





Key Facts

CONFIGURATION

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TECHNICAL SPECIFICATION

General Technical Data

Operating Parameters

Control

Sensor

Electric Interfaces

Connector

Mechanical Interfaces

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Hydraulical Interfaces

Work Ports

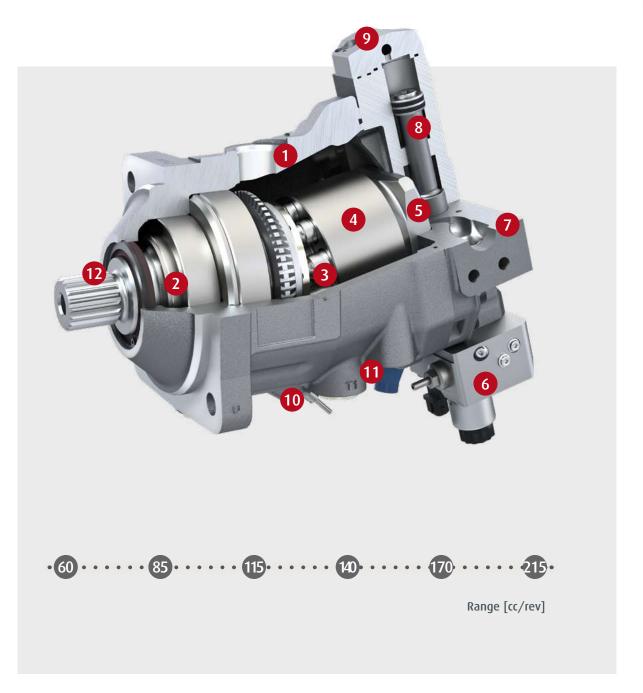
Auxiliary Ports

Functions/Options

Overview | **Key Facts**

In the following you will find the design characteristics and related advantages of the CMV. The components mentioned here are referred to repeatedly in the following sections of this datasheet.

With the next generation of the bent axis motors, Linde Hydraulics expands its customer oriented portfolio of high-quality components for hydraulic systems. Due to their standardized interfaces, e.g. the plug-in flange according to ISO, the CMV and CMF fit a high variety of applications, without the need of adaptors. The motors enable a more cost effective operation of the respective applications thanks to low windage losses and lighter weight.



1	~~	Robust design bent axis motor with high power density	<u> </u>	Suitable for a wide range of applications
2		Drive shaft assembly		High speed capability
3		Pistons		High flexibility
4		Rotating group with variable displacement		High starting torque
5		Port plate		High functional reliability - even under adverse operating conditions
6		Modular concept of various displacement and/or pressure controls (e.g. pressure side selection)		Precise control & low hysteresis
7		Optimized flow concept		Prevention of housing pressure peaks and vibrations
8		Control piston		Sensing of speed and direction of rotation
9		Asymmetrically damped changeover switch		Easy handling
10		Sensor		Easy replacement without the need of application
11		Thread for mounting of lifting devices		
12		Standardized interfaces		

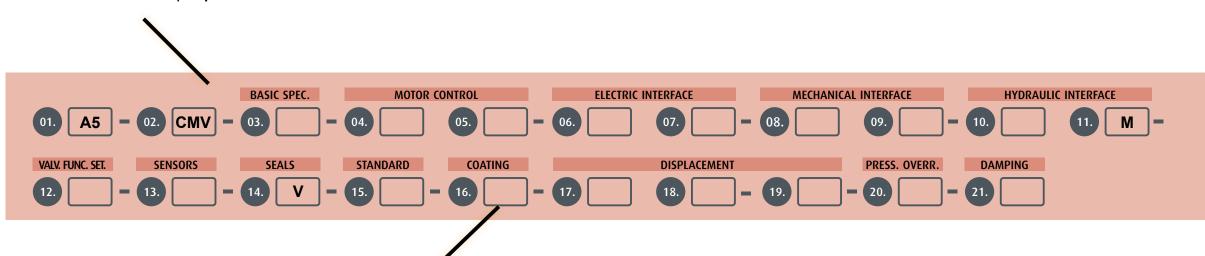




Configuration | Modelcode & Availability | Type

In the following you will find the Modelcode structure for inquiries in context of the [Configuration]. All features of the CMV are listed including brief specification. Please consider the availability and compatibility of the individual items regarding the relevant nominal size. In context of an order or inquiry consider these items as a coherent model code. It serves for further processing. For a more in-depth look at the technical specifications, please refer to the relevant section under [Technical Specification].

Modelcode for orders/inquiries



Modelcode items describing a configuration element each

Preferred



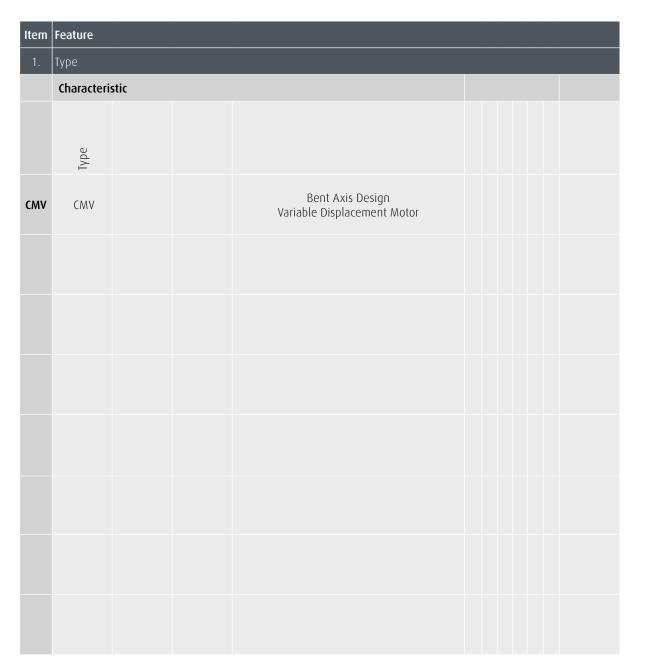


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Configuration | Modelcode & Availability | **Type**





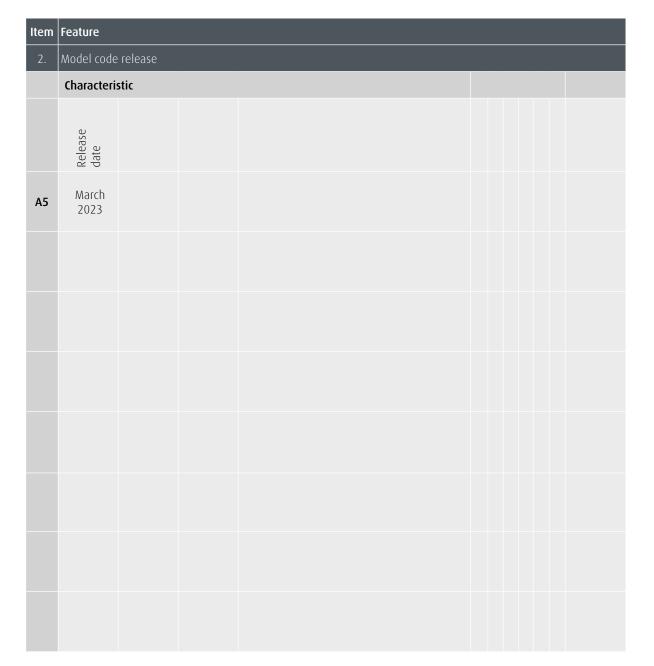


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OVERVIEW Key Facts CONFIGURATION **TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Electric Interfaces Mechanical Interfaces Shafts Hydraulical Interfaces Functions/Options

Configuration | Modelcode & Availability | Model Code Release

2.	A5
MODELCODE ITEM	Model Code Rele



Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



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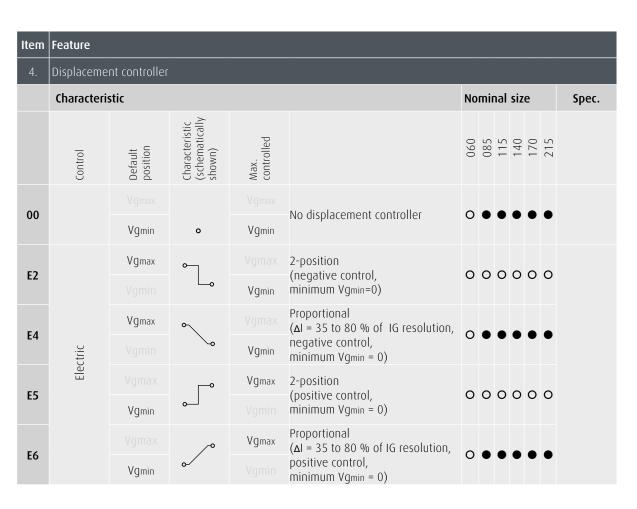
Configuration | Modelcode & Availability | Nominal Size

Item	Feature					
3.	Nominal siz					
	Characteris				Nominal size	Spec.
	Nominal size	Maximum displacement range [cc/rev]			060 085 115 170	<u>C</u> 7
060	60	62			0	
085	85	87.7			•	
115	115	115.3			•	
140	140	144.1			•	
170	170	170			•	
215	215	217.9				

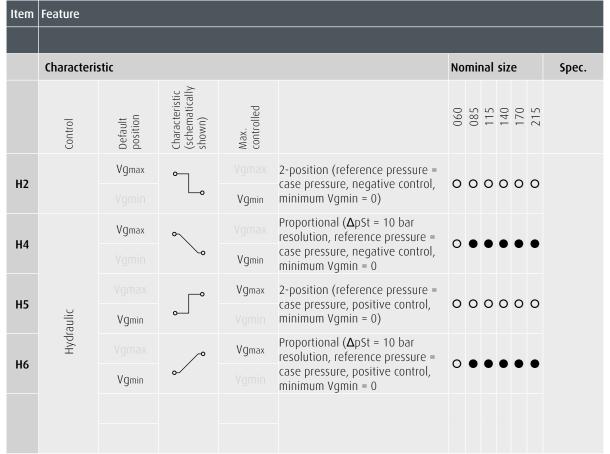
Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



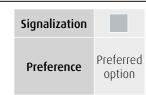
Configuration | Modelcode & Availability | **Displacement Controller**







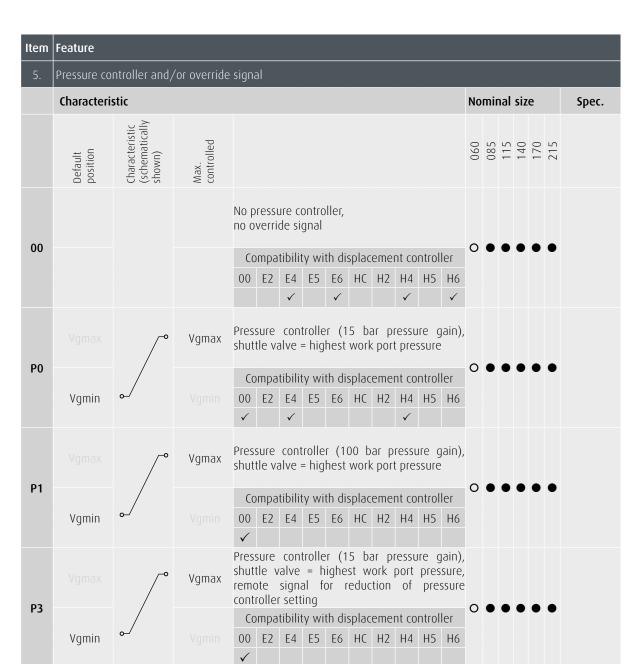




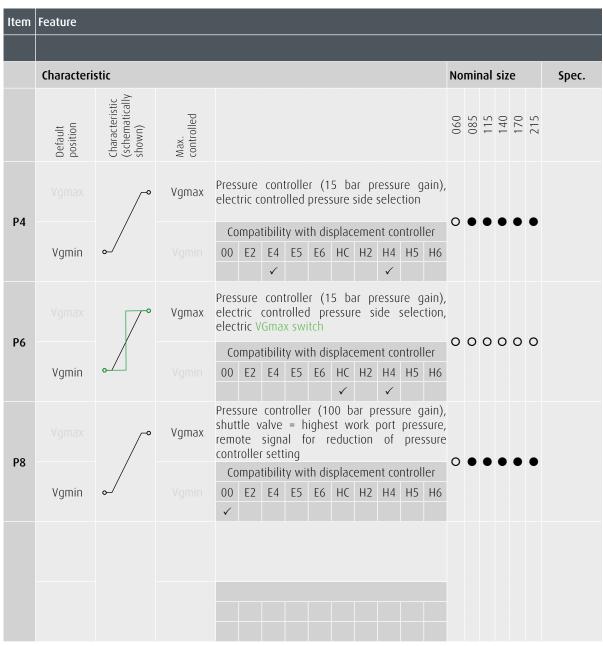


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Configuration | Modelcode & Availability | Pressure Controller and/or Override Signal







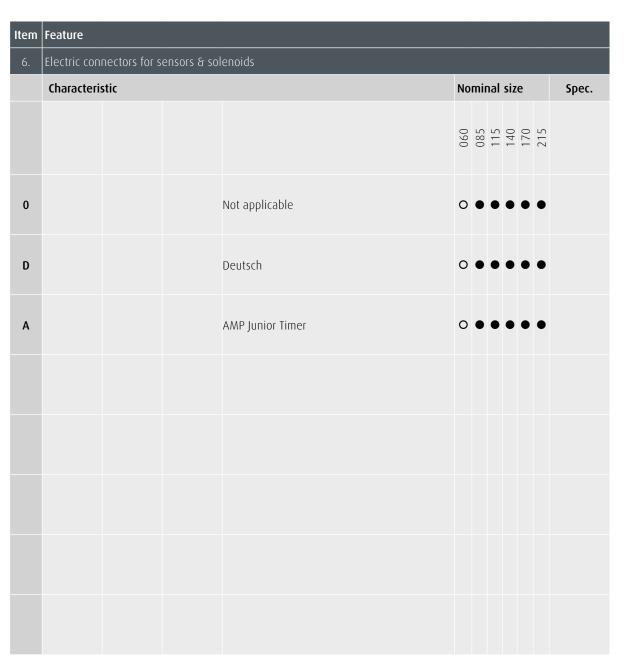


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Configuration | Modelcode & Availability | Electric Connectors for Sensors & Solenoids







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Configuration | Modelcode & Availability | Voltage for Solenoids

7. MODELCODE	Voltage for Solenoids

Item	Feature						
7.	Voltage for						
	Characteri	stic			N	Iominal size	Spec.
					CYC	060 085 115 140 170 215	
0			Not appl	icable	C		
1			12 V		C		
2			24 V		C		

Signalization	•	0	Si	ignalization	
Availability from	Now	Upon request	ı	Preference	Preferred option



Configuration | Modelcode & Availability | Mounting Flange

Item	Feature									
8.	Mounting flange									
	Characteris	tic					Nominal size	Spec.		
	Standard	Size [mm]- Number of bolts					060 085 115 170 215			
C2		127-2		SAE C			•			
C4	ISO 3019-1	127-4		SAE C			0			
D4	/ SAE J744	152-4		SAE D			• • •			
E4		165-4		SAE E			•			
M4		125-4					o			
N4	ISO 3019-2 metric	140-4					•			
P4		160-4					•			
R4		180-4					• •			



Item	Feature				
	Characteris	stic	Nominal size Spec		
	Standard	Size [mm]- Number of bolts		060 085 115 140 170 215	
S 4	ISO 3019-2 metric	200-4		•	
P2		160-2	Plug-in	0	
Y2	Plug-in, similar to	190-2	Plug-in	•	
S2	ISO 3019-2	200-2	Plug-in	• • •	
Z 4		260-4	Plug-in	•	





Configuration | Modelcode & Availability | **Drive Shaft / Compagnion Flange**

9.		
MODELCODE ITEM	Drive Shaft / Compagnion Flange	

Item	Feature				
9.	Drive shaft ,		on flange		
	Characteris	tic	Nominal size Spec.		
	Standard	Number of teeth	Spline pitch/ module	Identification code	060 085 115 140 170
S7		14	12/24	32-4	0
\$8		21	16/32	35-4	•
S 9		17	12/24	38-4	•
V 6	ISO 3019-1/ SAE J744	23	16/32	38-4	• •
V 7		27	16/32	44-4	• •
T1		13	8/16	44-4	• • •
T2		15	8/16	50-4	• •
D3	DINE 400	14	2	W30	0
D4	DIN5480	16	2	W35	0

Item	Feature						
	Characteris	tic				Nominal size	Spec.
	Standard	Number of teeth	Spline pitch/ module	Identification code		060 085 115 140 170	
D5		18	2	W40		••	
D6	DIN5480	21	2	W45		•••	
D7		24	2	W50		••	
F4	SAE J1946				Companion flange Type A - 120x8xM10	000000	







Configuration | Modelcode & Availability | Port Plate Housing

Itom	Feature								
10.	Port Plate Housi								
10.	Characteristic							Nominal size	Spec.
		Open & closed circuit operation	Closed circuit operation		Open Giranit	operation		060 085 115 140 170	<u>.</u>
	Work port orientation	Without additional functions	Flushing valve	Counter balance valve	Cross over relief valve	Anti-cavitation valve	Interface for external counter balance valve		
Α0		✓						0 • • • •	
A1			✓					0 • • • •	
А3	Axial twin ports (facing to rear)				✓			0 0	
A4						✓		• •	
A5					✓		✓	0 0	
S 0	Side ports (facing to the	✓						0 • • • •	
S 1	outside, left and right)		✓					0 • • • •	



Item	Feature								
10.	Port Plate Housi	ng							
	Characteristic							Nominal size	Spec.
		Open & dosed arcuit operation Closed circuit operation			Open	operation	060 085 115 170	5 7	
	Work port orientation	Without additional functions	Flushing valve	Counter balance valve	Cross over relief valve	Anti-cavitation valve	Interface for external counter balance valve		
R2	Radial twin ports			✓				0 0	

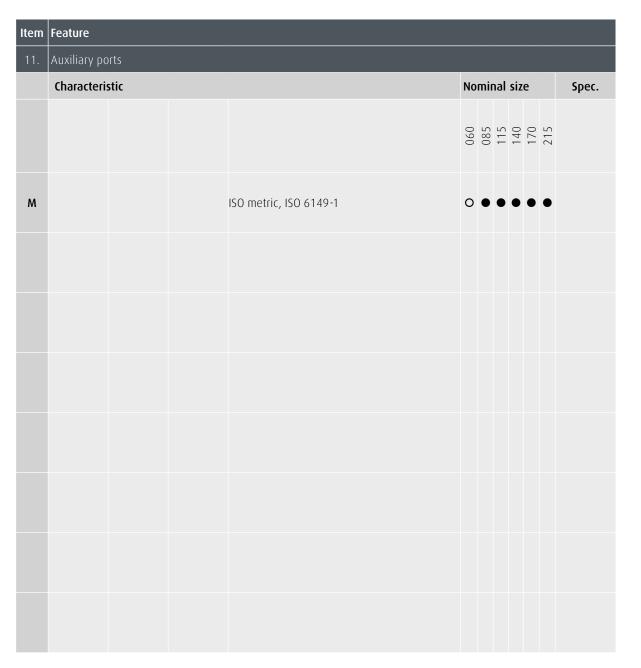


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Configuration | Modelcode & Availability | **Auxiliary Ports**









Configuration | Modelcode & Availability | Valve Function Settings

Item	Feature						
12.	Valve func	tion settings (according to yo	ur choice a	t item 10.	Port plate housing)		
	Characteri	stic				Nominal size	Spec.
						060 085 115 140 170	
	Operation	Port plate function	Pressure [bar]	Flow [I/min]			
0			-	-		0 • • • •	
		No additional function					
Р	Open & closed circuit		400			0 0	
Q	Open ci		380			0 0	
R		Cross over relief valve	350			0 0	
S			300			0 0	
T			250			0 0	

12.		
MODELCODE ITEM	Valve function settings	

Item	Feature		Feature										
12.	Valve func	Valve function settings (according to your choice at item 10. Port plate housing)											
	Characteri	stic	Nominal size Spec.										
					060 085 115 170 215								
	Operation	Function	Pressure [bar]	Flow [I/min]									
В				6	0 • • • •								
D	+			10	0 • • • •								
F	Closed circuit	Flushing		15	0 • • • •								
Н				20	0 • • • •								
J				25									

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



Configuration | Modelcode & Availability | **Speed Sensor**



Item	Feature					
13.	Speed sens	Oſ				
	Characteris				Nominal size	Spec.
	Speed sensor	Prepared for speed sensor	Without Speed sensor		060 085 115 140 170 215	
S	✓			Speed sensor, Function: speed and direction of rotation Connector type: is to be defined at modelcode Item 6 (default: Deutsch)	0 • • • •	
V		✓		Option allows the subsequent installation of speed sensors (Housing already has a mounting for the sensor, the drive shaft is equipped with an incremental ring)	0 • • • •	
0			✓	Option does not allow the subsequent installation of speed sensors (Housing has no mounting for the sensor, the drive shaft is not equipped with an incremental ring)	00000	

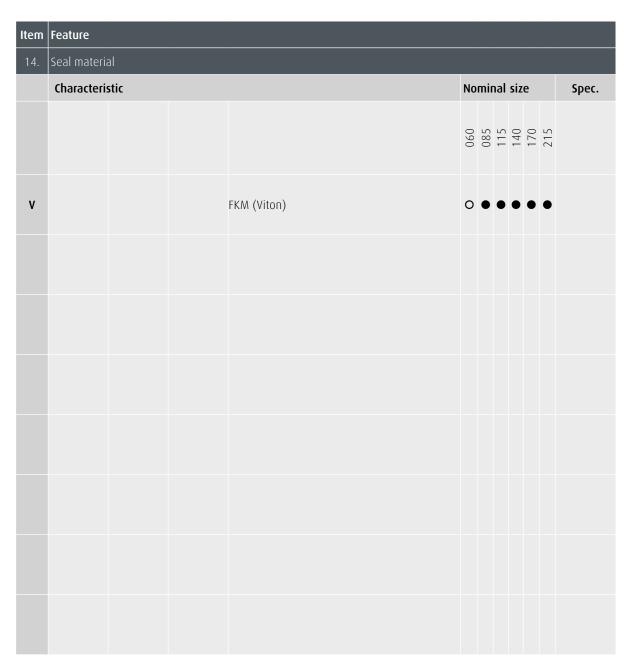
Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option

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Configuration | Modelcode & Availability | **Seal Material**







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Configuration | Modelcode & Availability | Variant Configuration



Item	Feature					
15.	Variant con	figuration (m	iay require fi	urther information)		
	Characteri	stic				
0	Standard execution			(Your desired configuration corresponds to the availabilities and combinations listed in this document.)	0 • • •	•
P	Special version			(Your desired configuration does not correspond to the availabilities shown in this document and/or does not correspond to the possible combinations shown.) Please explain your desired configuration in more detail under "Your choice & inquiry!"	00000	0

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option





Configuration | Modelcode & Availability | Corrosion Protection or Paint

16.		
MODELCODE ITEM	Corrosion Protection or Paint	

Item	Feature					
16.	Corrosion p	rotection or p	paint			
	Characteris	stic			Nominal size	Spec.
	Corrosion protection	Primer	Paint		060 085 115 170 215	
00	Anticorit RPO-3002			Corrosion protection, no primer or paint, 6 month active	0 • • • •	
P1		oxide red, RAL 3009		Primer	0 • • • •	
P6		traffic grey B RAL 7043		Primer (default primer)	0 • • • •	
V3		grey, RAL 7043	jet black, RAL 9005	2-coat paint	0 • • • •	
V7		grey, RAL 7043	slate grey, RAL 7015	2-coat paint	0 • • • •	

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



Configuration | Modelcode & Availability | **Vg**max

Item	Feature						
17.	Vgmax						
	Characteris	tic				Nominal size	Spec.
	Fixed setting	Individual setting	Comes with adjustment screw	Subsequent changes possible	Set value [cc/rev]	060 085 115 140 170 215	
					62	0	
					87.7	•	
MAX	√				115.3	•	
MAX	·				144.1	•	
					170	•	
					217.9	•	
[value]		✓	✓	✓	Individual value (numeric, 3 digits, only integer values) Minimum 70% of Vg _{max} expressed in cc/rev)	0 • • • •	

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



Configuration | Modelcode & Availability | **Vg**min

Item	Feature						
18.	Vgmin						
	Characteris	stic				Nominal size	Spec.
	Fixed setting	Individual setting	Comes with adjustment screw	Subsequent changes possible	Set value [cc/rev]	060 085 115 140 170	
[VALUE]		✓	✓	✓	Range 0 to 70% of Vgmax*1 expressed in cc/rev (numeric, 3 digits, only integer values)	0 • • • •	

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option

¹ at values <25% of Vgmax, motor should not be operated in motor mode - always observe max speed limitations

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Configuration | Modelcode & Availability | **Begin of Displacement Control**

MODELCODE Begin of Displacement Control (Hydraulic Controllers Only; as per 4.)

Item	Feature			
19.	Begin of displacement o	ontrol (hydraulic controllers only; as per 4.)		
	Characteristic		Nominal size	Spec.
		Set value [bar]	060 085 115 140 170 215	
00		Not applicable	0 • • • •	
[VALUE]		Range 5 to 10 (numeric, 2 digits, only in 1 bar increments)	0 • • • •	



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Configuration | Modelcode & Availability | Regulation Begin of Pressure Override

MODELCODE Regulation Begin of Pressure Override (as per 5.)

Item Fe	ature			
20. R€	egulation begin of pres	sure override (as per 5.)		
С	haracteristic		Nominal size	Spec.
		Set value [bar]	060 085 115 140 170 215	
000		Not applicable	0 • • • •	
[VALUE]		Range 80 to 400 (numeric, 3 digits, only in 10 bar increments)	0 • • • •	

Signalization	•	0	Signalization	
Availability from	Now	Upon request	Preference	Preferred option



Functions/Options

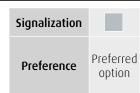
Configuration | Modelcode & Availability | Control Damping

060 085 115 140 170 215	Spec.
	Spec.
	Spec.
060 085 115 140 170 215	
0 • • • •	
0 • • • •	
0 • • • •	
0 • • • •	
0 • • • •	
0 • • • •	
0 • • • •	
0 • • • •	
0 • • • •	
0 • • • •	
0 • • • •	
0 • • • •	
0 • • • •	



Item	Item Feature								
	Characteri	stic					Nominal size	Spec.	
	Option depends on	controller configuration	Undamped swiveling	Damped	swiveling		060 085 115 140 170		
	Displacement controller	Pressure cotroller		from Vgmin to Vgmax	from Vgmax to Vgmin				
	E4						0 • • • •		
2	E6	0.0			✓	√		0 • • • •	
2	2 00 H4		V	V		0 • • • •			
	Н6						0 • • • •		







General Technical Data

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Technical Specification | **General Technical Data**

In the following you will find the general technical data of the CMV. The values listed refer to the respective nominal size and take into account the general use. If these data do not correspond to the requirements in the context of your application, please contact us. Other values are available upon individual consideration of your application.

General technical data				
Nominal size				
	Vg _{max}			
		at total pressure (A+B) = 40 bar		
Displacement	Vgx	at total pressure (A+B) = 120 bar	cc/rev	
		at total pressure (A+B) = 140 bar		
	Vg _{min}			
		at Vg _{max}		
Speed	Nominal speed	at $Vg \leq Vg_X$	rpm	
		at Vg _{min}		
	at Vg _{max}			
Inlet flow			l/min	
			.,	
			bar	
	Nominal pressure			
Pressure ¹	Maximum pressure ²		bar	
	Maximum housing pressure			
Torque	Output torque at Δp = 430 bar			
Temperature	Perm. housing temper	ature	°C	
Weight (without oil) approx.			kg	

60	85	115	140	170	215
60	85	115	140	170	215
62	87.7	115.3	144.1	170	217.9
upon request	29.8	39.2	49	64.6	82.8
-	-	-	-	105.4	135.1
upon request	52.6	69.2	86.5	-	-
0	0	0	0	0	0
4450	3900	3550	3250	3100	2900
7200	6800	6150	5600	4900	4600
		upon r	equest		
upon request	342.0	409.3	468.3	527.0	631.9
		45	50		
		50	00		
		2	.5		
411	582	787	958	1163	1471
		9	0		
27.7	36.3	44.8	59.2	62.1	76.4



 $^{^{1}}$ reference = ambient pressure ; 2 highest transient pressure, that can temporarily occur





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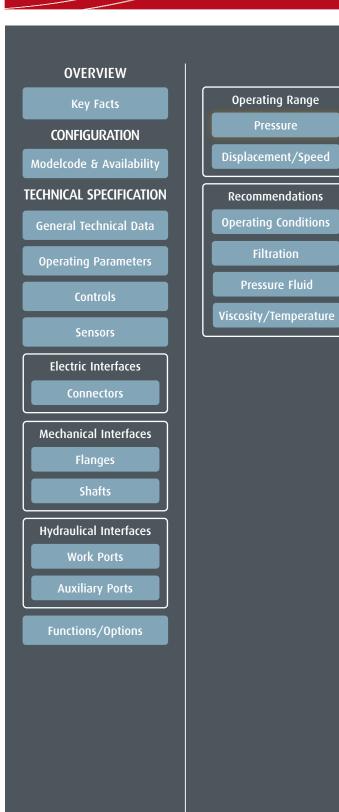
Technical Specification | Operating Parameters | **Pressure**

Pressure at work port A or B			
Nominal pressure p _{nom}			450
Maximal pressure p _{max}		bar	500
Minimum pressure pump operating mode inlet			see the diagram
Maximum summation pressure psu (pressure A + pressure B)			upon request
Date of process change DA	Without pressure relief valve	har /s	16000
Rate of pressure change RAmax	With pressure relief valve	bar/s	9000

Definition
The nominal pressure corresponding to the maximum design pressure
Highest transient pressure, that can temporarily occur; reference = ambient pressure
In order to prevent damage to the motor during pump operation (changing the the high-pressure side while the direction of rotation remains the same, e.g. during braking), a minimum pressure must be ensured at the work ports (inlet).
The summation pressure is the sum of the pressures at both work ports (A and B); reference = ambient pressure
Maximum permissible rate of pressure build up and reduction during a pressure change over the entire pressure range (Definition see diagram)

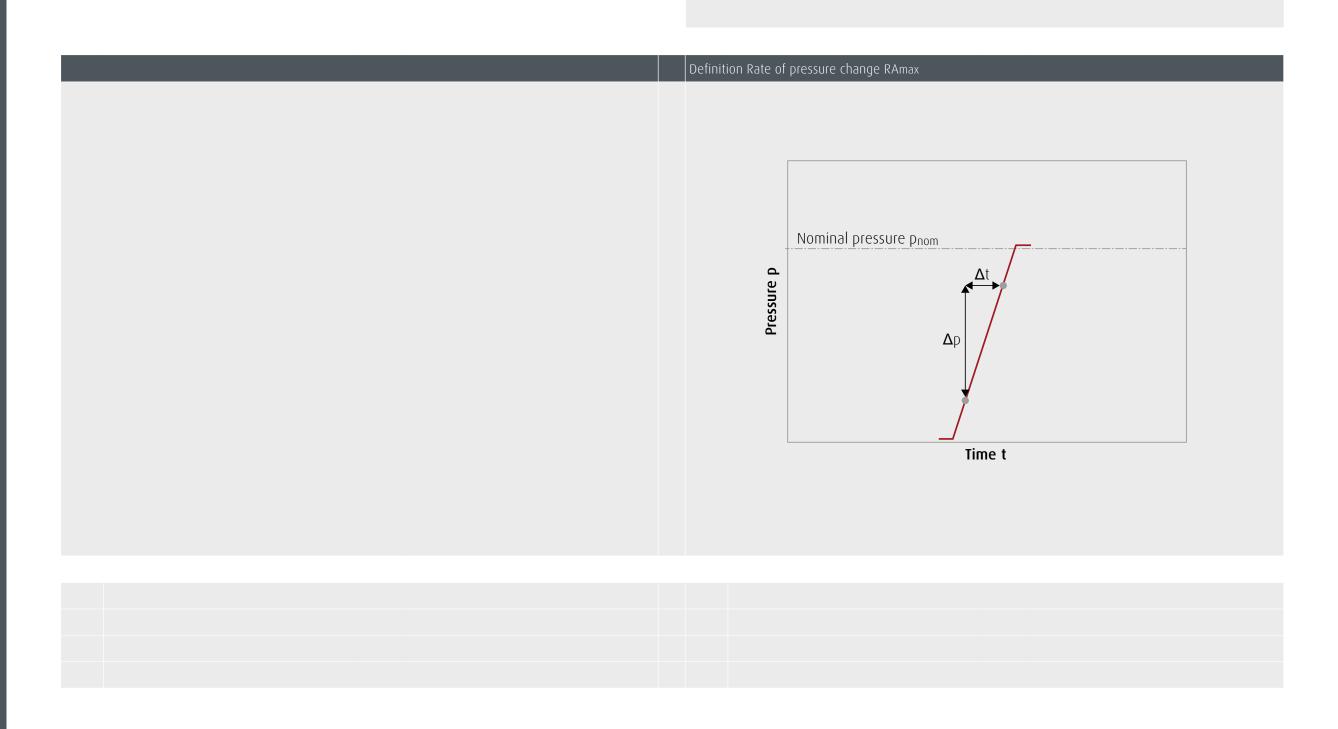








Technical Specification | Operating Parameters | **Pressure**







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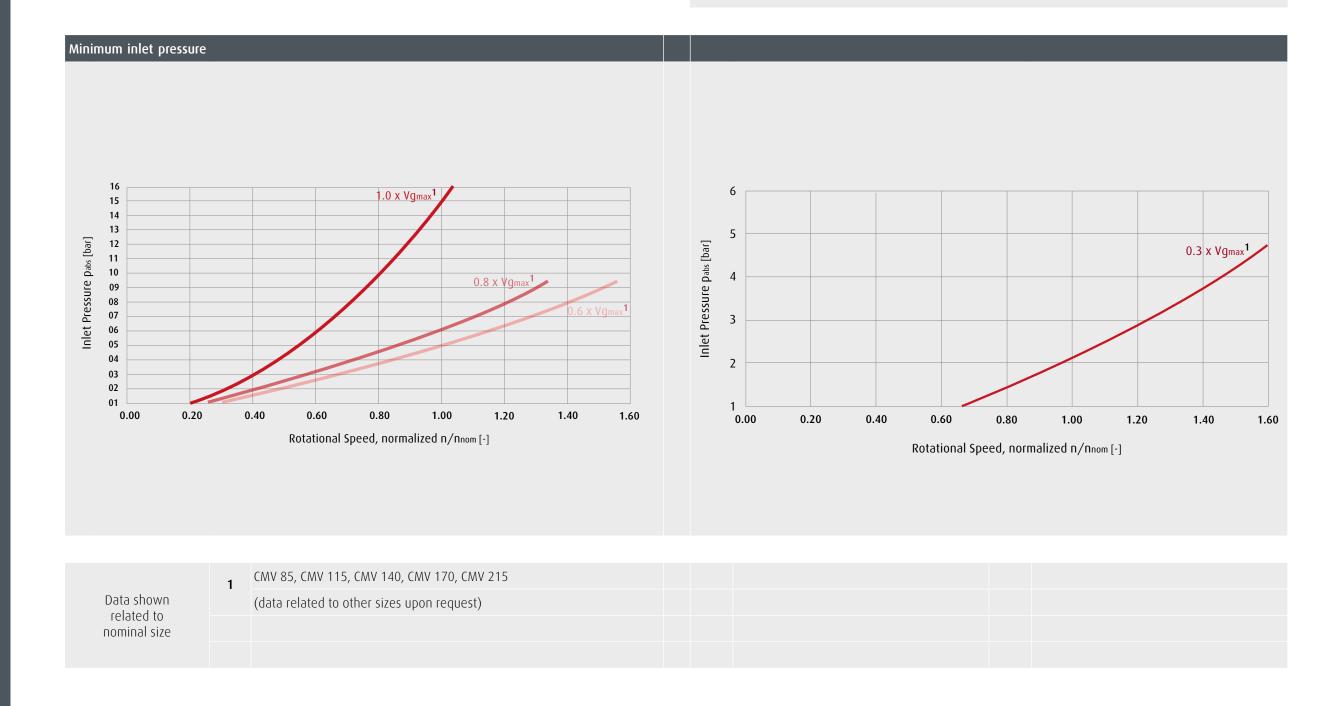
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Technical Specification | Operating Parameters | **Pressure**







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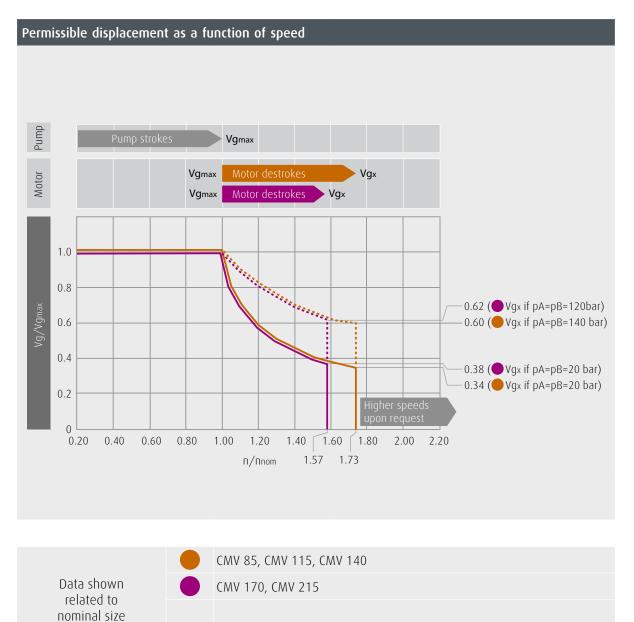
Hydraulical Interfaces

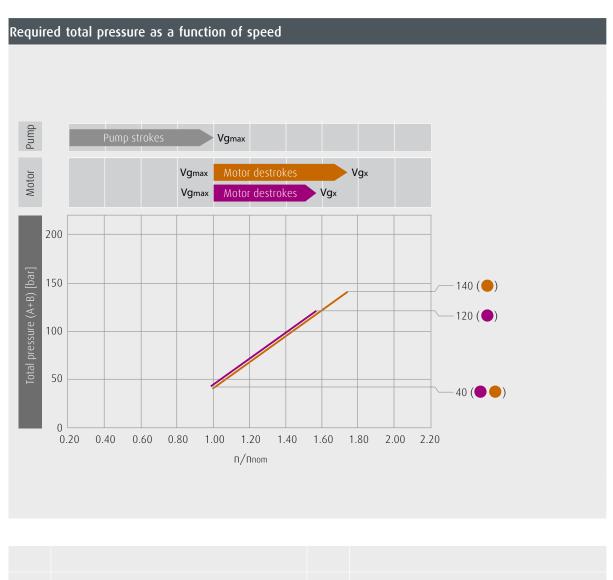
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Viscosity/Temperature

Technical Specification | Operating Parameters | **Operating Conditions**

General technical d	ata	
Nominal size		
Spood	Speed	
Speed		
Pressure	Operating pressure	bar
ricssuic	Max. pressure	Dai
Power		
Tower		
	Viscosity	Centistokes (cSt)
Fluid	Purity of fluid	
	Tanky or hold	

Beneficial conditions for long service life	Adverse factors for long service life
All sizes	All sizes
Lower continuous maximum speed	Between nominal speed and maximum speed
<300 on average	>300 on average
Only at reduced displacement	
Continuous power or lower	Continuous operation close to maximum power
15 30	
In accordance with ISO 4406	In accordance with ISO 4406
18/16/13 or better	Worse than 18/16/13







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In the following you will find the operating parameters which should be considered to ensure safe operation under all prevailing conditions and a long service life of the CMV.

Filtration
For reliable proper function and long service life
Minimum requirements
Commissioning
Filling and operation of hydraulic systems
Comparable international standards

18/16/13	
20/18/15	

The minimum purity requirement for the hydraulic oil is based on the most sensitive system component. For commissioning we recommend a filtration in order to achieve the required purity.

The required purity of the hydraulic oil must be ensured during filling or topping up. When drums, canisters or large-capacity tanks are used the oil generally has to be filtered. We recommend the implementation of suitable measures (e.g. filters) to ensure that the required minimum purity of the oil is also achieved during operation.

Purity class according to ISO 4406		Purity class according to SAE AS 4059 E
18/16/13	corresponds to	8A/7B/7C
20/18/15		9A/8B/8C







OVERVIEW Operating Range CONFIGURATION Displacement/Speed **TECHNICAL SPECIFICATION** Recommendations General Technical Data Operating Parameters Viscosity/Temperature Electric Interfaces Mechanical Interfaces Hydraulical Interfaces Functions/Options

Technical Specification | Operating Parameters | **Pressure Fluid**

n the following you nder all prevailing o Pressure fluid	will find the operating parameters which should be considered to econditions and a long service life of the CMV.	ensure safe operation	
		Mineral oil HLP according to DIN 51 524-2	
Pressure fluid	Permitted pressure fluids	Biodegradable fluids in accordance with ISO 15 380 on request	
		Other pressure fluids on request	





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Viscosity/Temperature



Technical Specification | Operating Parameters | Temperature/Viscosity

In the following you will find the operating parameters which should be considered to ensure safe operation under all prevailing conditions and a long service life of the CMV.

In order to be able to select the right hydraulic fluid it is necessary to know the working temperature in the hydraulic circuit. The hydraulic fluid should be selected that its optimum viscosity is within the working temperature range (see tables). The temperature should not exceed 90 °C in any part of the system. Due to pressure and speed influences the leakage fluid temperature is always higher than the circuit temperature. Please contact Linde Hydraulics if the stated conditions cannot be met in special circumstances.

Viscosity/Temperatur	e					
Temperature	Perm. pressure fluid temperature range		[°C]			
		Working viscosity range	$[mm^2/s] = [cSt]$			
	Recommended viscosity ranges	Optimum working viscosity	$[mm^2/s] = [cSt]$			
Viscosity		Max. viscosity (short time during cold start)	[mm²/s] = [cSt]			
		Working temperature	[°C]			
	Optimum viscosity	approx. 30 to 40				
	at temperature					
		арргох. 60 to 80				

-20 à +105 °C
10 to 80 cSt
15 to 30 cSt
1000 cSt
Viscosity class [mm²/s] = [cSt] at 40 °C
22 cSt
32 cSt
46 or 68 cSt





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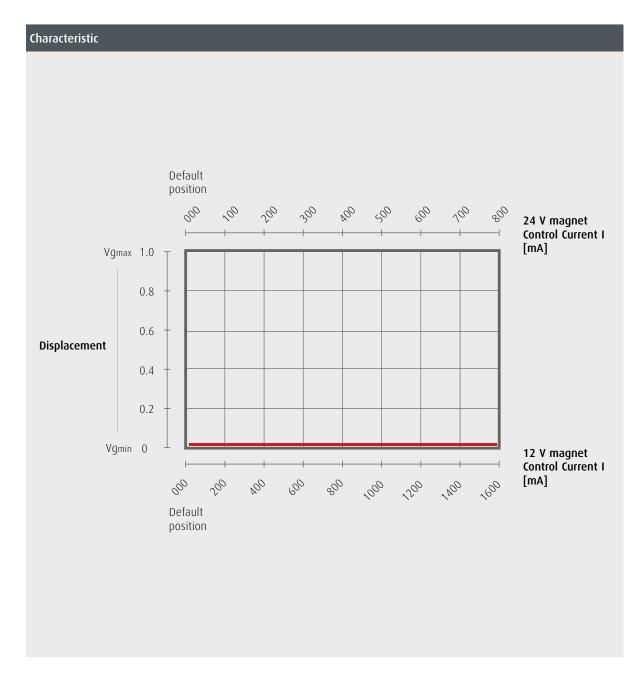
Technical Specification | Controls | Displacement Controller | **00**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

		_		_	_	_	_	_	
Basic Specification					12.1/			241/	
Magnet					12 V			24 V	
Voltage			V		-			-	
Begin of Control/ Default position	Vgmin/ Minimum Torque/ Maximum Speed	Current	mA		-		-		
End of Control	Vgmin/ Minimum Torque/ Maximum Speed				-		-		
Limit		Limit current	А		-			-	
Solenoid		Electrical resistance	Ω		-			-	
Dither		Frequency	Hz		-			-	
Dittiel		Minimum amplitude	mA		-			-	
Duty Cycle			0/0		-			-	
Control press. supply	Minimum pressure	at work port A/B	bar				-		
Protection class						No cor	nector		
Options									
	Nominal size			60	85	115	140	170	215
		1/4 Vgr	max						

Protection class							NO COI	mector		
Options										
	Nominal size				60	85	115	140	170	215
		Undamped	1/4 Vgmax -> Vgmax		-	-	-	-	-	-
	Swiveling speed at 200 bar		Vgmax -> 1/4 Vgmax	S	-	-	-	-	-	-
		Damaad	1/4 Vgmax -> Vgmax	3	-	-	-	-	-	-
		Damped	Vgmax -> 1/4 Vgmax		-	-	-	-	-	-

The displacement controller with the abbreviation "00" is not an individual function. In this case, the component for diplacement and pressure control does not support dispacement control. The motor is in default position Vgmin. When choosing this option, a pressure controller must be considered to control the motor.







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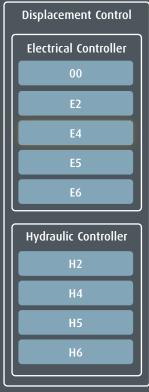
Shafts

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Functions/Options

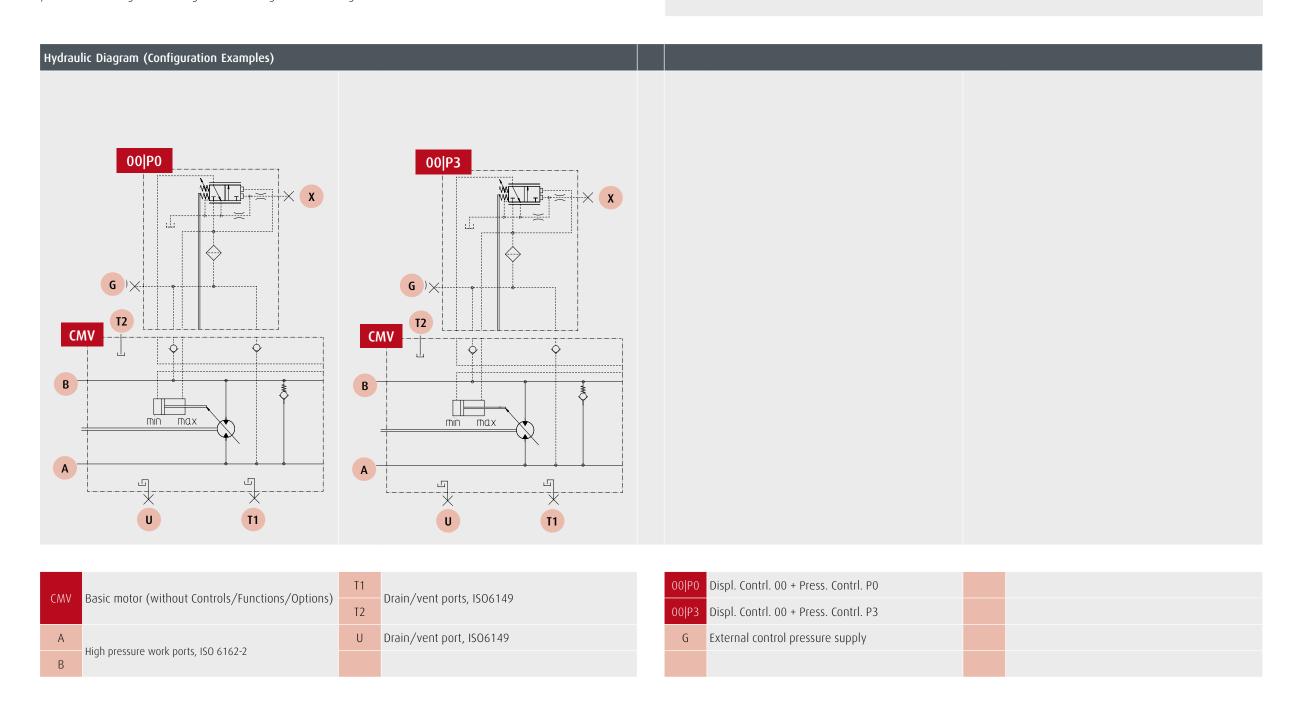


Pressure Control/Override 00 P0 P1 P3 P4 P6 P8



Technical Specification | Controls | Displacement Controller | **00**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.







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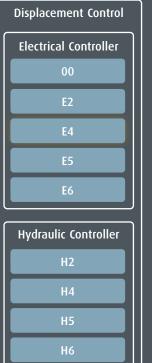
Shafts

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Functions/Options



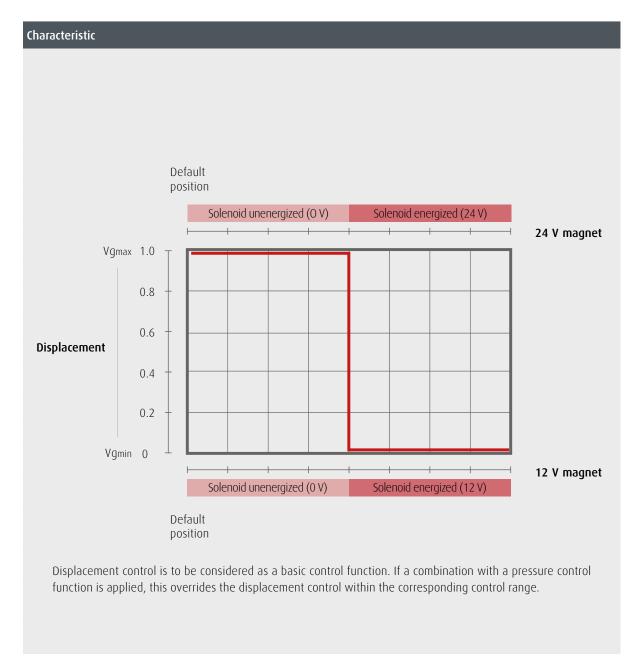
Pressure Control/Override 00 P0 P1 P3 P4 P6 P8

Technical Specification | Controls | Displacement Controller | **E2**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification												
Magnet						12 V		24 V				
Voltage		V 12 (-10%/+ 20 %) (-10%						24 1%/+ 2	24 %/+ 20%)			
Begin of Control/ Default position	Vgmax/ Maximum Torque/ Minimum Speed	Status soleno	oid		Solenoid unenergized							
End of Control	Vgmin/ Minimum Torque/ Maximum Speed				Solenoid energized							
Solenoid		Electrical res	Ω		6.3		24.6					
Duty Cycle			0/0		100							
Control press. supply	Minimum pressure	at work port A	bar	30								
Protection class					See connector							
Options												
	Nominal size				60	85	115	140	170	215		
		Undamped	1/4 Vgmax -> Vgmax	S	upon request	upon request	upon request	upon request	upon request	upon request		
Damping	Approx. swiveling speed at 200 bar	undamped	Vgmax -> 1/4 Vgmax		upon request	upon request	upon request	upon request	upon request	upon request		
		Damped	1/4 Vgmax -> Vgmax		upon request	upon request	upon request	upon request	upon request	upon request		
		baniped	Vgmax -> 1/4 Vgmax		upon request	upon request	upon request	upon request	upon request	upon request		

The displacement controller E2 is an electric controller that enables 2-point negative control and default position Vgmax. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.









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00

P0

P1

P3

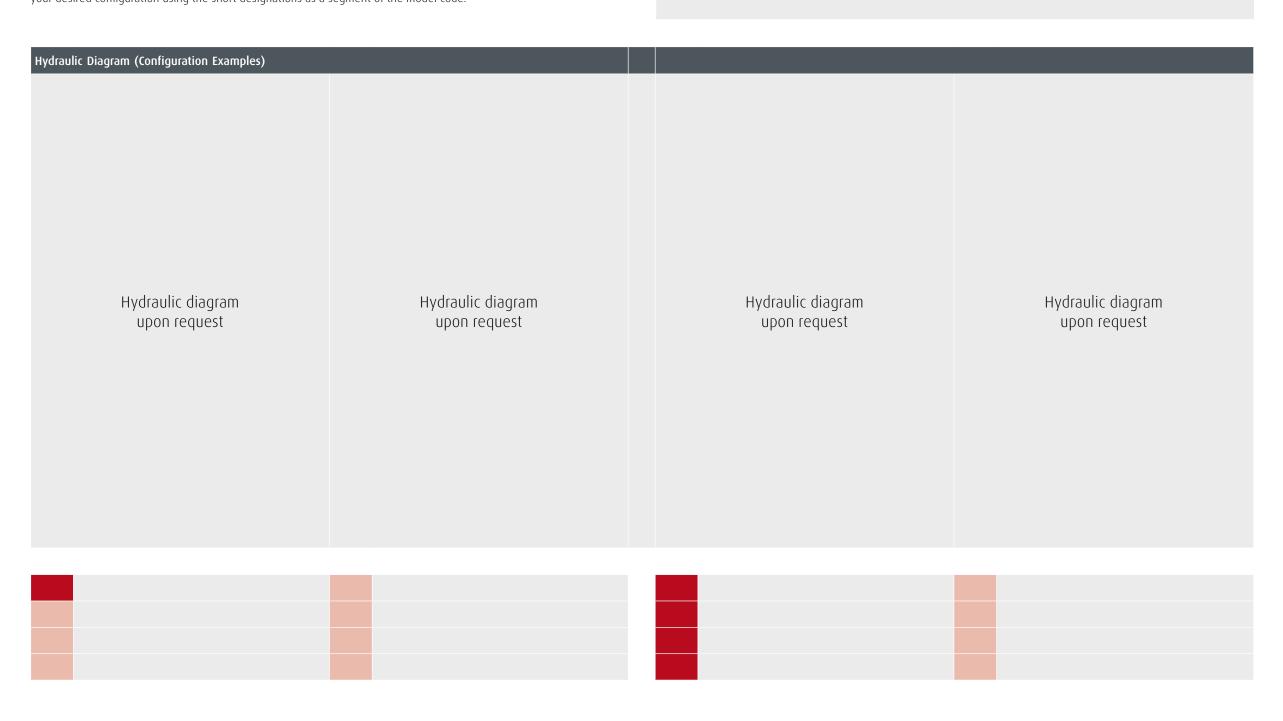
P4

P6

P8



Technical Specification | Controls | Displacement Controller | **E2**







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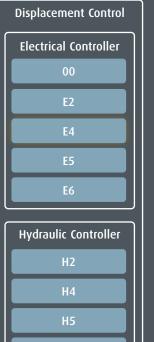
Shafts

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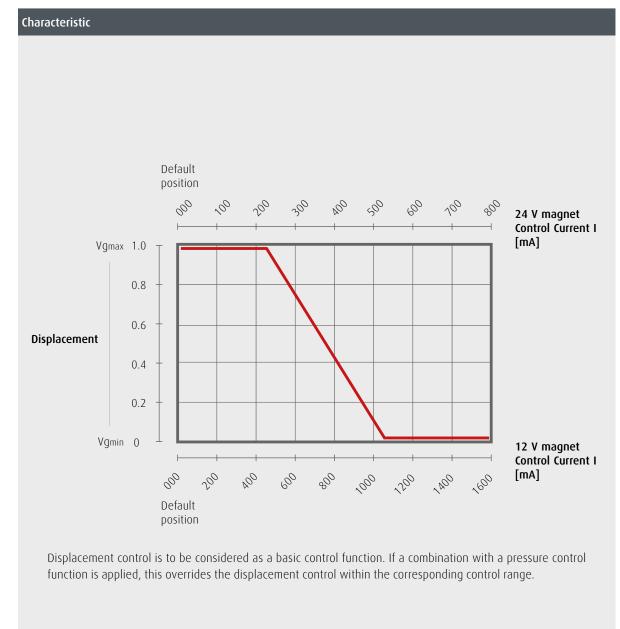
Pressure Control/ Override
00
P0
P1
Р3
P4
P6
P8

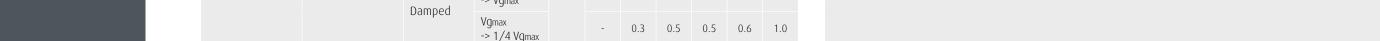
Technical Specification | Controls | Displacement Controller | **E4**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification										
Magnet					12 V		24 V			
Voltage			V	12 (-10%/+ 20 %)			24 (-10%/+ 20%)			
Begin of Control/ Default position	Vg _{max} / Maximum Torque/ Minimum Speed	Current	mA	450			225			
End of Control	Vgmin/ Minimum Torque/ Maximum Speed					1050		525		
Limit		Limit current	А	1.3			0.65			
Solenoid		Electrical res	Ω	6.3			24.6			
Dither		Frequency Minimum amplitude		Hz		100		100		
Dittiei				mA	320			160		
Duty Cycle				0/0	100			100		
Control press. supply	Minimum pressure	at work port A	bar	30						
Protection class					See connector					
Options										
	Nominal size				60	85	115	140	170	215
		Undamped	1/4 Vgmax -> Vgmax	S	-	0.15	0.2	0.2	0.3	0.5
Damping	Approx. swiveling	Undamped	Vgmax -> 1/4 Vgmax		-	0.15	0.2	0.2	0.3	0.5
	speed at 200 bar	Damped	1/4 Vgmax -> Vgmax		-	0.3	0.5	0.5	0.6	1.0
			Vgmax -> 1/4 Vgmax		-	0.3	0.5	0.5	0.6	1.0

The displacement controller E4 is an electric controller that enables stepless negative control (proportional to the applied control current) and default position Vgmax. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.











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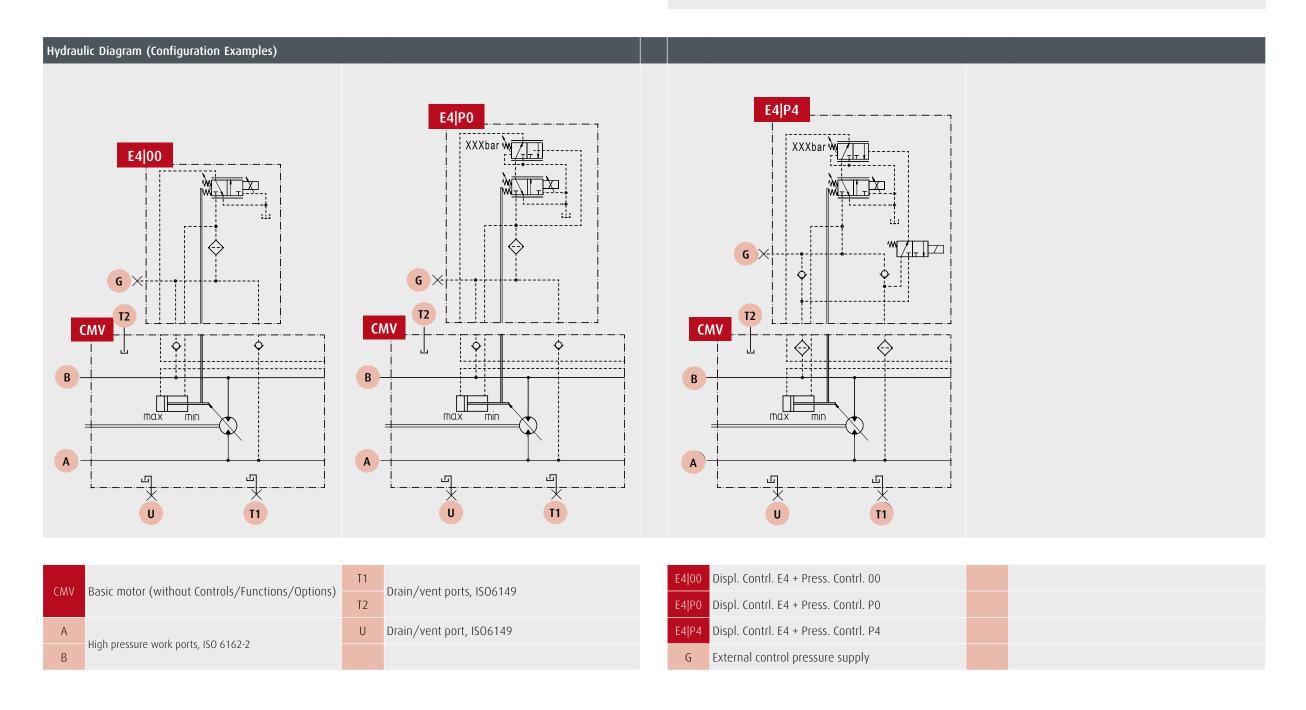
Functions/Options



Pressure Control/ Override 00 P0 P1 P3 P4 P6 P8



Technical Specification | Controls | Displacement Controller | **E4**







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00
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P1
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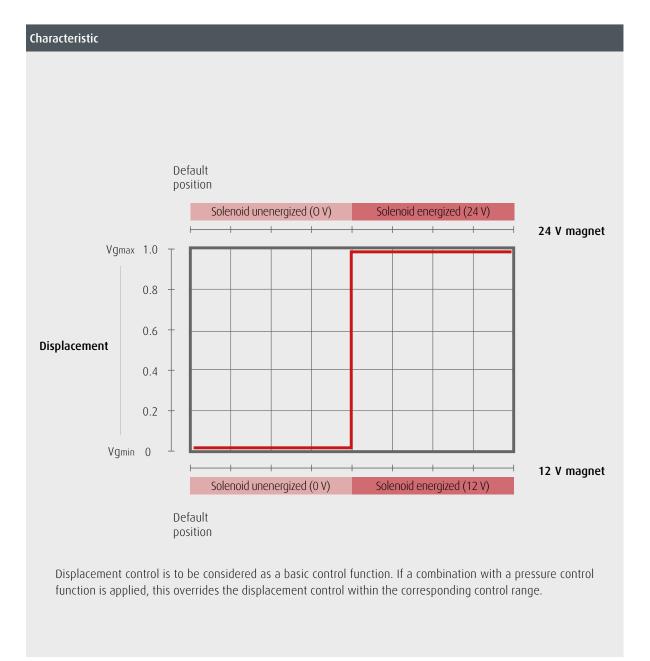


Technical Specification | Controls | Displacement Controller | **E5**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification											
Magnet				12 V			24 V				
Voltage			V	(-10	12 (-10%/+ 20 %)			24 (-10%/+ 20%)			
Begin of Control/ Default position	Vgmin/ Minimum Torque/ Maximum Speed	Status soleno	oid	Solenoid unenergized							
End of Control	Vgmax/ Maximum Torque/ Minimum Speed			Solenoid energized							
Solenoid		Electrical res	Ω		6.3			24.6			
Duty Cycle			%		100 100						
Control press. supply	Minimum pressure	at work port A	bar	30							
Protection class					See connector						
Options											
	Nominal size				60	85	115	140	170	215	
		Undamped	1/4 Vgmax -> Vgmax	S	upon request	upon request	upon request	upon request	upon request	upon request	
Damping	Approx. swiveling speed at 200 bar	undamped	Vgmax -> 1/4 Vgmax		upon request	upon request	upon request	upon request	upon request	upon request	
		Damped	1/4 Vgmax -> Vgmax		upon request	upon request	upon request	upon request	upon request	upon request	
			Vgmax -> 1/4 Vgmax		upon request	upon request	upon request	upon request	upon request	upon request	

The displacement controller E5 is an electric controller that enables 2-point positive control and default position Vgmin. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.







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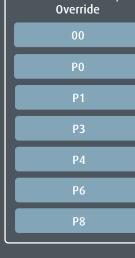
Hydraulical Interfaces

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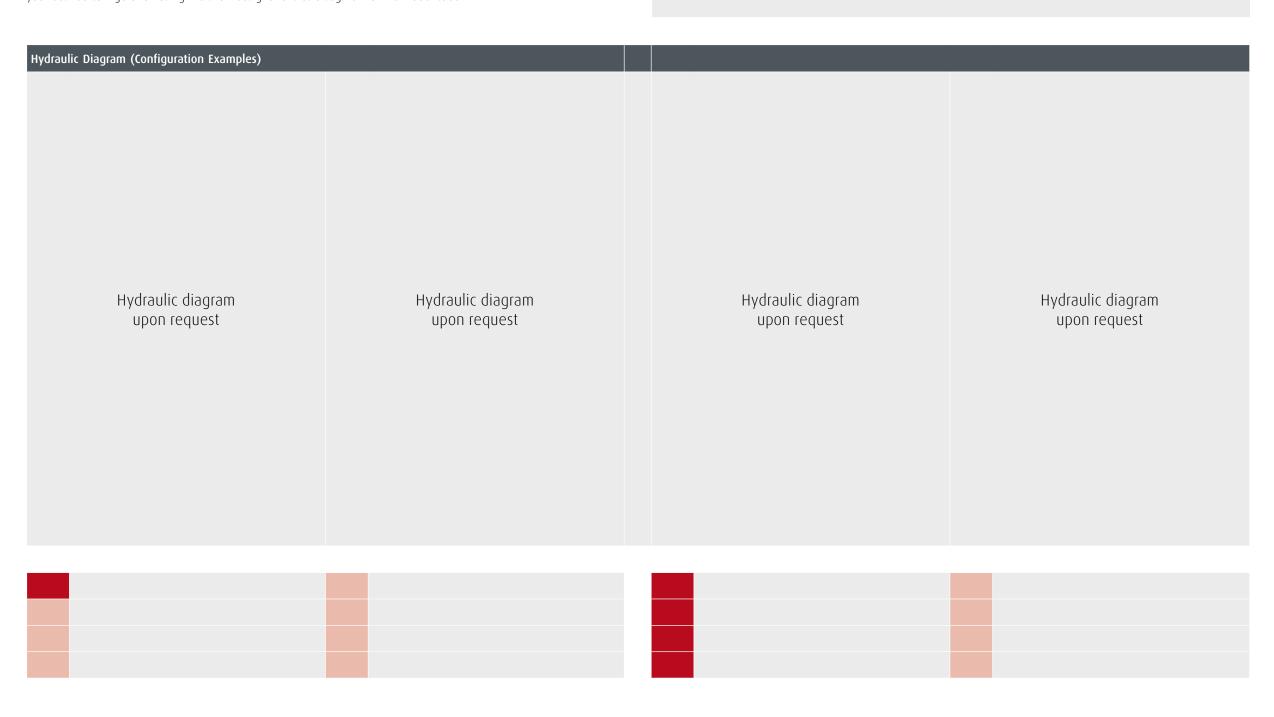
Functions/Options







Technical Specification | Controls | Displacement Controller | **E5**







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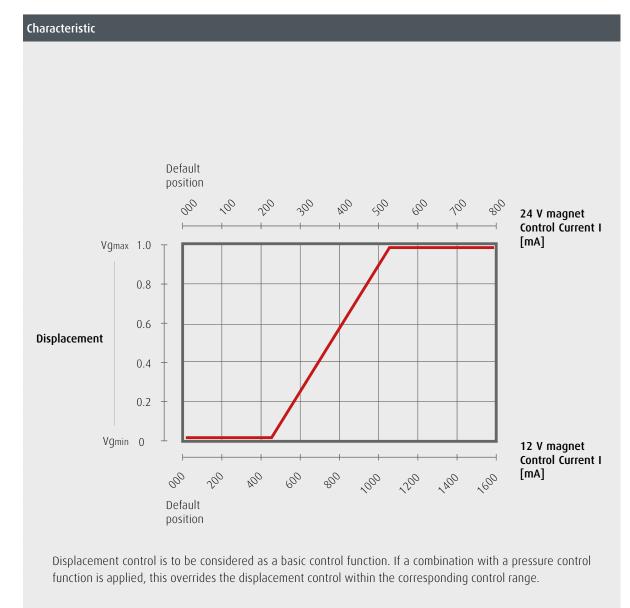
Pressure Control/ Override
00
PO
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Р3
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Technical Specification | Controls | Displacement Controller | **E6**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification										
Magnet					12 V		24 V			
Voltage			V	12 (-10%/+ 20 %)			24 (-10%/+ 20%)			
Begin of Control/ Default position	Vgmin/ Minimum Torque/ Maximum Speed	Current	mA	450			225			
End of Control	Vgmax/ Maximum Torque/ Minimum Speed					1050		525		
Limit		Limit current	А	1.3			0.65			
Solenoid		Electrical res	Ω	6.3			24.6			
Dither	Frequency		Hz	100		100				
Dittiei		Minimum amplitude		mA		320		160		
Duty Cycle				0/0	100			100		
Control press. supply	Minimum pressure	at work port A	bar	30						
Protection class					See connector					
Options										
	Nominal size				60	85	115	140	170	215
		Undamped	1/4 Vgmax -> Vgmax	S	-	0.15	0.2	0.2	0.3	0.5
Damping	Approx. swiveling speed at 200 bar	Undamped	Vgmax -> 1/4 Vgmax		-	0.15	0.2	0.2	0.3	0.5
		Damped	1/4 Vgmax -> Vgmax		-	0.3	0.5	0.5	0.6	1.0
			Vgmax -> 1/4 Vgmax		-	0.3	0.5	0.5	0.6	1.0

The displacement controller E6 is an electric controller that enables stepless positive control (proportional to the applied control current) and default position Vgmin. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.









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Technical Specification | Controls | Displacement Controller | **E6**







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P4
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Technical Specification | Controls | Displacement Controller | **H2**

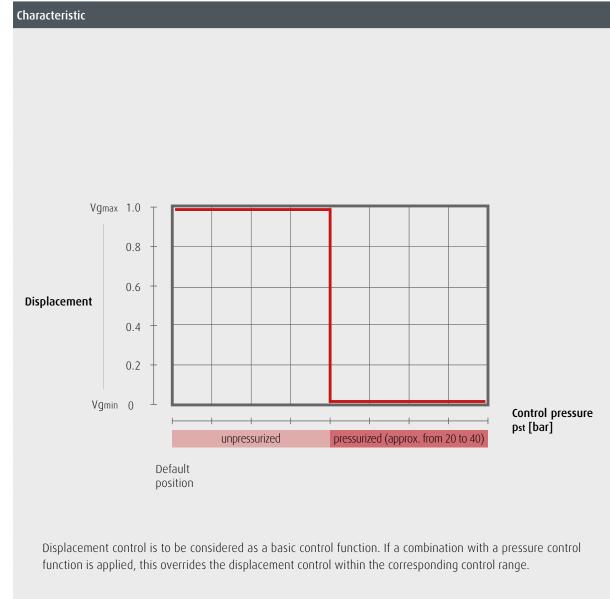
- 0.3 0.5 0.5 0.6 1.0

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification Control Begin of control/ Maximum torque/ pressure Pilot port unpressurized Default position Minimum speed (pst) bar Vgmin/ Control Pilot port pressurized End of control Minimum torque/ pressure (approx. from 20 to 40) Reference pressure Reference Case pressure Limit 50 Maximum pilot pressure Control press. supply Minimum pressure at work port A/B bar 30 Threaded port ISO 6149-1 M14x1.5 Nominal size 85 115 140 170 215 1/4 Vgmax 0.15 0.2 0.2 0.3 0.5 -> Vgmax Undamped Vqmax 0.15 0.2 0.2 0.3 0.5 Damping -> 1/4 Vgmax Approx. swiveling speed at 200 bar 1/4 Vgmax 0.3 0.5 0.5 0.6 1.0 -> Vgmax Damped

-> 1/4 Vgmax

The displacement controller H2 is an hydraulic controller that enables 2-point negative control and default position Vgmax. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.









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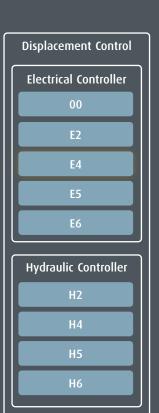
Shafts

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Auxiliary Ports

Functions/Options



Override

00

P0

P1

P3

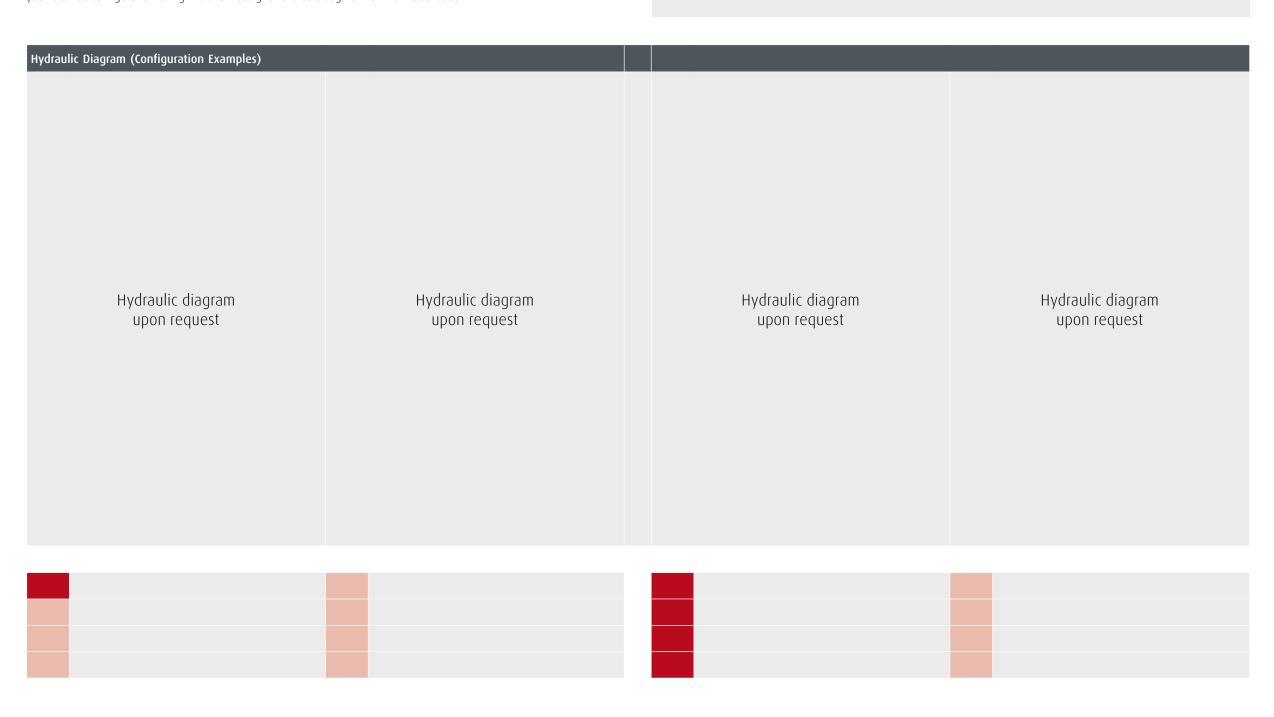
P4

P6

Pressure Control/



Technical Specification | Controls | Displacement Controller | **H2**







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00
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P1
Р3
P4
P6
P8

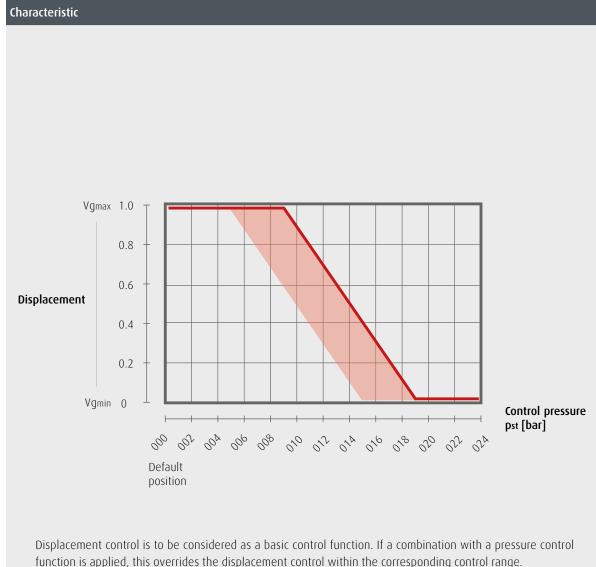
Technical Specification | Controls | Displacement Controller | **H4**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification						
Begin of control/	Vgmax/	Control	Minimum Setting		5	
Default position	Maximum torque/ Minimum speed	pressure (pst)	Maximum Setting		9	
- 1 () 1	Vgmin/		Vgmin/ Control	Minimum Setting	bar	15
End of control	Minimum torque/ Maximum speed	pressure (pst)	Maximum Setting		19	
Reference	Reference pressure				Case pressure	
Limit	Maximum pilot pre	ssure		bar	50	
Control press. supply	Minimum pressure	at work port A	N/B	bar	30	
Threaded port					ISO 6149-1 M14x1.5	

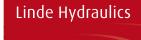
	Nominal size				60	85	115	140	170	215
	Approx. swiveling speed at 200 bar	Undamped	1/4 Vgmax -> Vgmax	S	-	0.15	0.2	0.2	0.3	0.5
Damping			Vgmax -> 1/4 Vgmax			0.15	0.2	0.2	0.3	0.5
		Damped	1/4 Vgmax -> Vgmax	3	-	0.3	0.5	0.5	0.6	1.0
			Vgmax -> 1/4 Vgmax		-	0.3	0.5	0.5	0.6	1.0

The displacement controller H4 is an hydraulic controller that enables stepless negative control (proportional to the applied pilot pressure) and default position Vqmax. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



function is applied, this overrides the displacement control within the corresponding control range.







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Technical Specification | Controls | Displacement Controller | **H4**







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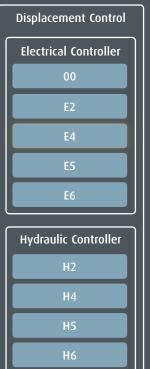
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Damping

Approx. swiveling

speed at 200 bar

Technical Specification | Controls | Displacement Controller | **H5**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification Control Begin of control/ Minimum torque/ pressure Pilot port unpressurized Default position Maximum speed (pst) Control Vgmax/ Pilot port pressurized End of control Maximum torque/ pressure (approx. from 20 to 40) Minimum speed Reference Reference pressure Case pressure Limit 50 Maximum pilot pressure 30 Minimum pressure at work port A/B Control press. supply Threaded port ISO 6149-1 M14x1.5 85 115 140 170 215 Nominal size 1/4 Vgmax n.a. n.a. n.a. n.a. n.a. -> Vgmax Undamped

-> 1/4 Vgmax

-> 1/4 Vgmax

1/4 Vgmax

-> Vgmax

Damped

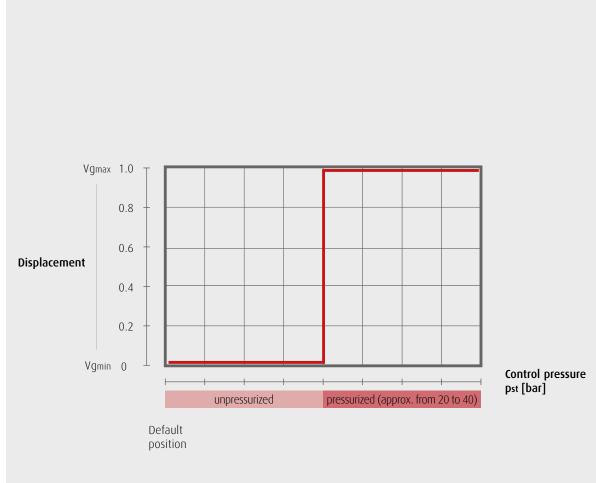
n.a. n.a. n.a. n.a.

n.a. n.a. n.a. n.a.

n.a. n.a.

The displacement controller H5 is an hydraulic controller that enables 2-point positive control and default position Vgmin. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.

Characteristic



Displacement control is to be considered as a basic control function. If a combination with a pressure control function is applied, this overrides the displacement control within the corresponding control range.







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00

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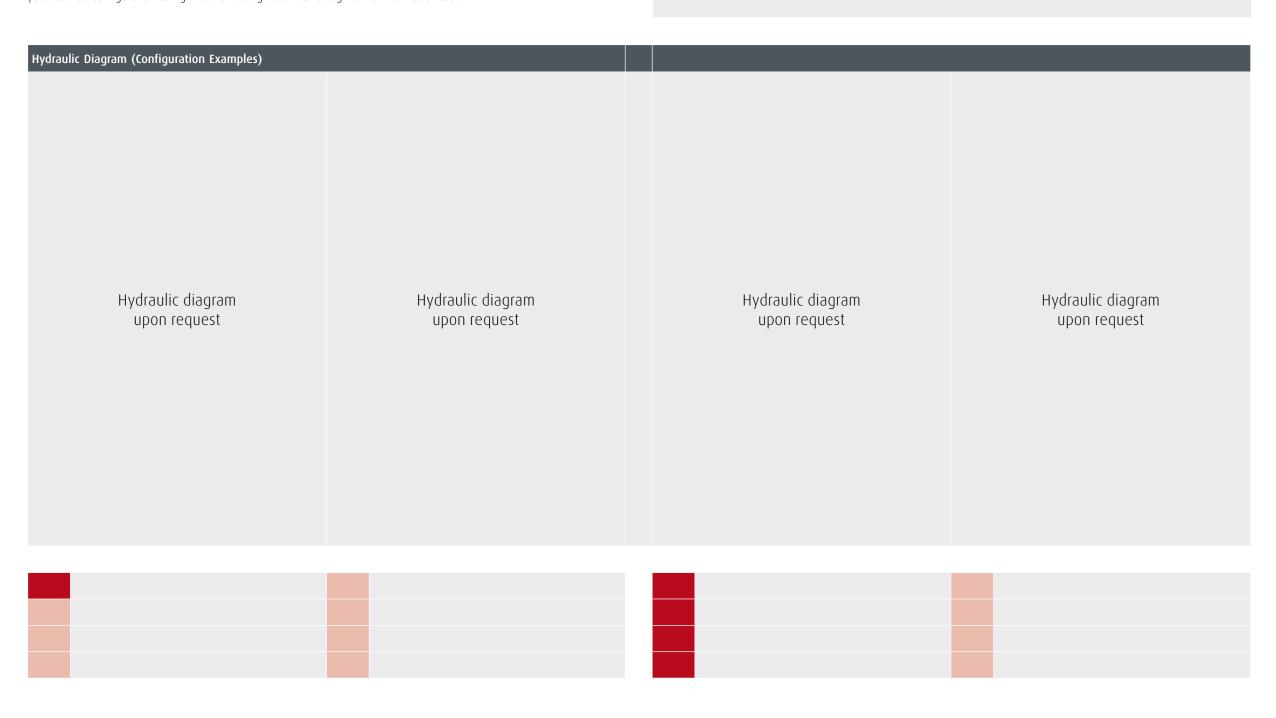
P4

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Pressure Control/



Technical Specification | Controls | Displacement Controller | **H5**







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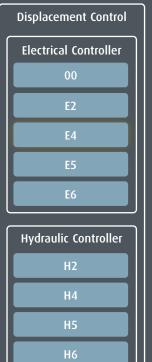
Shafts

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00
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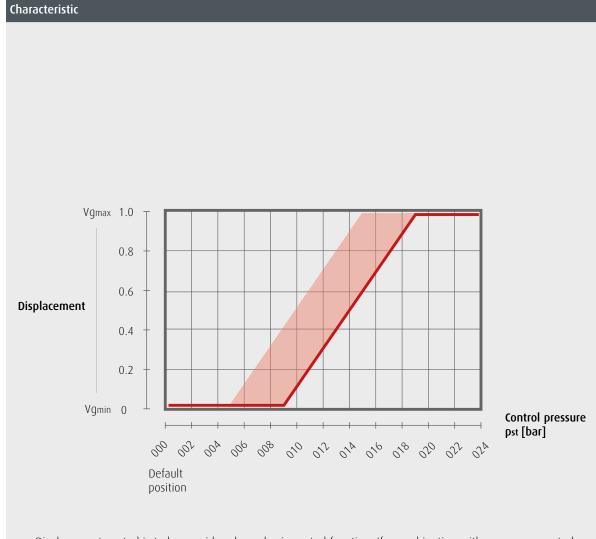
Technical Specification | Controls | Displacement Controller | **H6**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic Specification					
Begin of control/	Vgmax/ Maximum torque/ Minimum speed	Control pressure (pst)	Minimum Setting		5
Default position			Maximum Setting	bar	9
	Vgmin/ Minimum torque/ Maximum speed	Control pressure (pst)	Minimum Setting		15
End of control			Maximum Setting		19
Reference	Reference pressure				Case pressure
Limit	Maximum pilot pre	ssure		bar	50
Control press. supply	Minimum pressure	at work port A	N/B	bar	30
Threaded port			ISO 6149-1 M14x1.5		

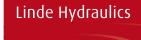
		Nominal size				60	85	115	140	170	215
			Undamped	1/4 Vgmax -> Vgmax	S	-	0.15	0.2	0.2	0.3	0.5
Dan	Damping	Approx. swiveling speed at 200 bar		Vgmax -> 1/4 Vgmax		-	0.15	0.2	0.2	0.3	0.5
			Damped	1/4 Vgmax -> Vgmax		-	0.3	0.5	0.5	0.6	1.0
				Vgmax -> 1/4 Vgmax		-	0.3	0.5	0.5	0.6	1.0

The displacement controller H6 is an hydraulic controller that enables stepless positive control (proportional to the applied pilot pressure) and default position Vgmin. In addition, one-sided or two-sided damping is optionally available. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



Displacement control is to be considered as a basic control function. If a combination with a pressure control function is applied, this overrides the displacement control within the corresponding control range.







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Pressure Control/ Override

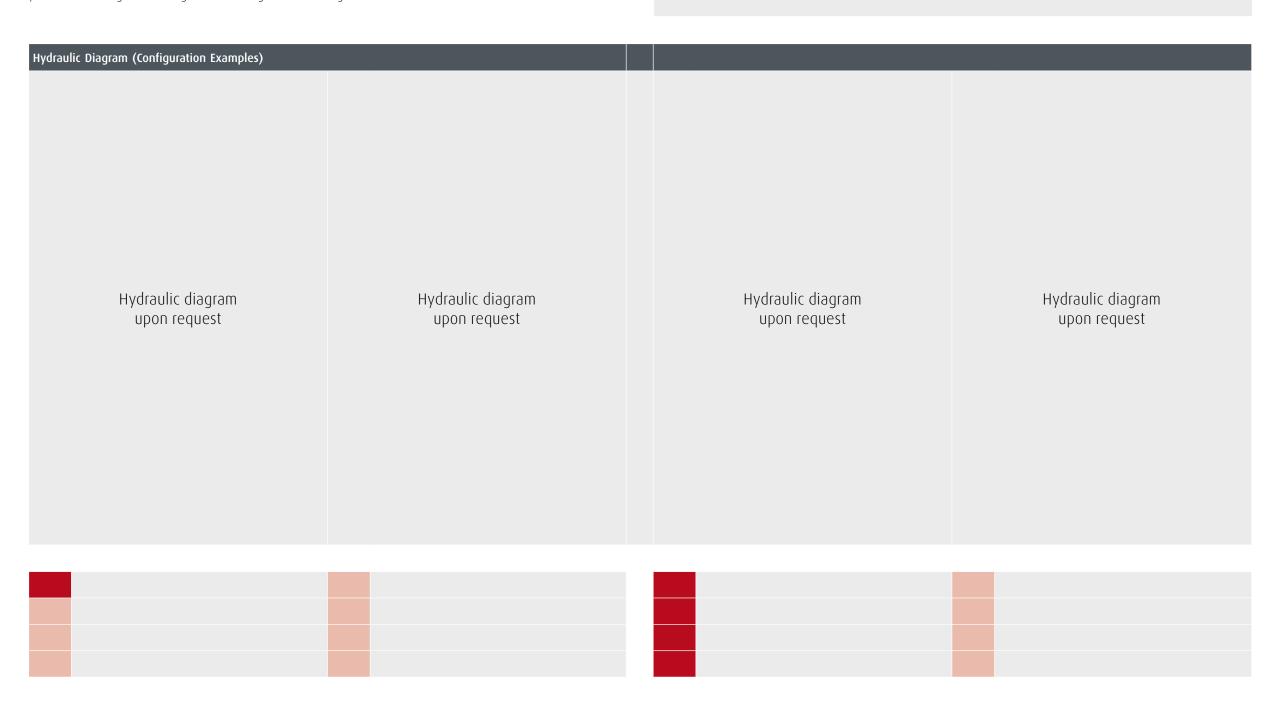
P0

P4

P6



Technical Specification | Controls | Displacement Controller | **H6**







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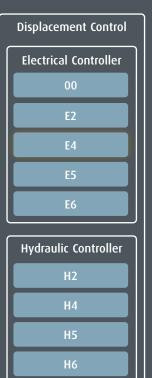
Mechanical Interfaces

Hydraulical Interfaces

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00
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P1
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Pressure Control/



Technical Specification | Controls | Pressure Controller and/or Override Signal | **00**

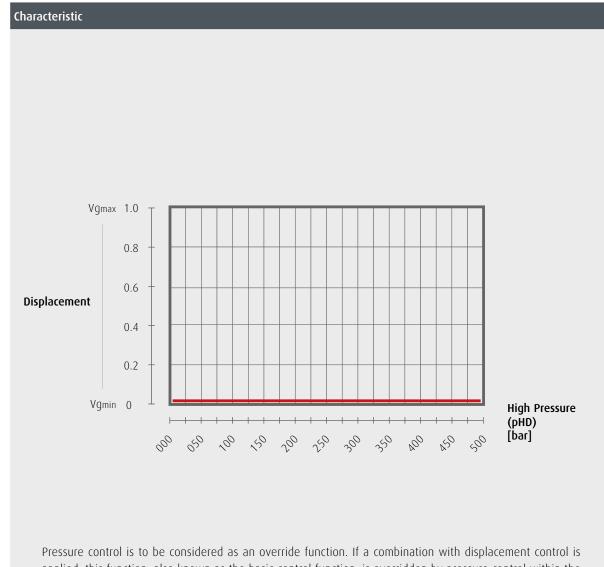
In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile

your desired configuration using the short designations as a segment of the model code.

Basic	Specification					
	Begin of Control/ Default position	Vgmin/	Control pressure (pHD)	Minimum Setting		-
		Minimum Torque/ Maximum Speed		Maximum Setting	bar	-
	End of Control	Vgmax/	Control	Minimum Setting	Ddl	-
		Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		-
	Begin of Control	No reduction of the pressure setting/ Basic function is not affected	Pilot pr. pressure (pst)		bar	-
Reduction of ressure seting			Control pr. pressure (pHD)			-
Reduction of pressure seting		Max. reduction of the pressure setting/ Basic function is overriden	Pilot pr. pressure (pst)			-
	End of Control		Control pr. pressure (pHD)			-
se of ement	Vo switch		Solenoid unenergized			-
Increase of displacement	Vgmax switch		Solenoid energized			-
	Control variable					
	Control press. supply	Minimum pressure a	at work port A/	′В	bar	-

	Damping	Nominal size				60	85	115	140	170	215
		Swiveling speed at 200 bar	Undamped	1/4 Vgmax -> Vgmax	S	-	-	-	-	-	-
				Vgmax -> 1/4 Vgmax		-	-	-	-	-	-
			Damped	1/4 Vgmax -> Vgmax		-	-	-	-	-	-
				Vgmax -> 1/4 Vgmax		-	-	-	-	-	-

The pressure controller with the abbreviation "00" is not an individual function. In this case, the component for diplacement and pressure control does not support pressure control. When choosing this option, a displacement controller must be considered to control the motor.



applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.





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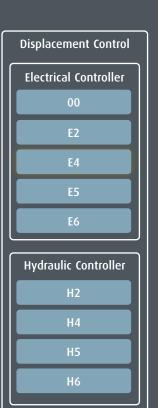
Snarts

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Pressure Control/Override

00

P0

P1

P3

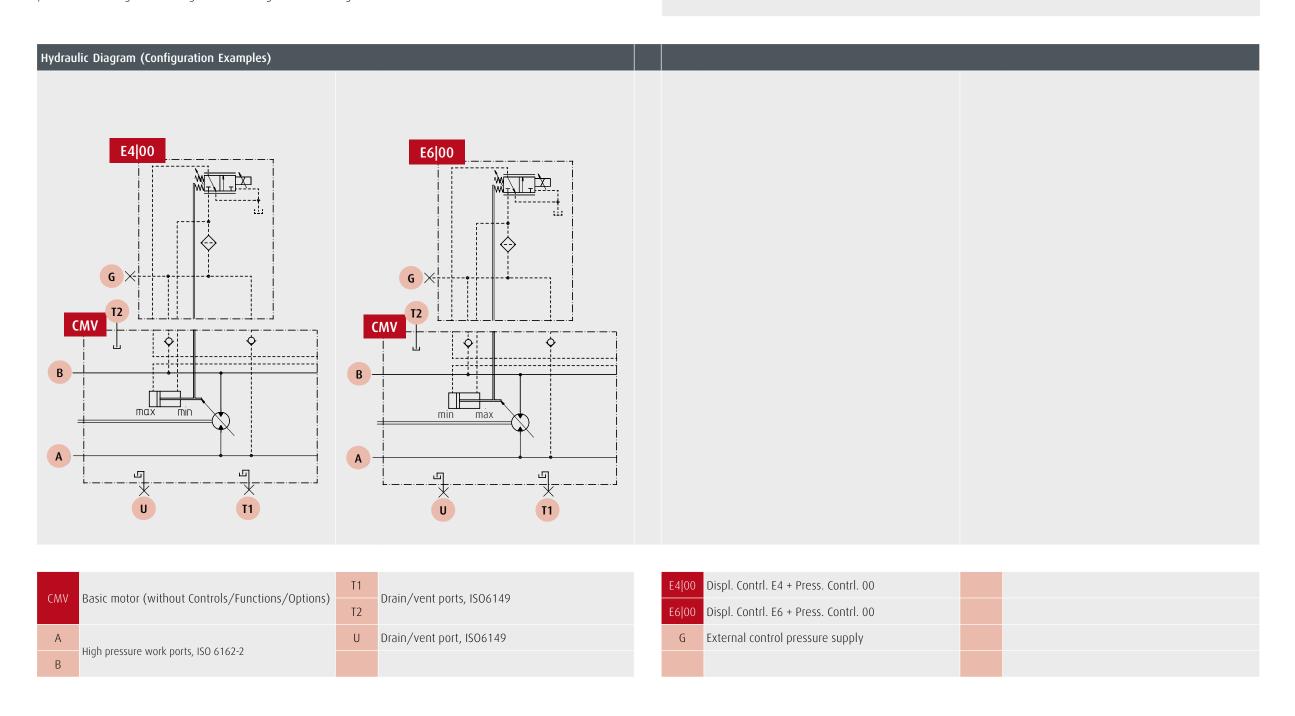
P4

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Technical Specification | Controls | Pressure Controller and/or Override Signal | **00**







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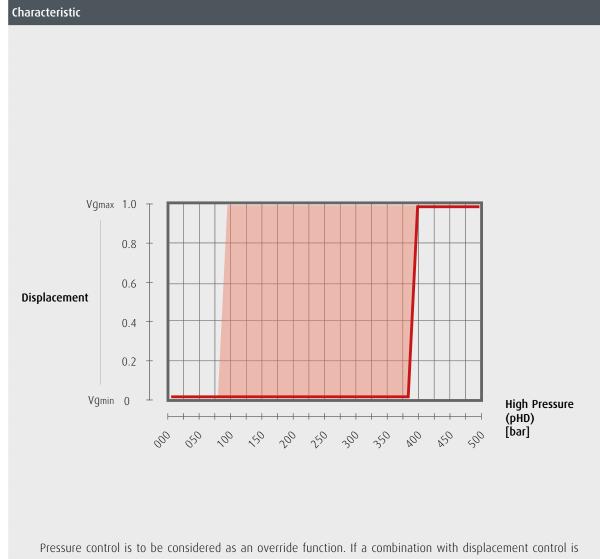
Technical Specification | Controls | Pressure Controller and/or Override Signal | **P0**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

	Basic	Specification					
		Begin of Control/	Vgmin/	Control pressure	Minimum Setting		80
		Default position	Minimum Torque/ Maximum Speed	(pHD)	Maximum Setting	bar	385
			Vgmax/	Control	Minimum Setting		95
		End of Control	Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		400
	on of seting	Begin of Control	No reduction of the pressure setting/ Basic function is not affected	Pilot pr. pressure (pst)		bar	n.a.
				Control pr. pressure (pHD)			n.a.
	Reduction of pressure seting	End of Control	Max. reduction of the pressure setting/ Basic function is overriden	Pilot pr. pressure (pst)			n.a.
				Control pr. pressure (pHD)			n.a.
	se of ement	Va switch		Solenoid unenergized			n.a.
	Increase of displacement	Vgmax switch		Solenoid energized			n.a.
		Control variable					Work port A or B according to highest pressure value prevailing
		Control press. supply	Minimum pressure	at work port A,	/B	bar	30

	Damping	Nominal size			60	85	115	140	170	215	
		Swiveling speed at 200 bar	Undamped	1/4 Vgmax -> Vgmax	S	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
				Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
			Damped	1/4 Vgmax -> Vgmax		upon request	upon request	upon request	upon request	upon request	upon request
				Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

The pressure controller P0 enables self-regulating control depending on prevailing high-pressure level and default position Vgmin without any external signal. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



Pressure control is to be considered as an override function. If a combination with displacement control is applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.







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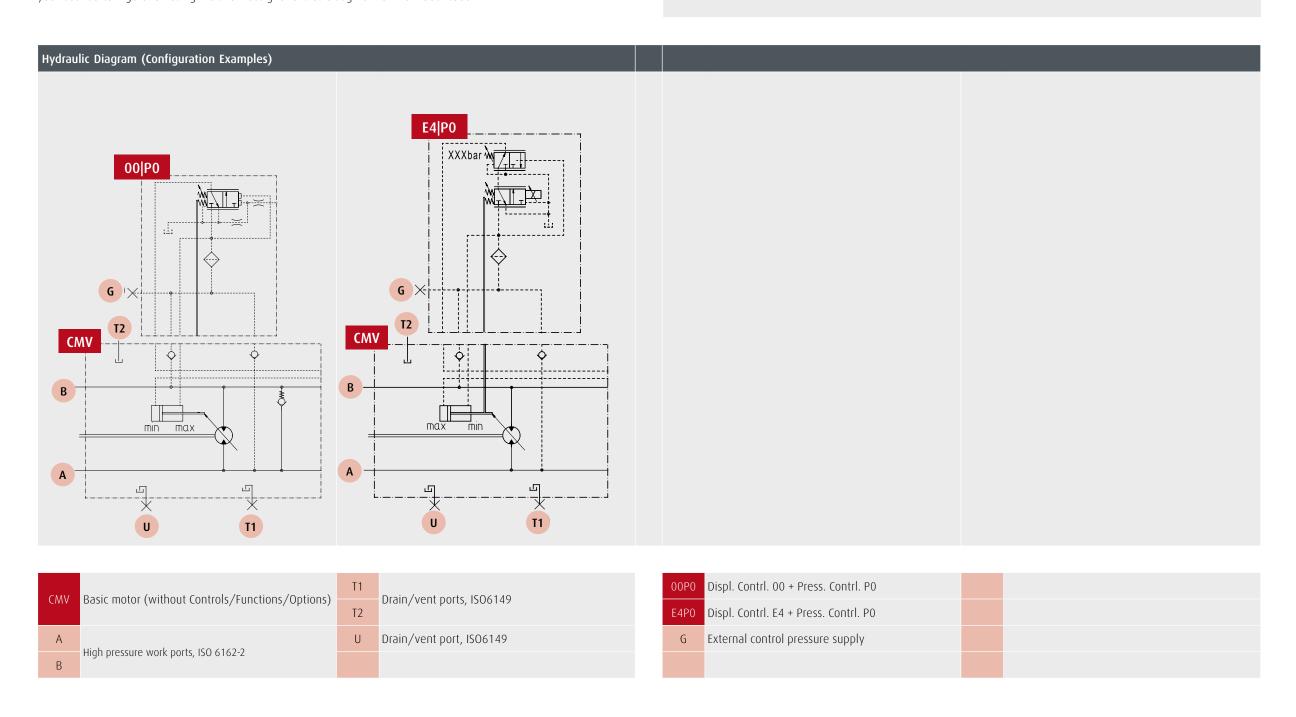
Functions/Options



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00
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Technical Specification | Controls | Pressure Controller and/or Override Signal | **P0**







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Pressure Control/ Override
00
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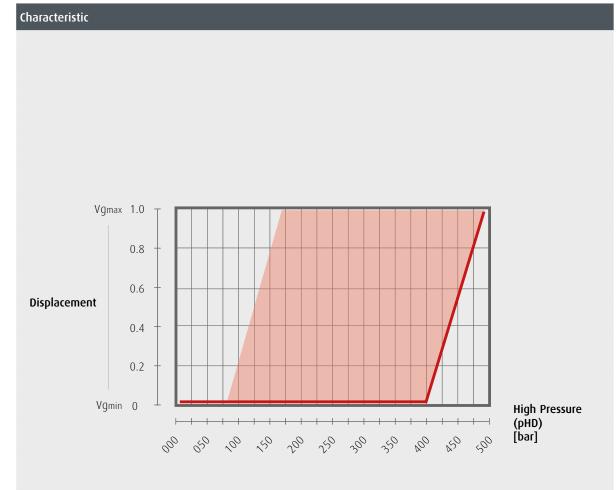
Technical Specification | Controls | Pressure Controller and/or Override Signal | P1

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basio	: Specification					
	Begin of Control/ Default position	Vgmin/	Control	Minimum Setting		80
Basic setting		Minimum Torque/ Maximum Speed	pressure (pHD)	Maximum Setting	bar	400
Basic	End of Control	Vgmax/	Control	Minimum Setting	Ddl	170
		Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		490
_	Begin of Control	No reduction of the pressure setting/ Basic function is not affected	Pilot pr. pressure (pst)			n.a.
Reduction of ressure seting			Control pr. pressure (pHD)		bar	n.a.
Reduction of pressure seting		Max. reduction of the pressure setting/ Basic function is overriden	Pilot pr. pressure (pst)			n.a.
_	End of Control		Control pr. pressure (pHD)			n.a.
ise of ement	Vamov switch		Solenoid unenergized			n.a.
Increase of displacement	Vgmax switch		Solenoid energized			n.a.
	Control variable					Work port A or B according to highest pressure value prevailing
	Control press. supply	Minimum pressure	at work port A _/	/B	bar	30

	Damping	Nominal size			60	85	115	140	170	215	
		Swiveling speed at 200 bar	Undamped	1/4 Vgmax -> Vgmax	S	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
				Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
			Damped	1/4 Vgmax -> Vgmax		upon request	upon request	upon request	upon request	upon request	upon request
				Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

The pressure controller P1 enables self-regulating control depending on prevailing high-pressure level and default position Vgmin without any external signal. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply. The difference between P0 and P1 is the gradient, with which the displacement changes as a function of rising work pressure.



The difference between P0 and P1 is the gradient, with which the displacement changes as a function of rising work pressure. P0 has a pressure gain of about 10 to 15 bar from Vmin to Vmax, whereas P1 has a pressure gain of about 100 bar from Vmin to Vmax.

Pressure control is to be considered as an override function. If a combination with displacement control is applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.







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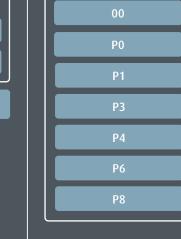
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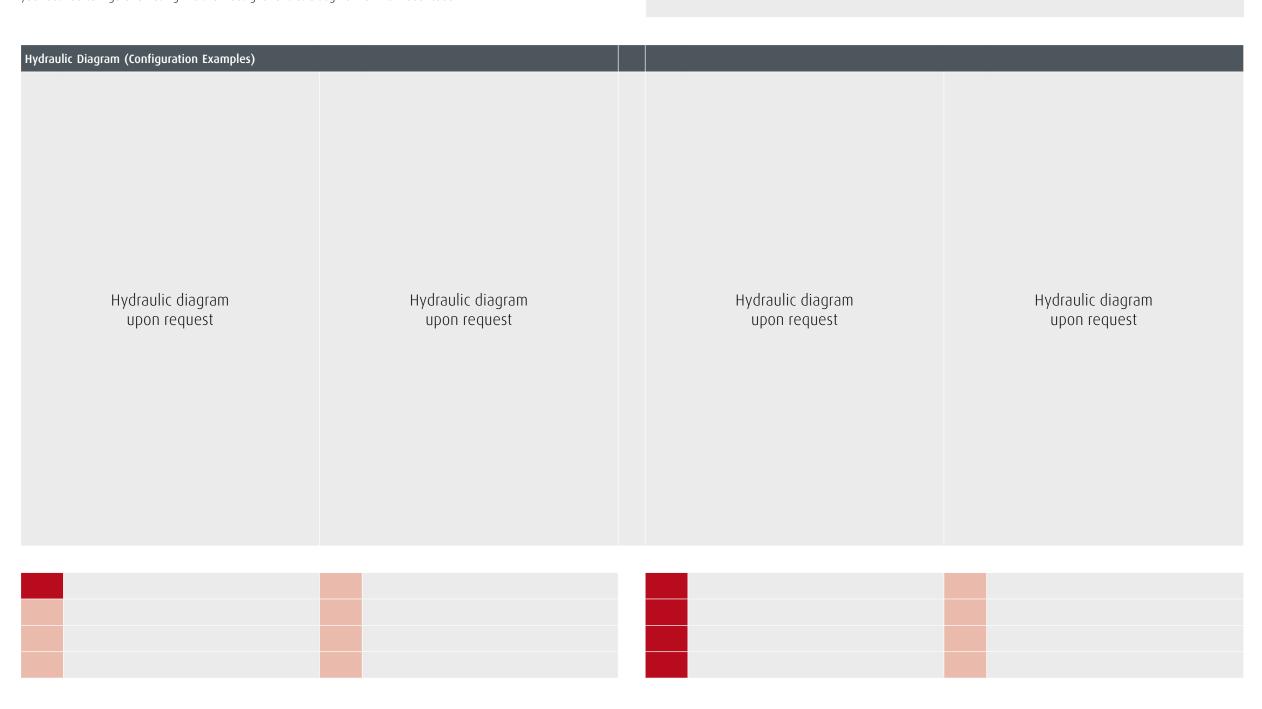
Functions/Options

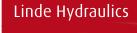






Technical Specification | Controls | Pressure Controller and/or Override Signal | P1







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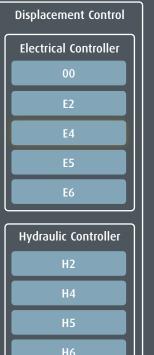
Shafts

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Pressure Control/



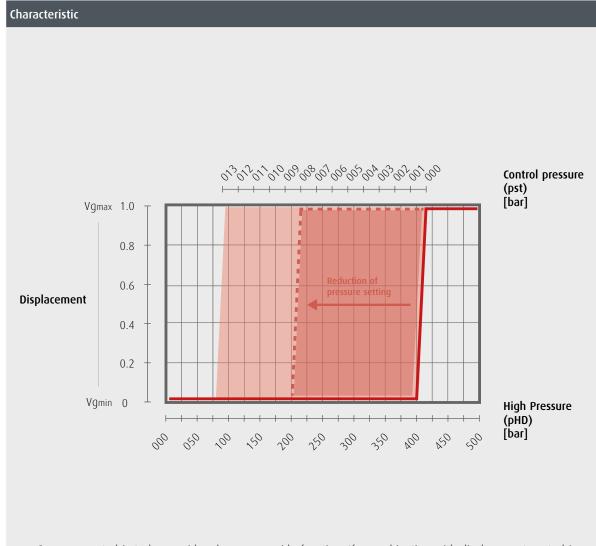
Technical Specification | Controls | Pressure Controller and/or Override Signal | **P3**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

В	asic	Specification					
		Begin of Control/ Default position	Vgmin/	Control pressure (pHD)	Minimum Setting		80
			Minimum Torque/ Maximum Speed		Maximum Setting	bar	400
		End of Control	Vgmax/	Control	Minimum Setting	Ddl	95
		End of Control	Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		415
	Reduction of ressure seting	Begin of Control	No reduction of the pressure setting/ Basic function is not affected	Pilot pr. pressure (pst)			0
ion of				Control pr. pressure (pHD)		bar	according to basic setting
Redire	pressure seting	End of Control	Max. reduction of the pressure setting/ Basic function is overriden	Pilot pr. pressure (pst)		bar	8
	_			Control pr. pressure (pHD)			according to basic setting minus 176
Sp of	ement	Vgmax switch		Solenoid unenergized			na.
Incres	Increase of displacement	vgmax SWIICH		Solenoid energized			n.a.
		Control variable					Work port A or B according to highest pressure value prevailing
	Control press. supply Minimum pressure at work port A/B					bar	30

	Damping	Nominal size			60	85	115	140	170	215	
		Swiveling speed	Undamped	1/4 Vgmax -> Vgmax	S	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
				Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		at 200 bar	Damped	1/4 Vgmax -> Vgmax		upon request	upon request	upon request	upon request	upon request	upon request
				Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

The pressure controller P3 enables self-regulating control depending on prevailing high-pressure level and default position Vgmin without any external signal. According to the desired operating condition, the pressure setting can be reduced continuously via an external signal. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



Pressure control is to be considered as an override function. If a combination with displacement control is applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.





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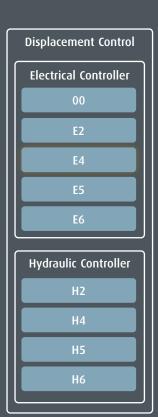
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Pressure Control/Override

00

P0

P1

P3

P4

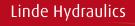
P6

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Technical Specification | Controls | Pressure Controller and/or Override Signal | **P3**







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Technical Specification | Controls | Pressure Controller and/or Override Signal | **P4**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

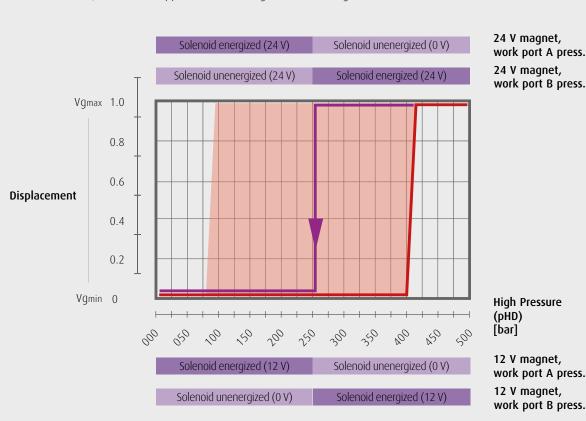
Basic	Specification					
	Begin of Control/	Vgmin/	Control	Minimum Setting		80
Basic setting	Default position	Minimum Torque/ Maximum Speed	pressure (pHD)	Maximum Setting	bar	400
Basic	End of Control	Vgmax/	Control	Minimum Setting	Dal	95
	End of Control	Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		415
- -	Pressure side selection	Work port A pressurized/ direction of rotation: counterclockwise	Solenoid une	nergized		Pressure control activated/ Motor remains at Vgmin
Deactivating of pressure control			Solenoid ene	rgized		Pressure control deactivated
Deactiv		Work port B pressurized/ direction of rotation: counterclockwise	Solenoid unenergized			Pressure control deactivated
			Solenoid ene	rgized		Pressure control activated/ Motor remains at Vgmin
se of ement	Varrau switch		Solenoid unenergized			n.a.
Increase of displacement	Vgmax switch		Solenoid energized			n.a.
	Control variable					Work port A or B according to pressure side selection
	Control press. supply Minimum pressure at work port A/B					30

		Nominal size				60	85	115	140	170	215
			Undamped	1/4 Vgmax -> Vgmax	C	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Damping	Swiveling speed		Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		at 200 bar	Damand	-> Vgmax request re-	upon request	upon request	upon request	upon request	upon request		
			Damped	Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

The pressure controller P4 enables self-regulating control depending on prevailing high-pressure level and default position Vgmin without any external signal. Independently of the basic setting, the pressure controller can be overridden so that the motor sviwels to Vgmin - depending on the pressure side. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



This controller provides the feature to define side selection for the pressure signal reaching the pressure controller. This feature is i.e. to be selected, when the application can generate a high pressure during decelleration, like in drive applications or during downhill driving.



Pressure control is to be considered as an override function. If a combination with displacement control is applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.



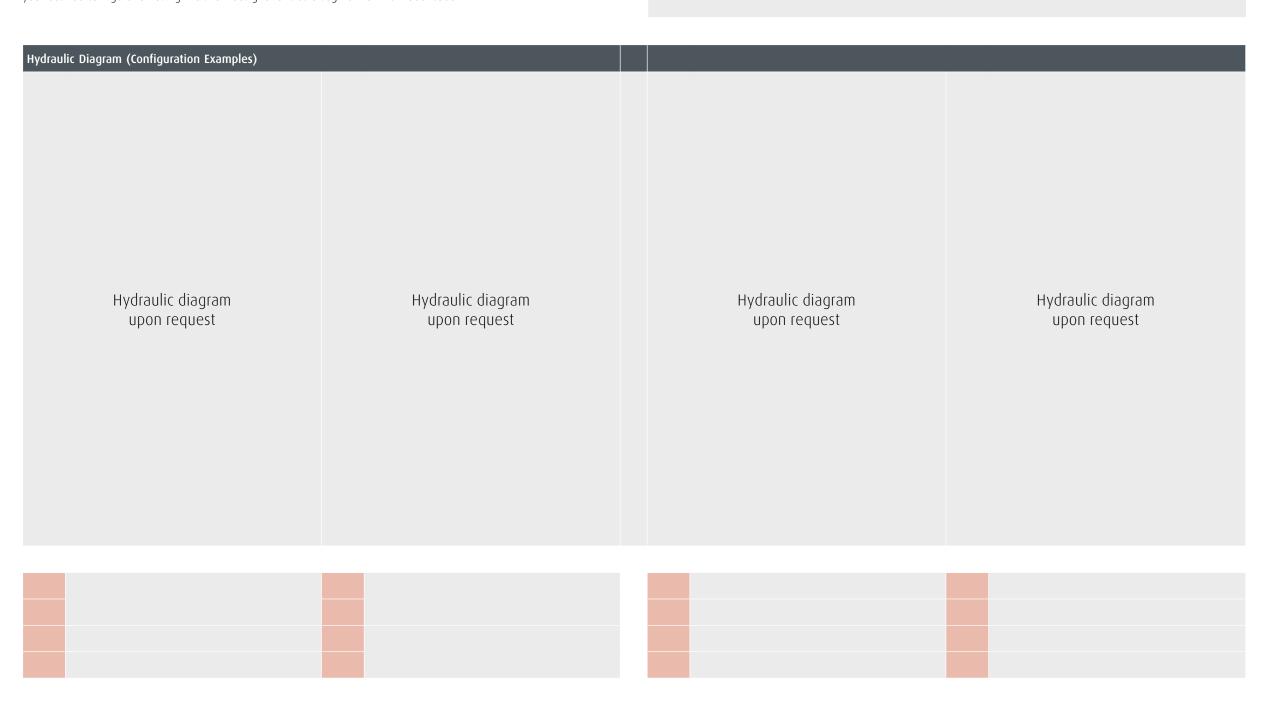


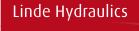


OVERVIEW Displacement Control Key Facts CONFIGURATION **Electrical Controller TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Hydraulic Controller Electric Interfaces Mechanical Interfaces Shafts Pressure Control/ **Override** Hydraulical Interfaces Work Ports Auxiliary Ports P1 Functions/Options Р3 P6



Technical Specification | Controls | Pressure Controller and/or Override Signal | **P4**







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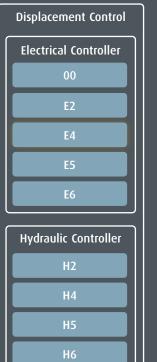
Shafts

Hydraulical Interfaces

Work Ports

Auxiliary Ports

Functions/Options



Pressure Control/ Override
00
P0
P1
Р3
P4
P6
P8



Technical Specification | Controls | Pressure Controller and/or Override Signal | **P6**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic	Specification									
	Begin of Control/	Vgmin/	Control	Minimum Setting		80				
Basic setting	Default position	Minimum Torque/ Maximum Speed	(pHD)	Maximum Setting	bar	400				
Basic	End of Control	Vgmax/	Control	Minimum Setting	Dai	95				
	End of Control	Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		415				
<u> </u>	Pressure side selection	Work port A pressurized/	Solenoid une	nergized		Pressure control activated/ Motor remains at Vgmin				
Deactivating of pressure control		direction of rotation: counterclockwise	Solenoid ene	rgized		Pressure control deactivated				
Deactiva oressure		Work port B pressurized/ direction of rotation: counterclockwise	Solenoid unenergized			Pressure control deactivated				
			Solenoid ene	rgized		Pressure control activated/ Motor remains at Vgmin				
Increase of displacement	Vamov switch		Solenoid unenergized			according to basic setting				
Increa displac	Vgmax switch		Solenoid energized			Vgmax				
	Control variable					Work port A or B according to pressure side selection				
	Control press. supply Minimum pressure at work port A/B					30				

	Damping	Nominal size				60	85	115	140	170	215
			Undamped	1/4 Vgmax -> Vgmax	S	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		Swiveling speed		Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		at 200 bar	Damped	1/4 Vgmax -> Vgmax		upon request	upon request	upon request	upon request	upon request	upon request
				Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

The pressure controller P6 enables self-regulating control depending on prevailing high-pressure level and default position Vqmin without any external signal. Independently of the basic setting, the pressure controller can be overridden so that the motor sviwels to Vgmax or, depending on the pressure side, to Vqmin. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



Pressure control is to be considered as an override function. If a combination with displacement control is applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.



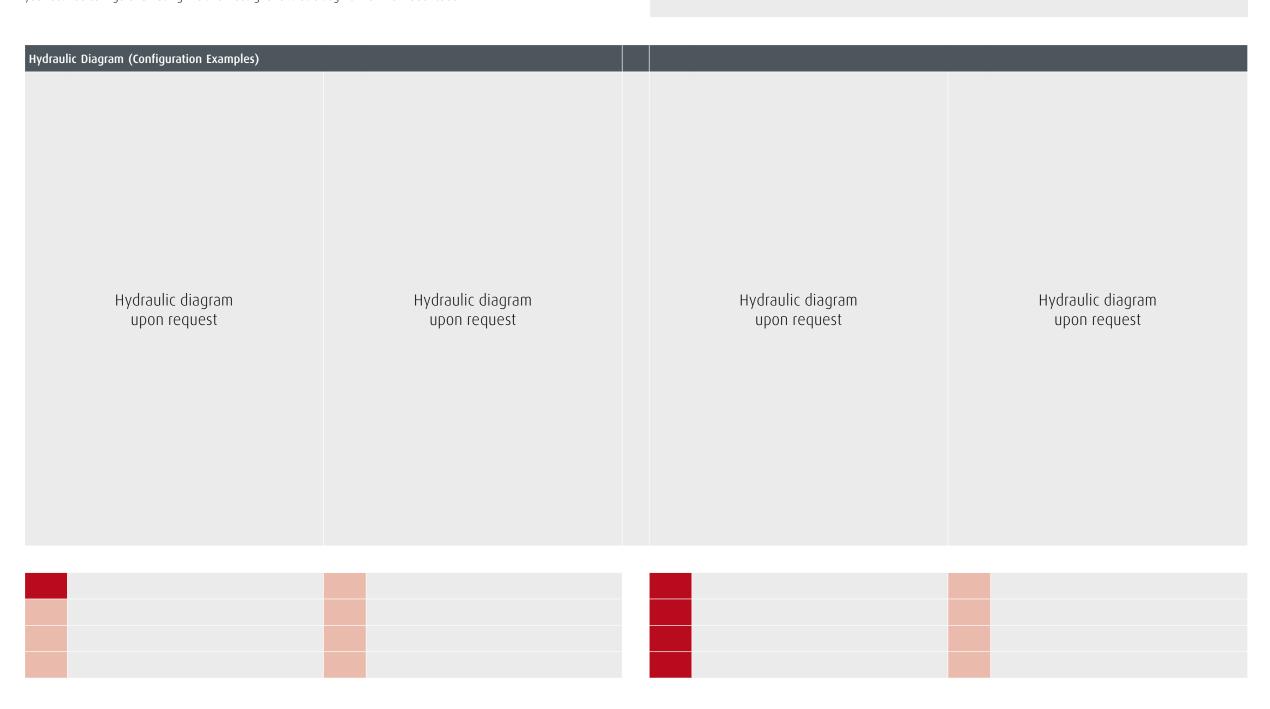


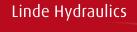


OVERVIEW Displacement Control Key Facts CONFIGURATION **Electrical Controller TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Hydraulic Controller Electric Interfaces Mechanical Interfaces Shafts Pressure Control/ **Override** Hydraulical Interfaces Work Ports Auxiliary Ports P1 Functions/Options Р3 Р6



Technical Specification | Controls | Pressure Controller and/or Override Signal | **P6**







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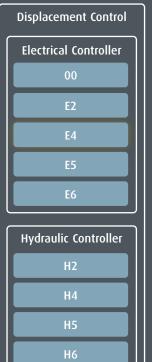
Shafts

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Work Ports

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Pressure Control/ Override
00
P0
P1
Р3
P4
P6
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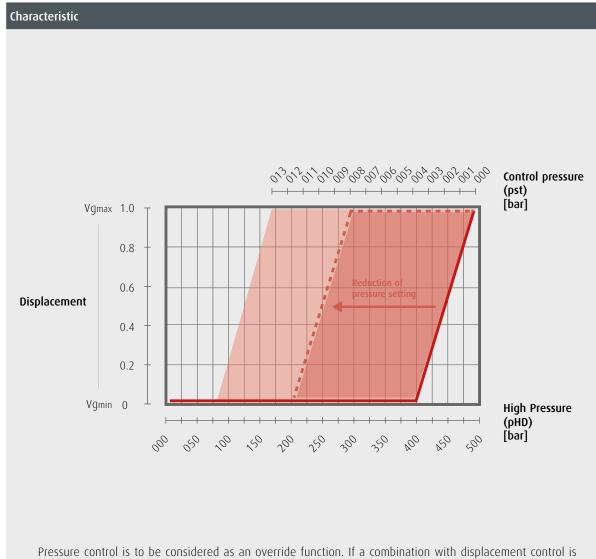
Technical Specification | Controls | Pressure Controller and/or Override Signal | **P8**

In the following you will find the technical specifications of the displacement and pressure controllers for the CMV. These are subdivided into electric and hydraulic displacement controllers as well as pressure controllers or override signals. First get an overview of the basic specs, options and characteristics. Note the short designations such as "E2" or "P0". In the section Find Model Code & Availability, you can then check the availability of the corresponding controllers and compile your desired configuration using the short designations as a segment of the model code.

Basic	Specification					
	Begin of Control/ Default position	Vgmin/	Control pressure (pHD)	Minimum Setting		80
Basic setting		Minimum Torque/ Maximum Speed		Maximum Setting	bar	400
	End of Control	Vgmax/	Control	Minimum Setting		170
		Maximum Torque/ Minimum Speed	pressure (pHD)	Maximum Setting		490
	Begin of Control	No reduction of the pressure setting/ Basic function is not affected	Pilot pr. pressure (pst)			0
tion of setting			Control pr. pressure (pHD)		bar	according to basic setting
Reduction of pressure seting	End of Control	Max. reduction of the pressure setting/ Basic function is overriden	Pilot pr. pressure (pst)			8
			Control pr. pressure (pHD)			according to basic setting minus 176
ise of ement	Va switch		Solenoid unenergized			na.
Increase of displacement	Vgmax switch		Solenoid energized			n.a.
	Control variable					Work port A or B according to highest pressure value prevailing
	Control press. supply	Minimum pressure	at work port A/	'B	bar	30

	Damping	Nominal size				60	85	115	140	170	215
			Undamped	1/4 Vgmax -> Vgmax	max s upon upon request request ->	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		Swiveling speed		Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
		at 200 bar		1/4 Vgmax -> Vgmax				upon request	upon request	upon request	upon request
			Damped	Vgmax -> 1/4 Vgmax		n.a.	n.a.	n.a.	n.a.		

The pressure controller P8 enables self-regulating control depending on prevailing high-pressure level and default position Vgmin without any external signal. According to the desired operating condition, the pressure setting can be reduced continuously via an external signal. In addition, this pressure controller is basically one-sided damped. The control pressure supply operates with oil from the high-pressure circuit. Accordingly, for reliable functionality under all conditions, a minimum pressure must be ensured. If the working pressure level is too low for the control function, the required pressue can be connected to the port "G" from an outside pressure supply.



applied, this function, also known as the basic control function, is overridden by pressure control within the corresponding control range.







OVERVIEW Displacement Control Key Facts CONFIGURATION **Electrical Controller TECHNICAL SPECIFICATION** General Technical Data Operating Parameters Hydraulic Controller Electric Interfaces Mechanical Interfaces Shafts Pressure Control/ **Override** Hydraulical Interfaces Work Ports Auxiliary Ports P1 Functions/Options Р3 Р6



Technical Specification | Controls | Pressure Controller and/or Override Signal | **P8**





Speed & Direction

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Auxiliary Ports

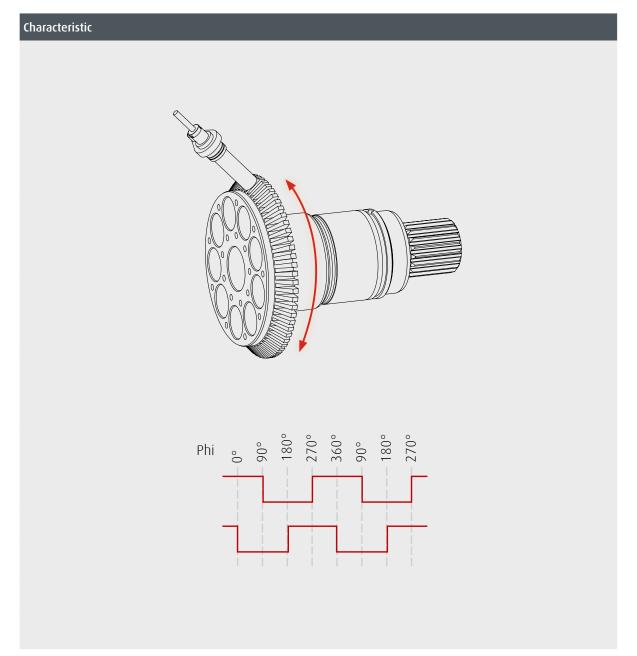
Functions/Options

Technical Specification | Sensors | **Speed & Direction**

In the following you will find the technical specifications of the sensors for the CMV. First get an overview of the specification. In the section Find Model Code & Availability, you can then check the availability of the sensor and compile your desired configuration using the short designations as a segment of the model code.

The sensor for speed and direction of rotation is located in the housing of the CMV and picks up the frequency signal from a increment ring on the drive shaft. It is available as an option. If no speed sensor is desired, but the possibility for subsequent installation exists, the drive shaft is supplied with increments and the installation opening is provided with a blind plate.

Basic Specification									
Sensor type						На	all		
Signal output						Nf	PN		
Voltage			V			7.0	.32.0		
Protection class					(See coi	nnecto	٢	
	Nominal siz	e		60	85	115	140	170	215
Impulsos	Impulses pe	er rev		54	58	65	70	74	80
Impulses				-	-	-	-	-	-
				-	-	-	-	-	-







Speed & Direction

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Functions/Options



In the following you will find the technical specifications of the sensors for the CMV. First get an overview of the specification. In the section Find Model Code & Availability, you can then check the availability of the sensor and compile your desired configuration using the short designations as a segment of the model code.







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3.13.1

Hydraulical Interfaces

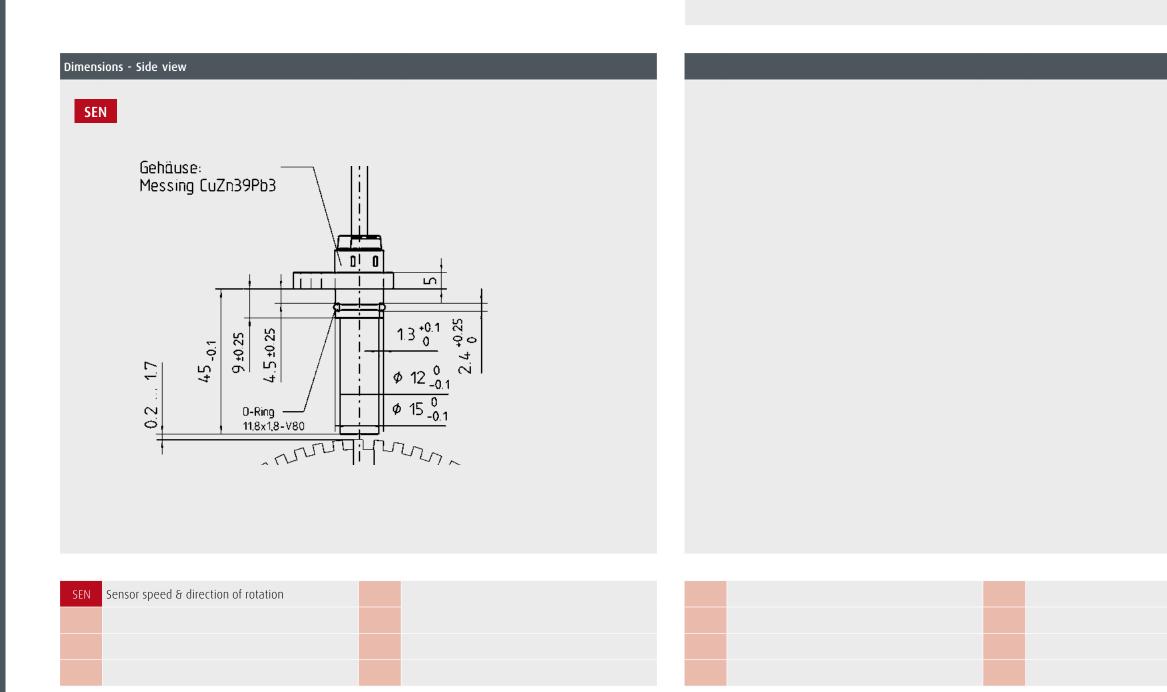
Work Ports

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Technical Specification | Sensors | **Speed & Direction**

In the following you will find the technical specifications of the sensors for the CMV. First get an overview of the specification. In the section Find Model Code & Availability, you can then check the availability of the sensor and compile your desired configuration using the short designations as a segment of the model code.







A - AMP Junior Timer

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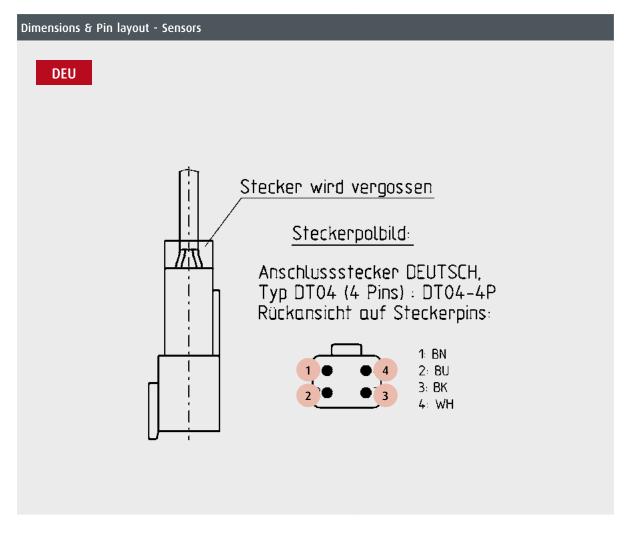
Work Ports

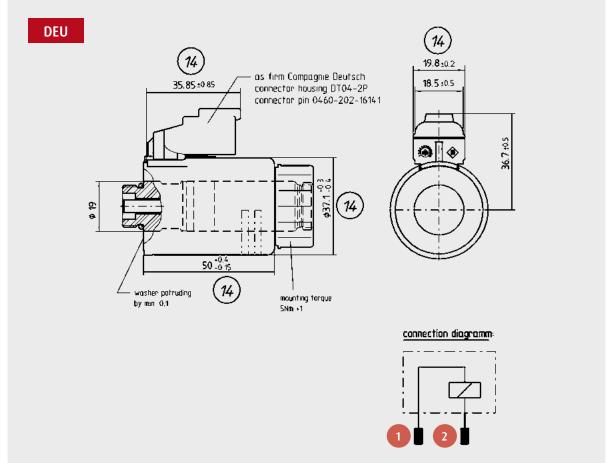
Auxiliary Ports

Functions/Options

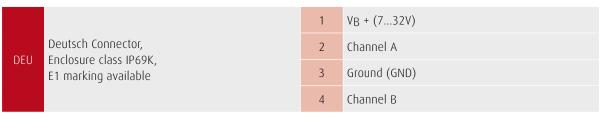
Technical Specification | Connectors | **D - Deutsch**

In the following you will find the technical specifications of the connectors for the CMV. First get an overview of the specification. Note the short designations such as "D" or "A". In the section Model Code & Availability, you can then check the availability of the sensor and compile your desired configuration using the short designations as a segment of the model code





Dimensions & Pin layout - Solenoids (porportional/switched)



Deutsch Connector, Enclosure class IP69K, E1 marking available 1 VB + (7...32V) / Switched ground

Switched ground / VB + (7...32V)





A - AMP Junior Timer

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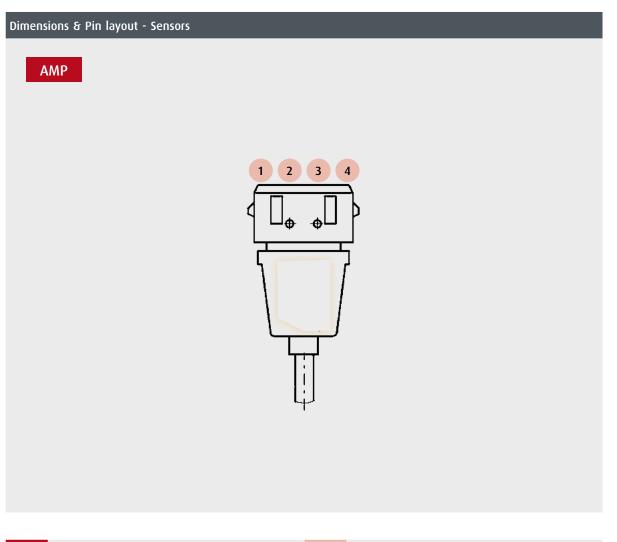
Work Ports

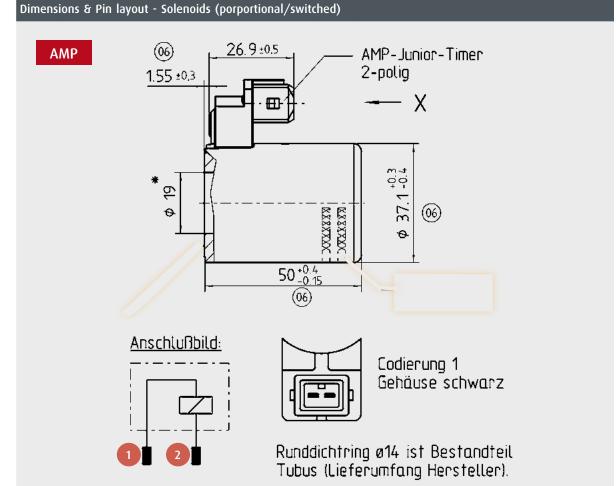
Auxiliary Ports

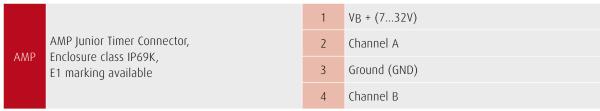
Functions/Options

Technical Specification | Connectors | A - AMP Junior Timer

In the following you will find the technical specifications of the connectors for the CMV. First get an overview of the specification. Note the short designations such as "D" or "A". In the section Model Code & Availability, you can then check the availability of the sensor and compile your desired configuration using the short designations as a segment of the model code







AMP Junior Timer Connector, Enclosure class IP69K, E1 marking available 1 VB + (7...32V) / Switched ground
2 Switched ground / VB + (7...32V)
3





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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **C4/CMV60**

In the following you will find the technical specifications of the mounting flanges and auxiliary ports. They are clustered according to the standard and nominal sizes. First get an overview of the dimensions. Note the short designations such as "C4" or "E4". In the section [Model Code & Availability] you can then check the availability of the mounting flange as well as auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.

Dimensions		
	Dimensions upon request	

Dimensions		
	Dimensions	
	upon request	

А	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
A		ВХ	Pressure equalization port
В	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149
D	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149

G	Ext. control pressure supply, ISO 6149	
U	Bearing flush port, ISO 6149	
Y1	Measuring port, ISO 6149	





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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **C4/CMV60**

In the following you will find the technical specifications of the mounting flanges and auxiliary ports. They are clustered according to the standard and nominal sizes. First get an overview of the dimensions. Note the short designations such as "C4" or "E4". In the section [Model Code & Availability] you can then check the availability of the mounting flange as well as auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.

Dimensions - side view		
	Dimensions upon request	

Dimensions - front view		
	Dimensions upon request	

Α	٨	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise	AX	Pressure equalization port
	A	Nom. pres.: 450 bar, max. press.: 500 bar		riessure equalization port
	D	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149
	В		T2	Drain / vent port, ISO 6149

G	Ext. control pressure supply, ISO 6149	
U	Bearing flush port, ISO 6149	
Y1	Measuring port, ISO 6149	





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ISO 3019-1/ SAE J744

C4 / CMV 60

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **C4/CMV60**

Dimensions	
	Dimensions
	upon request

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise	AX	Pressure equalization port
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149
D	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149

G	Ext. control pressure supply, ISO 6149	
U	Bearing flush port, ISO 6149	
Y1	Measuring port, ISO 6149	





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Functions/Options

ISO 3019-1/ SAE J744

C4 / CMV 60

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | C2/CMV85

Dimensions		
	Dimensions	
	upon request	

Dimensions		
	Dimensions upon request	

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Pressure equalization port	
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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Functions/Options

ISO 3019-1/ SAE J744

C4 / CMV 60

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | C2/CMV85

Dimensions		
	Dimensions	
	upon request	

Dimensions		
	Dimensions upon request	

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Pressure equalization port	
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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Functions/Options

ISO 3019-1/ SAE J744

C4 / CMV 60

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | C2/CMV85

Dimensions		
	Dimensions	
	upon request	

Dimensions		
	Dimensions upon request	

٨	٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Pressure equalization port
	A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
	0	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
	В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV115**

Dimensions - Top view		
	Dimensions upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Pressure equalization port
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV115**

Dimensions - Top view
Dimensions upon request

Dimensions		
	Dimensions	
	upon request	

	٨	High pressure work port, ISO 6162-2, SAE 1" A If pressurised - motor runs clockwise	AX	Pressure equalization port
	A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
0	В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
	В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV115**

Dimensions - Top view
Dimensions upon request

Dimensions		
	Dimensions	
	upon request	

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Proceure equalization port
A		ВХ	Pressure equalization port
В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV140**

Dimensions		
	Dimensions upon request	

Dimensions		
	Discosion	
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
A		ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV140**

Dimensions		
	Dimensions upon request	

Dimensions		
	Discosion	
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
A		ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV140**

Dimensions		
	Dimensions upon request	

Dimensions		
	Discosion	
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV170**

Dimensions		
	Dimensions	
	upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149,
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M14x1.5, 11.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV170**

Dimensions		
	Dimensions	
	upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149,
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M14x1.5, 11.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **D4/CMV170**

Dimensions		
	Dimensions	
	upon request	

Dimensions		
	Dimensions upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149,
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M14x1.5, 11.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **E4/CMV215**

Dimensions		
	Dimensions upon request	

Dimensions		
	Dimensions	
	upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149,
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M22x1.5, 15.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **E4/CMV215**

Dimensions		
	Dimensions upon request	

Dimensions		
	Dimensions	
	upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149,
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M22x1.5, 15.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-1/SAE J744 | **E4/CMV215**

Dimensions		
	Dimensions upon request	

Dimensions		
	Dimensions	
	upon request	

٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149,
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M22x1.5, 15.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

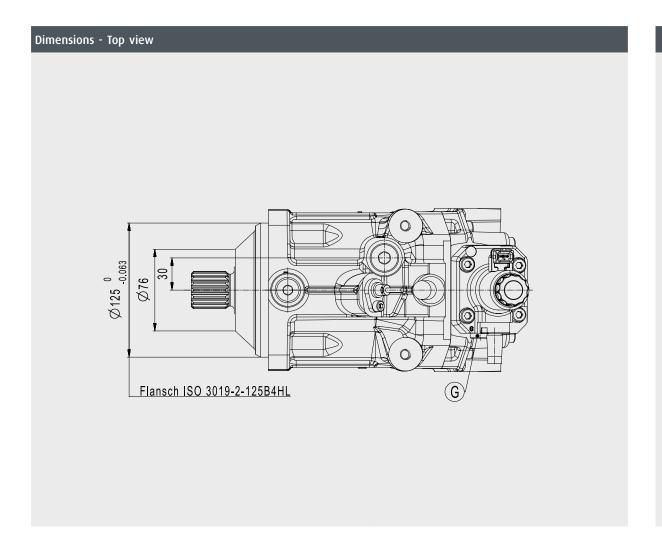
similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

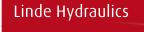
Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | M4/CMV60



٨	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise	AX	Proceure equalization port
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
D	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149

G	Ext. control pressure supply, ISO 6149	
U	Bearing flush port, ISO 6149	
Y1	Measuring port, ISO 6149	







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D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

similar to ISO 3019-2

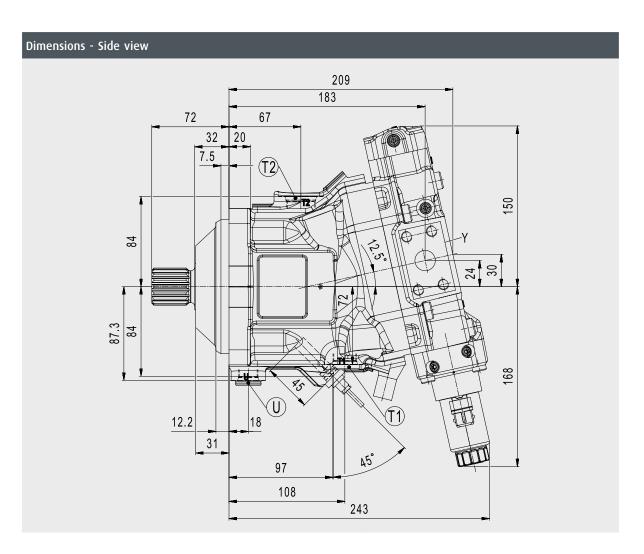
P2 / CMV 60

Y2 / CMV 85

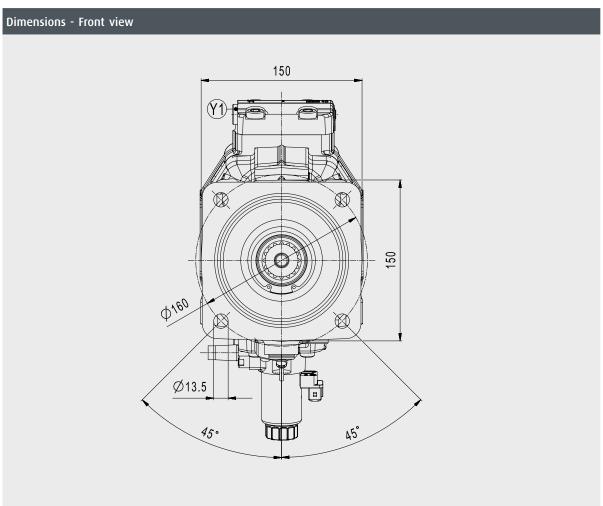
S2 / CMV 115

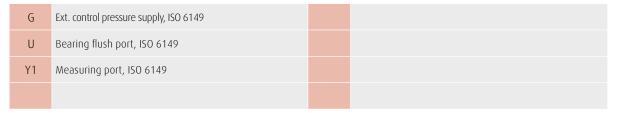
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | M4/CMV60



А	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX BX	Pressure equalization port
ρ.	High pressure work port, ISO 6162-2,	T1	Drain / vent port, ISO 6149
В	If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149









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D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 170

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

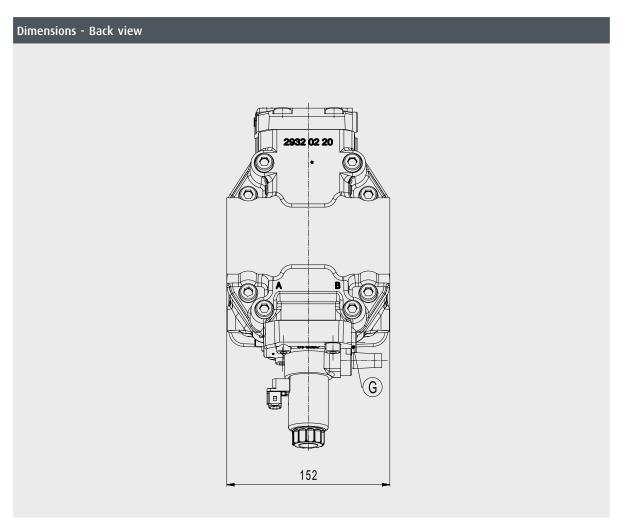
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | M4/CMV60

Ext. control pressure supply, ISO 6149

Bearing flush port, ISO 6149

Measuring port, ISO 6149



٨	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise	AX	Pressure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149

imensions			





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D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 170

Plug-in, similar to ISO 3019-2

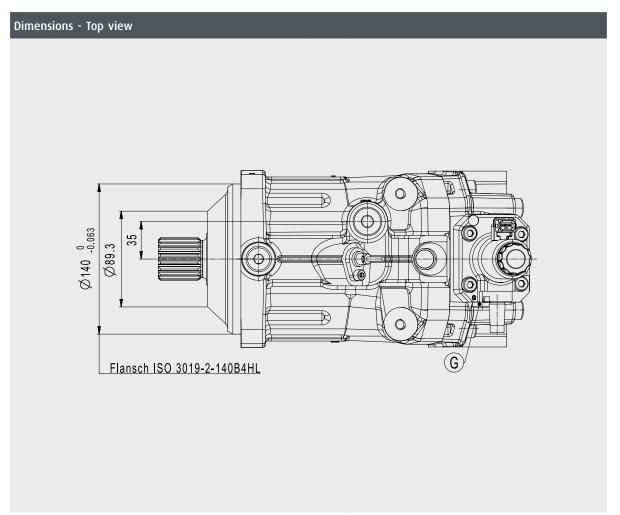
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | N4/CMV85

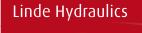


Dimensions		

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Pressure equalization port
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	riessure equalization port
В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

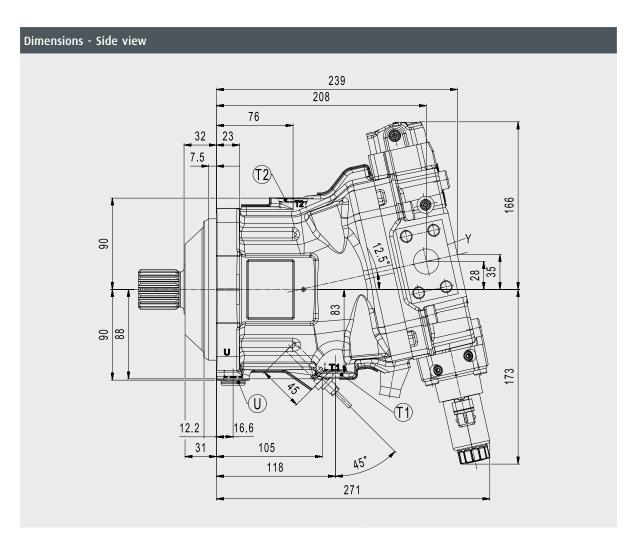
P2 / CMV 60

Y2 / CMV 85

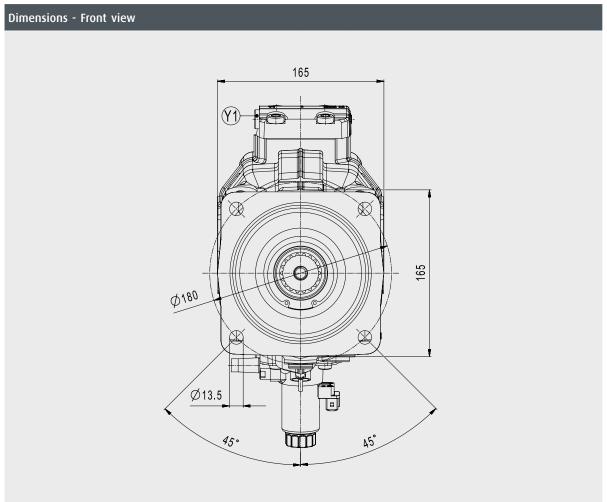
S2 / CMV 115

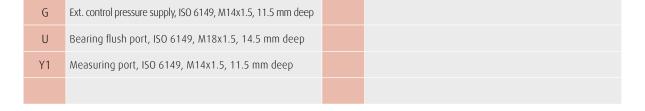
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | N4/CMV85



٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
A		ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep









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ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise

Nom. pres.: 450 bar, max. press.: 500 bar

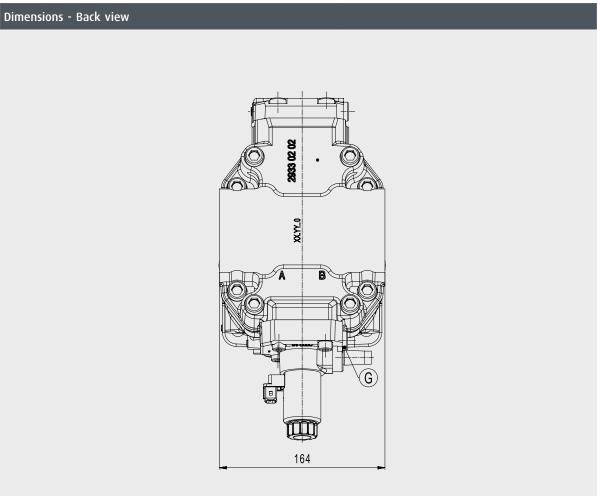
High pressure work port, ISO 6162-2, SAE 1"

If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | N4/CMV85

Dimensions

In the following you will find the technical specifications of the mounting flanges and auxiliary ports. They are clustered according to the standard and nominal sizes. First get an overview of the dimensions. Note the short designations such as "C4" or "E4". In the section [Model Code & Availability] you can then check the availability of the mounting flange as well as auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



ВХ

Pressure equalization port

T1 Drain / vent port, ISO 6149, M22x1.5, 15.5 n

T2 Drain / vent port, ISO 6149, M27x2, 19 mm (

	G
	U
nm deep	Y1
deep	

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 170

similar to ISO 3019-2

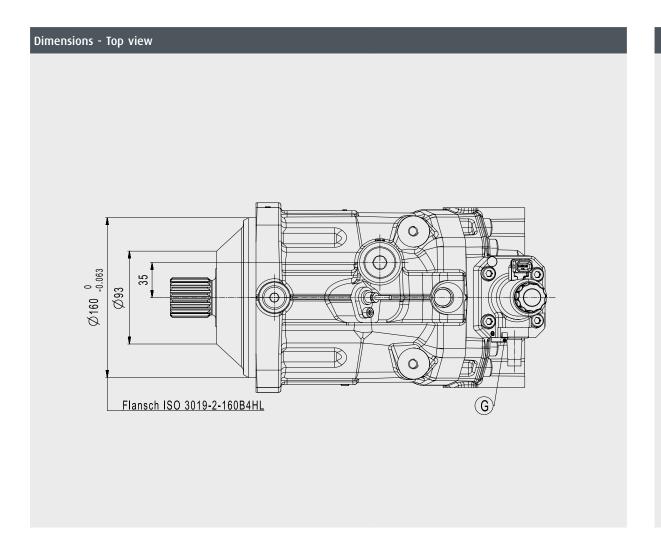
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **P4/CMV115**



	٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Desceure equalization part
	A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
	n	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
	В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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Functions/Options

ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

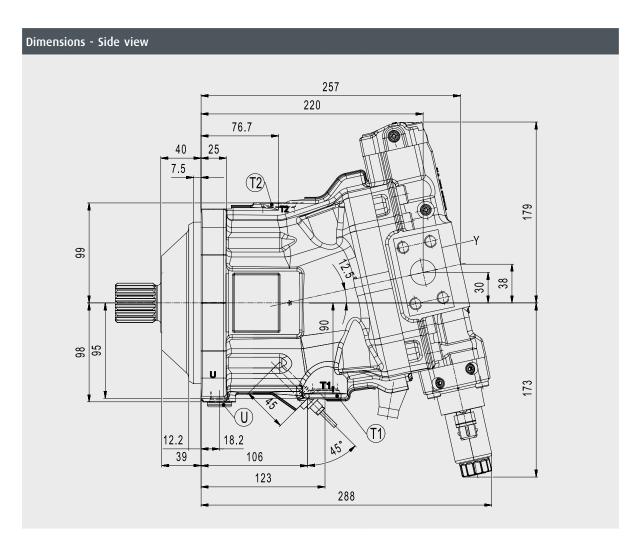
P2 / CMV 60

Y2 / CMV 85

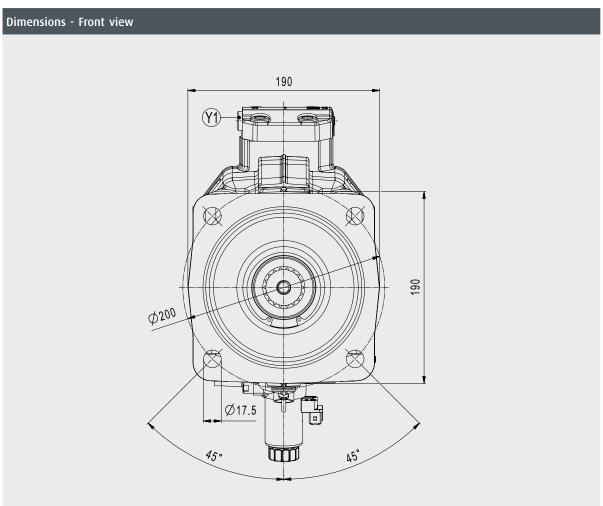
S2 / CMV 115

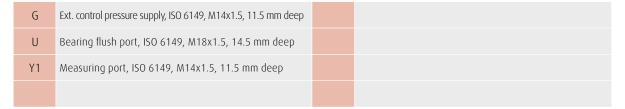
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **P4/CMV115**



	۸	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
	A		ВХ	Pressure equalization port
	D	High pressure work port, ISO 6162-2, SAE 1"	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
	В	B If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep









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Functions/Options

ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 170

similar to ISO 3019-2

P2 / CMV 60

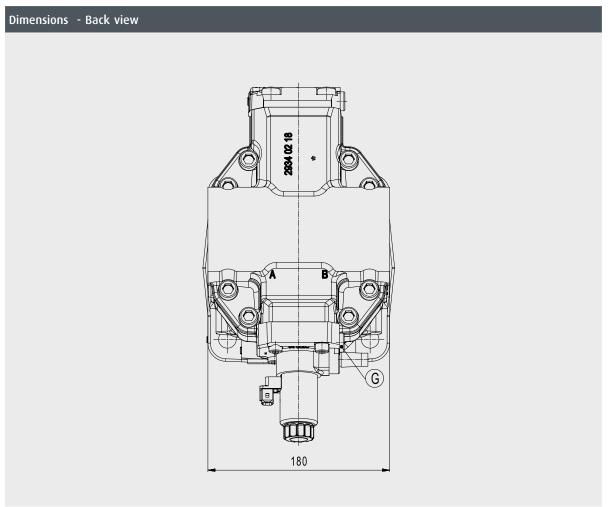
Y2 / CMV 85

S2 / CMV 115

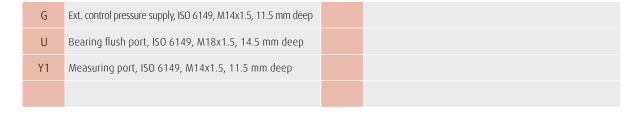
Z4 / CMV 215

Dimensions

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **P4/CMV115**



٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
А		ВХ	riessure equalization port
D	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep







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ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 170

similar to ISO 3019-2

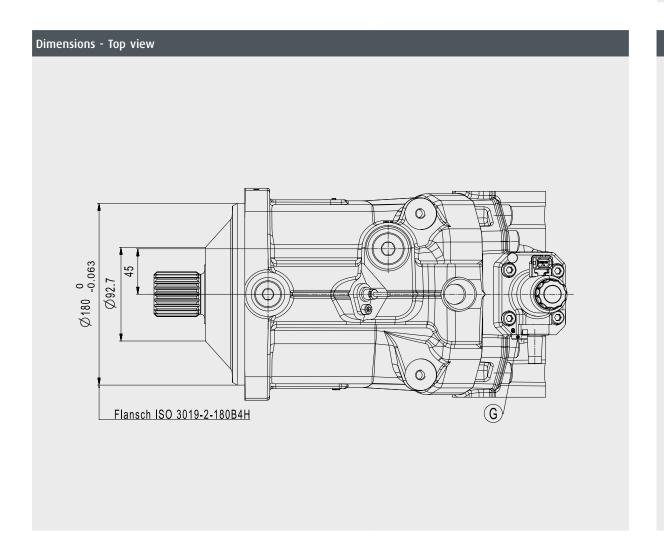
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | R4/CMV140



А	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX BX	Pressure equalization port
D	B High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

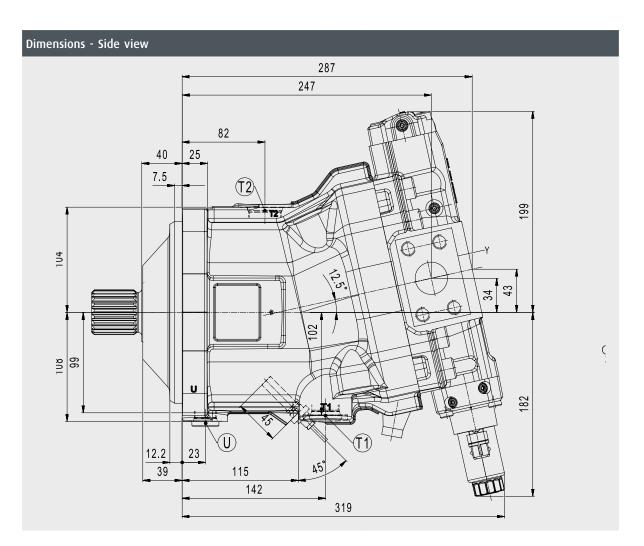
P2 / CMV 60

Y2 / CMV 85

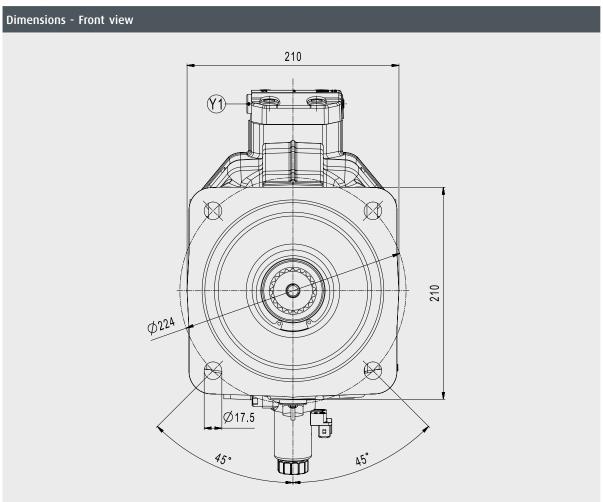
S2 / CMV 115

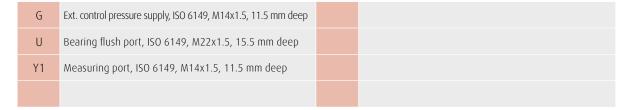
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | R4/CMV140



	٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Desceure equalization post
	A		ВХ	Pressure equalization port
	n	B High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
	В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep









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ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

High pressure work port, ISO 6162-2, SAE 1 1/4"

High pressure work port, ISO 6162-2, SAE 1 1/4"

If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

If pressurised - motor runs clockwise

Nom. pres.: 450 bar, max. press.: 500 bar

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | R4/CMV140

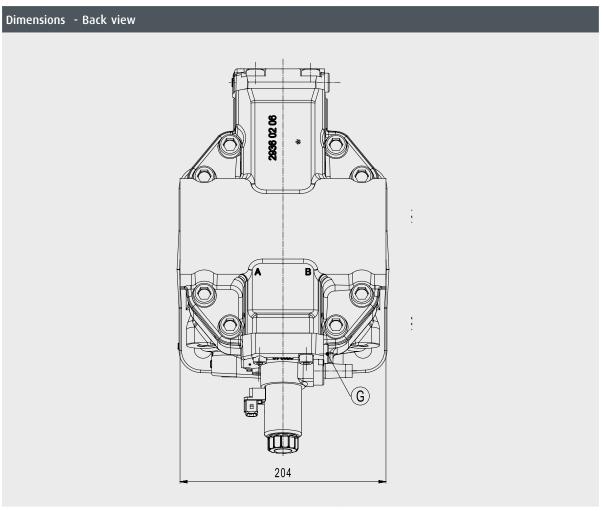
Dimensions

Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep

Measuring port, ISO 6149, M14x1.5, 11.5 mm deep

In the following you will find the technical specifications of the mounting flanges and auxiliary ports. They are clustered according to the standard and nominal sizes. First get an overview of the dimensions. Note the short designations such as "C4" or "E4". In the section [Model Code & Availability] you can then check the availability of the mounting flange as well as auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



ВХ

Pressure equalization port

T1 Drain / vent port, ISO 6149, M27x2, 19 mm deep

T2 Drain / vent port, ISO 6149, M33x2, 19 mm deep







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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 170

similar to ISO 3019-2

P2 / CMV 60

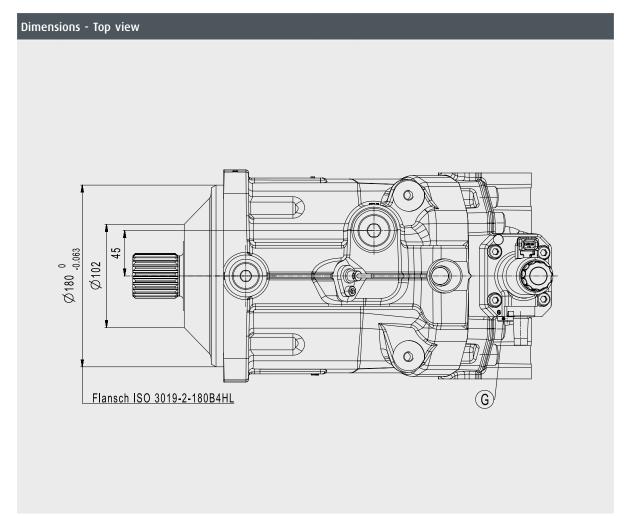
Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | R4/CMV170

Dimensions



	٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port, ISO 6149,
	А		ВХ	M14x1.5, 11.5 mm deep
	D	High pressure work port, ISO 6162-2, SAE 1 1/4"	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep	

-	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
	U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Υ	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

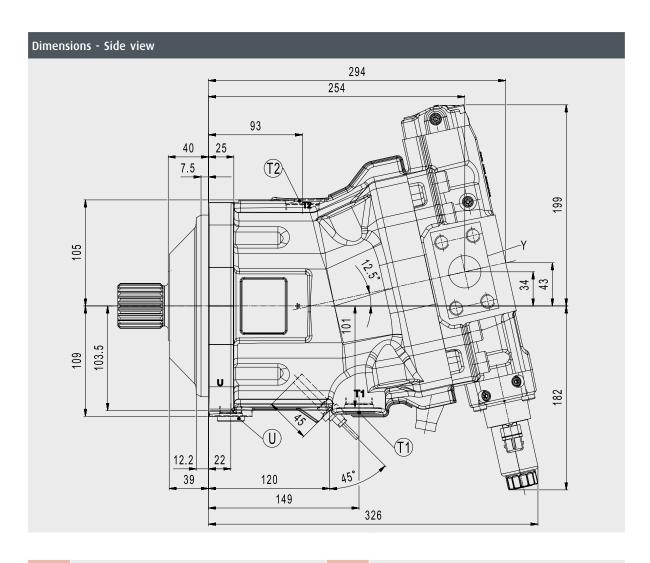
P2 / CMV 60

Y2 / CMV 85

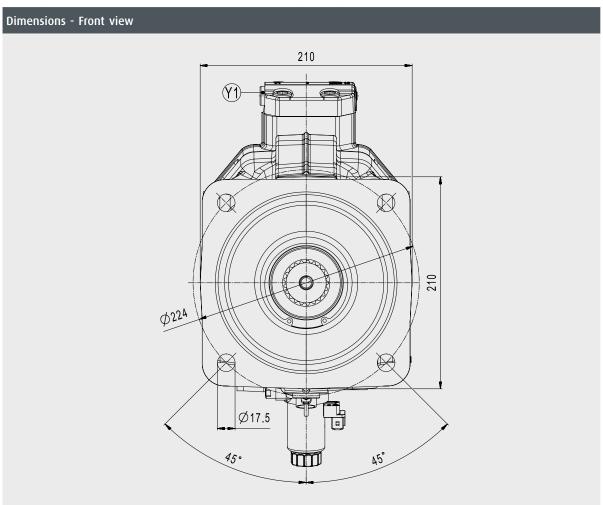
S2 / CMV 115

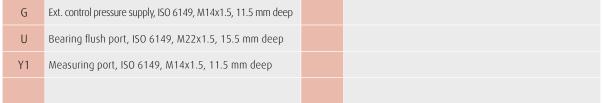
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | R4/CMV170



А	٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise		Pressure equalization port, ISO 6149,
	A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M14x1.5, 11.5 mm deep
	n	High pressure work port, ISO 6162-2, SAE 1 1/4"		Drain / vent port, ISO 6149, M27x2, 19 mm deep
	В	If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep









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ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

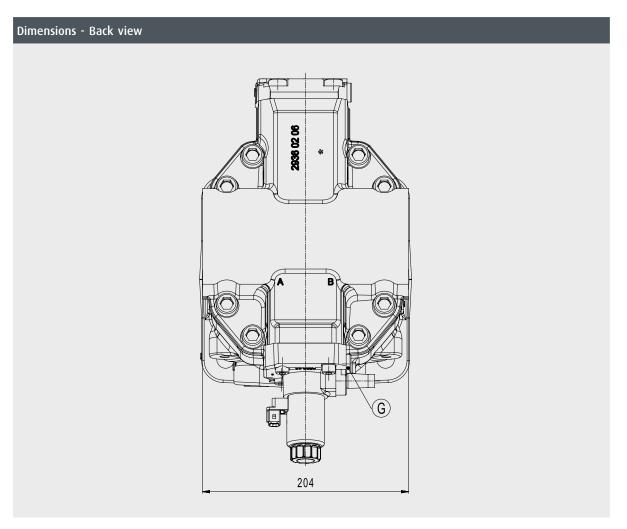
similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **R4/CMV170**



А	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX BX	Pressure equalization port, ISO 6149, M14x1.5, 11.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

vimensions			

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

similar to ISO 3019-2

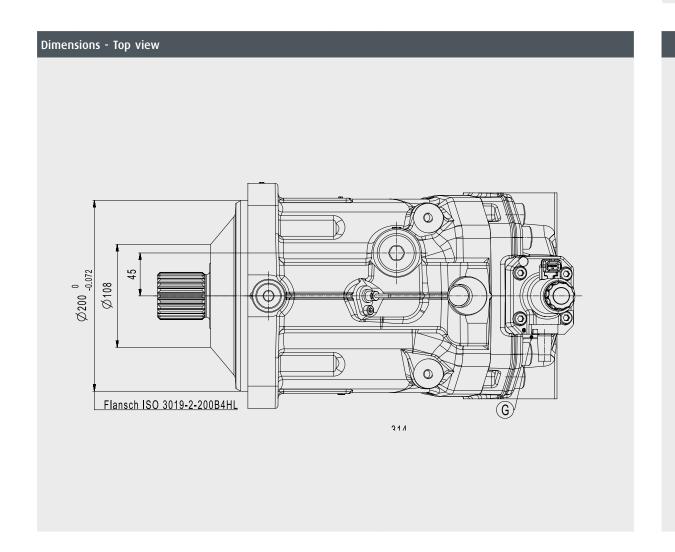
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

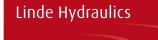
Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **\$4/CMV215**



۸	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. press.: 450 bar, max. press.: 500 bar		Pressure equalization port, ISO 6149,
А			M22x1.5, 15.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

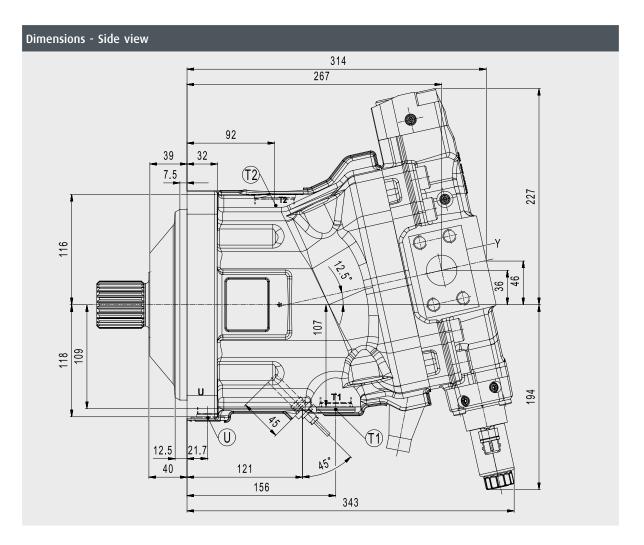
P2 / CMV 60

Y2 / CMV 85

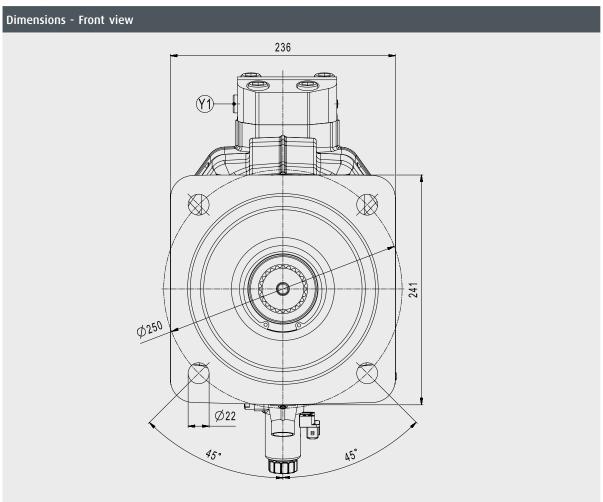
S2 / CMV 115

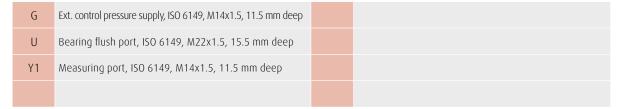
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **\$4/CMV215**



	٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149,
	А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M22x1.5, 15.5 mm deep
	D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep	









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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | ISO 3019-2 metric | **\$4/CMV215**

Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep

Dimensions

In the following you will find the technical specifications of the mounting flanges and auxiliary ports. They are clustered according to the standard and nominal sizes. First get an overview of the dimensions. Note the short designations such as "C4" or "E4". In the section [Model Code & Availability] you can then check the availability of the mounting flange as well as auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.

Dimensions - Back view 216

Α	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise		Pressure equalization port, ISO 6149,
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M22x1.5, 15.5 mm deep
В	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep





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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

similar to ISO 3019-2

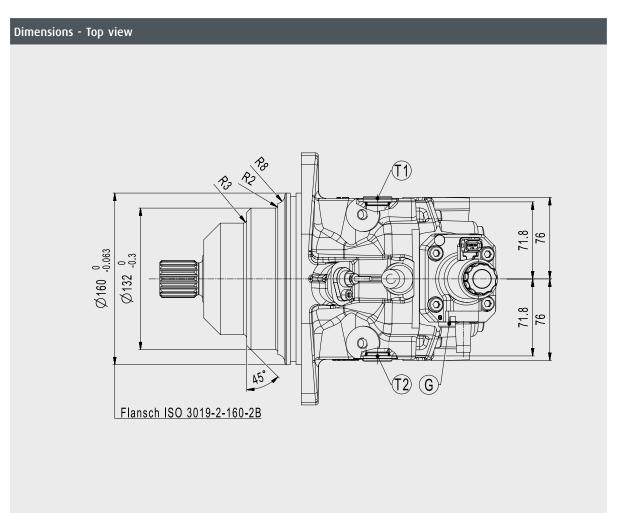
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

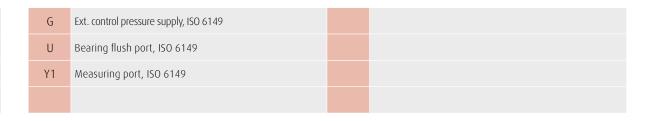
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **P2/CMV60**

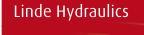


	Ansicht Y 23.8	Z 2:1 5.4 +0.25 0 8:50 0 8:50 0 970 0 9
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А	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX BX	Pressure equalization port
B High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149	
		T2	Drain / vent port, ISO 6149









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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

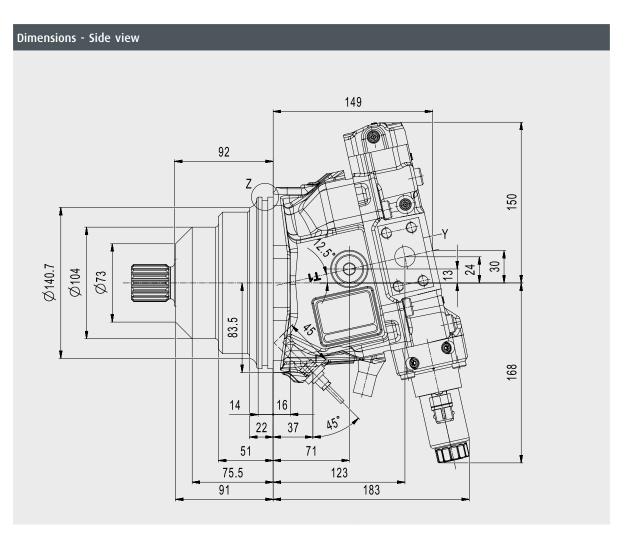
P2 / CMV 60

Y2 / CMV 85

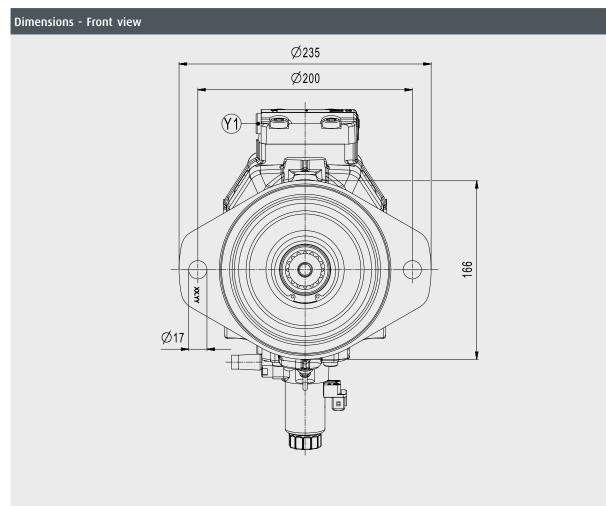
S2 / CMV 115

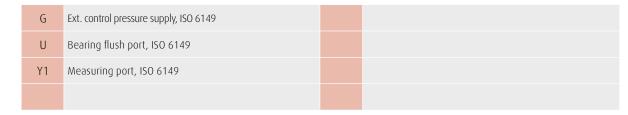
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **P2/CMV60**



	А	High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port
			ВХ	
	В	High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149
			T2	Drain / vent port, ISO 6149











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ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 170

similar to ISO 3019-2

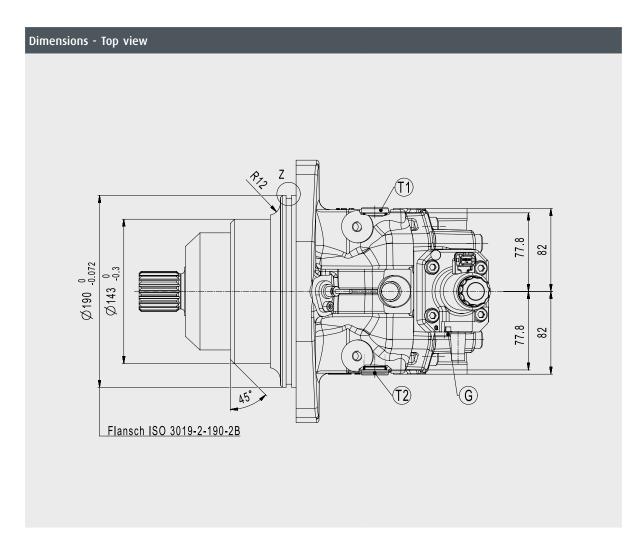
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | Y2/CMV85



5.4 +0.25 687 8 : 82 27.8

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Description and institution and
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
D	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

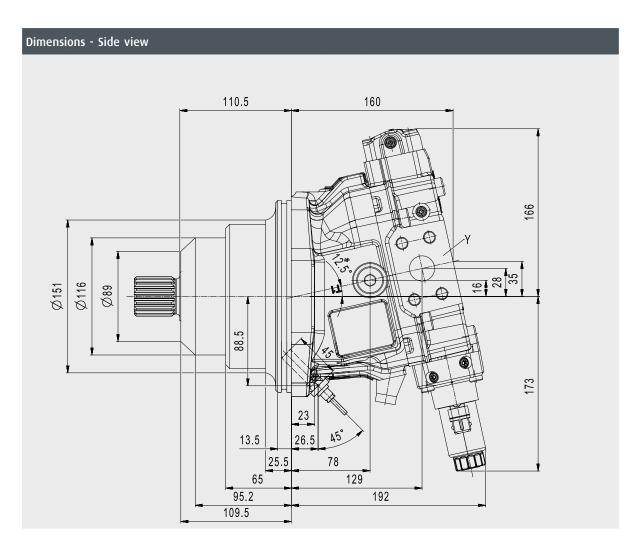
P2 / CMV 60

Y2 / CMV 85

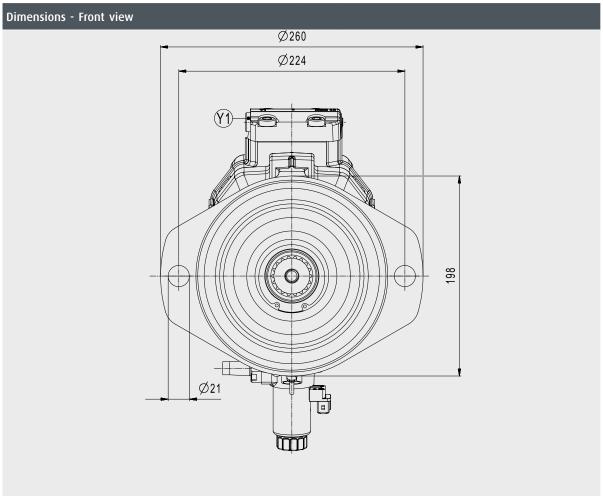
S2 / CMV 115

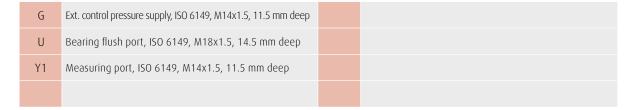
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | Y2/CMV85



٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Procesure aqualization part
А		ВХ	Pressure equalization port
D	High pressure work port, ISO 6162-2, SAE 1"	T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep
В	If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep









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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 170

similar to ISO 3019-2

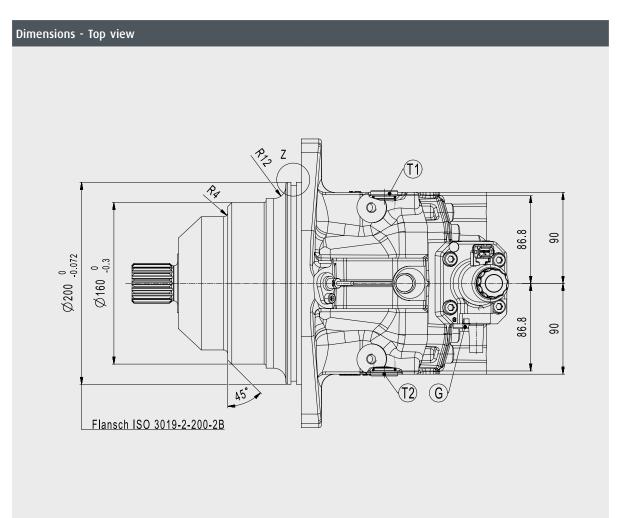
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **S2/CMV115**

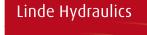


Dimensions	Z 2:1 5.4 -0.072	
	Ø 193.8 0	

٨	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	December of the control of the contr
А	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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ISO 3019-1/ SAE J744

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

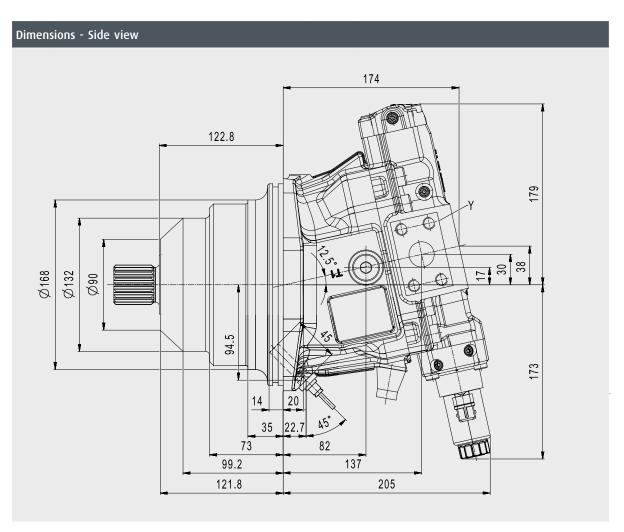
P2 / CMV 60

Y2 / CMV 85

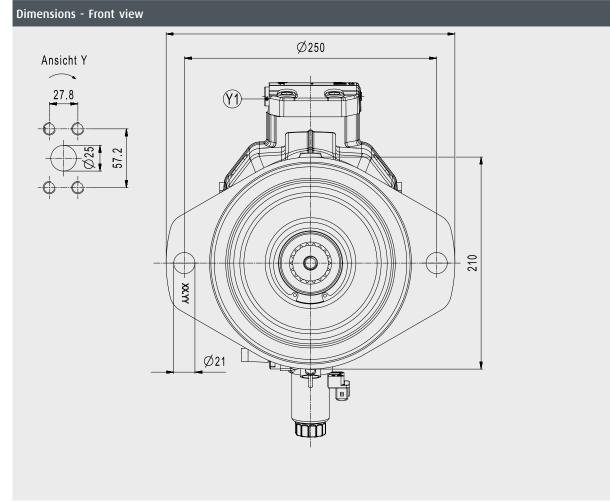
S2 / CMV 115

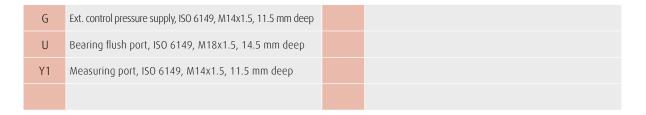
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **S2/CMV115**



	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise	AX	Processes application and
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
D	High pressure work port, ISO 6162-2, SAE 1"	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep











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ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 170

similar to ISO 3019-2

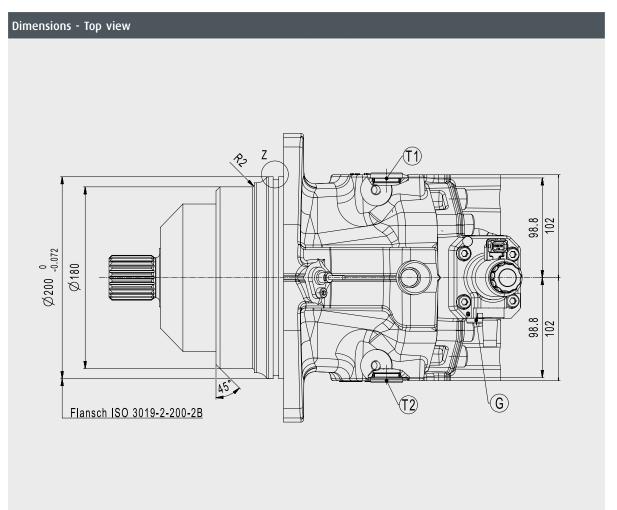
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **\$2/CMV140**



Z 2:1 5.4 *0.25 Ansicht Y	
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٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Processes appalization and
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
n	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В	Nom. pres.: 450 bar, max. press.: 500 bar	T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

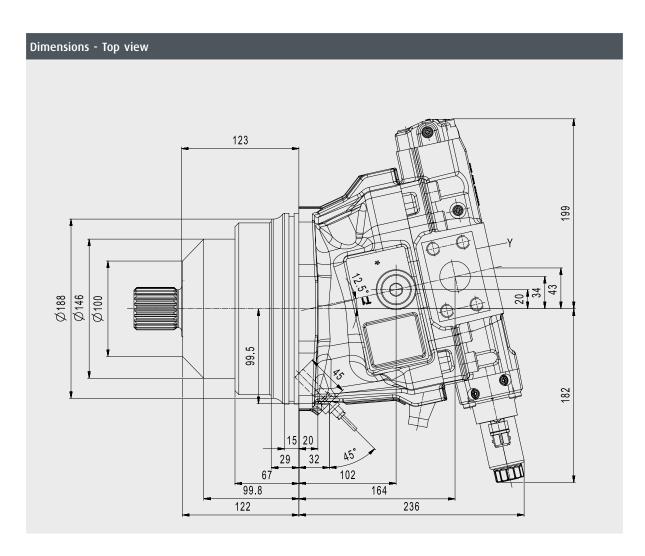
P2 / CMV 60

Y2 / CMV 85

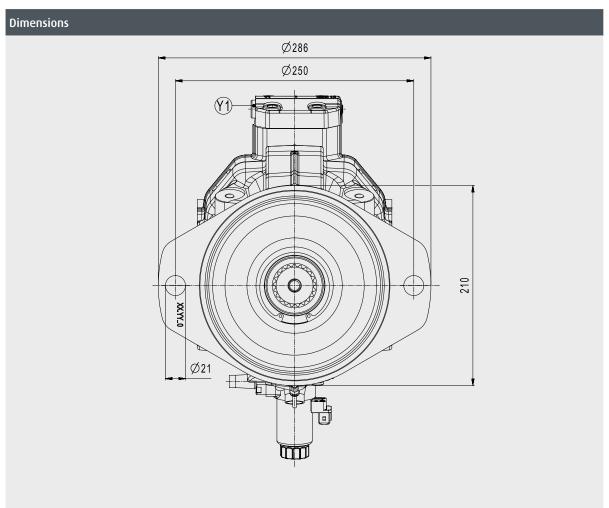
S2 / CMV 115

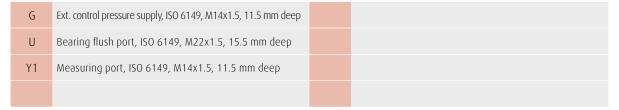
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **S2/CMV140**



٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Occurred to the control of the contr
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	Pressure equalization port
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep









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ISO 3019-1/ **SAE J744**

C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 170

similar to ISO 3019-2

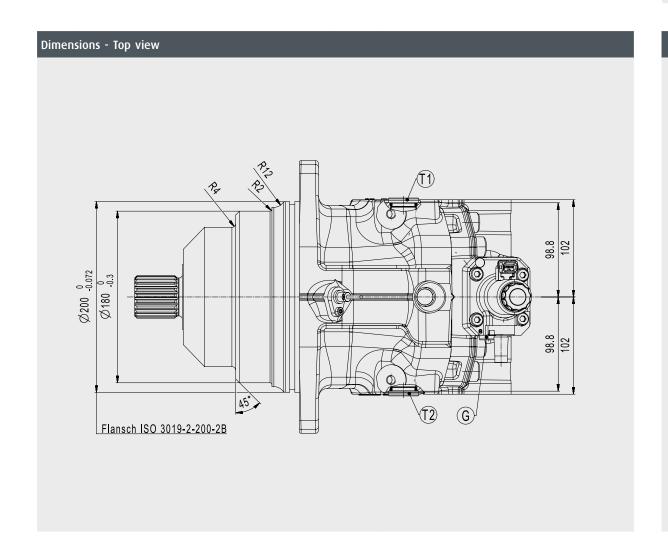
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **S2/CMV170**



٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise	AX	Pressure equalization port, ISO 6149,
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M14x1.5, 11.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep

G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	







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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115 D4 / CMV 140

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

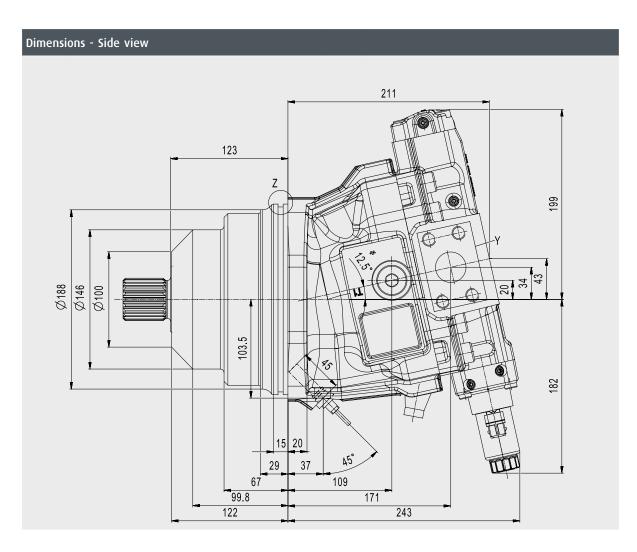
P2 / CMV 60

Y2 / CMV 85

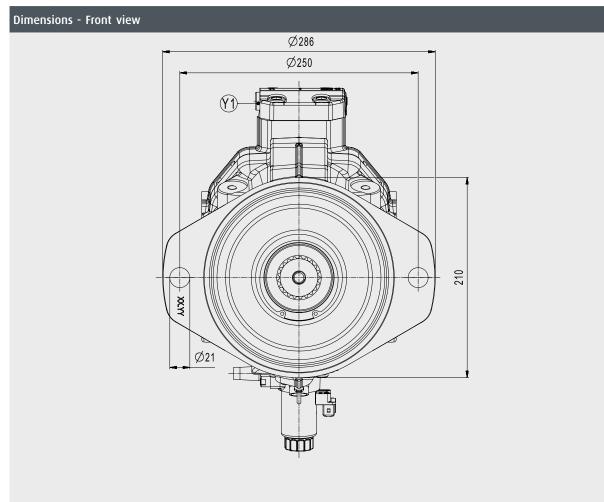
S2 / CMV 115

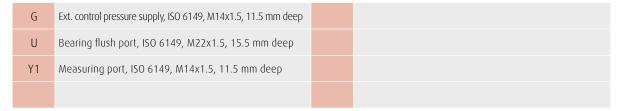
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **S2/CMV170**



	٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise		Pressure equalization port, ISO 6149,
А		Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M14x1.5, 11.5 mm deep
	D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep
	В		T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep









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C4 / CMV 60

C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

D4 / CMV 170

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 170

similar to ISO 3019-2

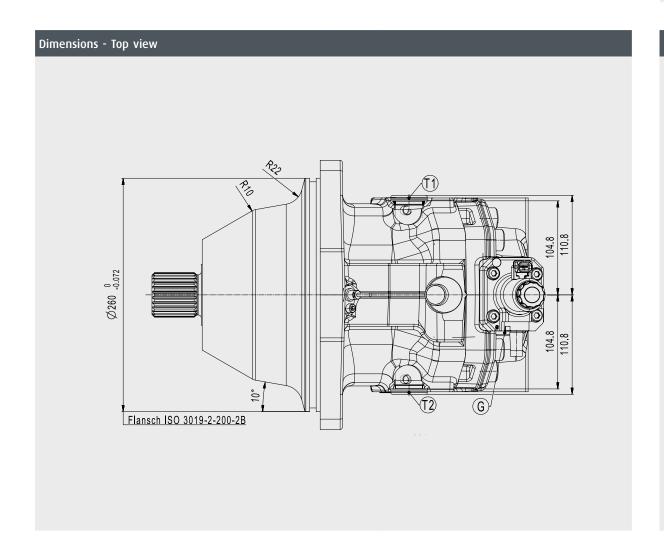
P2 / CMV 60

Y2 / CMV 85

S2 / CMV 115

Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **Z4/CMV215**



٨	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise		Pressure equalization port, ISO 6149,
A	Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M22x1.5, 15.5 mm deep
D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
В		T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep	
	U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep	
`	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep	





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C2 / CMV 85

D4 / CMV 115

D4 / CMV 140

E4 / CMV 215

ISO 3019-2 metric

M4 / CMV 60

N4 / CMV 85

P4 / CMV 115

R4 / CMV 140

R4 / CMV 170

S4 / CMV 215

similar to ISO 3019-2

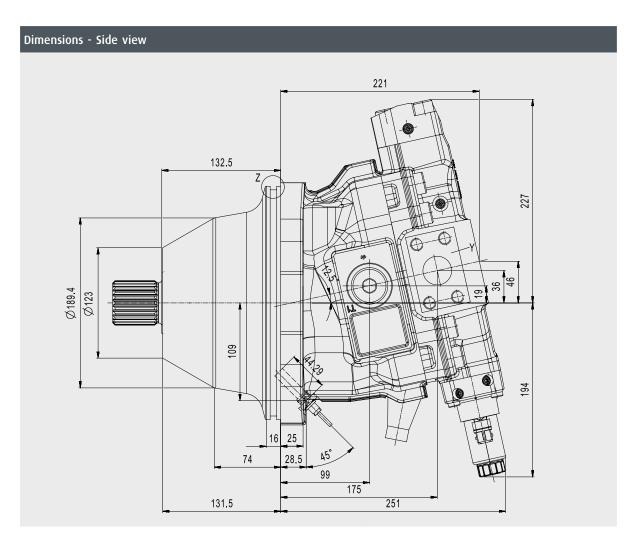
P2 / CMV 60

Y2 / CMV 85

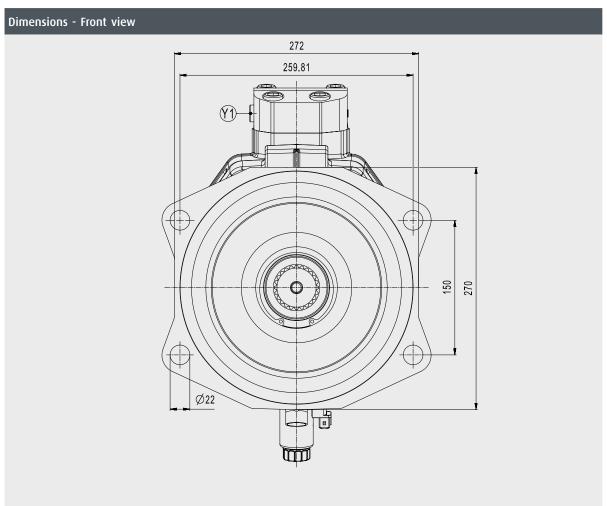
S2 / CMV 115

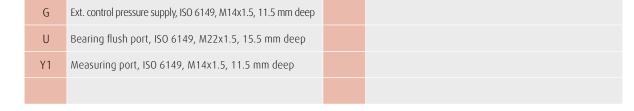
Z4 / CMV 215

Technical Specification | Mounting Flanges Auxiliary Ports | Plug-in, similar to ISO 3019-2 | **Z4/CMV215**



	٨	High pressure work port, ISO 6162-2, SAE 1 1/4"		Pressure equalization port, ISO 6149,
	А	If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	ВХ	M22x1.5, 15.5 mm deep
	D	High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar	T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep
	В		T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep









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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

N7 / CMN 140 /170

1 / CMV 11E /140 /13

T2 / CMV 170 /215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CNN 11F /140 /17

07 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S7 / CMV 60**

Specification					
	Specification	Standard			
Shaft end		Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	Fq		Fpmax	N
Nominal size related data	Rodial forces			а	mm
		Fax+	Motor at standstill or in rotation considering	Fax+	N
	Axial forces Fax+ Fax- Fax-		unpressurized work ports	Fax-	N
		Work ports pressurized	Fax+/p	N/bar	

	ISO 3019-1/SAE J744					
	14					
	12/24					
	32-4					
60						
400						
405						
6930						
24						
0						
500						
7.5						





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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

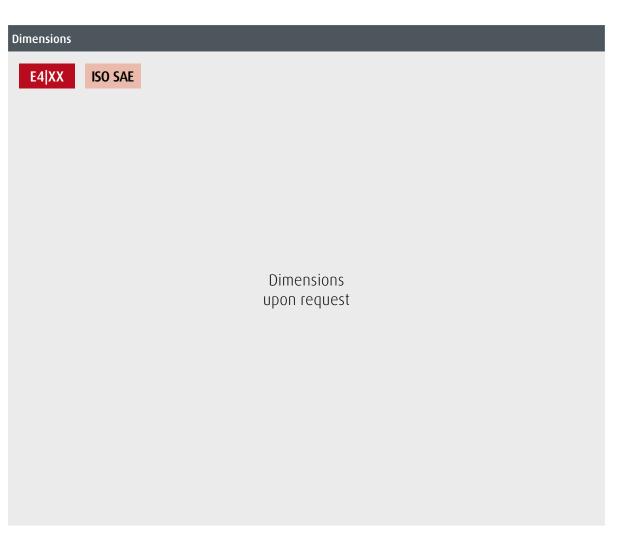
6 / CMV 115/140/170

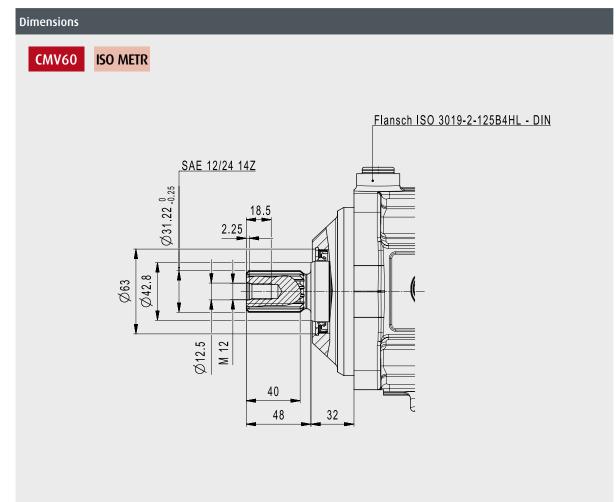
D7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S7 / CMV 60**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric







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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

D7 / CMV 170/215

SAE J1946

F4

Nominal size 60

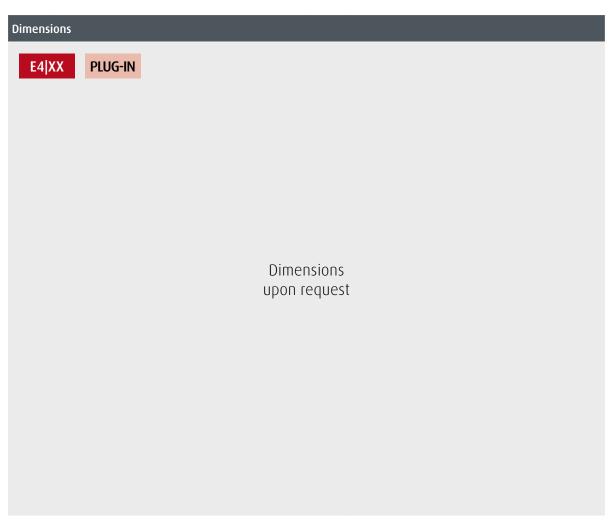
Nominal size 85

Nominal size 115
Nominal size 140



Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S7 / CMV 60**

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



CMV170 Nominal size 170

CMV215 Nominal size 215

ISO SAE Mounting flange ISO 3019-1/ SAE J744

ISO METR Mounting flange ISO 3019-2 metric

Dimensions		

PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2



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ISO 3019-1/ SAE J744

S7 / CMV 60

50 / 5111/ 05

S8 / CMV 85

S9 / CMV 85 V6 / CMV 85/115

T2 / CNV 470 /245

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 11E /140 /170

D7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S8 / CMV 85**

Specification					
	Specification	Standard			
Shaft end		Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	Fq		Fpmax	N
Nominal size related data	Rodial forces			а	mm
		Fax+	Motor at standstill or in rotation considering	Fax+	N
	Axial forces Fax+ Fax- Fax-		unpressurized work ports	Fax-	N
		Work ports pressurized	Fax+/p	N/bar	

	ISO 3019-1/SAE J744					
	21					
	16/32					
	35-4					
85						
628						
450						
12500						
24						
0						
710						
9.6						





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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

Γ1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

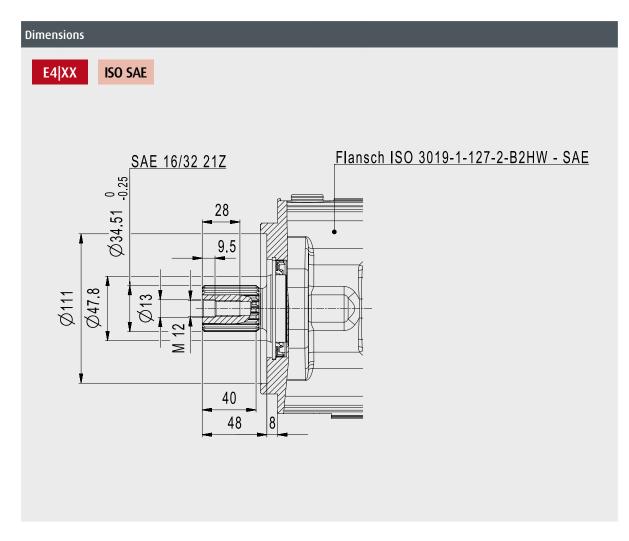
6 / CMV 115/140/170

07 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S8 / CMV 85**



Dimensions CMV60	ISO METR			
		Dimensions		
		upon request		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

(/ CMV 11F /140 /170

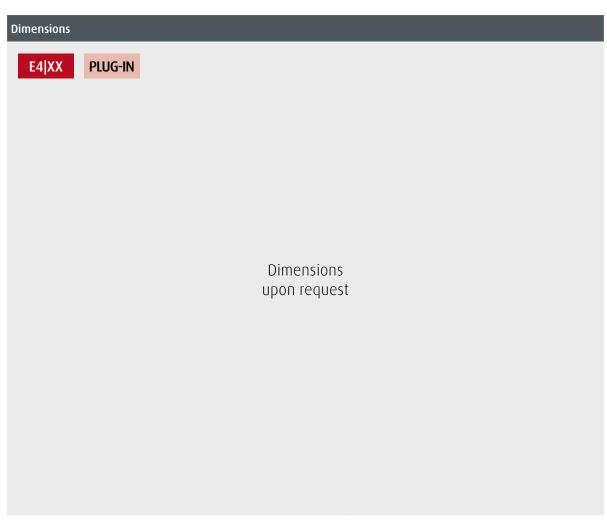
D7 / CMV 170/215

SAE J1946

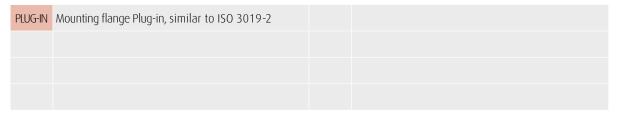
F∠

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S8 / CMV 85**

Dimensions











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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

NZ / CNN 140 /170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

D7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S9 / CMV 85**

Specification					
		Standard			
Shaft end	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	Fq		Fpmax	N
Nominal size related data	Rodial forces			а	mm
		_/	Motor at standstill or in rotation considering	Fax+	N
	Axial forces	Fax+	unpressurized work ports	Fax-	bar N mm
	Axial forces Fax-	Work ports pressurized	Fax+/p	N/bar	

	ISO 3019-1/SAE J744	
	17	
	12/24	
	38-4	
85		
600		
430		
12500		
27		
0		
710		
9.6		





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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

s9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

Γ1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

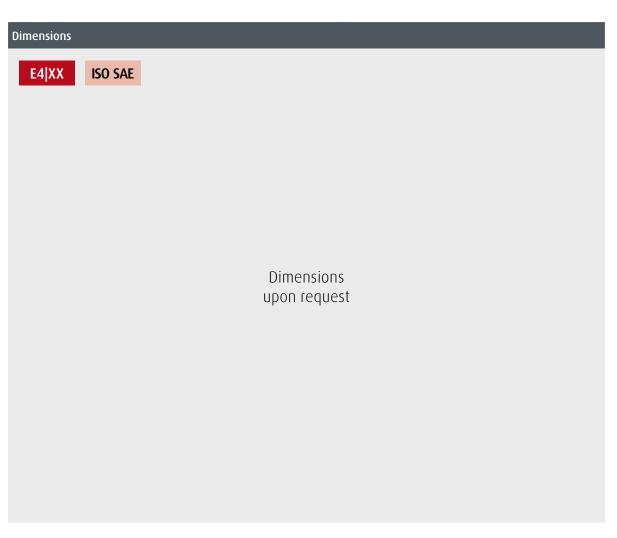
6 / CMV 115/140/170

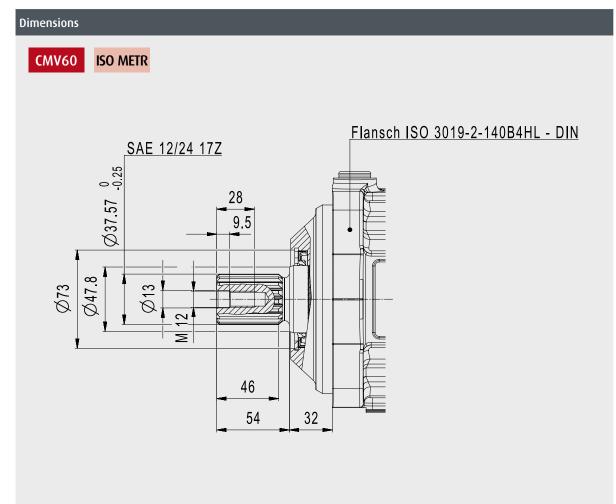
D7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S9 / CMV 85**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

D7 / CMV 170/215

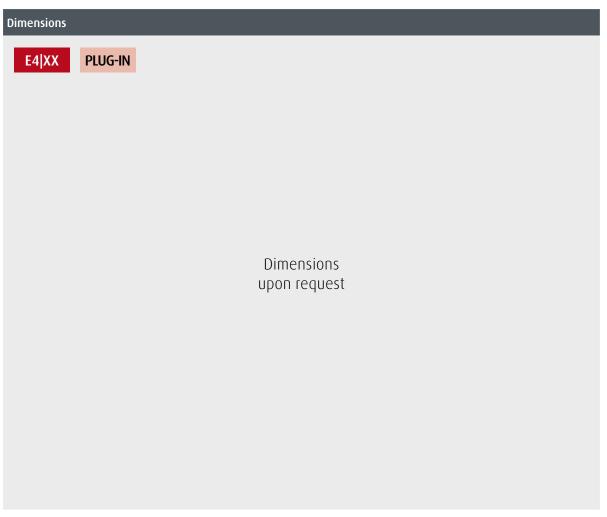
SAE J1946

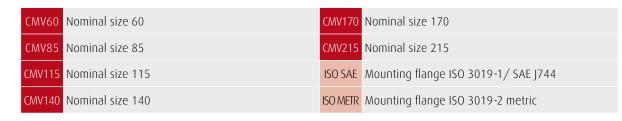
F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **S9 / CMV 85**

Dimensions

PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2









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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

O7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V6 / CMV 85/115**

Specification					
		Standard			
Shaft end	Specification	Number of teeth			
related data	эреспісаціон	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	↓ Fq		Fpmax	N
Nominal size related data	Radial forces	a		а	mm
		/	Motor at standstill or in rotation considering	Fax+	N
	Avial forces	Fax+	unpressurized work ports	Fax-	N
	Axial forces Fax-	Fax-	Work ports pressurized	Fax+/p	N/bar

	ISO 3019-1/SAE J744	
	23	
	16/32	
	38-4	
85	115	
628	578	
450	315	
12500	9450	
27	27	
0	0	
710	1000	
9.6	11	





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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

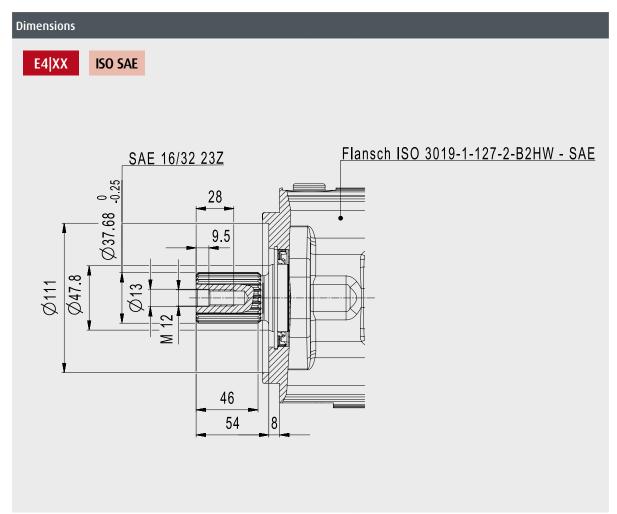
6 / CMV 115/140/170

07 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V6 / CMV 85/115**



D	Dimensions			
	CMV60	ISO METR		
			Dimensions	
			upon request	

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

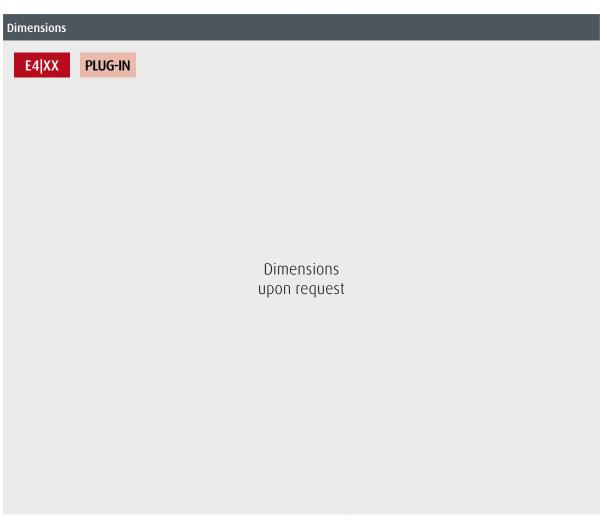
6 / CMV 115/140/170

D7 / CMV 170/215

SAE J1946

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Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V6 / CMV 85/115**



CMV60 Nominal size 60	CMV170	Nominal size 170
CMV85 Nominal size 85	CMV215	Nominal size 215
CMV115 Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

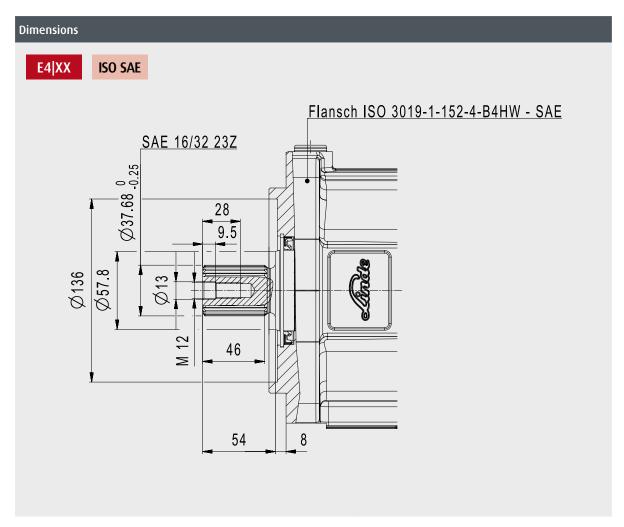
6 / CMV 115/140/170

7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V6 / CMV 85/115**



CMV60 ISO METR Dimensions upon request
Dimensions
ироп тедаем

CMV60 Nominal size 60	CMV170	Nominal size 170
CMV85 Nominal size 85	CMV215	Nominal size 215
CMV115 Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

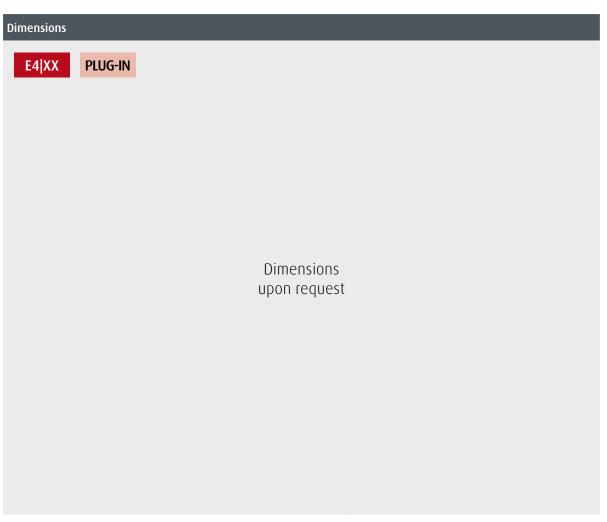
6 / CMV 115/140/170

D7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V6 / CMV 85/115**



CMV60 Nominal size 60	CMV170	Nominal size 170
CMV85 Nominal size 85	CMV215	Nominal size 215
CMV115 Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

30 / C.... 03

S9 / CMV 85 V6 / CMV 85/115

N7 / CMN 140 /170

1 / CMV 115/1/0/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CNN 11F /140 /17

D7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | V7 / CMV 140/170

Specification	_				
		Standard			
Shaft end	Specification	Number of teeth			
related data	эрестевноп	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
			Fpmax	N	
Nominal size related data		a		а	mm
	Axial forces	Fax+ Fax-	Motor at standstill or in rotation considering	Fax+	N
			unpressurized work ports	Fax-	N
			Work ports pressurized	Fax+/p	N/bar

	ISO 3019-1/SAE J744		
	27		
	16/32		
	44-4		
140	170		
1032	1218		
450	450		
16000	19400		
33.5	33.5		
0	0		
1210	1200		
12.4	15.1		





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S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

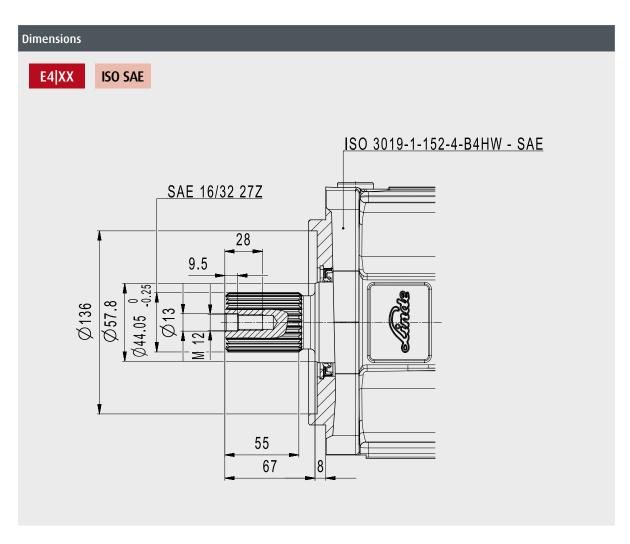
6 / CMV 115/140/170

D7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V7 / CMV 140/170**



Dimensions CMV60	ISO METR		
		Dimensions	
		upon request	

CMV60 Nominal size 60	CMV170	Nominal size 170
CMV85 Nominal size 85	CMV215	Nominal size 215
CMV115 Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric
		







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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

s9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 113/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

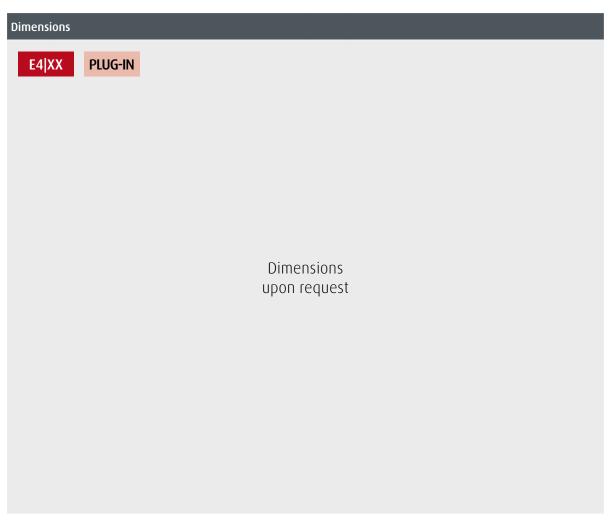
D7 / CMV 170/215

SAE J1946

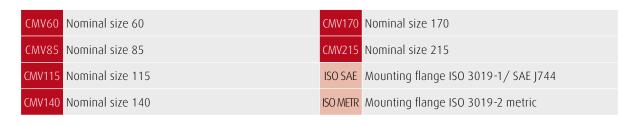
F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V7 / CMV 140/170**

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2







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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

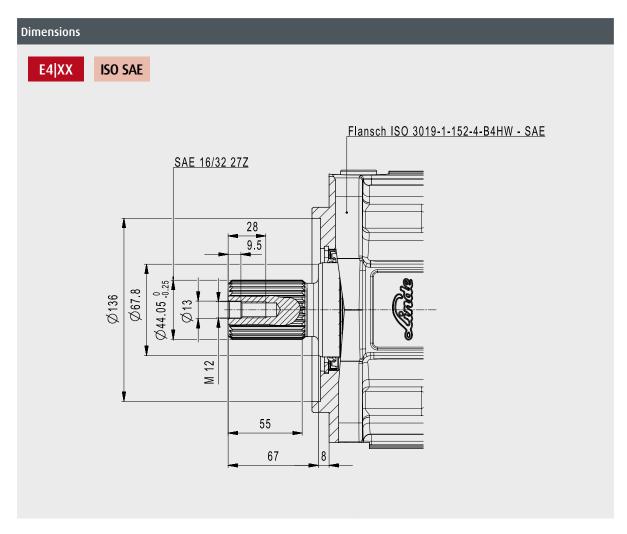
6 / CMV 115/140/170

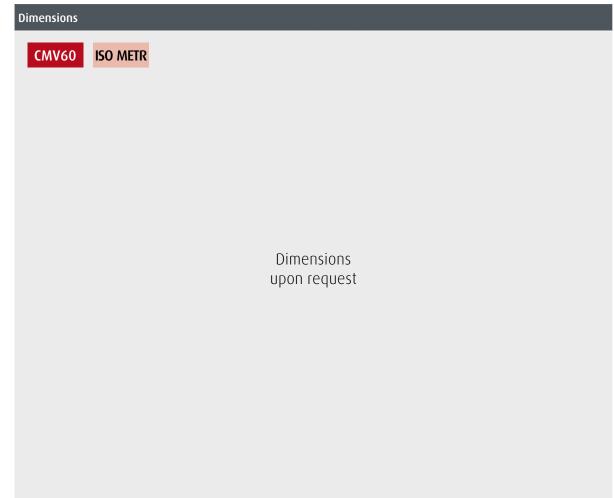
07 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V7 / CMV 140/170**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

s9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 113/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

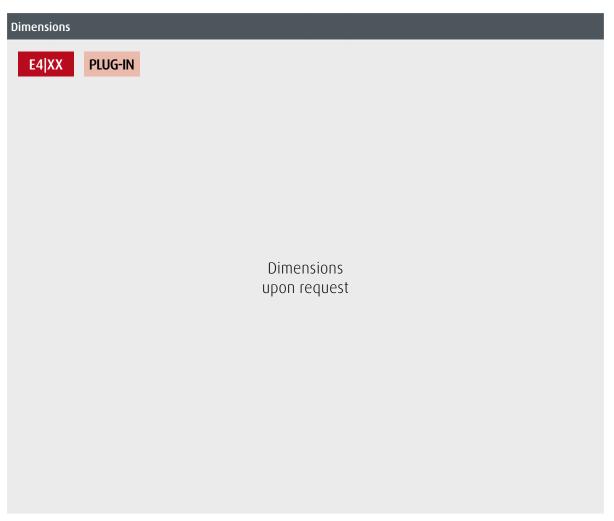
D7 / CMV 170/215

SAE J1946

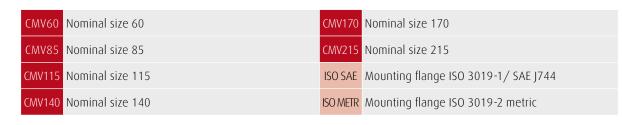
F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **V7 / CMV 140/170**

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2







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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

C / CMV 11F /140 /170

07 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **T1 / CMV 115/140/170**

Specification					
		Standard			
Shaft end	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
Nominal size related data	Radial forces	Fq		Fpmax	N
	Kadiai ioices			а	mm
		Fax+ Fax-	Motor at standstill or in rotation considering	Fax+	N
	Axial forces		unpressurized work ports	Fax-	N
	ANIGI TOLCES		Work ports pressurized	Fax+/p	N/bar

ISO 3019-1/SAE J744				
	13			
	8/16			
	44-4			
115	140	170		
826	894	879		
450	390	325		
15000	16000	11550		
33.5	33.5	33.5		
0	0	0		
1000	1210	1200		
11	12.4	15.1		





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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

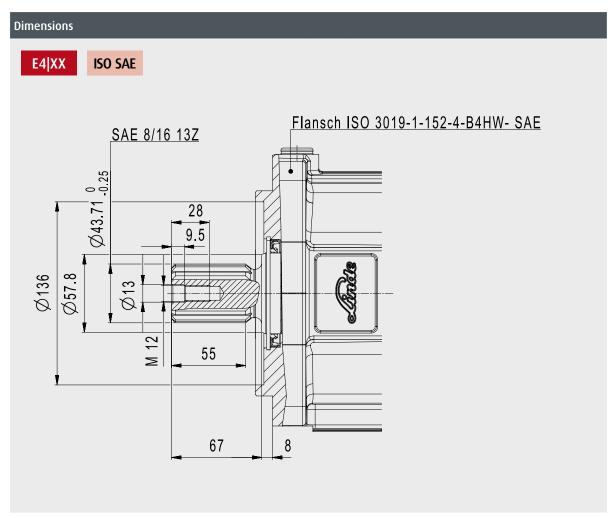
6 / CMV 115/140/170

D7 / CMV 170/215

SAE J1946

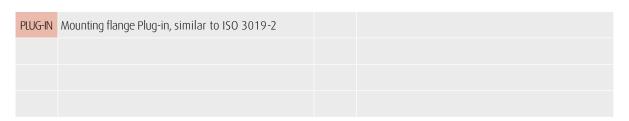
F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **T1 / CMV 115/140/170**



CMV60 ISO	METR		
		Dimensions upon request	









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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

DIN5480

D3 / CMV 60

D5 / CMV 85/115

SAE J1946

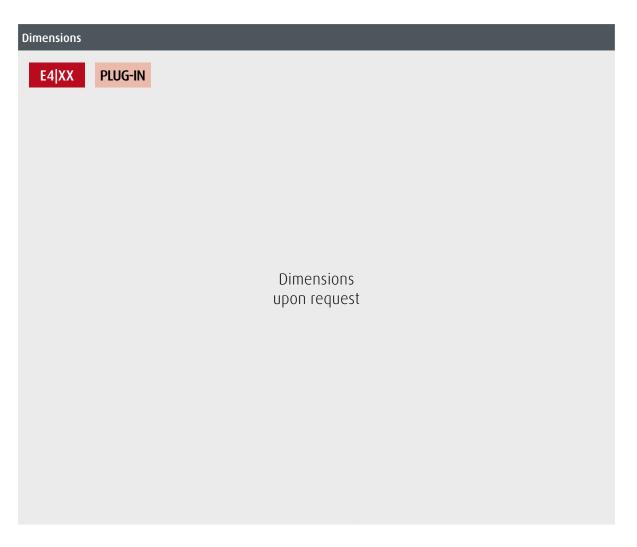
S9 / CMV 85

V6 / CMV 85/115

D4 / CMV 60/85

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T1 / CMV 115/140/170

Dimensions



V60	Nominal size 60	CMV170	Nominal size 170
V85	Nominal size 85	CMV215	Nominal size 215
/115	Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
/140	Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2	



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S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

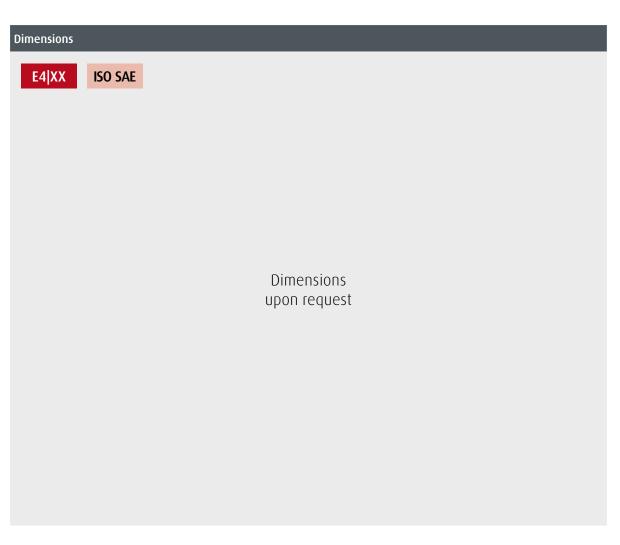
6 / CMV 115/140/170

O7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T1 / CMV 115/140/170



Dimensions	
CMV60 ISO METR	
SAE 8/16 13Z 28 9.5 67 40	ISO 3019-2-180B4HL - DIN

CMV60 Nominal size 60	CMV170	Nominal size 170
CMV85 Nominal size 85	CMV215	Nominal size 215
CMV115 Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric







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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

DIN5480

D3 / CMV 60

D5 / CMV 85/115

SAE J1946

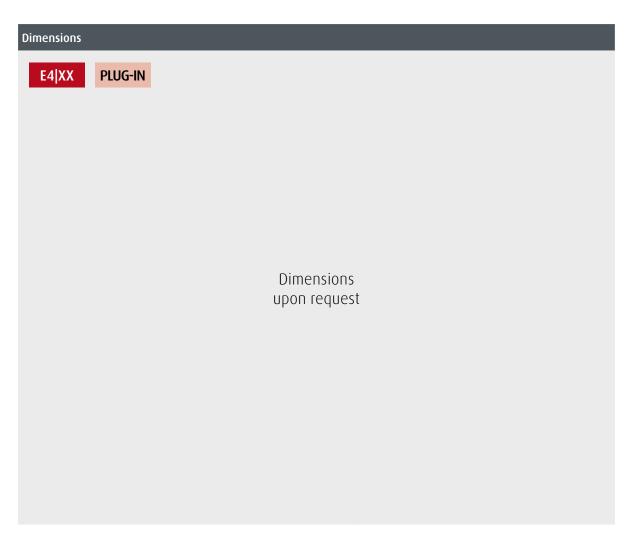
S9 / CMV 85

V6 / CMV 85/115

D4 / CMV 60/85

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T1 / CMV 115/140/170

Dimensions



V60	Nominal size 60	CMV170	Nominal size 170
V85	Nominal size 85	CMV215	Nominal size 215
/115	Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
/140	Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2	



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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

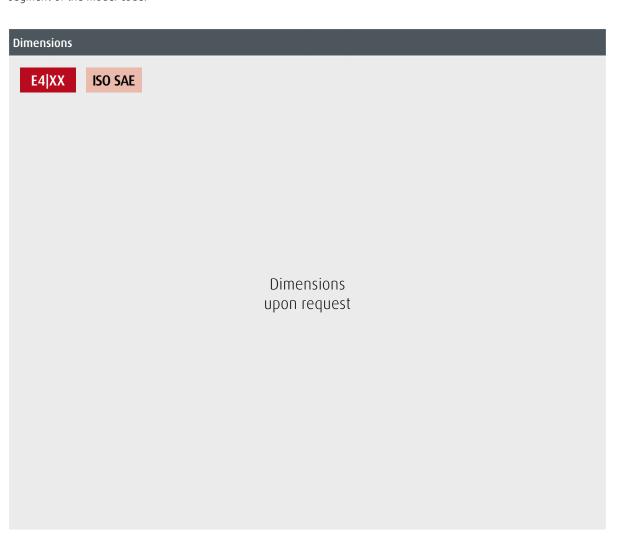
6 / CMV 115/140/170

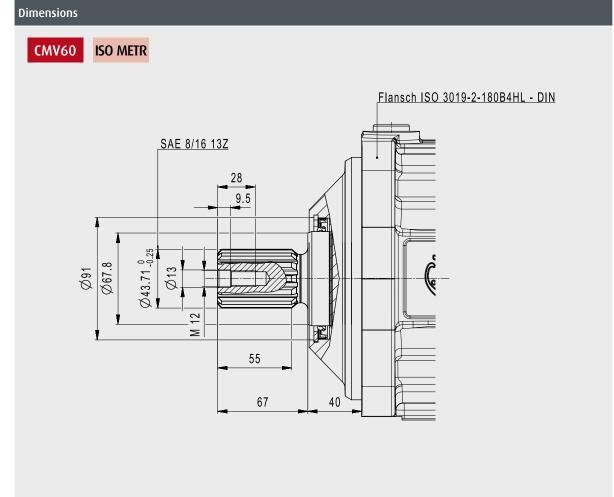
D7 / CMV 170/215

SAE J1946

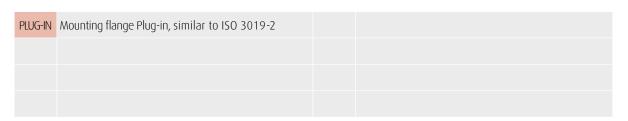
F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | **T1 / CMV 115/140/170**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric







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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

DIN5480

D3 / CMV 60

D5 / CMV 85/115

SAE J1946

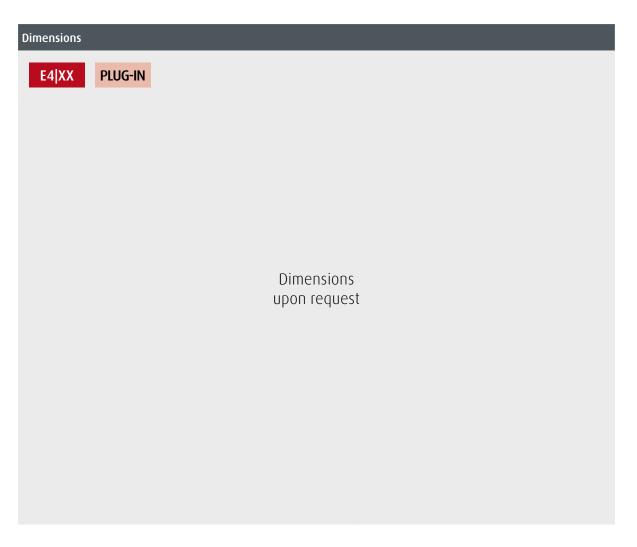
S9 / CMV 85

V6 / CMV 85/115

D4 / CMV 60/85

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T1 / CMV 115/140/170

Dimensions



V60	Nominal size 60	CMV170	Nominal size 170
V85	Nominal size 85	CMV215	Nominal size 215
/115	Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
/140	Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2	



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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85 V6 / CMV 85/115

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

SAE J1946

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T2 / CMV 170/215

Specification					
		Standard			
Shaft end	Specification	Number of teeth			
related data	эреспісаціон	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	↓ Fq		Fpmax	N
Nominal size related data	Radial forces	adian forces		а	mm
		/	Motor at standstill or in rotation considering	Fax+	N
		Fax+	unpressurized work ports	Fax-	N
	Axial forces	Fax-	Work ports pressurized	Fax+/p	N/bar

	ISO 3019-1/SAE J744	
	15	
	8/16	
	50-4	
170	215	
1218	1457	
450	420	
19400	22600	
33.5	33.5	
0	0	
1200	1250	
15.1	17	





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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

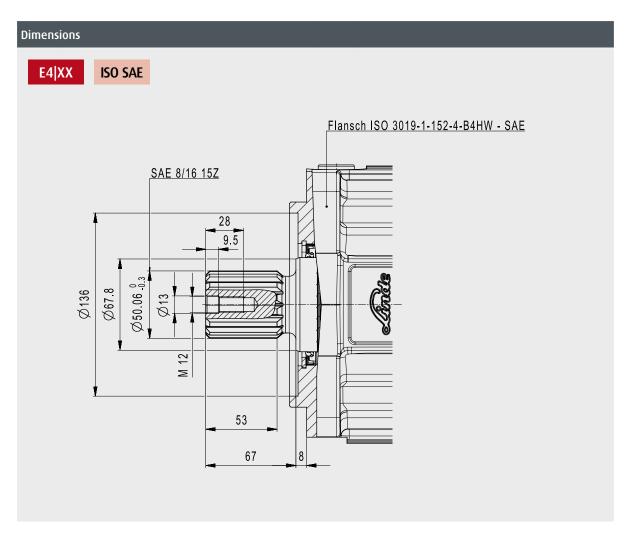
6 / CMV 115/140/170

D7 / CMV 170/215

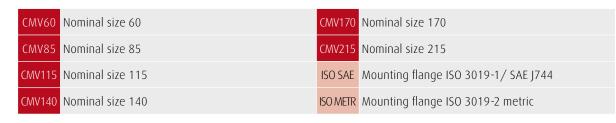
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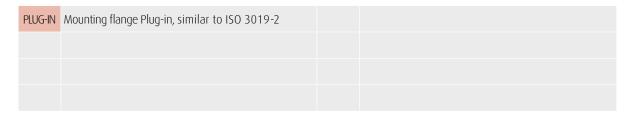
F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T2 / CMV 170/215



CMV60 ISO METR		
	Dimensions upon request	









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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V/ / CMV 140/1/0

1 / CMV 115/140/1/0

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

D7 / CMV 170/215

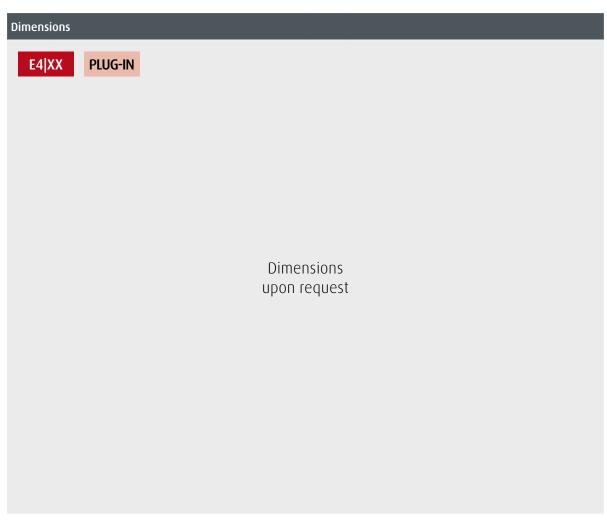
SAE J1946

F4

€ Color

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T2 / CMV 170/215

Dimensions



CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

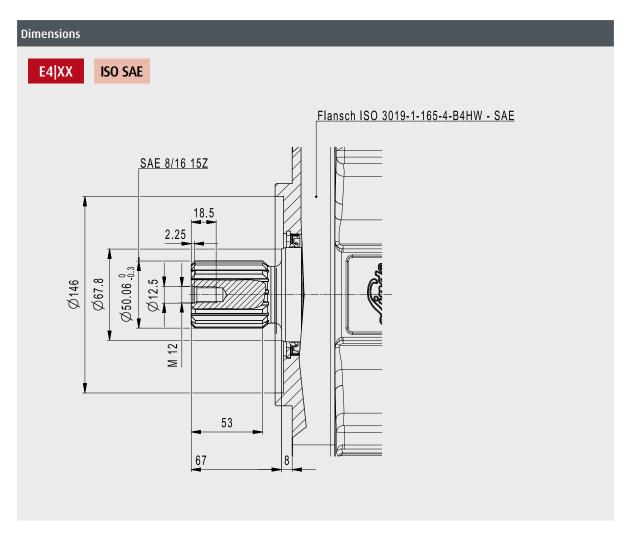
6 / CMV 115/140/170

D7 / CMV 170/215

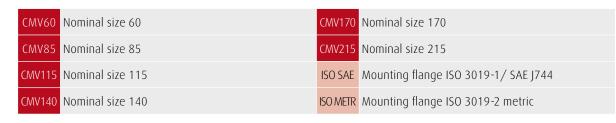
SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T2 / CMV 170/215



CMV60 ISO METR			
CMV00 ISO MEIK			
	Dimensions upon request		









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S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V/ / CMV 140/1/0

1 / CMV 115/140/1/0

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

D7 / CMV 170/215

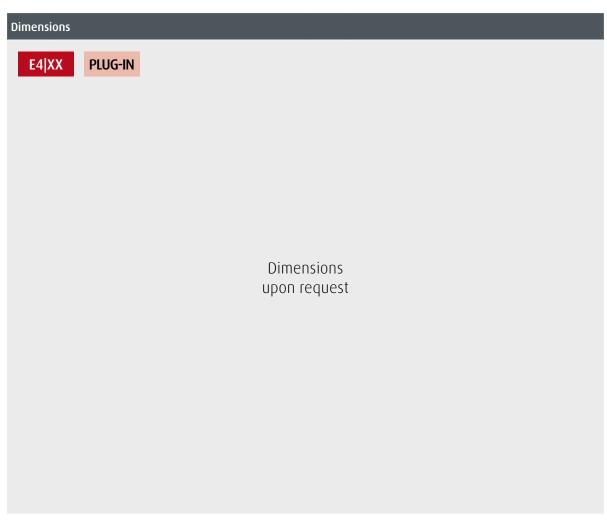
SAE J1946

F4

€ Color

Technical Specification | Drive Shafts / Comp. Flanges | ISO 3019-1/SAE J744 | T2 / CMV 170/215

Dimensions



CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

NZ / CNN 140 /170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

06 / CMV 115/140/17

D7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D3 / CMV 60**

Specification					
		Standard			
Shaft end	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	Fq		Fpmax	N
Nominal size related data	Rodial forces			а	mm
		Fax+	Motor at standstill or in rotation considering	Fax+	N
	Axial forces		unpressurized work ports	Fax-	N
		Fax-	Work ports pressurized	Fax+/p	N/bar

	DIN 5480	
	14	
	2	
	W30	
60		
upon request		





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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

DIN5480

D4 / CMV 60/85

D5 / CMV 85/115



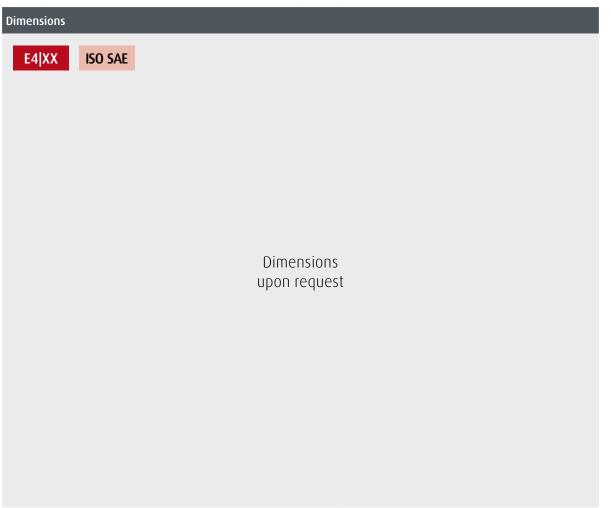
S9 / CMV 85

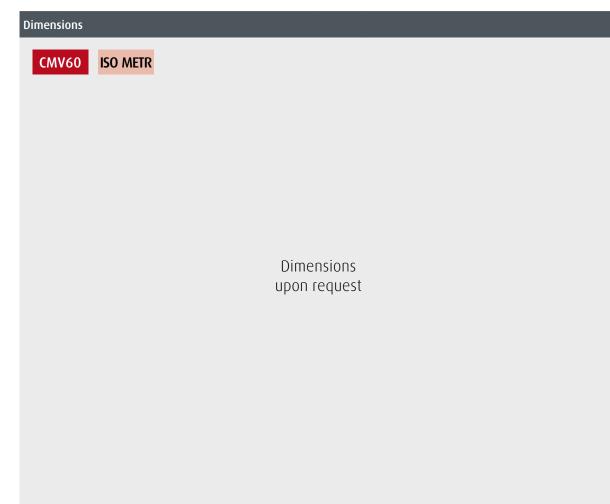
V6 / CMV 85/115

D3 / CMV 60

SAE J1946

Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D3 / CMV 60**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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ISO 3019-1/ SAE J744

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S8 / CMV 85

, c.... 03

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

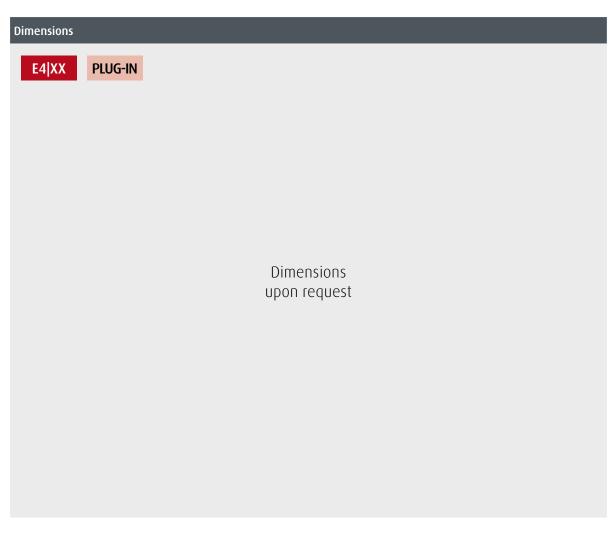
D7 / CMV 170/215

SAE J1946

F4

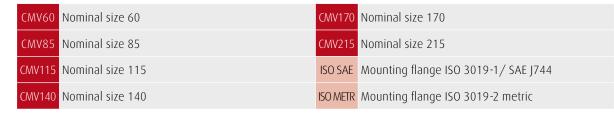
Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D3 / CMV 60**

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



Dimensions			

PLUG-IN Mounting flange Plug-in, similar to ISO 3019-2









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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 11F /140 /170

DE / 6101 4E0 /04E

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D4 / CMV 60/85**

Specification					
		Standard			
Shaft end	Specification	Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	Fq		Fpmax	N
Nominal size related data				а	mm
		/	Motor at standstill or in rotation considering	Fax+	N
	Axial forces	Fax+	unpressurized work ports	Fax-	N
	AMIGITORICS	Fax-	Work ports pressurized	Fax+/p	N/bar

	DIN 5480	
	16	
	2	
	W35	
60	85	
444	upon request	
450	upon request	
10300	upon request	
20	upon request	
0	upon request	
500	upon request	
7.5	upon request	





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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140 /170

Γ1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

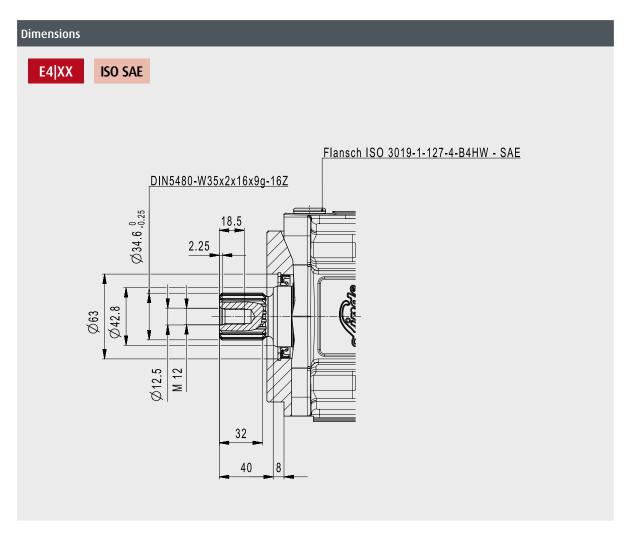
6 / CMV 115/140/170

7 / CMV 1/0/215

SAE J1946

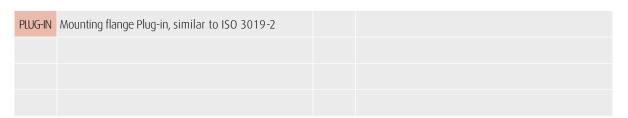
F4

Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D4 / CMV 60/85**



CMV60 ISO N	METR		
		Dimensions upon request	

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric







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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

(/ CMV 11F /140 /170

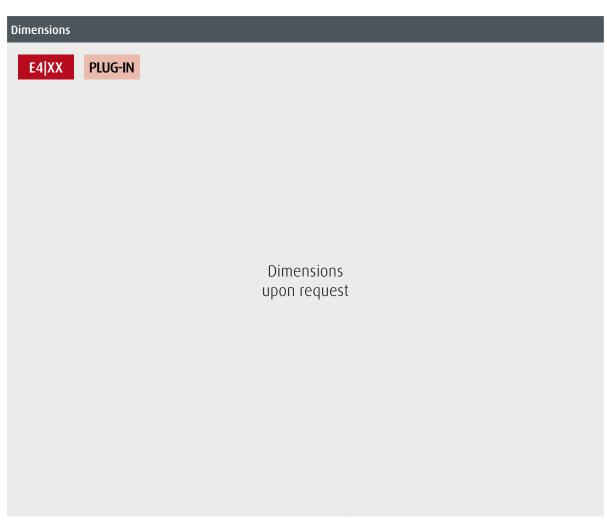
D7 / CMV 170/215

SAE J1946

F4



Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D4 / CMV 60/85**



CMV60	Nominal size 60	CMV170	Nominal size 170
CMV85	Nominal size 85	CMV215	Nominal size 215
CMV115	Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140	Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

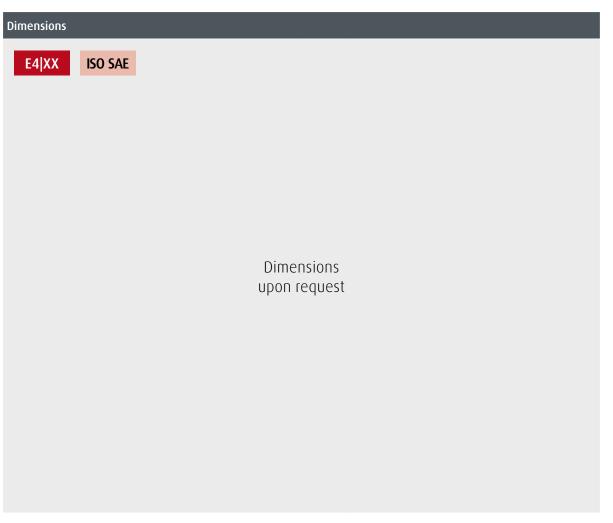
PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



OVERVIEW ISO 3019-1/ Key Facts SAE J744 CONFIGURATION S7 / CMV 60 S8 / CMV 85 **TECHNICAL SPECIFICATION** S9 / CMV 85 General Technical Data V6 / CMV 85/115 Operating Parameters **Electric Interfaces** DIN5480 D3 / CMV 60 Mechanical Interfaces D4 / CMV 60/85 D5 / CMV 85/115 Shafts Hydraulical Interfaces Work Ports SAE J1946 Auxiliary Ports Functions/Options



Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D4 / CMV 60/85**



CMV60	SO METR			
		Dimensions upon request		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2		



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S7 / CMV 60

S8 / CMV 85

, ciii 03

S9 / CMV 85 V6 / CMV 85/115

V/ / CMV 140/1/0

1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

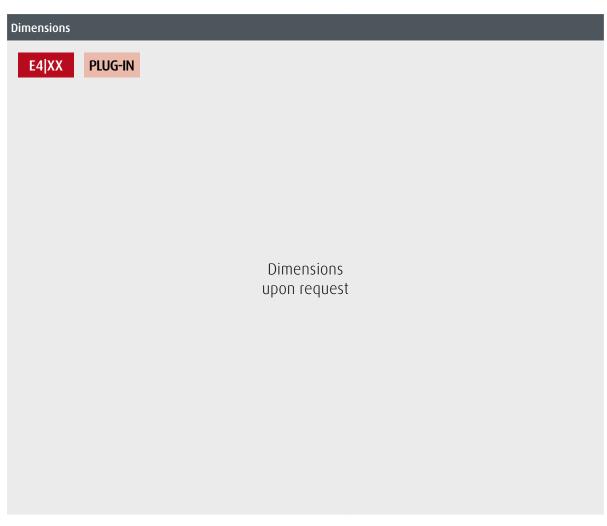
D7 / CMV 170/215

SAE J1946

F4

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Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D4 / CMV 60/85**



Dimensions			

CMV60	Nominal size 60	CMV170	Nominal size 170
CMV85	Nominal size 85	CMV215	Nominal size 215
CMV115	Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140	Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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ISO 3019-1/ SAE J744

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S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140 /170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

O7 / CMV 170/215

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Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D5 / CMV 85/115**

Specification					
		Standard			
Shaft end	Specification	Number of teeth			
related data		Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	↓ Fq		Fpmax	N
Nominal size related data	Radial forces	→ a		а	mm
		Fax+	Motor at standstill or in rotation considering	Fax+	N
	Axial forces Fax+ Fax-		unpressurized work ports	Fax-	N
		Work ports pressurized	Fax+/p	N/bar	

DIN 5480					
	18				
	2				
	W40				
85	115				
628	826				
450	450				
12500	16700				
22.5	22.5				
0	0				
710	1000				
9.6	11				

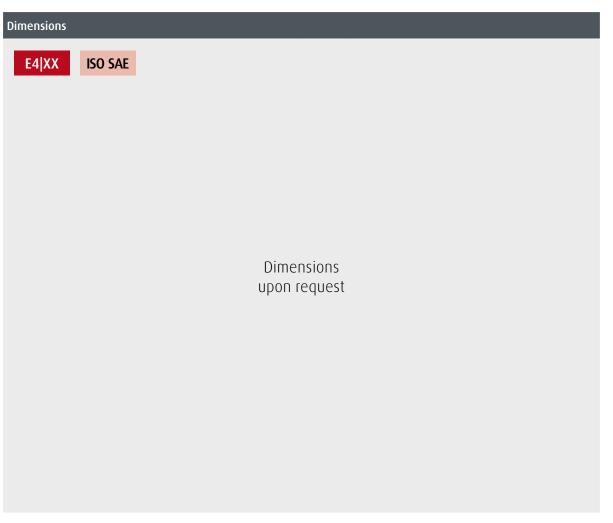




OVERVIEW ISO 3019-1/ Key Facts SAE J744 CONFIGURATION S7 / CMV 60 S8 / CMV 85 **TECHNICAL SPECIFICATION** S9 / CMV 85 General Technical Data V6 / CMV 85/115 Operating Parameters Electric Interfaces DIN5480 D3 / CMV 60 Mechanical Interfaces D4 / CMV 60/85 D5 / CMV 85/115 Shafts Hydraulical Interfaces Work Ports SAE J1946 Auxiliary Ports Functions/Options



Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D5 / CMV 85/115**



Dimensions			
CMV60 ISO ME	R		
		Dimensions	
		upon request	

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

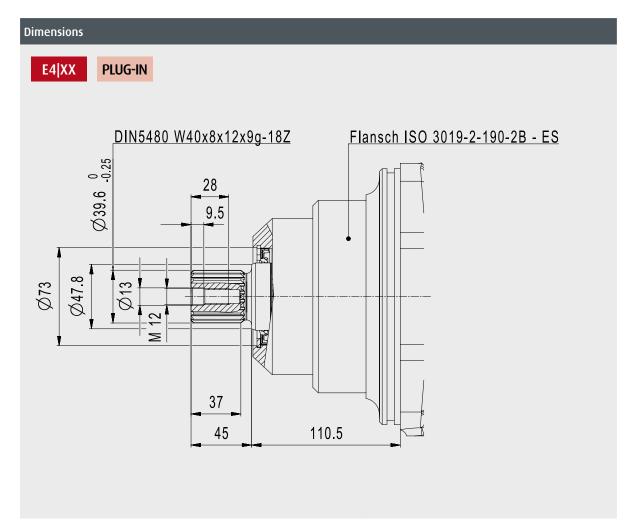
5 / CMV 115/140/170

7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D5 / CMV 85/115**



Dimensions		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	

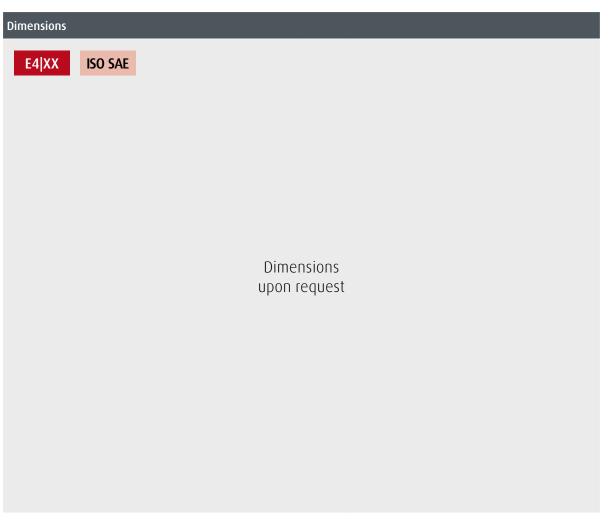




OVERVIEW ISO 3019-1/ Key Facts SAE J744 CONFIGURATION S7 / CMV 60 S8 / CMV 85 **TECHNICAL SPECIFICATION** S9 / CMV 85 General Technical Data V6 / CMV 85/115 Operating Parameters Electric Interfaces DIN5480 D3 / CMV 60 Mechanical Interfaces D4 / CMV 60/85 D5 / CMV 85/115 Shafts Hydraulical Interfaces Work Ports SAE J1946 Auxiliary Ports Functions/Options



Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D5 / CMV 85/115**



Dimensions			
CMV60 ISO ME	R		
		Dimensions	
		upon request	

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

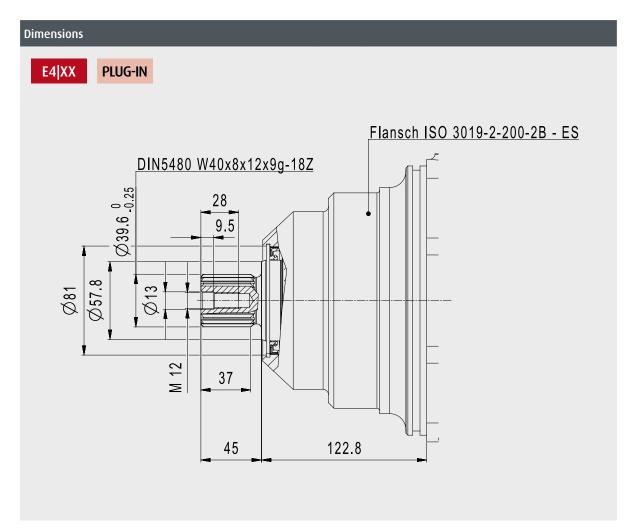
D7 / CMV 170/215

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Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D5 / CMV 85/115**

Dimensions



CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2				







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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

, S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

I / CMV 115/140/17

72 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 11F /140 /170

D7 / CMV 170/215

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Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**

Specification	_				
		Standard			
Shaft end	Specification	Number of teeth			
related data	эрестевноп	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	↓ Fq		Fpmax	N
Nominal size related data	Radial forces	a		а	mm
		_/	Motor at standstill or in rotation considering	Fax+	N
	Axial forces	Fax+	unpressurized work ports	Fax-	N
	ANIAI IUICES	Fax-	Work ports pressurized	Fax+/p	N/bar

	DIN 5480	
	21	
	2	
	W45	
115	140	170
826	1032	1218
450	450	450
16700	19500	21200
25	25	25
0	0	0
1000	1210	1200
11	12.4	15.1





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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

12 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

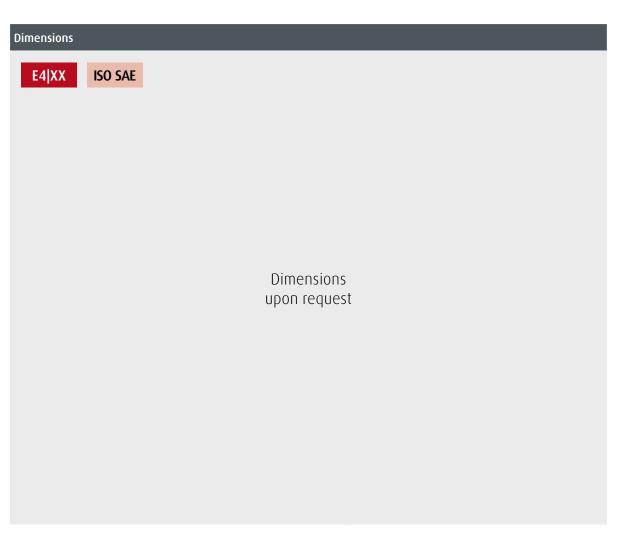
6 / CMV 115/140/170

07 / CMV 170/215

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Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**



CMV60 ISO METR	Elensoh ISO 2010 2 160P/III DIN
DIN5480 W45x8x12x9g-21Z 28 9.5 42 40	Flansch ISO 3019-2-160B4HL - DIN

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

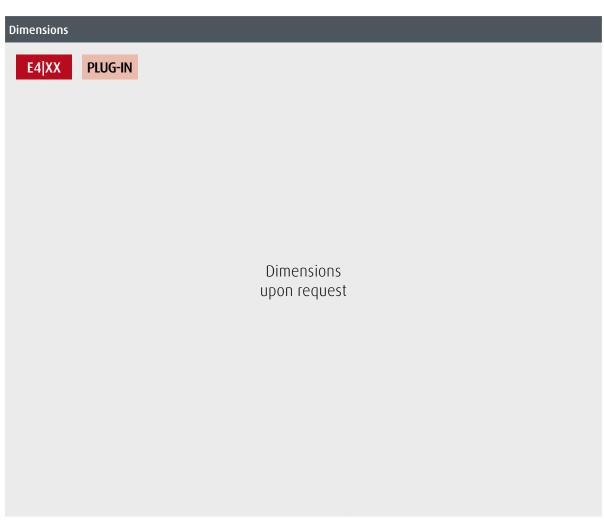
6 / CMV 115/140/170

07 / CMV 170/215

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Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**



Dimensions			

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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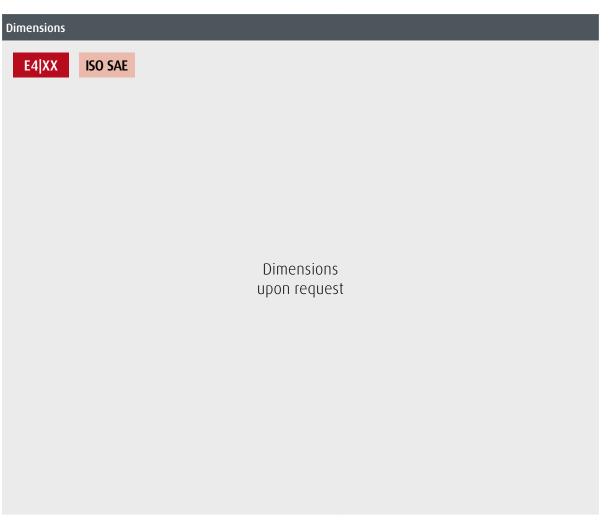
Work Ports

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Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



Dimensions CMV60	ISO METR			
		Dimension	c	
		upon reque		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

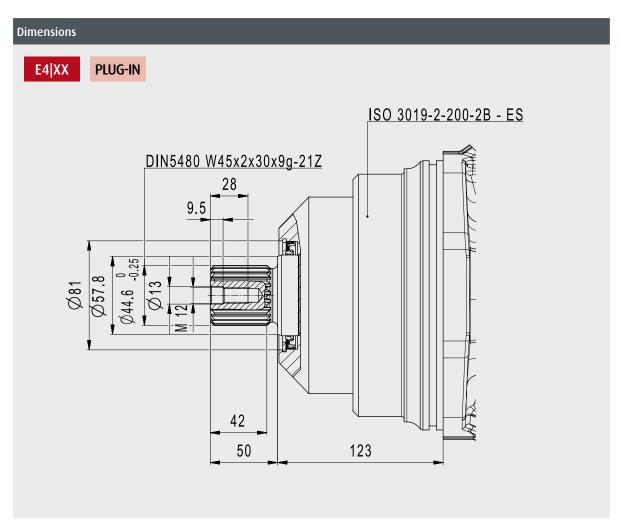
6 / CMV 115/140/170

D7 / CMV 170/215

SAE J1946

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Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**



Dimensions			

CMV60 Nominal size 60	CMV170	Nominal size 170
CMV85 Nominal size 85	CMV215	Nominal size 215
CMV115 Nominal size 115	ISO SAE	Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR	Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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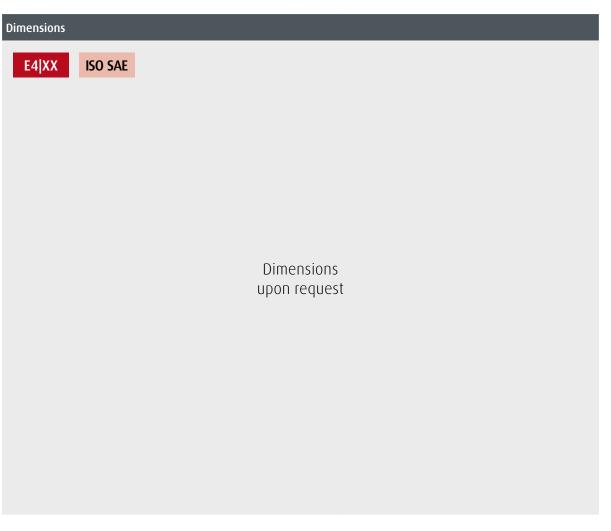
Work Ports

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Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**

In the following you will find the technical specifications of the drive shafts. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing standard and load capacity of the shafts. Beyond that you will find the dimensions of each shaft in combination with each relevant mounting flange and nominal size. Note the short designations such as "S7" or "D3". In the section [Model Code & Availability], you can then check the availability of the flange and auxiliary ports and compile your desired configuration using the short designations as a segment of the model code.



Dimensions CMV60	ISO METR			
		Dimension	c	
		upon reque		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

Γ1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

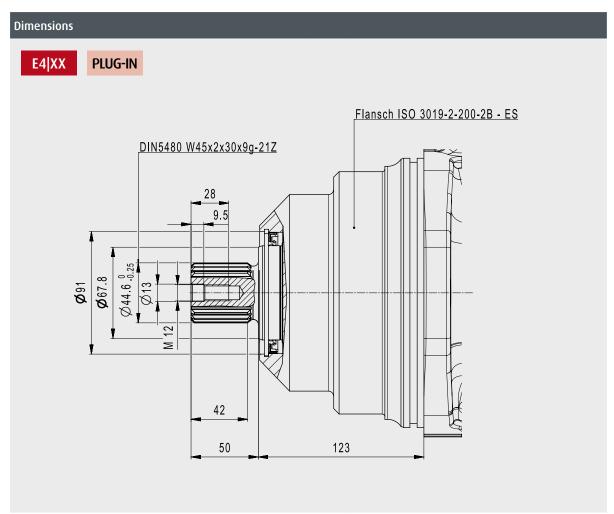
D7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D6 / CMV 115/140/170**

Dimensions



CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	







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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85 V6 / CMV 85/115

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

SAE J1946

Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D7 / CMV 170/215**

Specification	-	_	_		
		Standard			
Shaft end		Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	Fq		Fpmax	N
Nominal size related data	Radial forces			a	mm
		Fax+	Motor at standstill or in rotation considering	Fax+	N
	Axial forces Fax+ Fax-		unpressurized work ports	Fax-	N
		Work ports pressurized	Fax+/p	N/bar	

	DIN 5480				
	24				
	2				
	W50				
170	215				
1218	1561				
450	450				
21200	25000				
27.5	27.5				
0	0				
1200	1250				
15.1	17				





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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

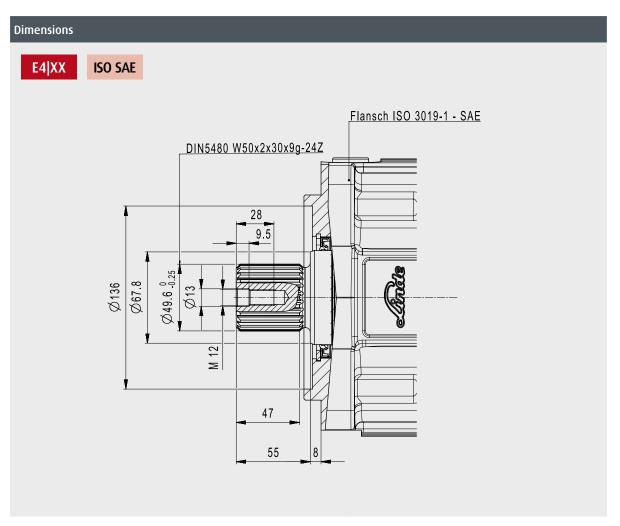
6 / CMV 115/140/170

07 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D7 / CMV 170/215**



Dimensions	
CMV60	ISO METR
	Dimensions
	upon request

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2		





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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

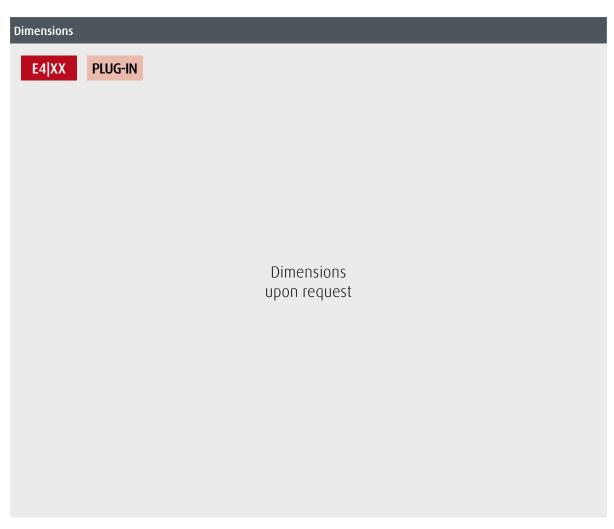
D7 / CMV 170/215

SAE J1946

F4



Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D7 / CMV 170/215**



Dimensions		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	



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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

T1 / CMV 115/140/170

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

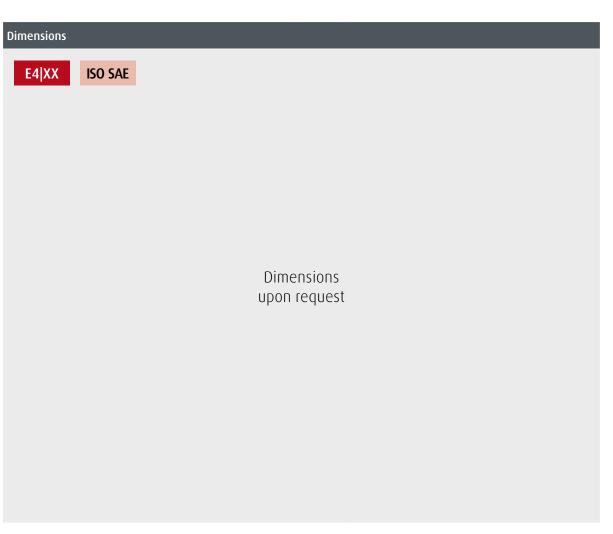
6 / CMV 115/140/170

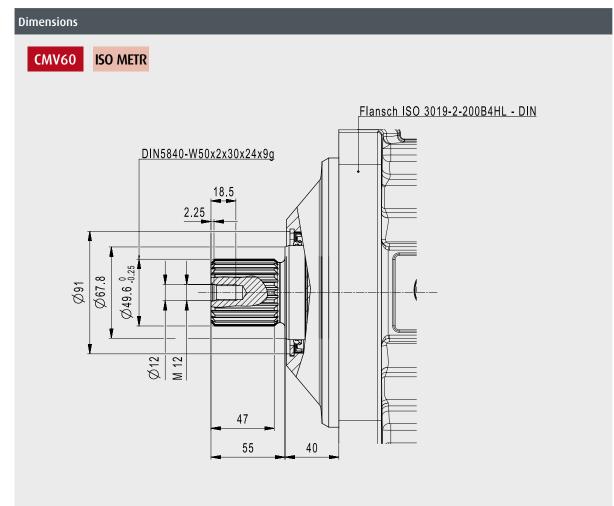
D7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D7 / CMV 170/215**





CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric







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ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140/170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

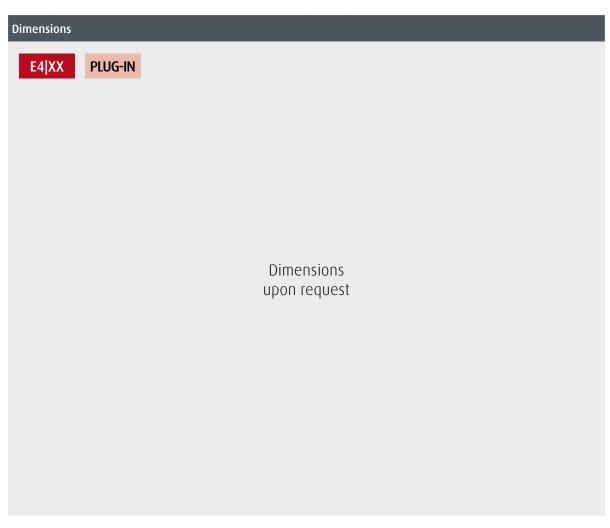
6 / CMV 115/140/170

07 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | DIN 5480 | **D7 / CMV 170/215**



Dimensions		

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISOMETR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	





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Functions/Options

ISO 3019-1/ SAE J744

S7 / CMV 60

S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

N7 / CMN 140 /170

I / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

O7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | SAE J1946 | **F4**

Specification					
	Specification	Standard			
Shaft end		Number of teeth			
related data	Specification	Spline pitch/module			
		Identification code			
	Nominal size				
	Torque	Maximum torque			Nm
	Pressure	Maximum differential pressure		dpmax	bar
	Radial forces	↓ Fq		Fpmax	N
Nominal size related data	Radial forces	a		а	mm
	Axial forces Fax+ Fax-	Fax+	Motor at standstill or in rotation considering	Fax+	N
			unpressurized work ports Fax-	Fax-	N
		Work ports pressurized	Fax+/p	N/bar	

	SAE J1946	
85/115/140/170/215		
upon request		





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ISO 3019-1/ SAE J744

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S8 / CMV 85

S9 / CMV 85

V6 / CMV 85/115

V7 / CMV 140 /170

1 / CMV 115/140/17

T2 / CMV 170/215

DIN5480

D3 / CMV 60

D4 / CMV 60/85

D5 / CMV 85/115

6 / CMV 115/140/170

O7 / CMV 170/215

SAE J1946

F4

Technical Specification | Drive Shafts / Comp. Flanges | SAE J1946 | **F4**

Dimensions	
Dimens upon re	

Dimensions		
	Dimensions upon request	

CMV60 Nominal size 60	CMV170 Nominal size 170
CMV85 Nominal size 85	CMV215 Nominal size 215
CMV115 Nominal size 115	ISO SAE Mounting flange ISO 3019-1/ SAE J744
CMV140 Nominal size 140	ISO METR Mounting flange ISO 3019-2 metric

PLUG-IN	Mounting flange Plug-in, similar to ISO 3019-2	







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AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

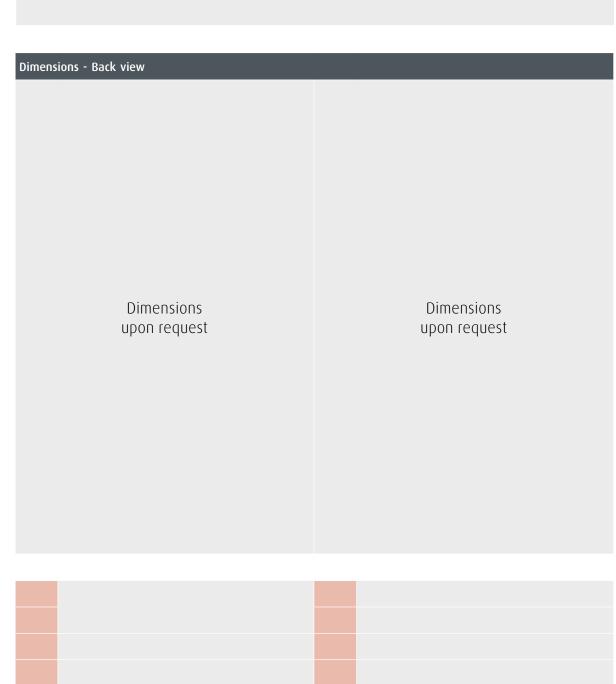
In combination with PLUG-IN, SIM. TO ISO 3019-2

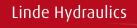
CMV 60-215

(L)

Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 60

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

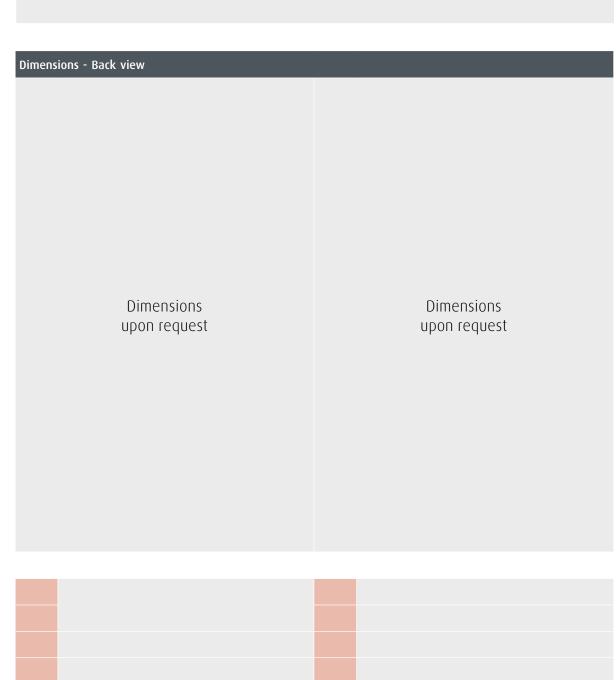
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 85

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

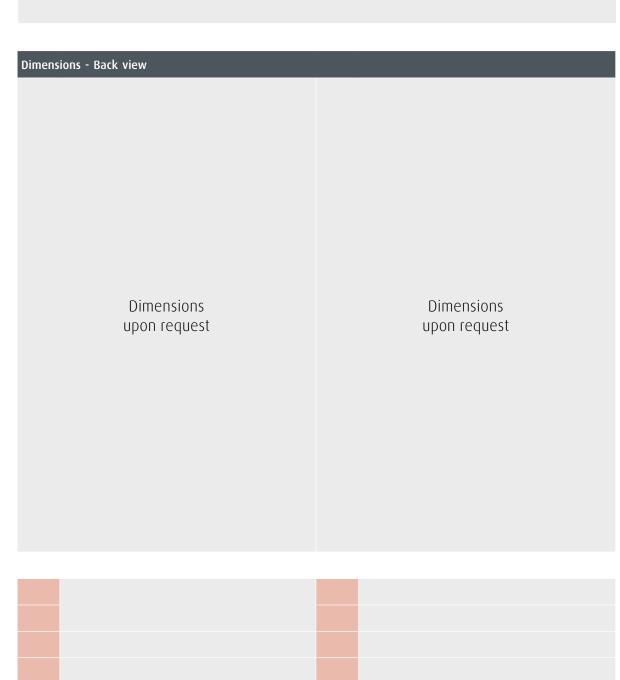
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

(d)

Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 115

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

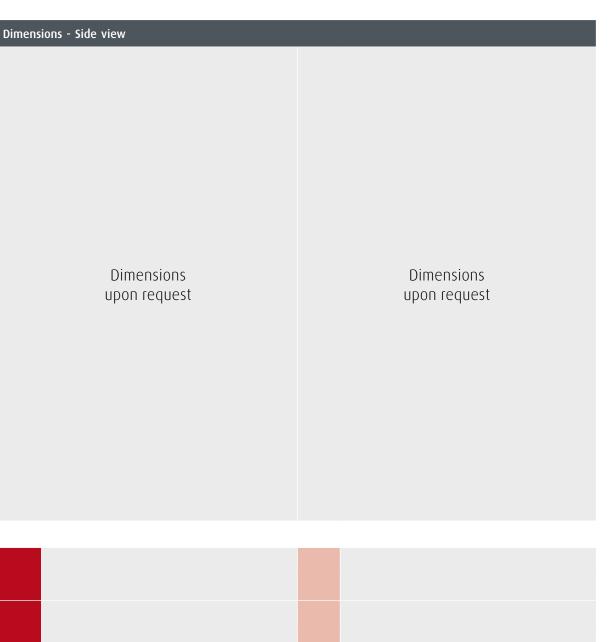
CMV 60-215

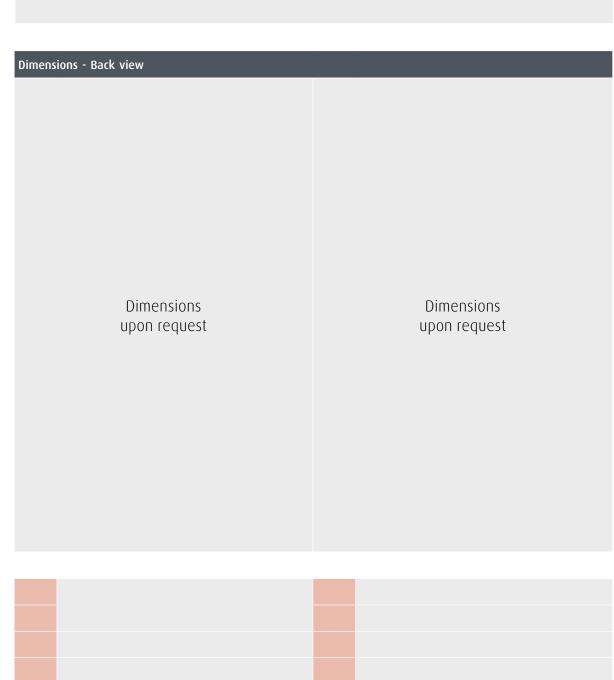
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

(d)

Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 140









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AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

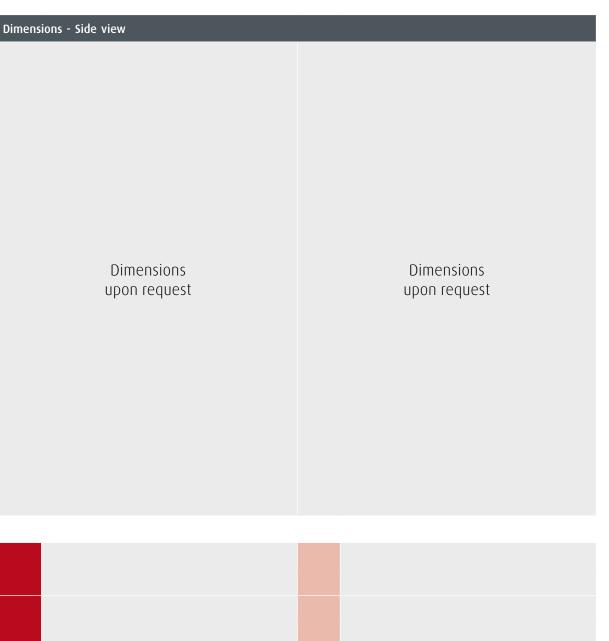
In combination with ISO 3019-2 metric

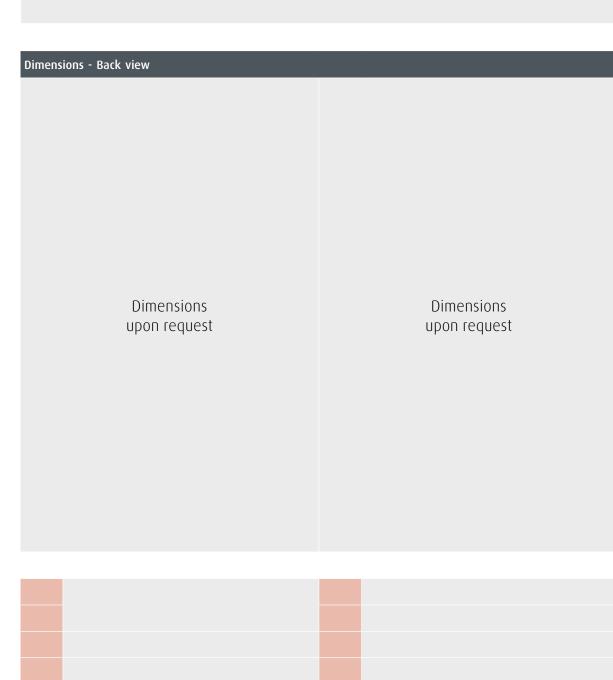
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 170









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AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

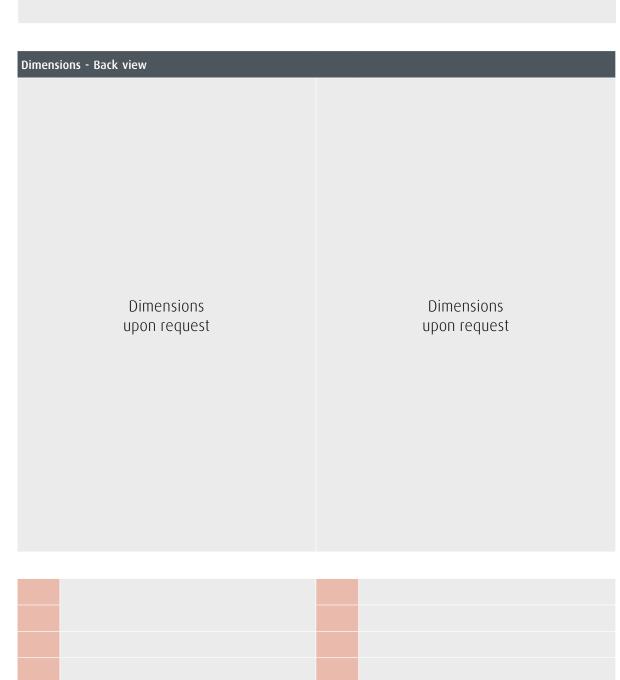
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

(d)

Technical Specification | Work Ports | Axial Twin Ports | ISO SAE | CMV 215

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

CMV 60-215

Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

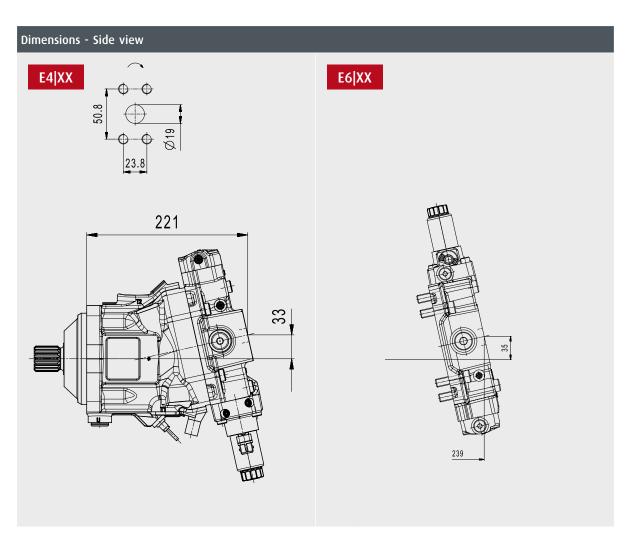
Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

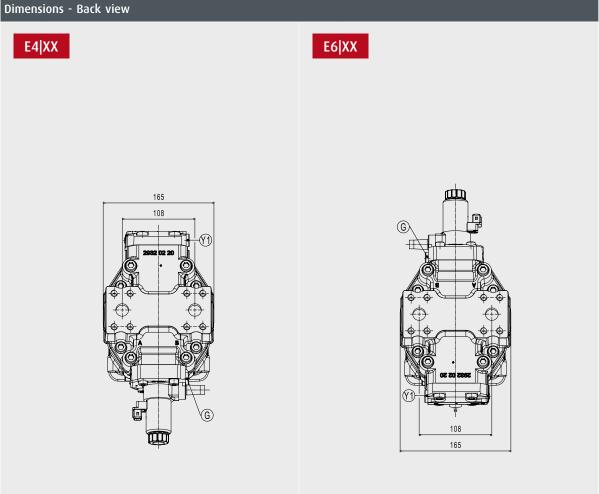
High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

Technical Specification | Work Ports | Axial Twin Ports | ISO METR | CMV 60

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Pressure equalization port

T1 Drain / vent port, ISO 6149

T2 Drain / vent port, ISO 6149

ВХ

Ext. control pressure supply, ISO 6149

Bearing flush port, ISO 6149

Y1 Measuring port, ISO 6149







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ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2

ISO 6162-2

In combination with

CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

In combination with

CMV 60-215

In combination with

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

AXIAL TWIN PORTS

In combination with

CMV 60-215

CMV 60-215

SIDE PORTS

ISO 3019-1 / SAE J744

CMV 60-215

In combination with CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

ISO 3019-1 / SAE J744

ISO 3019-2 metric

CMV 60-215

Technical Specification | Work Ports | Axial Twin Ports | ISO METR | CMV 85

High pressure work port, ISO 6162-2, SAE 1"

High pressure work port, ISO 6162-2, SAE 1"

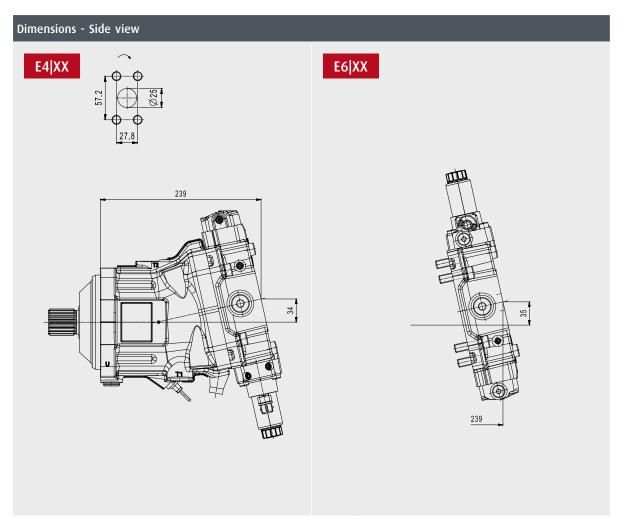
If pressurised - motor runs counter-clockwise

Nom. pres.: 450 bar, max. press.: 500 bar

Nom. pres.: 450 bar, max. press.: 500 bar

If pressurised - motor runs clockwise

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement

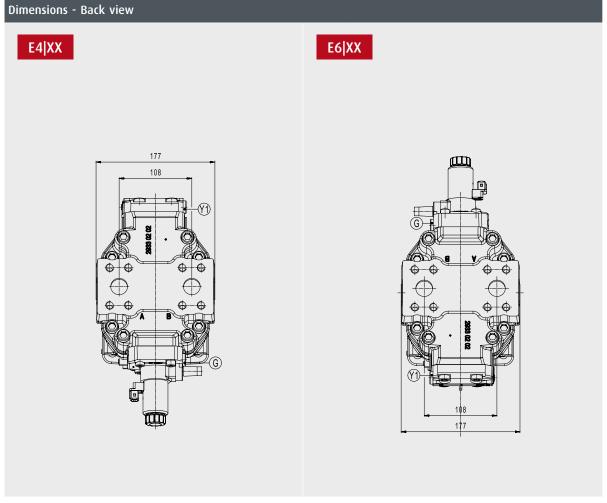
control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement



Pressure equalization port

Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep

T2 Drain / vent port, ISO 6149, M27x2, 19 mm deep

ВХ

G Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep







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ISO 6162-2

ISO 3019-1 / SAE J744

ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

> SIDE PORTS ISO 6162-2

In combination with

ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2

RADIAL TWIN PORTS

In combination with

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2

AXIAL TWIN PORTS

In combination with

CMV 60-215

In combination with

CMV 60-215

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

CMV 60-215

CMV 60-215

ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

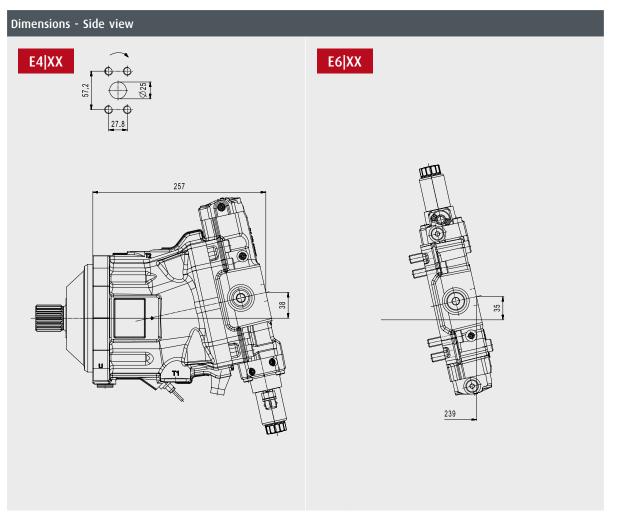
ISO 3019-2 metric

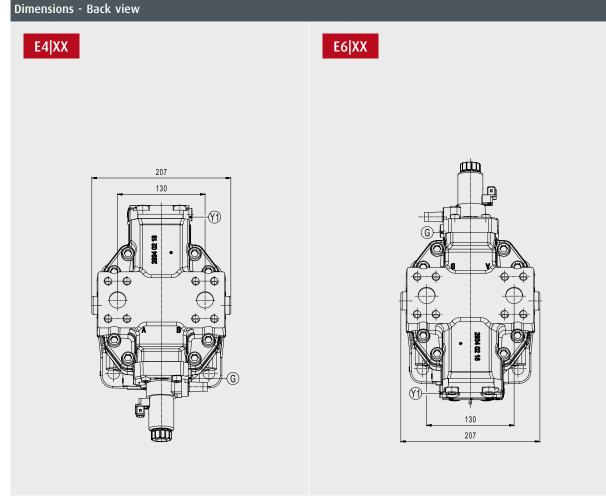
In combination with

CMV 60-215

Technical Specification | Work Ports | Axial Twin Ports | ISO METR | CMV 115

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Pressure equalization port	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ		U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







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Functions/Options

ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

ISO 6162-2

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

In combination with

CMV 60-215

AXIAL TWIN PORTS

In combination with

In combination with

CMV 60-215

In combination with

SIDE PORTS

In combination with ISO 3019-1 / SAE J744

CMV 60-215

CMV 60-215

In combination with CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

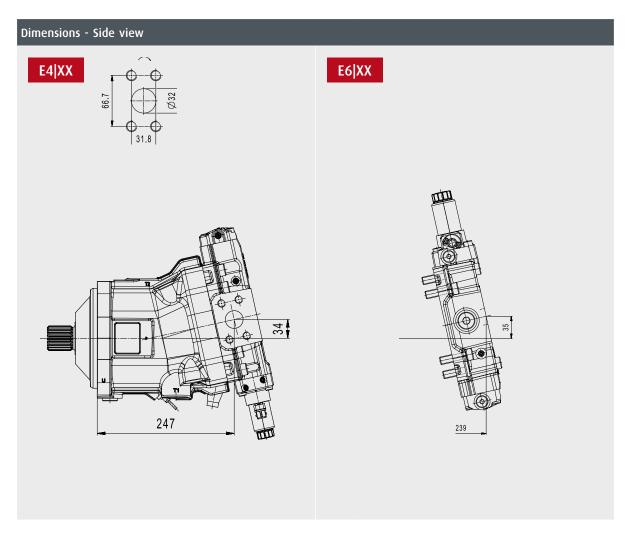
ISO 3019-2 metric

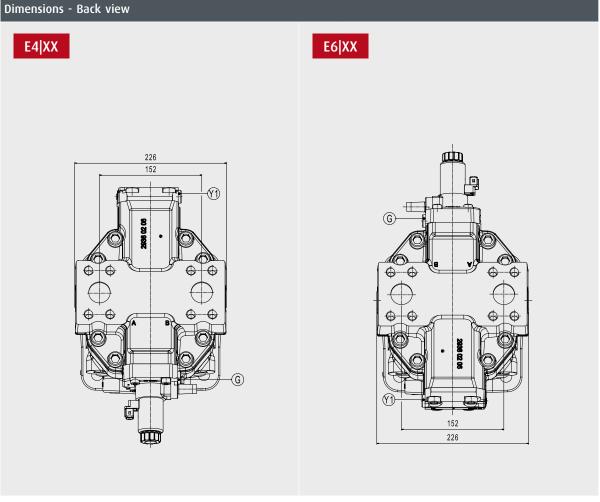
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

Technical Specification | Work Ports | Axial Twin Ports | ISO METR | CMV 140

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Pressure equalization port	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ		U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







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ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

ISO 3019-2 metric

CMV 60-215

CMV 60-215

In combination with

AXIAL TWIN PORTS

In combination with

CMV 60-215

In combination with

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

ISO 3019-2 metric

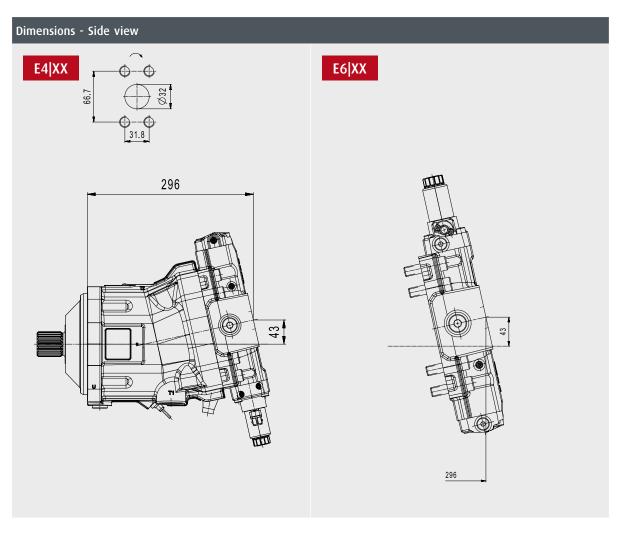
CMV 60-215

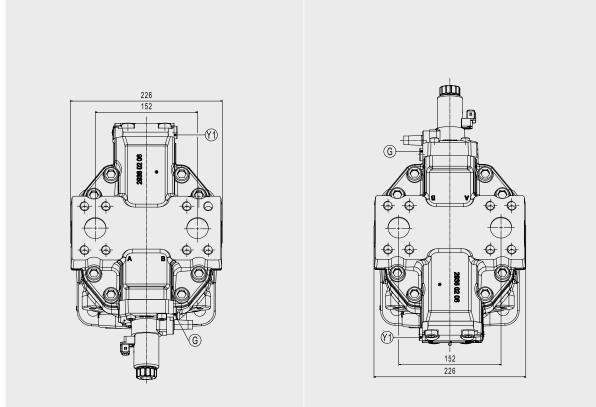
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Work Ports | Axial Twin Ports | ISO METR | CMV 170

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





E6|XX

Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4"

If pressurised - motor runs counter-clockwise

Nom. pres.: 450 bar, max. press.: 500 bar

M14x1.5, 11.5 mm deep T1 Drain / vent port, ISO 6149, M27x2, 19 mm deep T2 Drain / vent port, ISO 6149, M33x2, 19 mm deep

Pressure equalization port, ISO 6149,

Dimensions - Back view

E4|XX

G Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep







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AXIAL TWIN PORTS ISO 6162-2

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

ISO 6162-2

CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

RADIAL TWIN PORTS

ISO 3019-1 / SAE J744

In combination with

In combination with ISO 3019-1 / SAE J744

In combination with

SIDE PORTS

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with

ISO 6162-2

In combination with

CMV 60-215

ISO 3019-2 metric

CMV 60-215

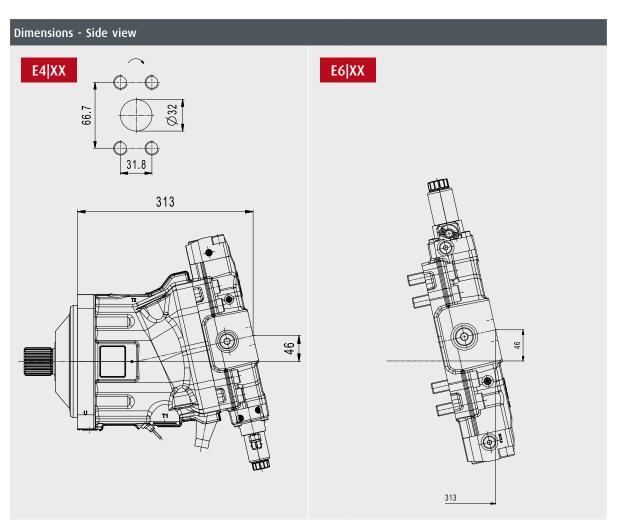
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Technical Specification | Work Ports | Axial Twin Ports | ISO METR | CMV 215

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar	AX	Pressure equalization port, ISO 6149,
	ВХ	M22x1.5, 15.5 mm deep

T1 Drain / vent port, ISO 6149, M33x2, 19 mm deep

T2 Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

Nom. pres.: 450 bar, max. press.: 500 bar High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

E6 XX	Dilliciisiolis - Back view	
	236 164	
164 236		

G Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep





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Functions/Options

ISO 6162-2

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

ISO 6162-2

CMV 60-215

In combination with

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

AXIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

In combination with

CMV 60-215

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

CMV 60-215

In combination with

RADIAL TWIN PORTS

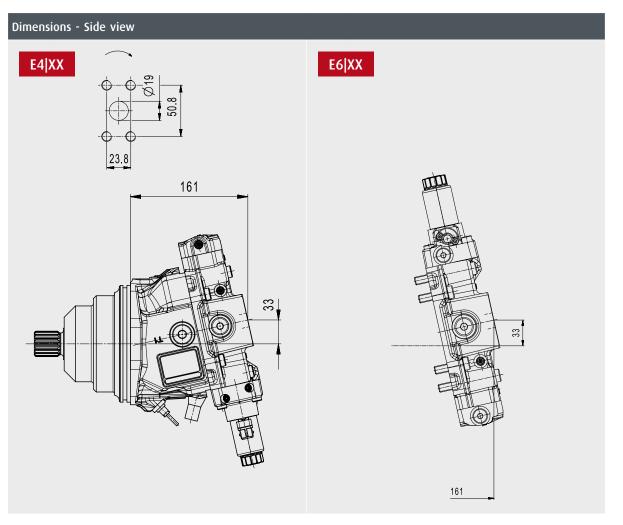
In combination with ISO 3019-1 / SAE J744

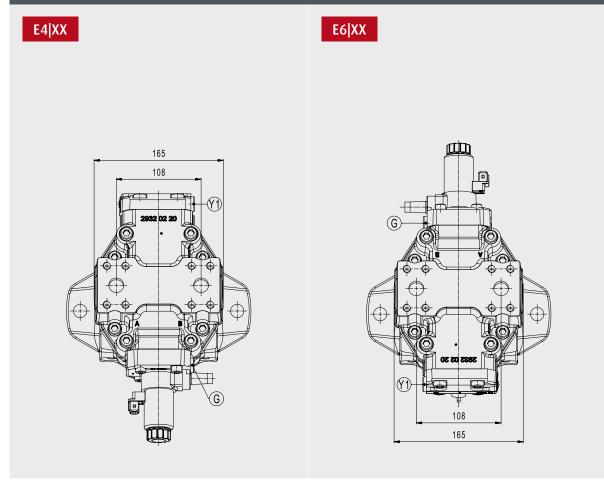
ISO 3019-2 metric

CMV 60-215

Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 60

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Dimensions - Back view

Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the

High pressure work port, ISO 6162-2, If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX		G	Ext. control pressure supply, ISO 6149
ВХ	Pressure equalization port	U	Bearing flush port, ISO 6149
T1	Drain / vent port, ISO 6149	Y1	Measuring port, ISO 6149
T2	Drain / vent port, ISO 6149		







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Connectors

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3.13.1

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AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

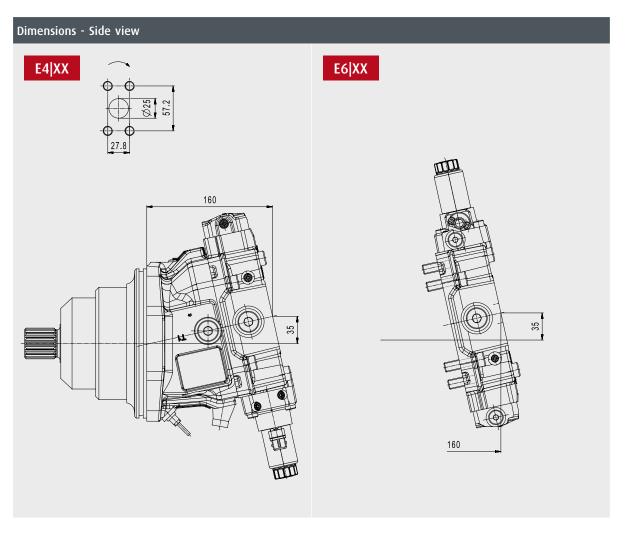
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

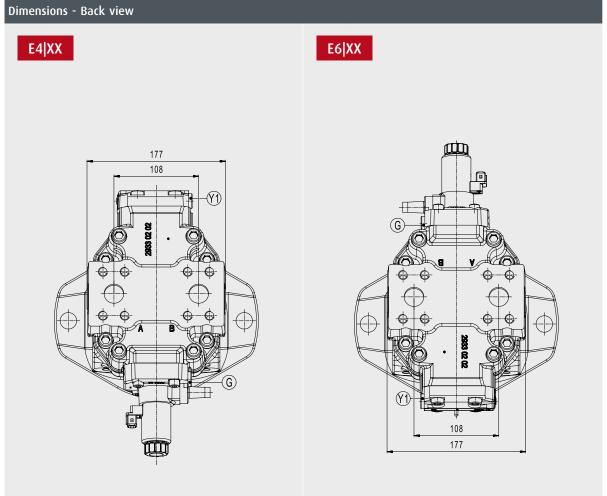
CMV 60-215

Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 85

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at model-code [item 10. Port Plate housing] and compile your desired configuration.



4 XX	Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.	А	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar
6 XX	Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.	В	High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar



Pressure equalization port

Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep

T2 Drain / vent port, ISO 6149, M27x2, 19 mm deep

ВХ

G Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep







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ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

In combination with

CMV 60-215

In combination with

AXIAL TWIN PORTS

In combination with

In combination with

CMV 60-215

In combination with

In combination with ISO 3019-1 / SAE J744

In combination with

CMV 60-215

In combination with CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

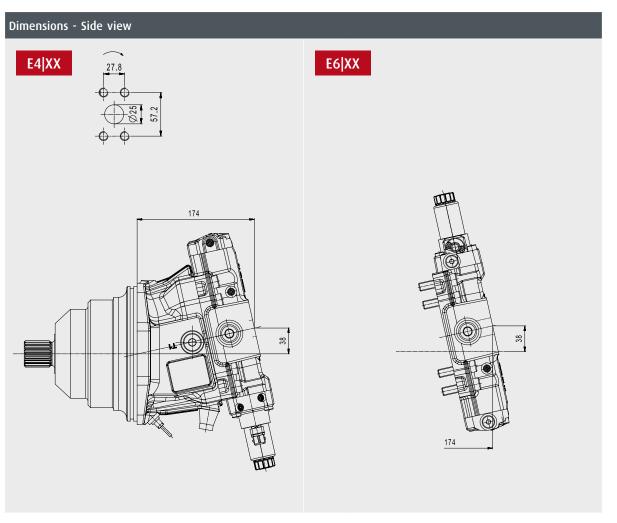
ISO 3019-2 metric

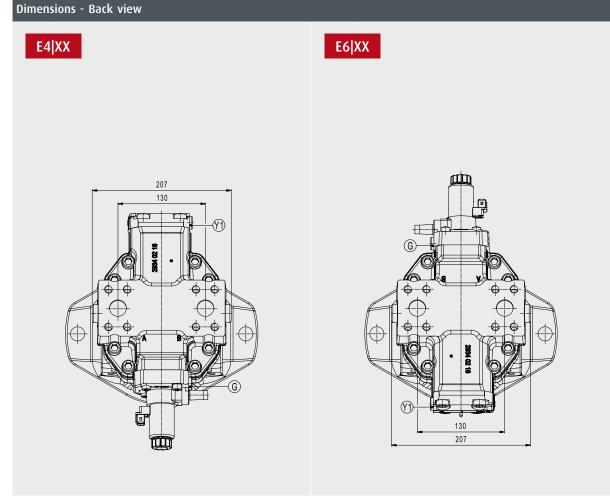
PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 115

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Description out	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ	Pressure equalization port	U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







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ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with ISO 3019-2 metric

CMV 60-215

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

AXIAL TWIN PORTS

CMV 60-215

In combination with

In combination with ISO 3019-1 / SAE J744

CMV 60-215

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

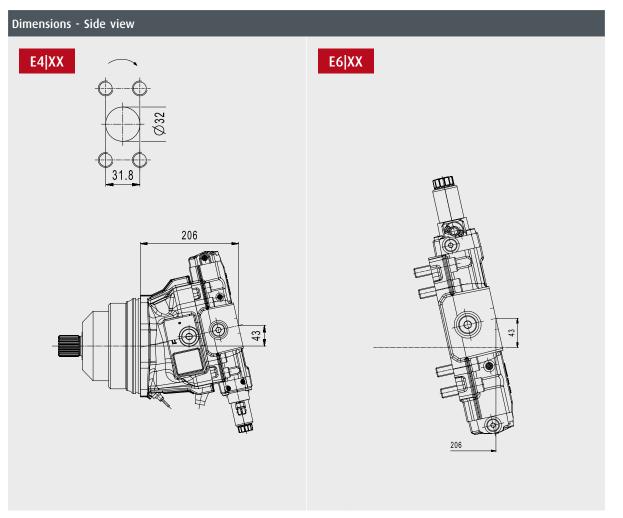
In combination with ISO 3019-1 / SAE J744

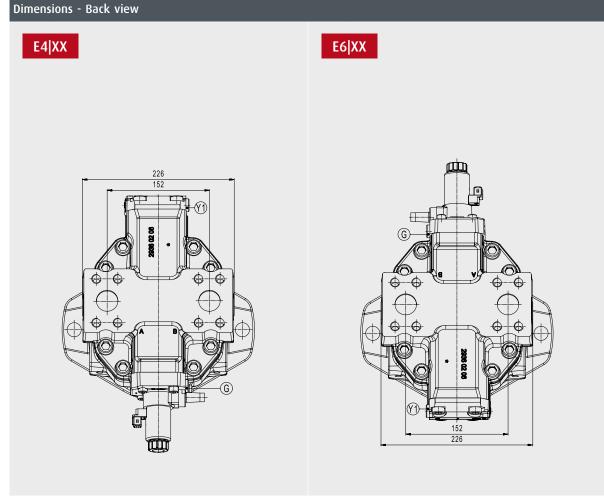
In combination with ISO 3019-2 metric

CMV 60-215

Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 140

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Pressure equalization port

T1 Drain / vent port, ISO 6149, M27x2, 19 mm deep

T2 Drain / vent port, ISO 6149, M33x2, 19 mm deep

ВХ

Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep

Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar





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AXIAL TWIN PORTS ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with

CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

RADIAL TWIN PORTS

CMV 60-215

In combination with

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with CMV 60-215

ISO 6162-2

In combination with ISO 3019-1 / SAE J744

ISO 3019-2 metric

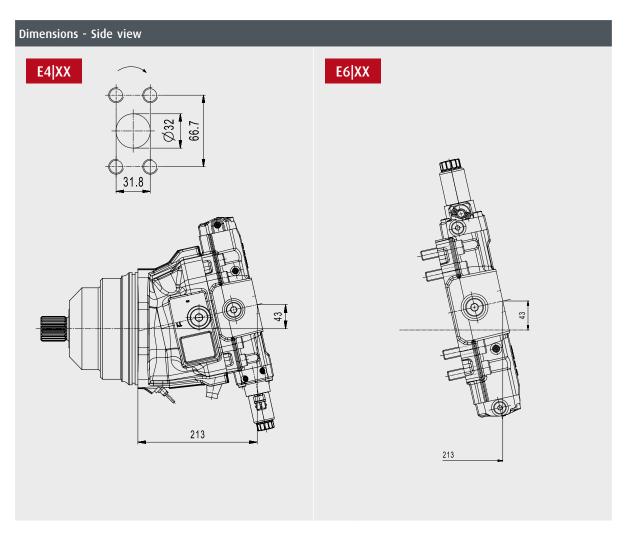
CMV 60-215

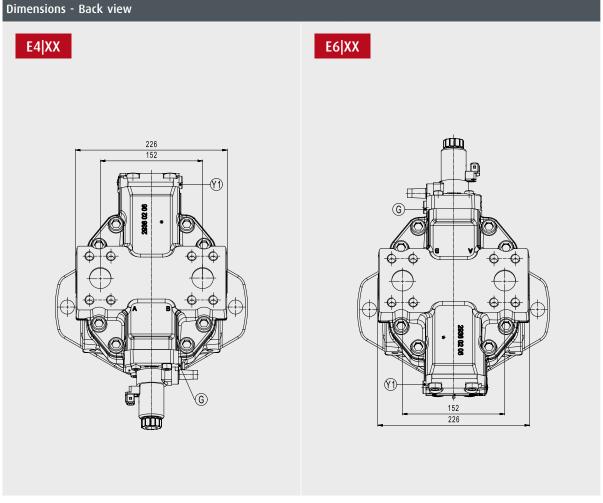
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 170

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

G Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep Pressure equalization port, ISO 6149, M14x1.5, 11.5 mm deep Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep T1 Drain / vent port, ISO 6149, M27x2, 19 mm deep Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep T2 Drain / vent port, ISO 6149, M33x2, 19 mm deep







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ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

ISO 6162-2

In combination with

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

RADIAL TWIN PORTS

In combination with

CMV 60-215

In combination with

In combination with

AXIAL TWIN PORTS

In combination with

In combination with

CMV 60-215

In combination with

SIDE PORTS

ISO 3019-1 / SAE J744

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

ISO 6162-2

ISO 3019-1 / SAE J744

ISO 3019-2 metric

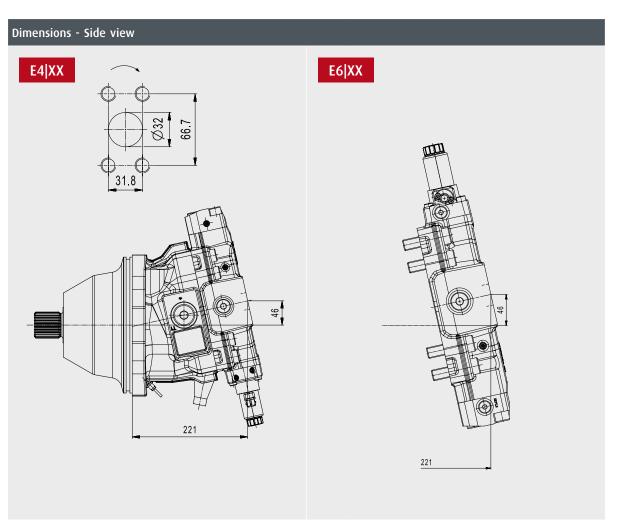
CMV 60-215

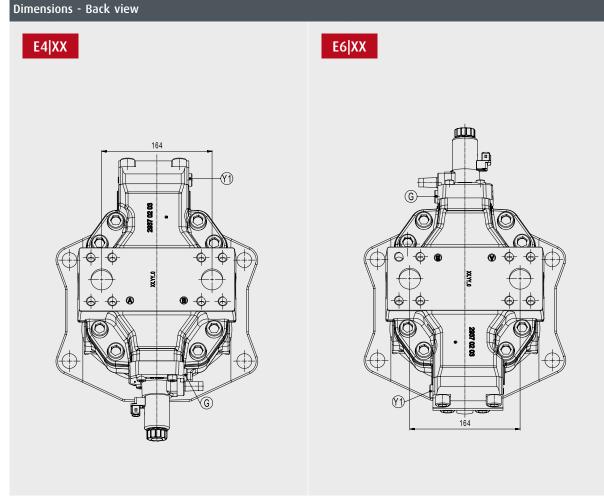
PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Work Ports | Axial Twin Ports | Plug-In | CMV 215

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

АХ	Pressure equalization port, ISO 6149,	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ	M22x1.5, 15.5 mm deep	U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
T1	Drain / vent port, ISO 6149, M33x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep		





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In combination with ISO 3019-2 metric

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RADIAL TWIN PORTS ISO 6162-2

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In combination with ISO 3019-2 metric

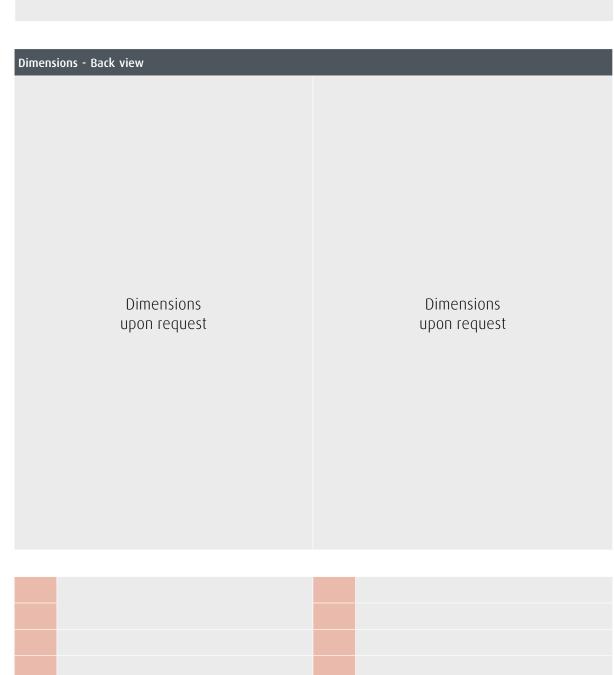
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

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CMV 60-215

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In combination with ISO 3019-1 / SAE J744

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In combination with ISO 3019-2 metric

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RADIAL TWIN PORTS ISO 6162-2

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CMV 60-2<u>15</u>

In combination with ISO 3019-2 metric

CMV 60-215

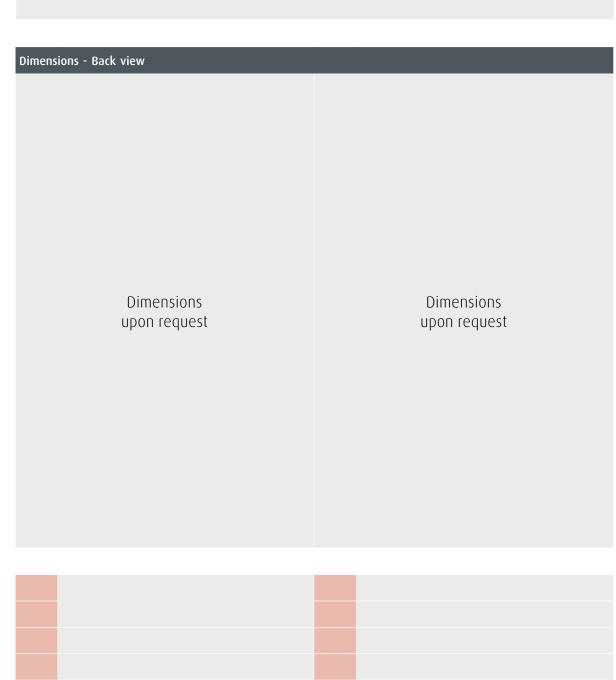
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CMV 60-215



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In combination with ISO 3019-2 metric

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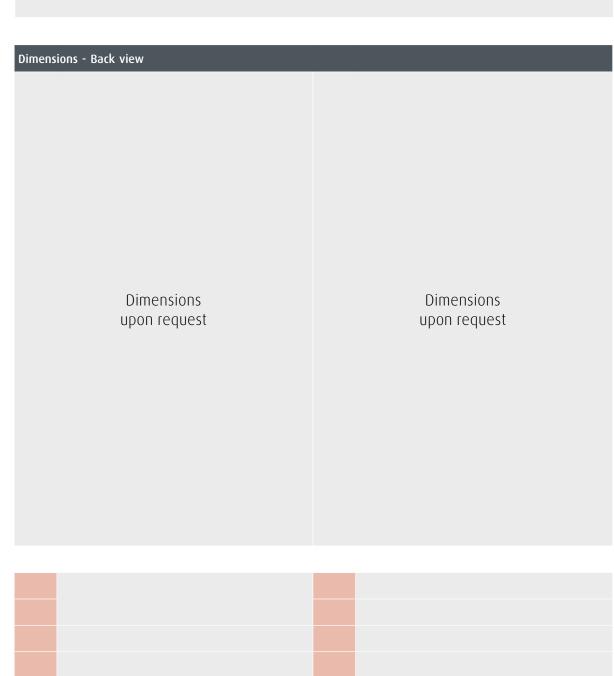
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In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

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RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

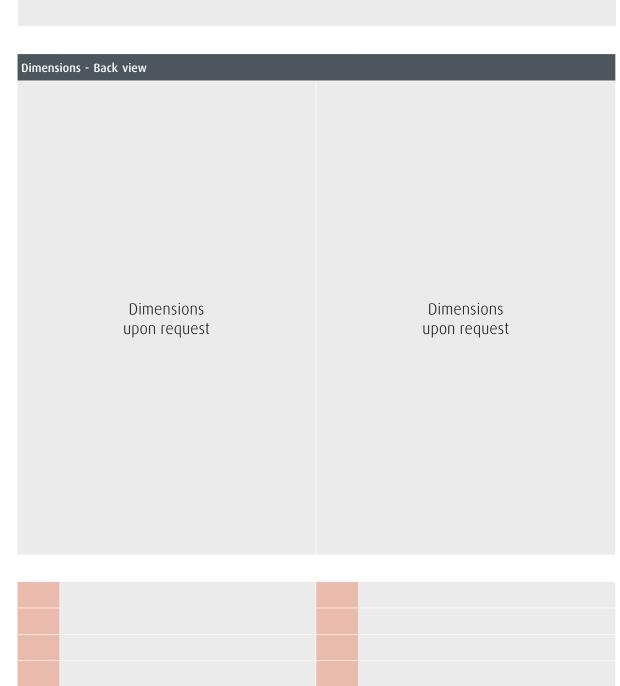
In combination with PLUG-IN, SIM. TO ISO 3019-2

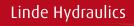
CMV 60-215



Technical Specification | Work Ports | Side Ports | ISO SAE | CMV 140

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CMV 60-215

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CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

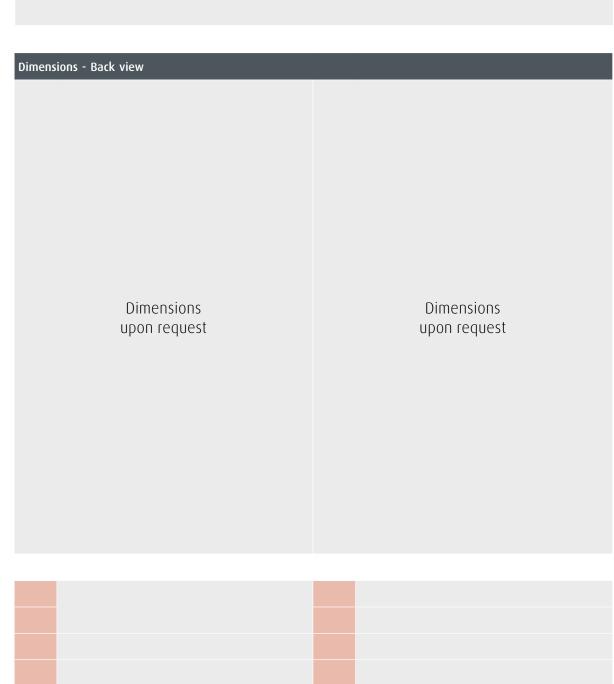
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Technical Specification | Work Ports | Side Ports | ISO SAE | CMV 170

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

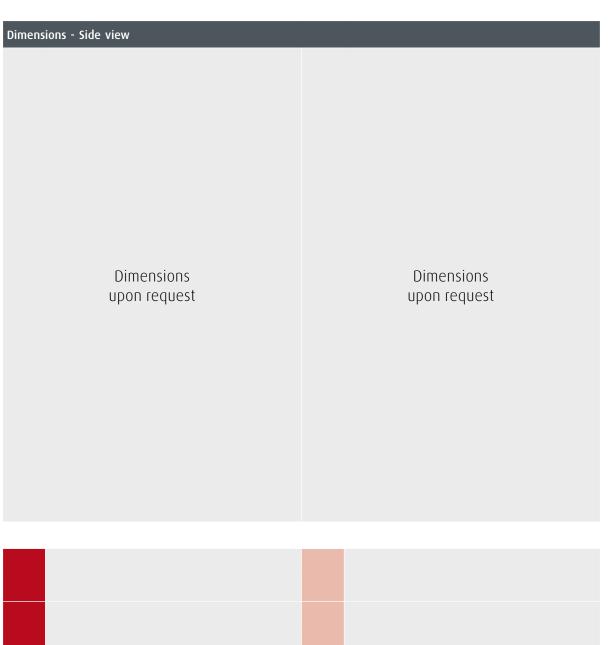
CMV 60-215

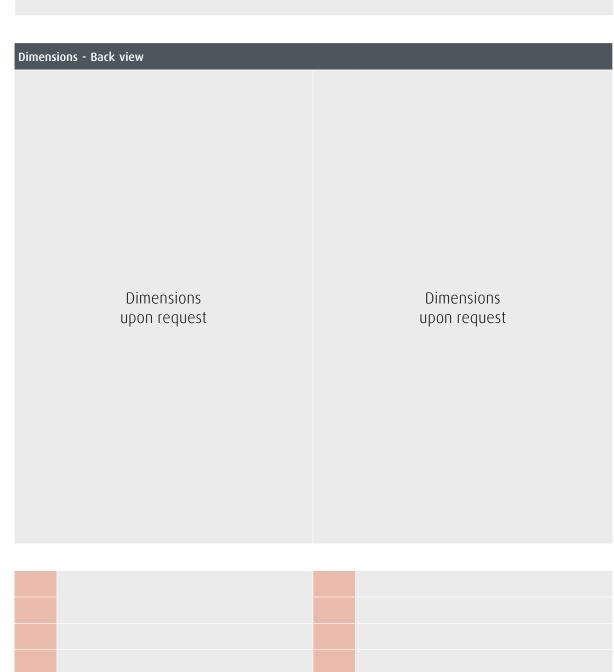
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Technical Specification | Work Ports | Side Ports | ISO SAE | CMV 215









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Technical Specification | Work Ports | Side Ports | ISO METR | CMV 60

High pressure work port, ISO 6162-2,

If pressurised - motor runs clockwise

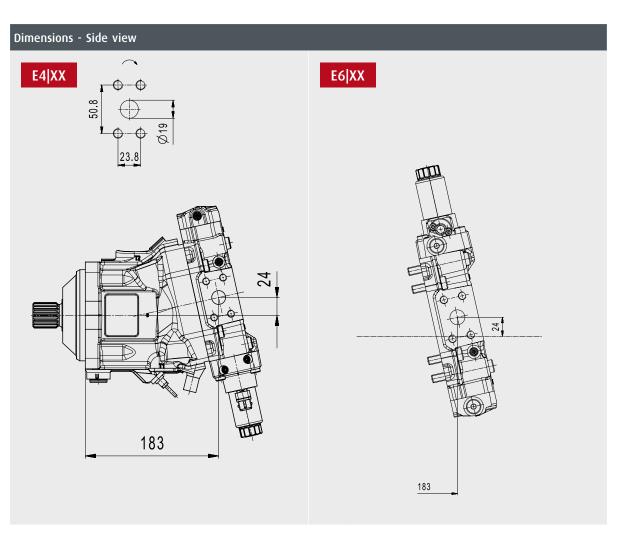
High pressure work port, ISO 6162-2,

Nom. pres.: 450 bar, max. press.: 500 bar

Nom. pres.: 450 bar, max. press.: 500 bar

If pressurised - motor runs counter-clockwise

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement

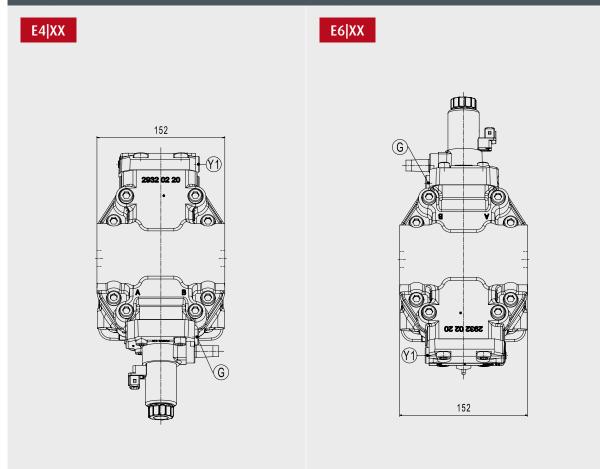
control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement



Dimensions - Back view

AX	Pressure equalization port	G	Ext. control pressure supply, ISO 6149
ВХ		U	Bearing flush port, ISO 6149
T1	Drain / vent port, ISO 6149	Y1	Measuring port, ISO 6149
T2	Drain / vent port, ISO 6149		





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In combination with ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with

In combination with ISO 3019-2 metric

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CMV 60-215

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RADIAL TWIN PORTS

In combination with

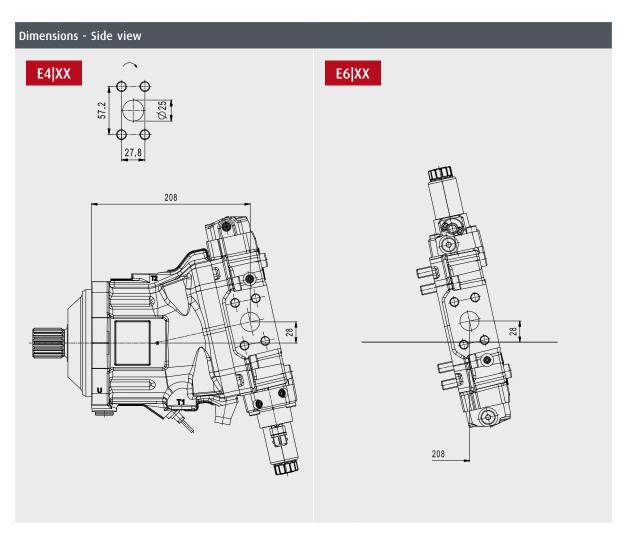
ISO 3019-2 metric

CMV 60-215



Technical Specification | Work Ports | Side Ports | ISO METR | CMV 85

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

AX	Pressure equalization port	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ		U	Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep
T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep		

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar





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In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

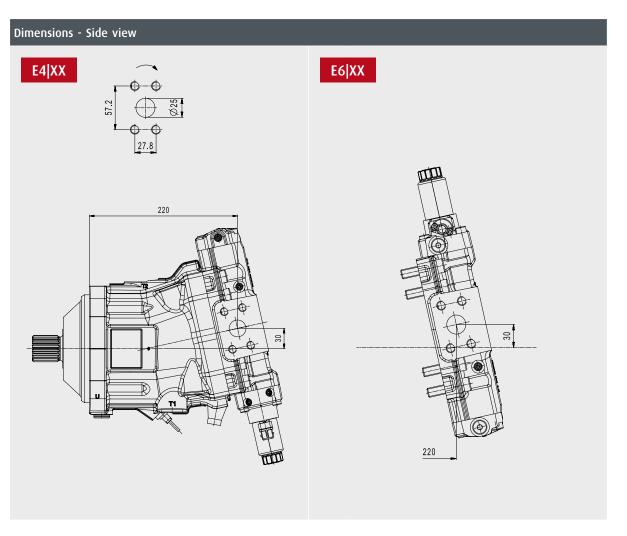
CMV 60-215

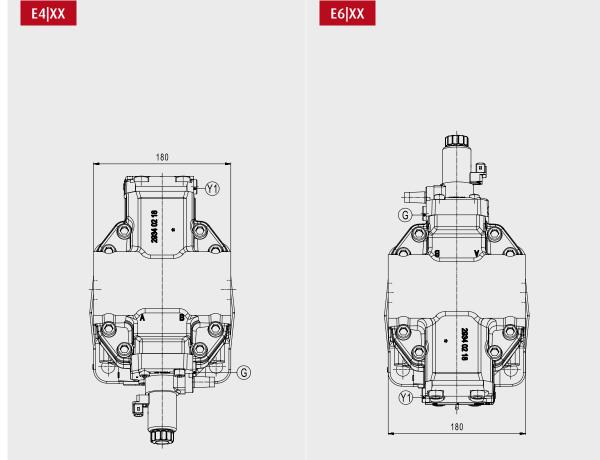
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Work Ports | Side Ports | ISO METR | CMV 115

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at model-code [item 10. Port Plate housing] and compile your desired configuration.





Dimensions - Back view

Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1"
If pressurised - motor runs counter-clockwise
Nom. pres.: 450 bar, max. press.: 500 bar

AX	Dragging aqualization doct	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ	Pressure equalization port		Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







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ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

ISO 6162-2

In combination with

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

In combination with

In combination with

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CMV 60-215

AXIAL TWIN PORTS

In combination with

In combination with

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In combination with

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RADIAL TWIN PORTS ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

Technical Specification | Work Ports | Side Ports | ISO METR | CMV 140

High pressure work port, ISO 6162-2, SAE 1 1/4"

High pressure work port, ISO 6162-2, SAE 1 1/4"

If pressurised - motor runs counter-clockwise

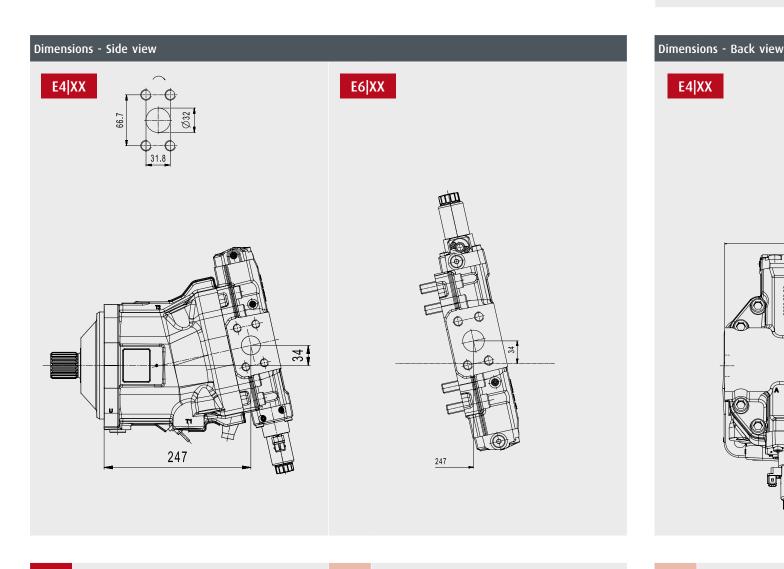
If pressurised - motor runs clockwise

Nom. pres.: 450 bar, max. press.: 500 bar

Nom. pres.: 450 bar, max. press.: 500 bar

E4|XX

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement

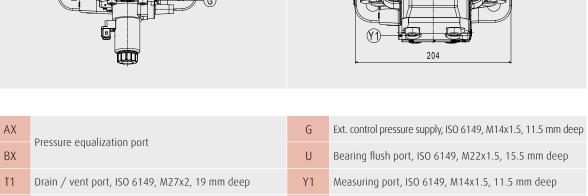
control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement



T2 Drain / vent port, ISO 6149, M33x2, 19 mm deep

E6|XX





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In combination with ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

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In combination with

CMV 60-215

In combination with

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

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In combination with

ISO 6162-2

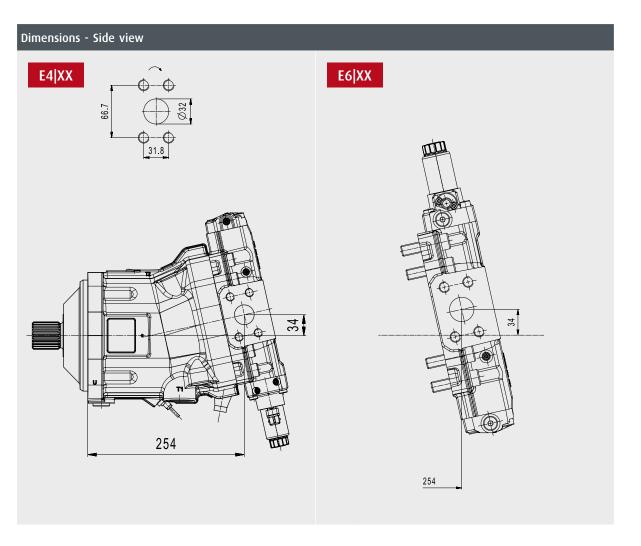
ISO 3019-1 / SAE J744

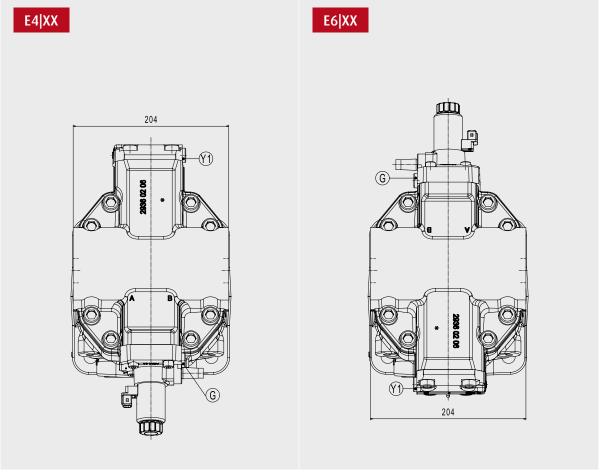
ISO 3019-2 metric

CMV 60-215

Technical Specification | Work Ports | Side Ports | ISO METR | CMV 170

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

Pressure equalization port, ISO 6149, M14x1.5, 11.5 mm deep T1 Drain / vent port, ISO 6149, M27x2, 19 mm deep T2 Drain / vent port, ISO 6149, M33x2, 19 mm deep

Dimensions - Back view

G Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep





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AXIAL TWIN PORTS

In combination with

CMV 60-215

In combination with CMV 60-215

ISO 3019-1 / SAE J744

In combination with

CMV 60-215

In combination with CMV 60-215

RADIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

CMV 60-215

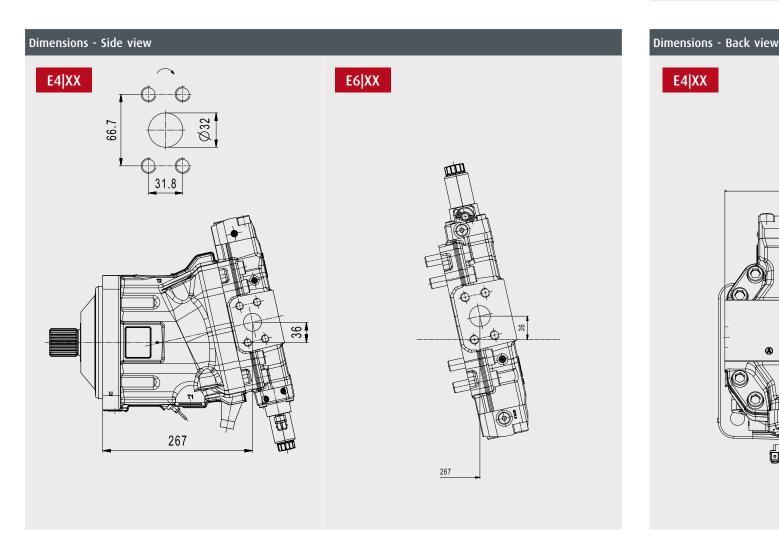
ISO 3019-2 metric

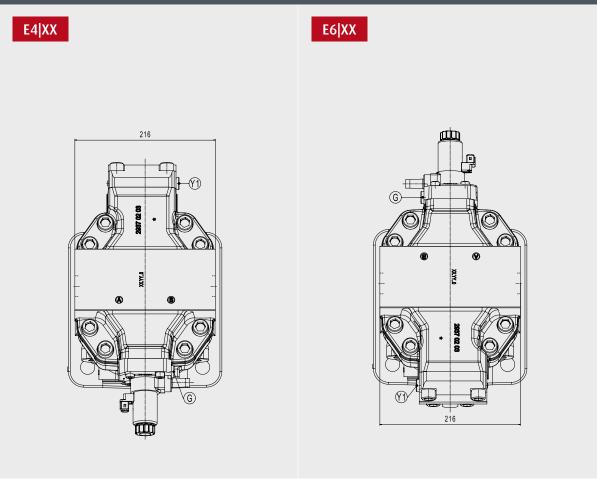
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Work Ports | Side Ports | ISO METR | CMV 215

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

X	Pressure equalization port, ISO 6149,	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
X	M22x1.5, 15.5 mm deep	U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
1	Drain / vent port, ISO 6149, M33x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
2	Drain / vent port, ISO 6149, M42x2, 19.5 mm deep		





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ISO 3019-1 / SAE J744

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In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

In combination with

AXIAL TWIN PORTS

In combination with

CMV 60-215

In combination with

In combination with ISO 3019-1 / SAE J744

CMV 60-215

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

ISO 3019-2 metric

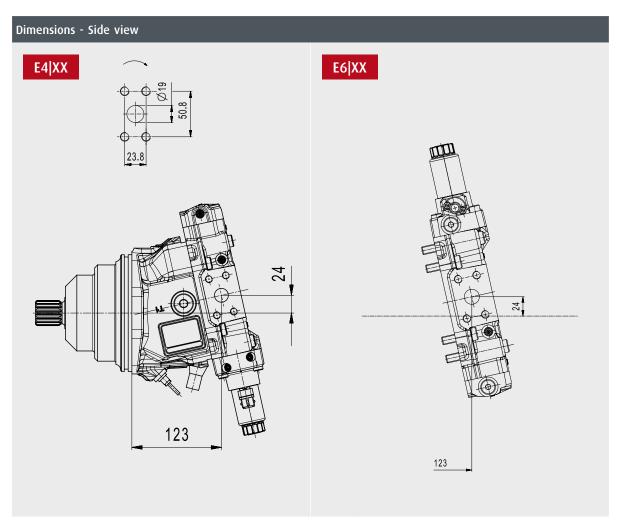
CMV 60-215

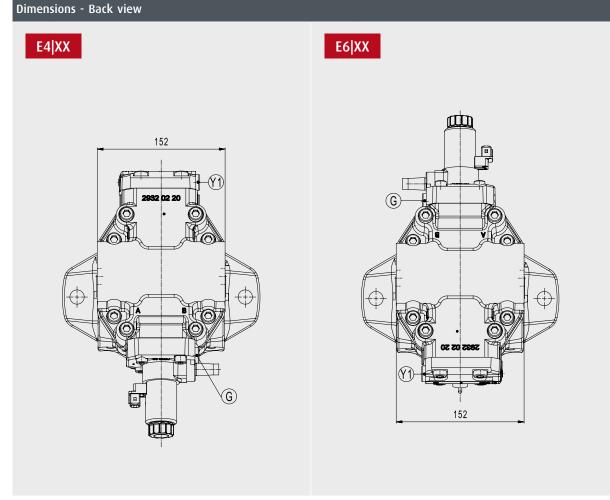
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 60

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





	Configuration wit
X	control). The othe
	position of the w

th negative control (E4 displacement er options shown do not determine the . ports and are chosen as an example.

If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2,

Configuration with positive control (E6 displacement E6|XX control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Pressure equalization port	G	Ext. control pressure supply, ISO 6149
ВХ		U	Bearing flush port, ISO 6149
T1	Drain / vent port, ISO 6149	Y1	Measuring port, ISO 6149
T2	Drain / vent port, ISO 6149		







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ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with

CMV 60-215

In combination with

CMV 60-215

In combination with

CMV 60-215

AXIAL TWIN PORTS

In combination with

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

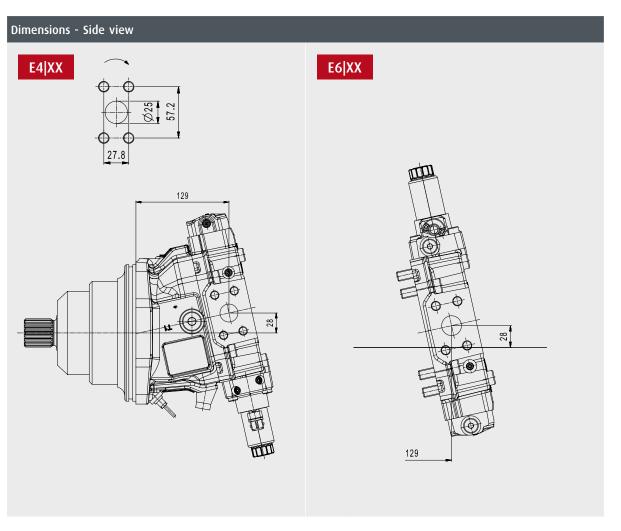
CMV 60-215

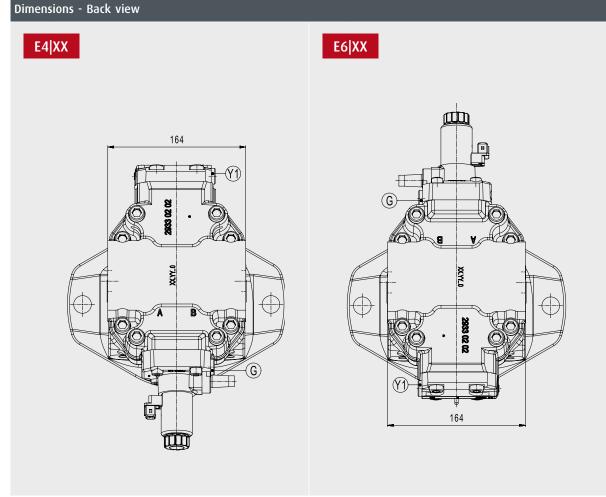
ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 85

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

АХ	Description and	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ	Pressure equalization port		Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep
T1	Drain / vent port, ISO 6149, M22x1.5, 15.5 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M27x2, 19 mm deep		





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ISO 6162-2

In combination with

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with

In combination with ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2

ISO 6162-2

ISO 3019-1 / SAE J744

In combination with

AXIAL TWIN PORTS

ISO 3019-1 / SAE J744

In combination with

CMV 60-215

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with CMV 60-215

RADIAL TWIN PORTS

In combination with

CMV 60-215

ISO 3019-2 metric

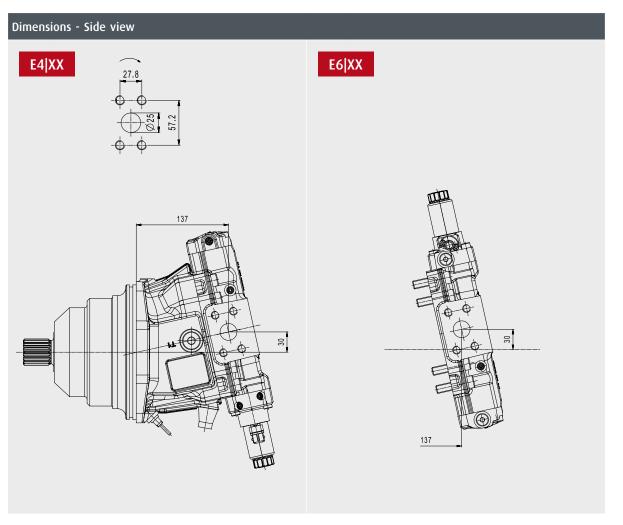
CMV 60-215

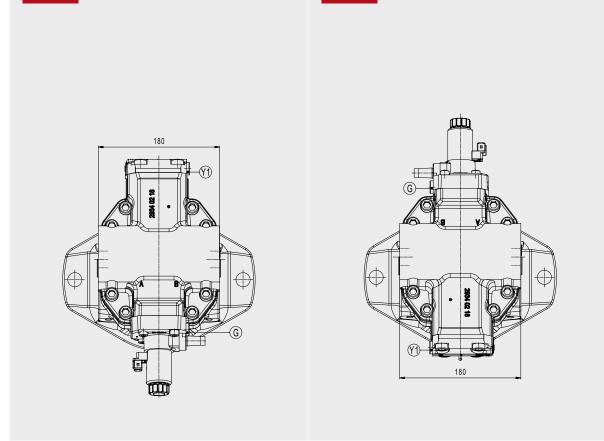
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 115

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





E6|XX

Dimensions - Back view

E4|XX

Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Description out	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ	Pressure equalization port		Bearing flush port, ISO 6149, M18x1.5, 14.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







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CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

CMV 60-215

In combination with

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

AXIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

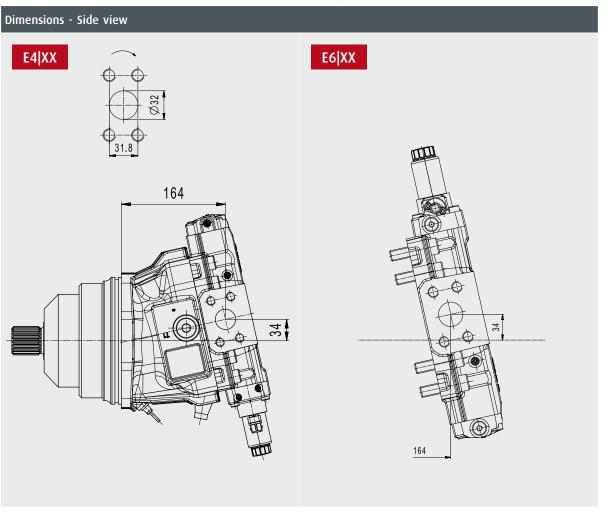
ISO 3019-2 metric

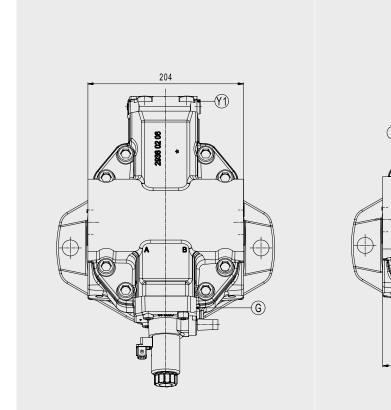
CMV 60-215



Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 140

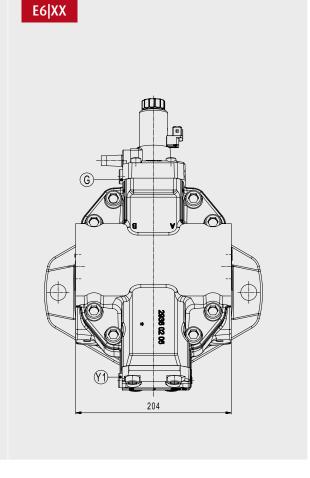
In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Dimensions - Back view

E4|XX



Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Pressure equalization port	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ		U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







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ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

ISO 3019-2 metric

CMV 60-215

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

CMV 60-215

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

RADIAL TWIN PORTS

In combination with

CMV 60-215

In combination with

In combination with

AXIAL TWIN PORTS

In combination with

In combination with

In combination with

In combination with ISO 3019-1 / SAE J744

In combination with

CMV 60-215

In combination with CMV 60-215

ISO 6162-2

ISO 3019-1 / SAE J744

ISO 3019-2 metric

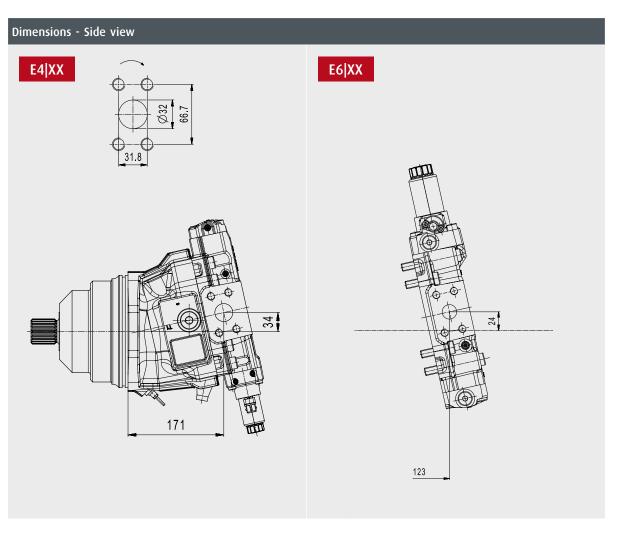
CMV 60-215

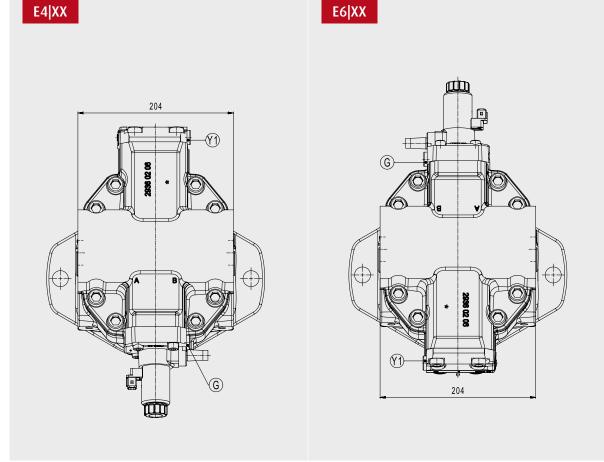
PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 170

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Dimensions - Back view



Configuration with negative control (E4 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

Configuration with positive control (E6 displacement control). The other options shown do not determine the position of the w. ports and are chosen as an example.

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs clockwise Nom. pres.: 450 bar, max. press.: 500 bar

High pressure work port, ISO 6162-2, SAE 1 1/4" If pressurised - motor runs counter-clockwise Nom. pres.: 450 bar, max. press.: 500 bar

AX	Pressure equalization port, ISO 6149, M14x1.5, 11.5 mm deep	G	Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep
ВХ		U	Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep
T1	Drain / vent port, ISO 6149, M27x2, 19 mm deep	Y1	Measuring port, ISO 6149, M14x1.5, 11.5 mm deep
T2	Drain / vent port, ISO 6149, M33x2, 19 mm deep		







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CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

CMV 60-215

In combination with ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

ISO 6162-2

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

CMV 60-215

In combination with

CMV 60-215

AXIAL TWIN PORTS

In combination with ISO 3019-1 / SAE J744

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with

RADIAL TWIN PORTS

In combination with

ISO 3019-2 metric

PLUG-IN, SIM. TO ISO 3019-2

Technical Specification | Work Ports | Side Ports | PLUG-IN | CMV 215

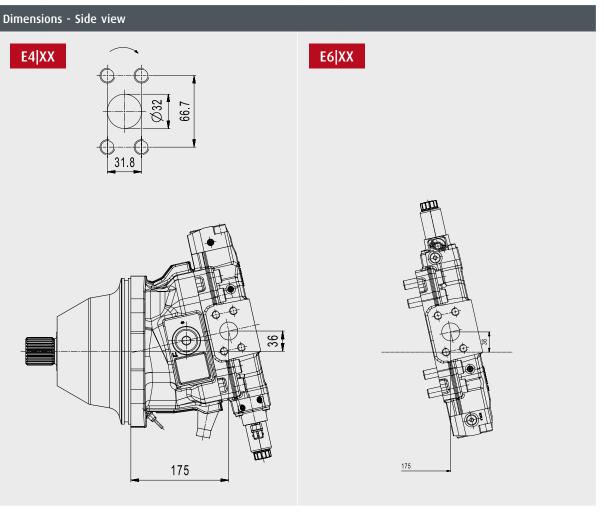
If pressurised - motor runs clockwise

Nom. pres.: 450 bar, max. press.: 500 bar

Nom. pres.: 450 bar, max. press.: 500 bar

If pressurised - motor runs counter-clockwise

In the following you will find the technical specifications of the work ports. They are clustered according to the related mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the work ports in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Configuration with negative control (E4 displacement

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

control). The other options shown do not determine the

position of the w. ports and are chosen as an example.

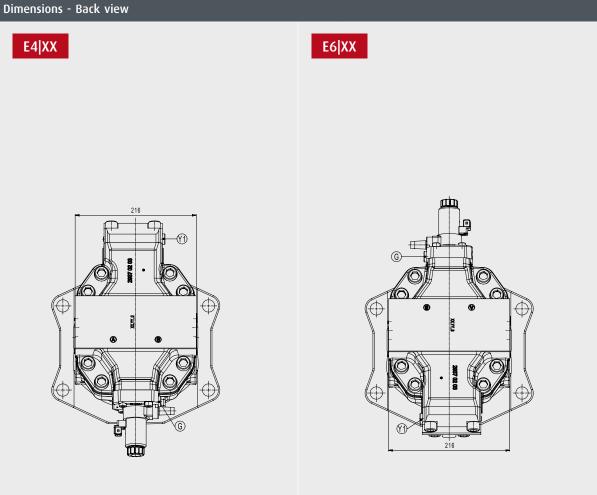
Configuration with positive control (E6 displacement

High pressure work port, ISO 6162-2, SAE 1 1/4" High pressure work port, ISO 6162-2, SAE 1 1/4" T1 Drain / vent port, ISO 6149, M33x2, 19 mm deep

Pressure equalization port, ISO 6149,

T2 Drain / vent port, ISO 6149, M42x2, 19.5 mm deep

M22x1.5, 15.5 mm deep



G Ext. control pressure supply, ISO 6149, M14x1.5, 11.5 mm deep

Y1 Measuring port, ISO 6149, M14x1.5, 11.5 mm deep

Bearing flush port, ISO 6149, M22x1.5, 15.5 mm deep







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AXIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

> SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-2<u>15</u>

In combination with ISO 3019-2 metric

CMV 60-215

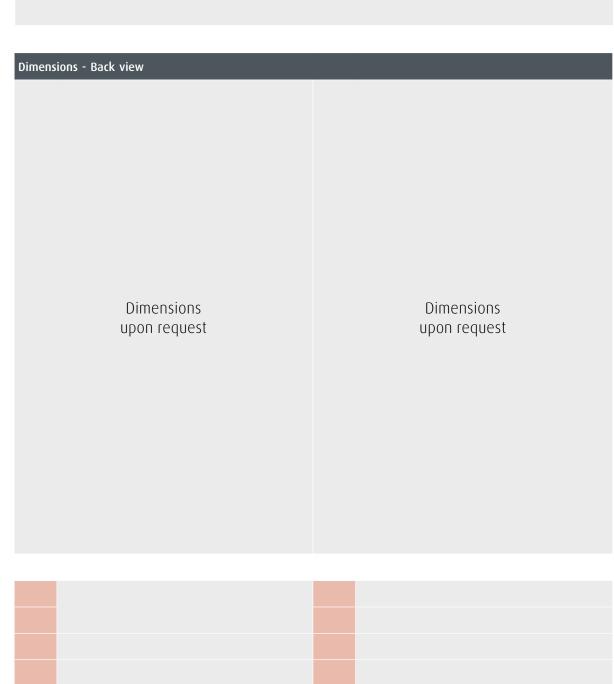
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 60

Dimensions - Side view	
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CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

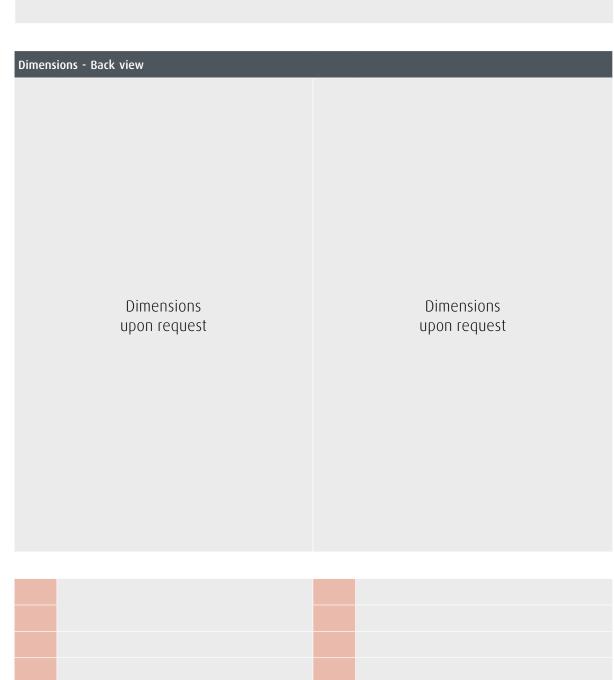
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

(d)

Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 85

Dimensions - Side view				
Dimensions upon request	Dimensions upon request			







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In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

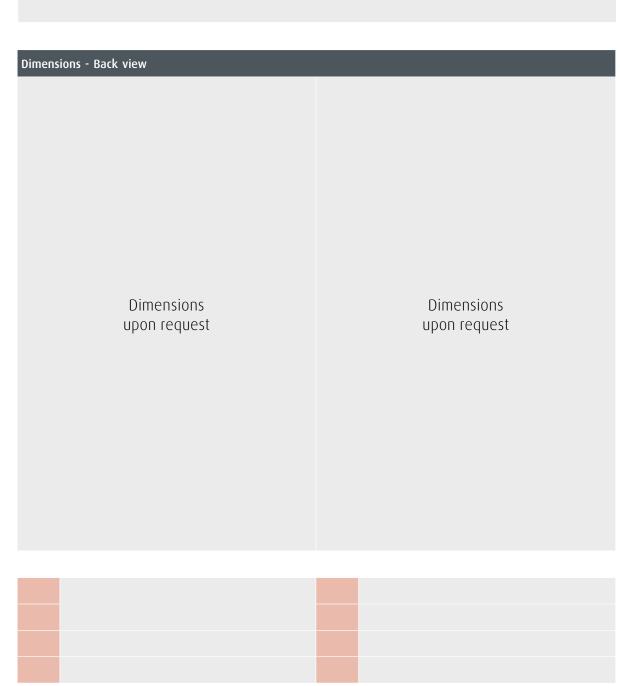
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 115

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In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

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CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

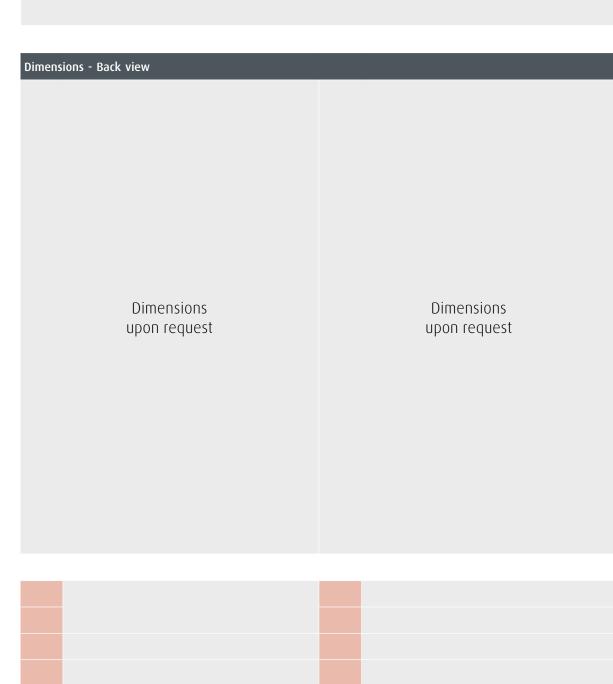
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 140

Dimensions - Side view	
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AXIAL TWIN PORTS ISO 6162-2

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CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

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CMV 60-215

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CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

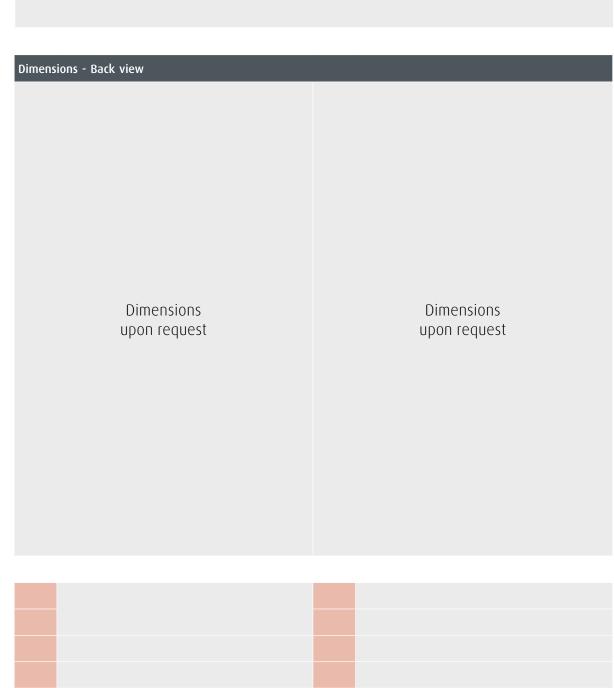
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

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Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 170

Dimensions - Side view Dimensions upon request	Dimensions upon request







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In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

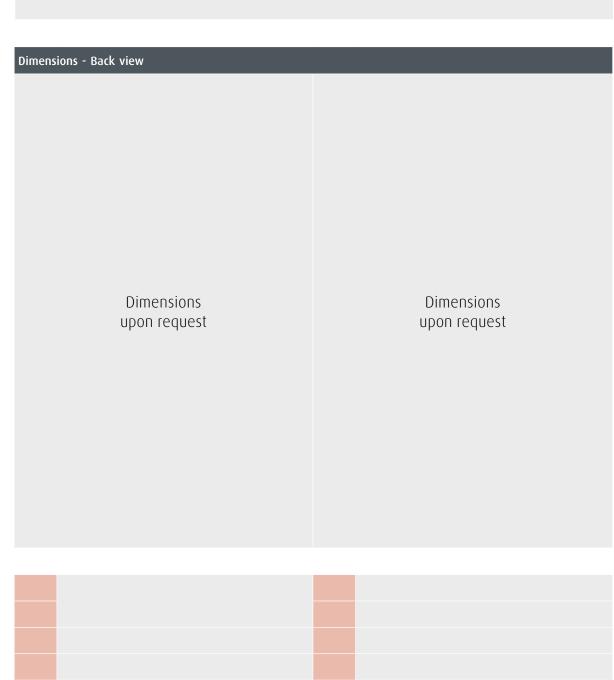
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Technical Specification | Work Ports | Radial Twin Ports | ISO SAE | CMV 215









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In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

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In combination with PLUG-IN, SIM. TO ISO 3019-2 CMV 60-215

SIDE PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

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RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

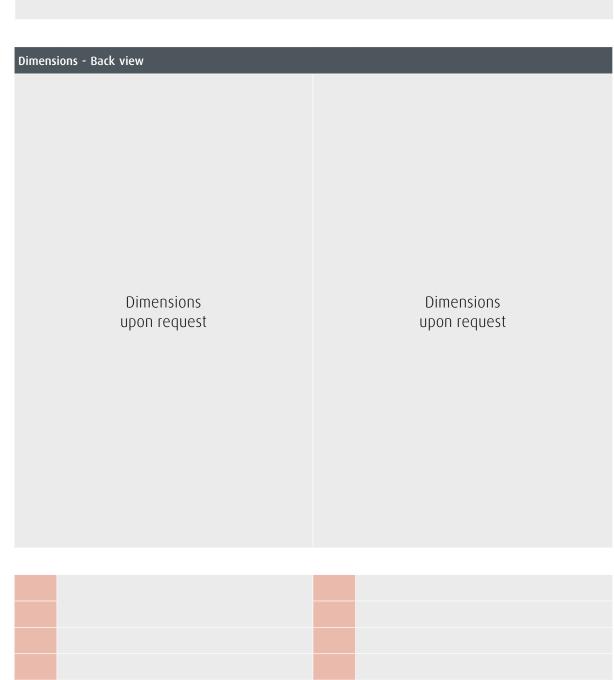
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

(C)

Technical Specification | Work Ports | Radial Twin Ports | ISO METR | CMV 60

Dimensions - Side view	
Dimensions upon request	Dimensions upon request







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In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

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RADIAL TWIN PORTS ISO 6162-2

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

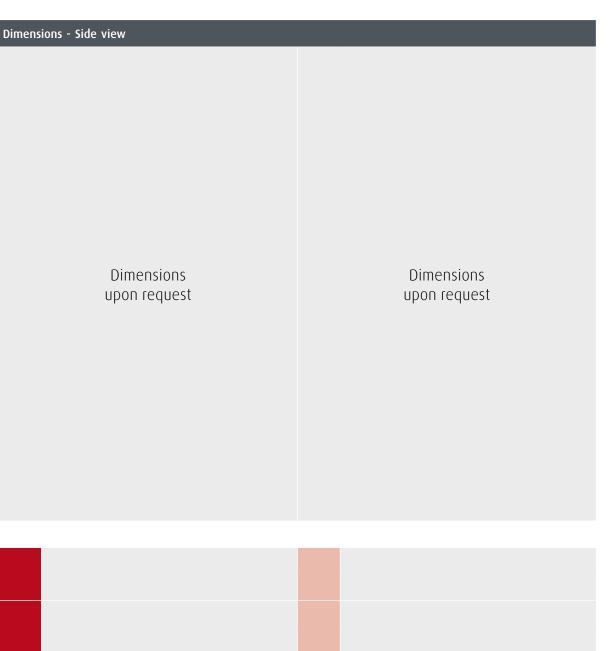
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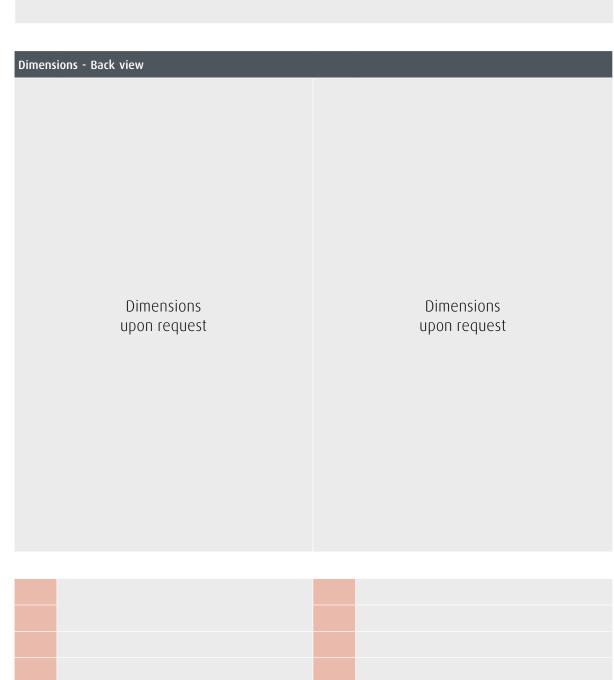
In combination with PLUG-IN, SIM. TO ISO 3019-2

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RADIAL TWIN PORTS ISO 6162-2

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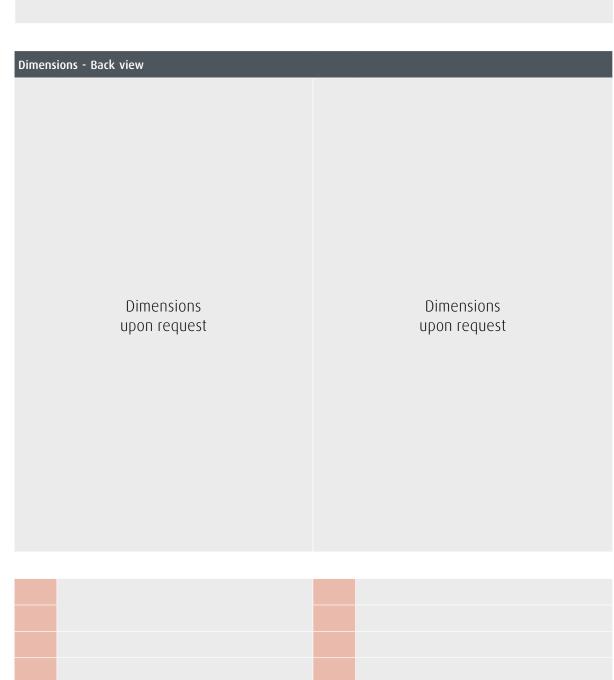
In combination with PLUG-IN, SIM. TO ISO 3019-2

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RADIAL TWIN PORTS ISO 6162-2

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In combination with ISO 3019-2 metric

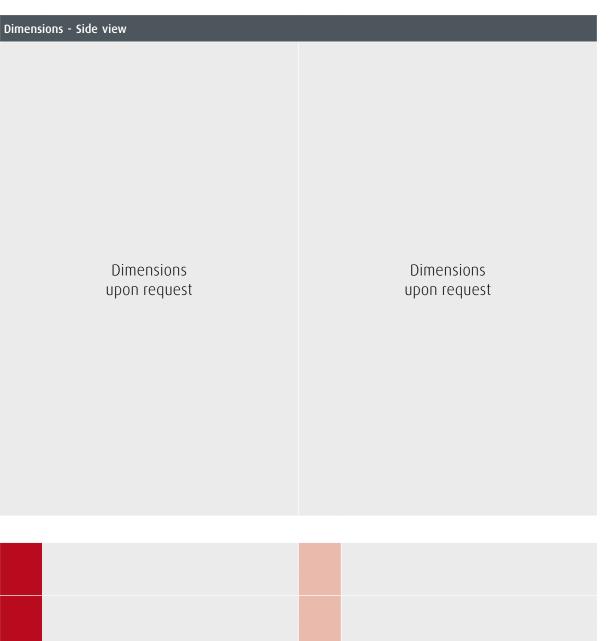
CMV 60-215

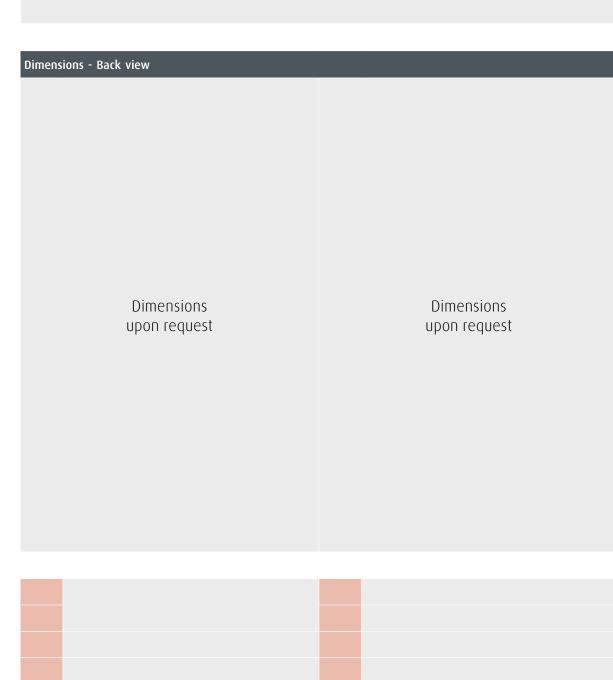
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

(C)

Technical Specification | Work Ports | Radial Twin Ports | ISO METR | CMV 140









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RADIAL TWIN PORTS ISO 6162-2

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In combination with ISO 3019-2 metric

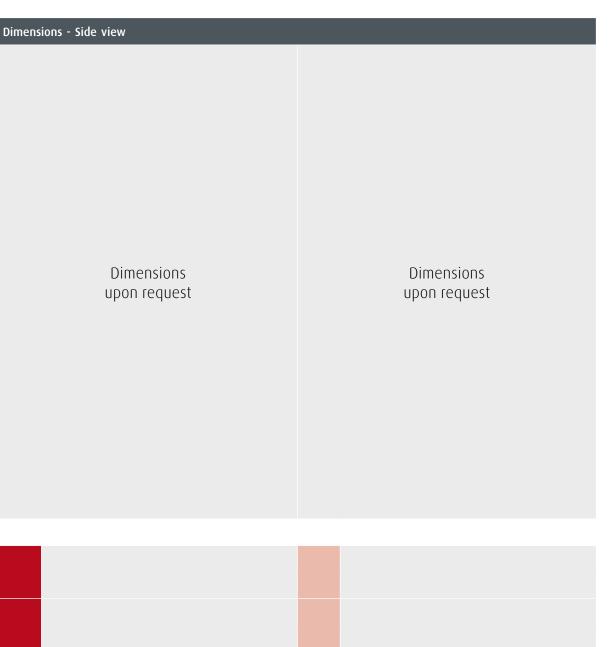
CMV 60-215

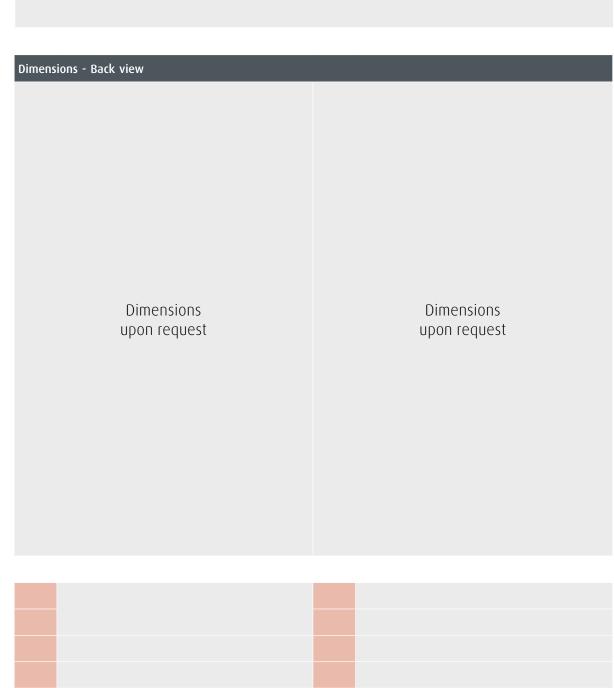
In combination with PLUG-IN, SIM. TO ISO 3019-2

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In combination with ISO 3019-2 metric

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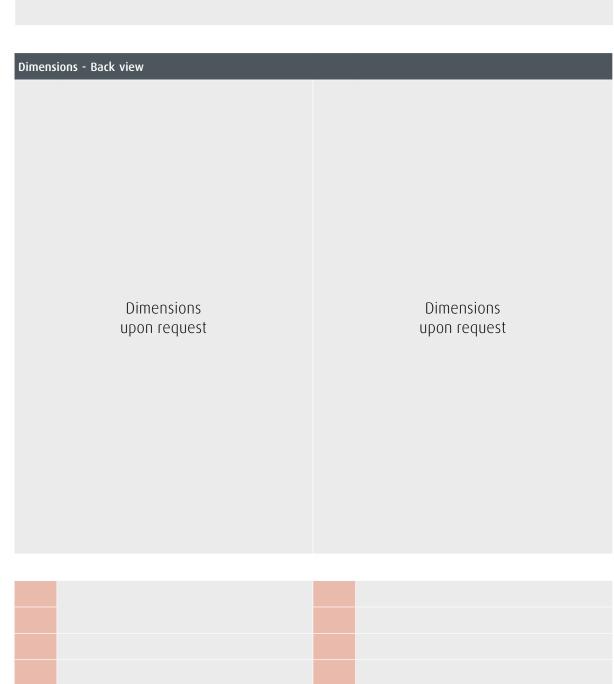
In combination with PLUG-IN, SIM. TO ISO 3019-2

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RADIAL TWIN PORTS ISO 6162-2

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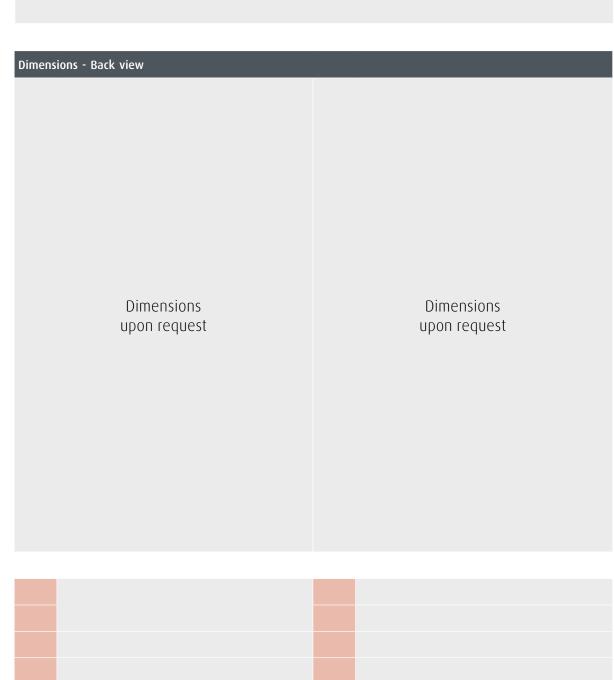
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RADIAL TWIN PORTS ISO 6162-2

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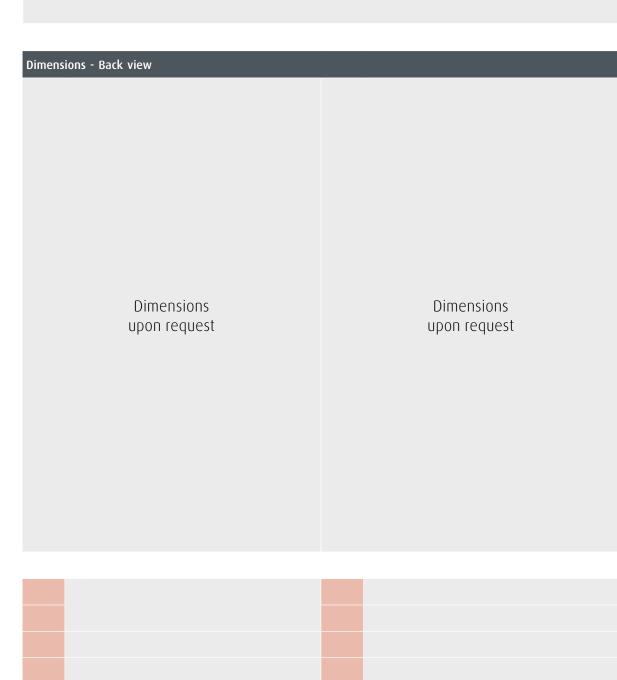
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Technical Specification | Work Ports | Radial Twin Ports | PLUG-IN | CMV 85

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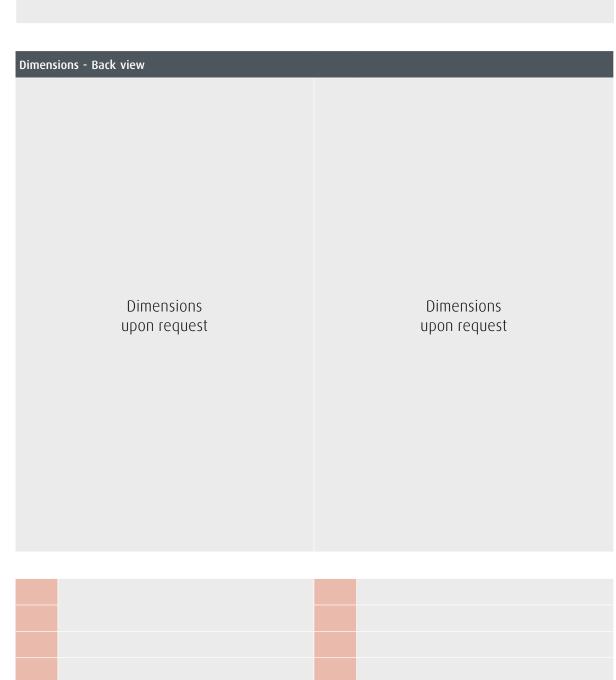
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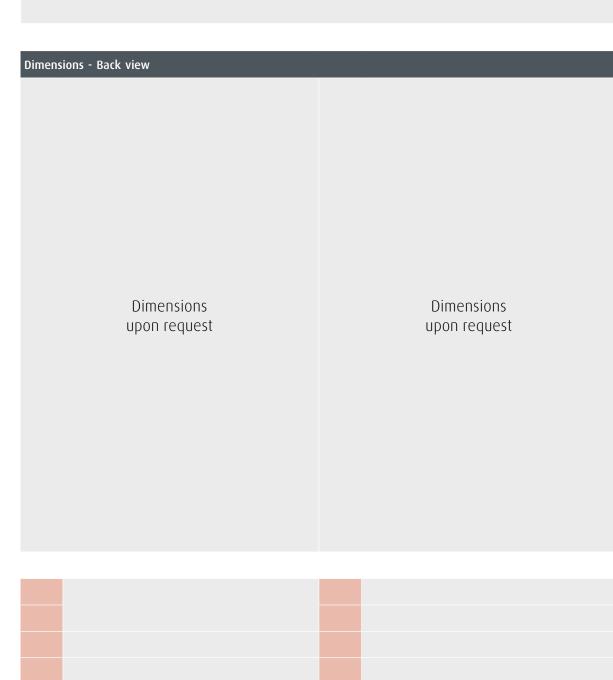
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RADIAL TWIN PORTS ISO 6162-2

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CMV 60-2<u>15</u>

In combination with ISO 3019-2 metric

CMV 60-215

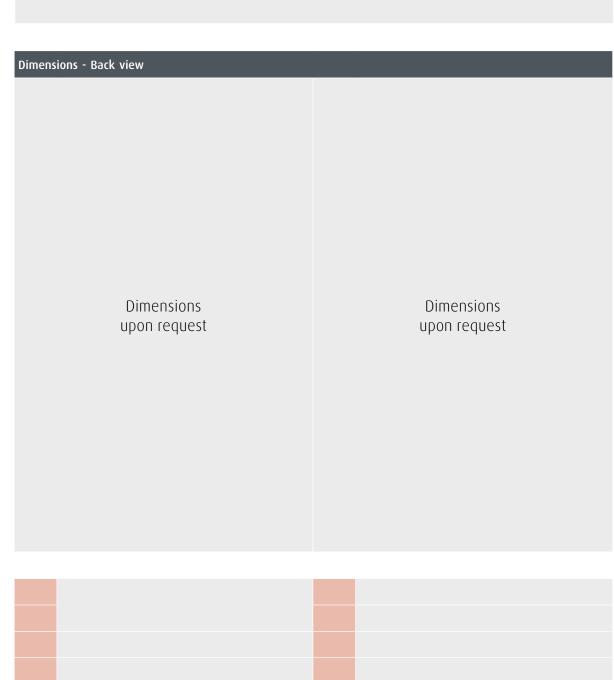
In combination with PLUG-IN, SIM. TO ISO 3019-2

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Technical Specification | Work Ports | Radial Twin Ports | PLUG-IN | CMV 170

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CMV 60-215

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RADIAL TWIN PORTS ISO 6162-2

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CMV 60-215

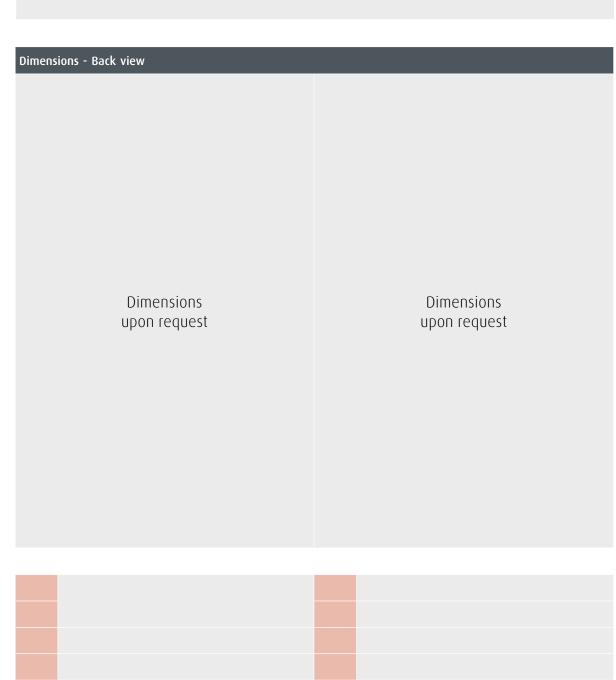
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Technical Specification | Work Ports | Radial Twin Ports | PLUG-IN | CMV 215

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In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.

The flushing function is used in closed circuit applications. Its primary function is to remove heat from the hydraulic circuit by flushing the housing. It also ensures the minimum charge pressure. In order to achieve this, the pressure fluid is discharged from the respective low-pressure side into the motor housing. Along with the leakage, this is discharged into the tank. The extracted pressure fluid is replaced with cooled pressure fluid by charge pump. The flushing function is mounted on the port plate housing.

Specification				
Nominal size				
Pressure	Opening pressure Flushing relief valve			bar
riessuie	Switching pressure	Shuttle valve		
Flow	Flushing flow	at 20 bar on low pressure side	and viscosity of approx. 15 cst	I/min

60	85	115	140	170	215
13	13	13	13	13	13
10	10	10	10	10	10
		6 to 25 (optional)		



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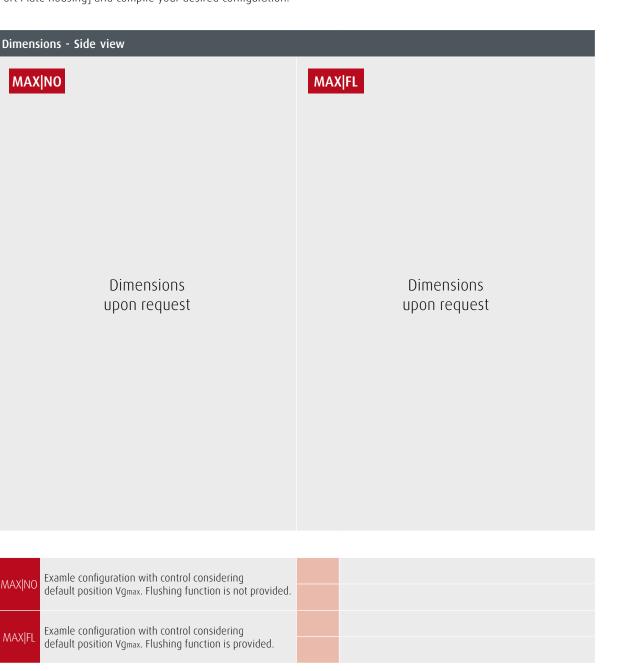
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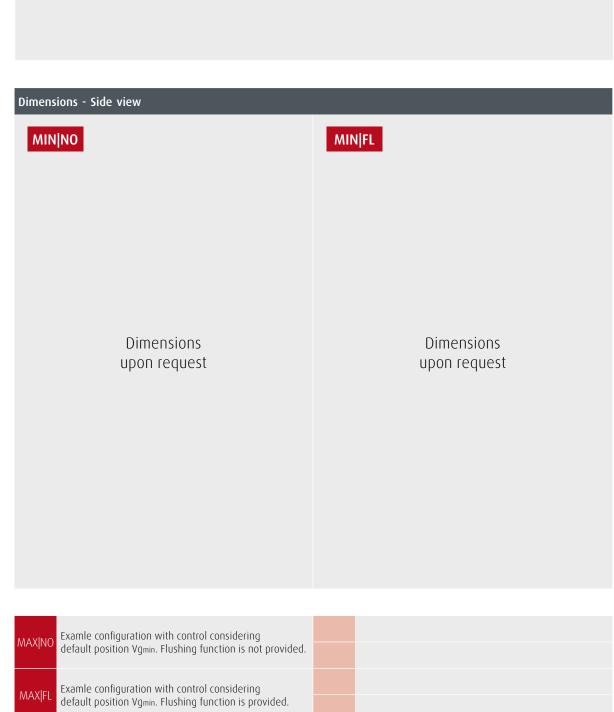
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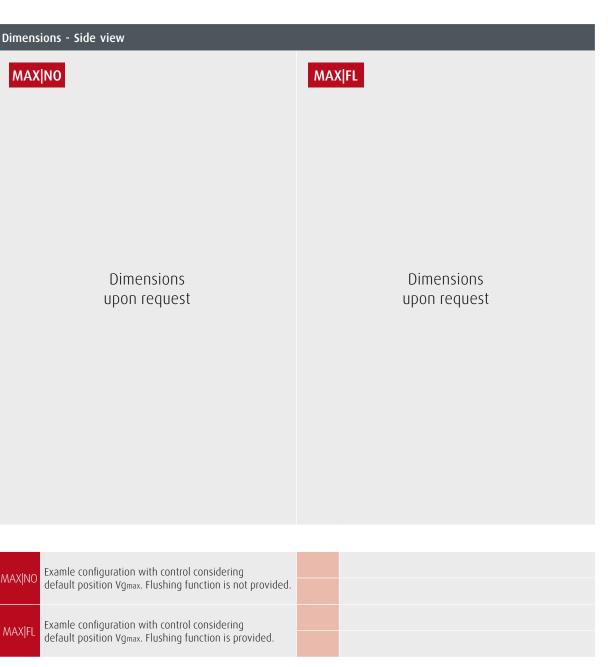
CMV 60-215

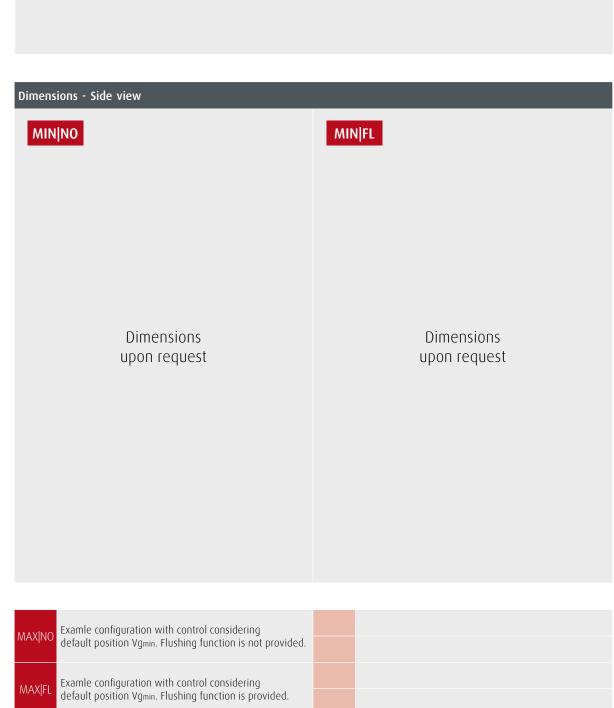
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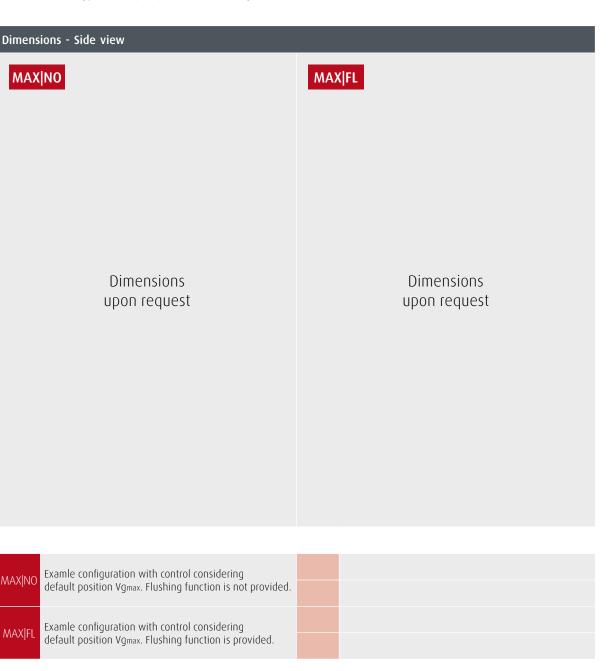
CMV 60-215

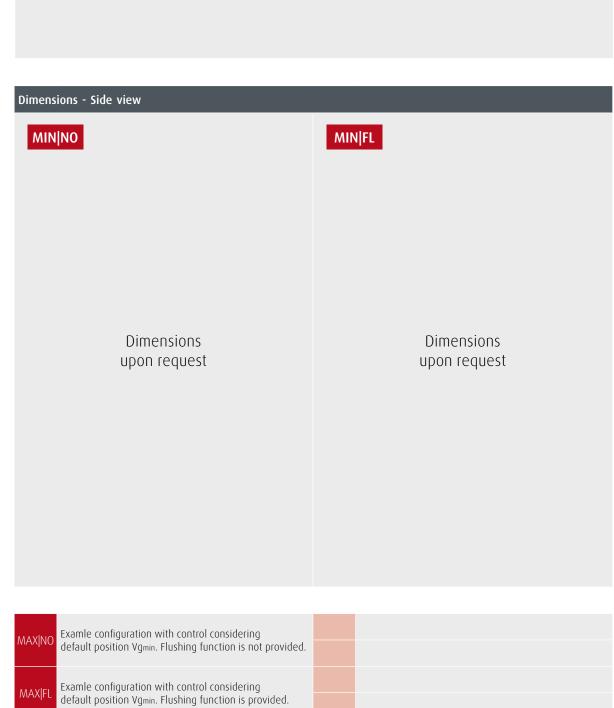
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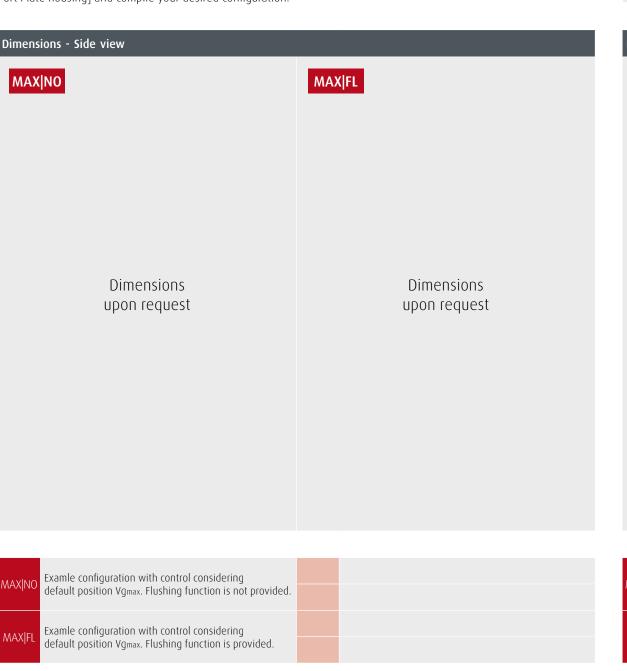
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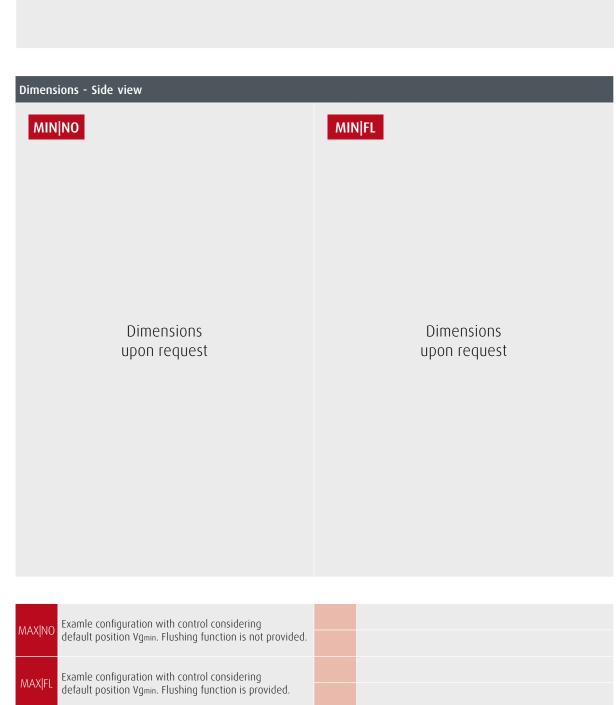
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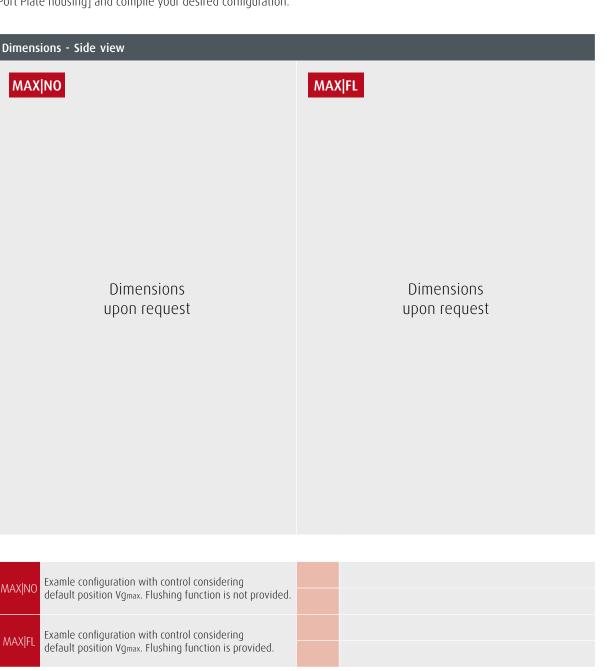
Flushing In combination with ISO 3019-1 / SAE J744 CMV 60-215 In combination with ISO 3019-2 metric CMV 60-215 In combination with

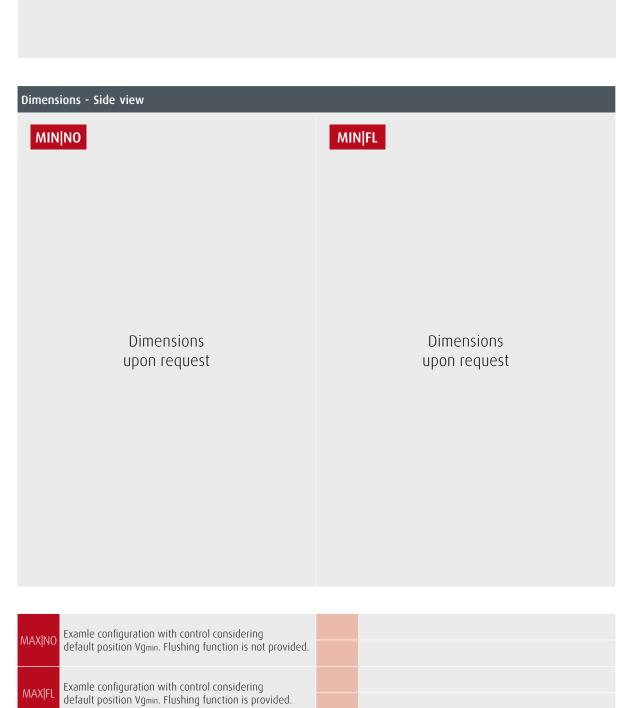
PLUG-IN, SIM. TO ISO 3019-2

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Technical Specification | Functions/Options | Flushing | ISO SAE | CMV 170







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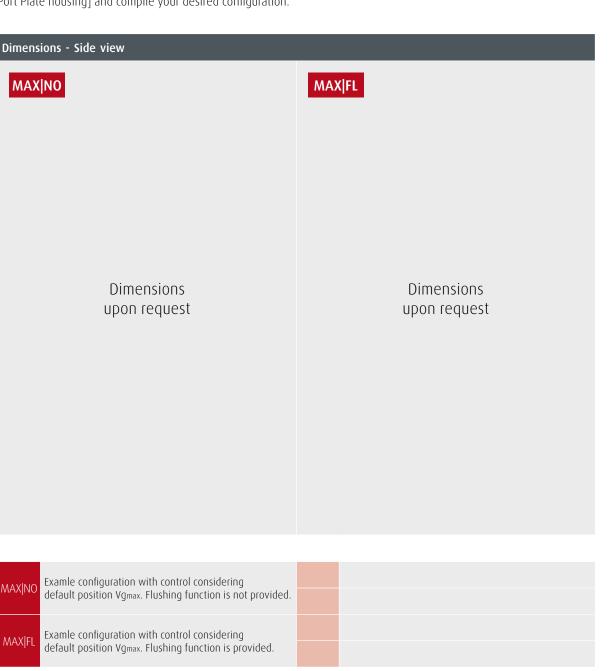
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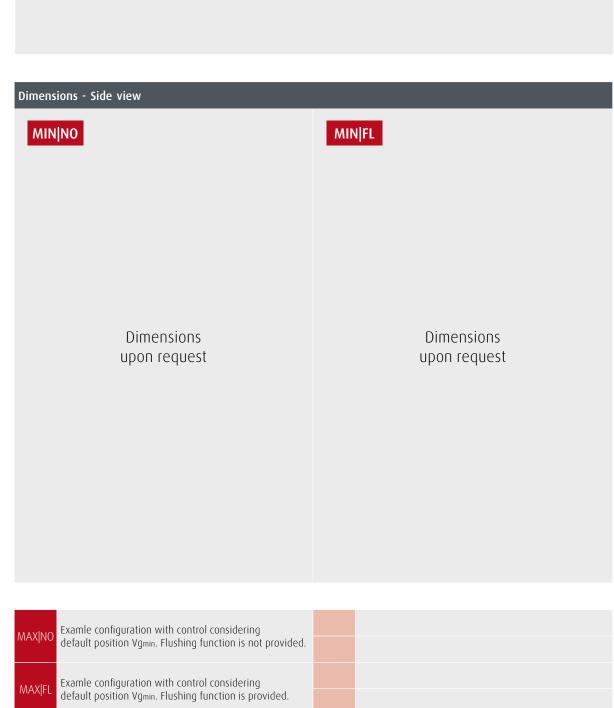
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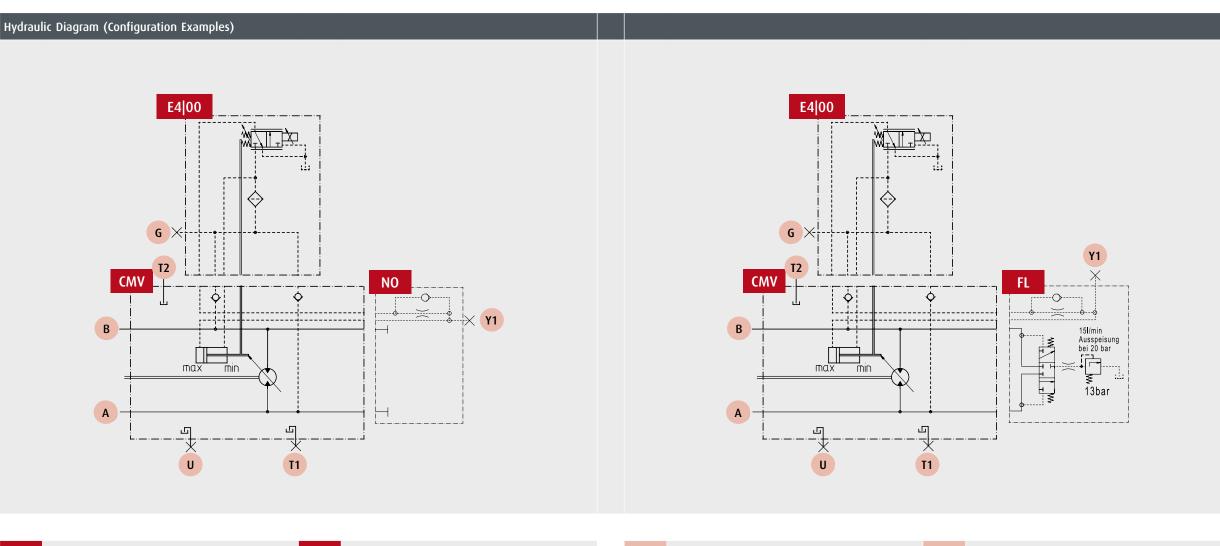
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Technical Specification | Functions/Options | Flushing | ISO SAE | CMV 60-215



	Basic motor (without Controls/Functions/Options) Displ. Contrl. E4 + Press. Contrl. 00		Cover that provides flushing function
NO	Blind cover that closes the interface of the	А	High pressure work port
NO	portplate and does not provide flushing function		High pressure work port

AX	On the state of th	G	Ext. control pressure supply
ВХ	Pressure equalization port		Bearing flush port
T1		Y1	Measuring port
T2	Drain / vent port		





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Functions/Options

In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10.

Port Plate housing] and compile your desired configuration. Specification

Nominal size							
0	Opening pressure	Flushing relief valve					
Pressure	Switching pressure	Shuttle valve					
Flow	Flushing flow	at 20 bar on low pressure side and viscosity of approx. 15 cst		l/min			

The flushing function is used in closed circuit applications. Its primary function is to remove heat from the hydraulic circuit by flushing the housing. It also ensures the minimum charge pressure. In order to achieve this, the pressure fluid is discharged from the respective low-pressure side into the motor housing. Along with the leakage, this is discharged into the tank. The extracted pressure fluid is replaced with cooled pressure fluid by charge pump. The flushing function is mounted on the port plate housing.

	60	
	13	
bar	10	
l/min		

Technical Specification | Functions/Options | Flushing | ISO METR | CMV 60-215

60	85	115	140	170	215
13	13	13	13	13	13
10	10	10	10	10	10
		6 to 25 (optional)		





Flushing

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

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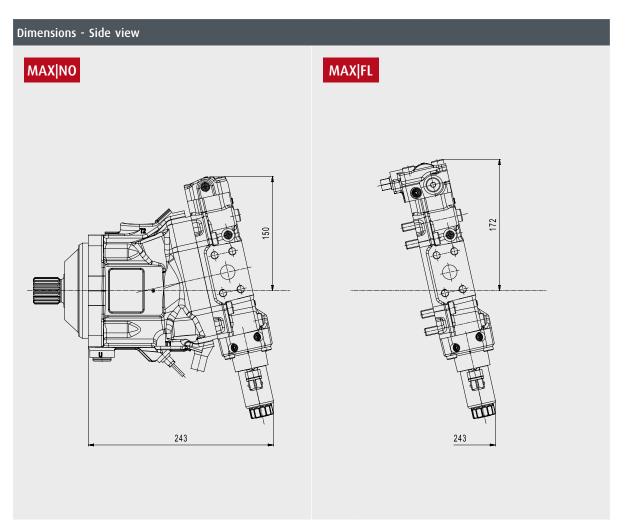
Hydraulical Interfaces

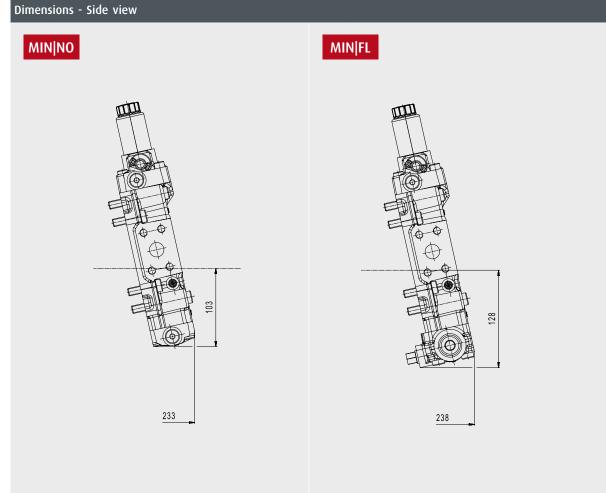
Work Ports

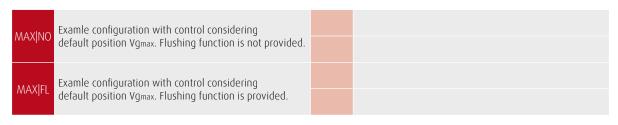
Auxiliary Ports

Functions/Options

Technical Specification | Functions/Options | Flushing | ISO METR | CMV 60













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Flushing
In combination with
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CMV 60-215

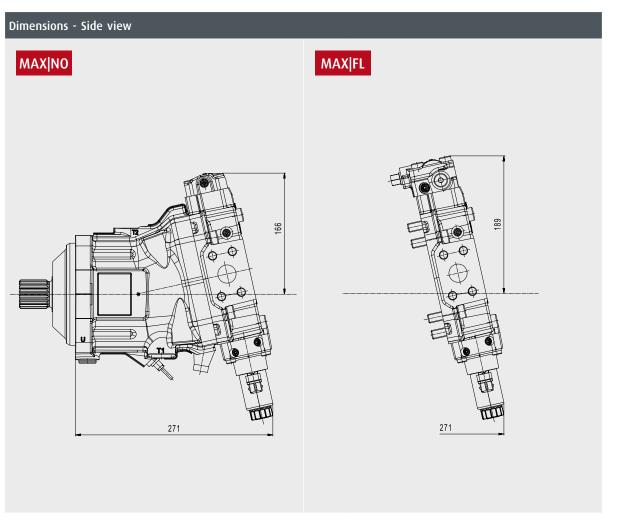
In combination with ISO 3019-2 metric

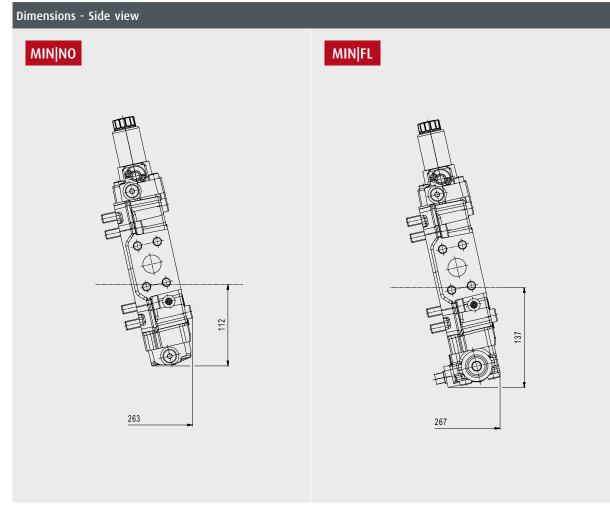
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

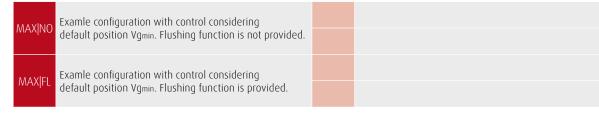
CMV 60-215

Technical Specification | Functions/Options | Flushing | ISO METR | CMV 85













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Functions/Options

Flushing

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

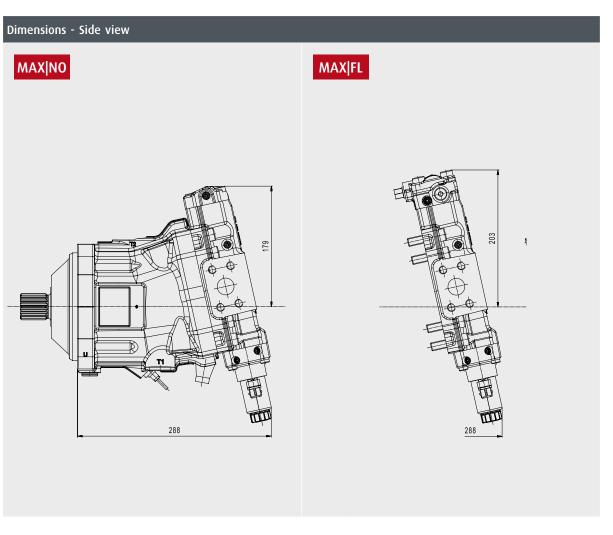
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Functions/Options | Flushing | ISO METR | CMV 115

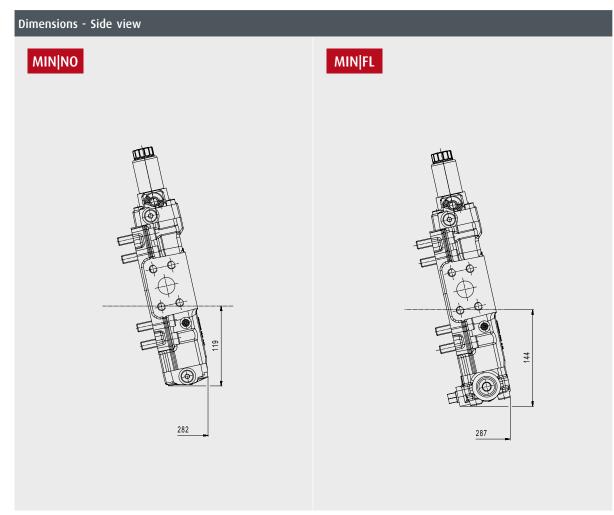
In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Examle configuration with control considering default position Vgmax. Flushing function is not provided.

Examle configuration with control considering

default position Vgmax. Flushing function is provided.



Examle configuration with control considering default position Vgmin. Flushing function is not provided.

Examle configuration with control considering default position Vgmin. Flushing function is provided.



Flushing

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

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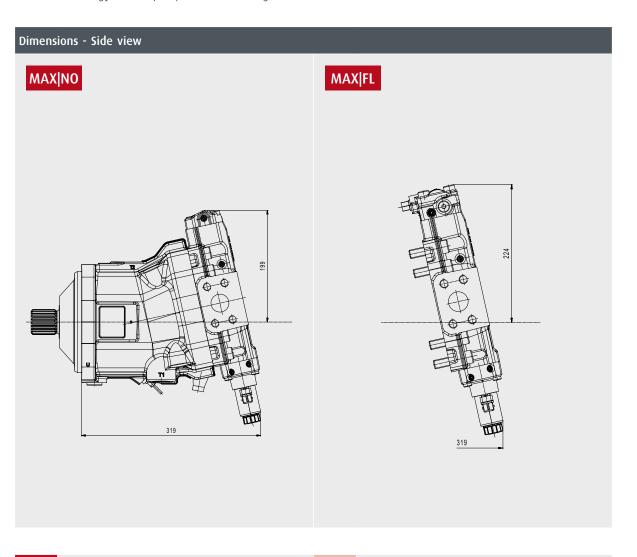
Technical Specification | Functions/Options | Flushing | ISO METR | CMV 140

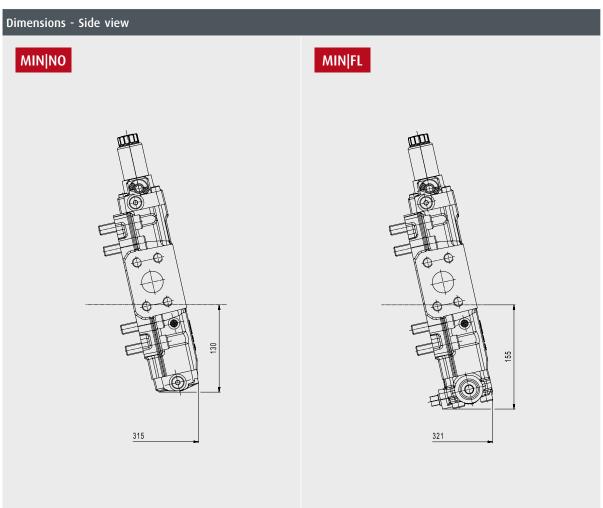
Examle configuration with control considering default position Vgmax. Flushing function is not provided.

Examle configuration with control considering

default position Vgmax. Flushing function is provided.

In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.





Examle configuration with control considering default position Vgmin. Flushing function is not provided.

Examle configuration with control considering default position Vgmin. Flushing function is provided.





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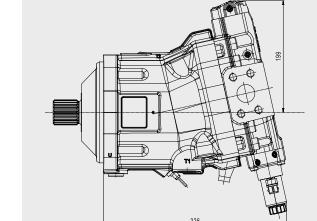
Flushing

In combination with ISO 3019-1 / SAE J744 CMV 60-215

In combination with ISO 3019-2 metric CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Examle configuration with control considering default position Vgmax. Flushing function is not provided.

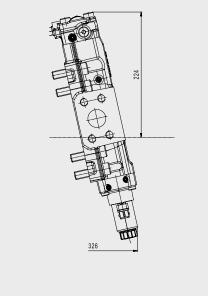
Examle configuration with control considering

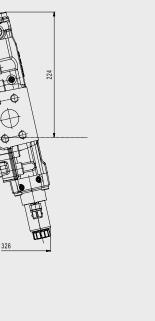
default position Vgmax. Flushing function is provided.

Port Plate housing] and compile your desired configuration.

Dimensions - Side view

MAX|NO





Technical Specification | Functions/Options | Flushing | ISO METR | CMV 170

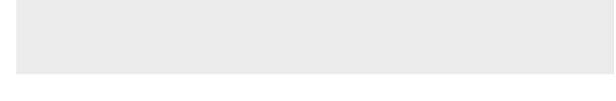
In the following you will find the technical specifications of the flushing function. They are clustered according to the

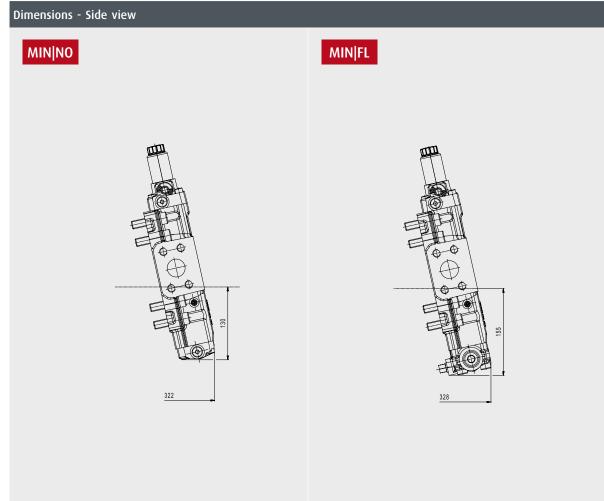
related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this

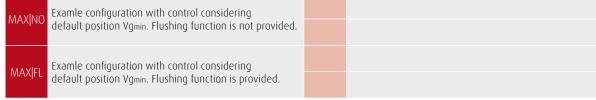
function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in

combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10.













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Functions/Options

Dimensions - Side view

MAX|NO

In combination with ISO 3019-2 metric

Flushing

In combination with

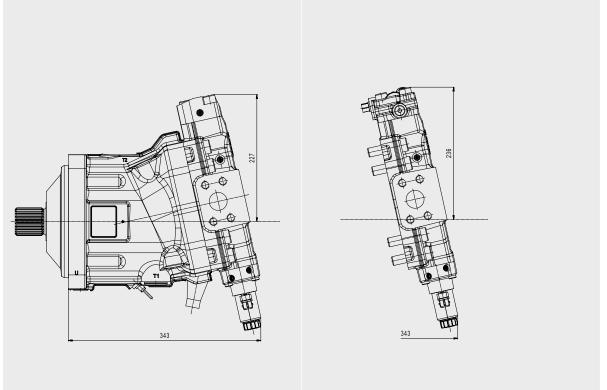
ISO 3019-1 / SAE J744

CMV 60-215

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

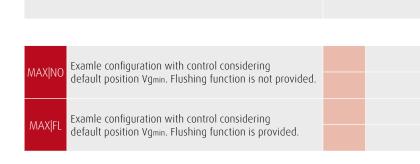
CMV 60-215



Examle configuration with control considering default position Vgmax. Flushing function is not provided.

Examle configuration with control considering

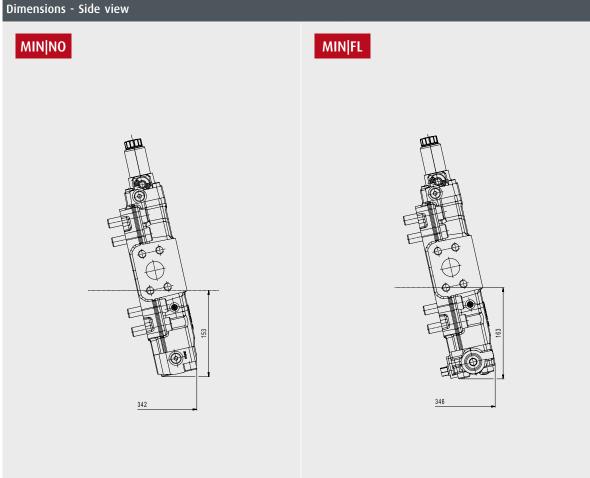
default position Vgmax. Flushing function is provided.





Technical Specification | Functions/Options | Flushing | ISO METR | CMV 215









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Functions/Options

Flushing

In combination with ISO 3019-1 / SAE J744

In combination with ISO 3019-2 metric

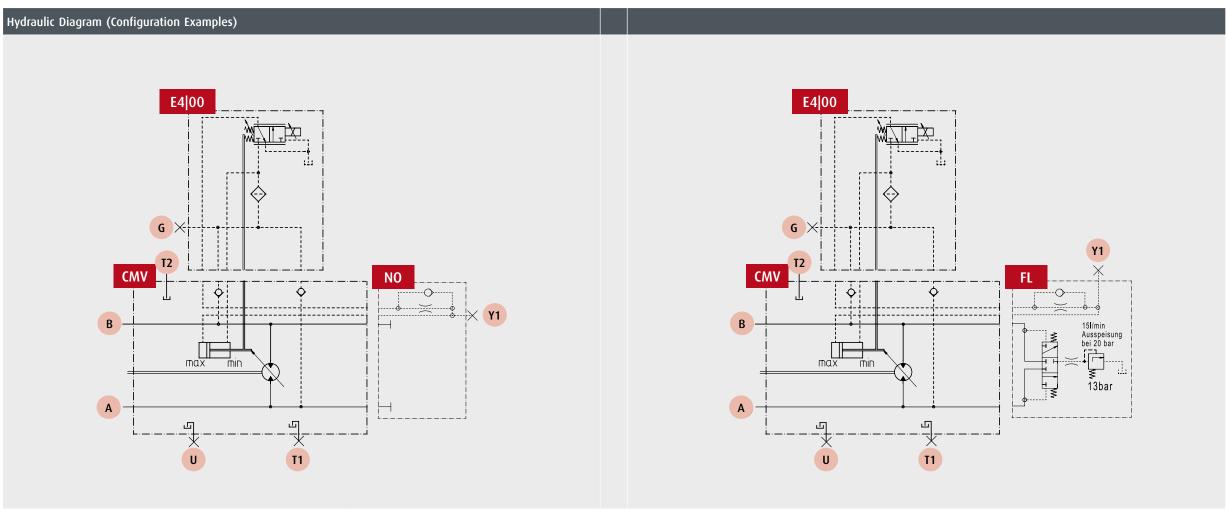
CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Technical Specification | Functions/Options | Flushing | ISO METR | CMV 60-215



C٨	Basic motor (without Controls/Functions/Options)	E1	Cover that provides flushing function
E4	00 Displ. Contrl. E4 + Press. Contrl. 00	FL	
N	Blind cover that closes the interface of the portplate and does not provide flushing function	А	High pressure work port
N		В	High pressure work port

AX	Pressure equalization port	G	Ext. control pressure supply
ВХ		U	Bearing flush port
T1		Y1	Measuring port
T2	Drain / vent port		





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------Flushing

In combination with ISO 3019-1 / SAE J744 CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Technical Specification | Functions/Options | Flushing | Plug-In | CMV 60-215

In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.

The flushing function is used in closed circuit applications. Its primary function is to remove heat from the hydraulic circuit by flushing the housing. It also ensures the minimum charge pressure. In order to achieve this, the pressure fluid is discharged from the respective low-pressure side into the motor housing. Along with the leakage, this is discharged into the tank. The extracted pressure fluid is replaced with cooled pressure fluid by charge pump. The flushing function is mounted on the port plate housing.

Specification						
Nominal size						
0	Opening pressure	Flushing relief valve				
Pressure	Switching pressure	Shuttle valve				
Flow	Flushing flow	at 20 bar on low pressure side	and viscosity of approx. 15 cst	l/min		

60	85	115	140	170	215
13	13	13	13	13	13
10	10	10	10	10	10
		6 to 25 (optional)		



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Flushing

In combination with ISO 3019-1 / SAE J744 CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

MAXIFL MAXIFL 183

In the following you will find the technical specifications of the flushing function. They are clustered according to the

related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this

function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in

combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10.

Port Plate housing] and compile your desired configuration.

Examle configuration with control considering default position Vgmax. Flushing function is not provided.

Examle configuration with control considering

default position Vgmax. Flushing function is provided.

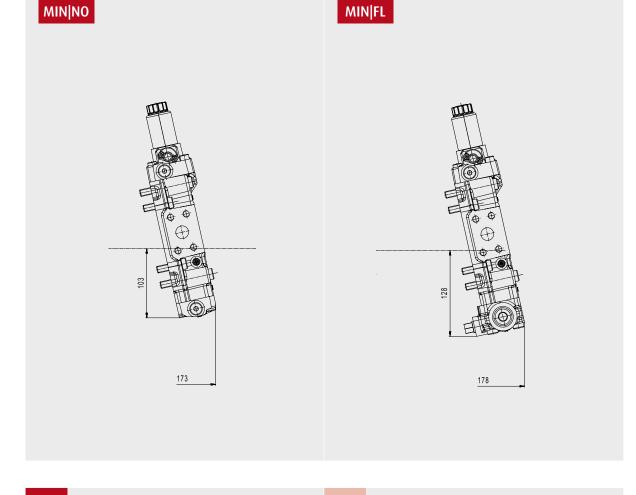
Dimensions - Side view

Technical Specification | Functions/Options | Flushing | Plug-In | CMV 60

Dimensions - Side view

Examle configuration with control considering default position Vgmin. Flushing function is not provided.

Examle configuration with control considering default position Vgmin. Flushing function is provided.







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Functions/Options

Flushing

In combination with

ISO 3019-1 / SAE J744

function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.

Dimensions - Side view

MAX|NO

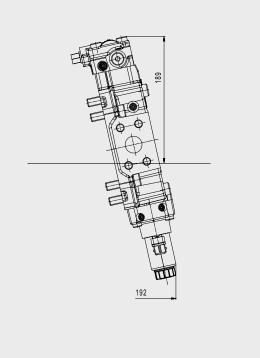
CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

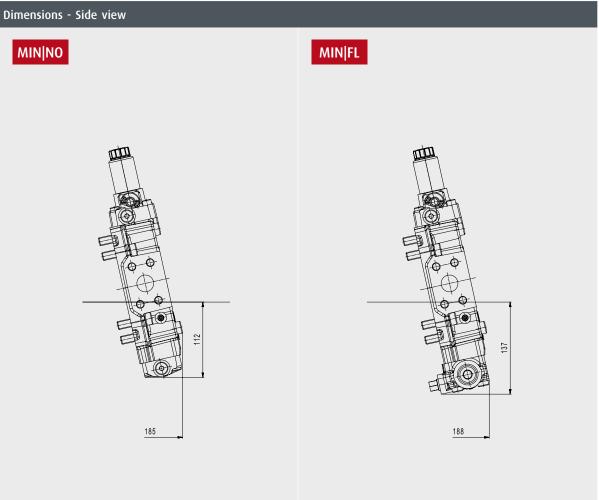


Technical Specification | Functions/Options | Flushing | Plug-In | CMV 85

In the following you will find the technical specifications of the flushing function. They are clustered according to the

related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this





Examle configuration with control considering default position Vgmin. Flushing function is not provided.

Examle configuration with control considering

default position Vgmin. Flushing function is provided.







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In combination with ISO 3019-1 / SAE J744 CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

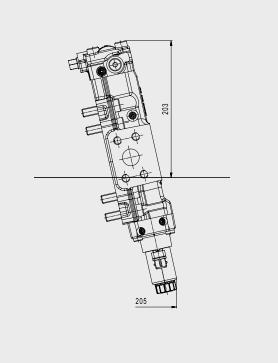
Port Plate housing] and compile your desired configuration. Dimensions - Side view MAX|NO

In the following you will find the technical specifications of the flushing function. They are clustered according to the

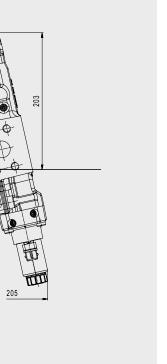
related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this

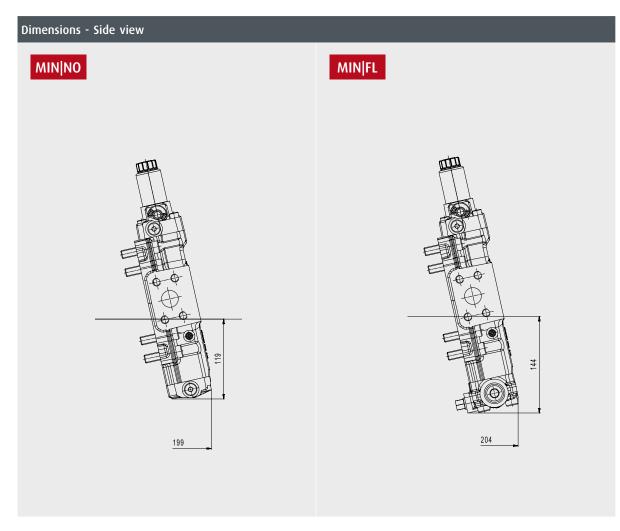
function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in

combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10.



Technical Specification | Functions/Options | Flushing | Plug-In | CMV 115















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Flushing

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

Dimensions - Side view

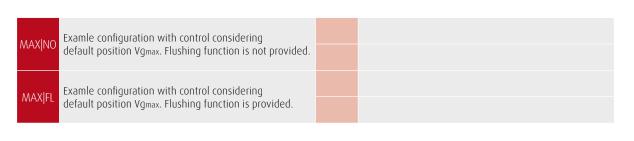
In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

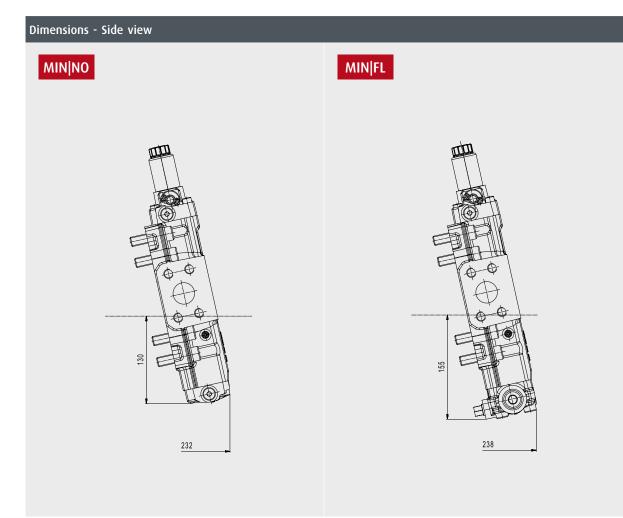
MAX|NO



In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this

Technical Specification | Functions/Options | Flushing | Plug-In | CMV 140

function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.









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In combination with ISO 3019-1 / SAE J744

CMV 60-215

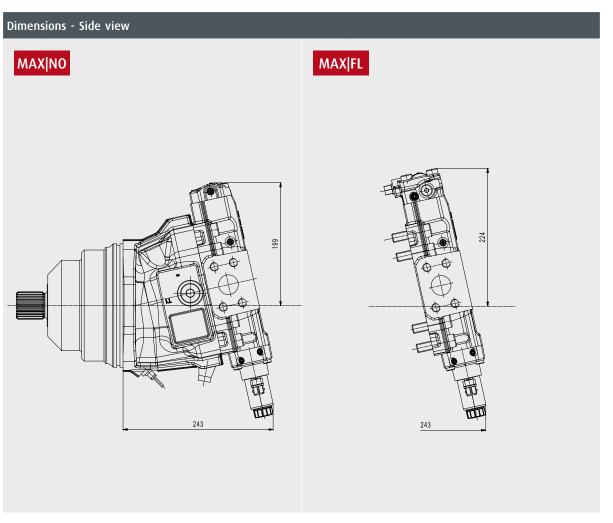
In combination with ISO 3019-2 metric

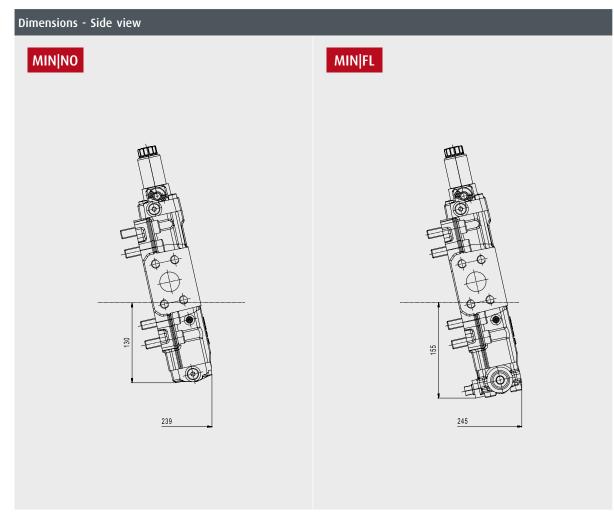
CMV 60-215

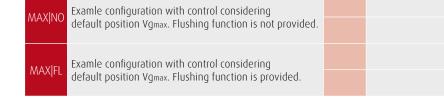
In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

Technical Specification | Functions/Options | Flushing | Plug-In | CMV 170













Flushing

In combination with

ISO 3019-1 / SAE J744

CMV 60-215

In combination with

ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215

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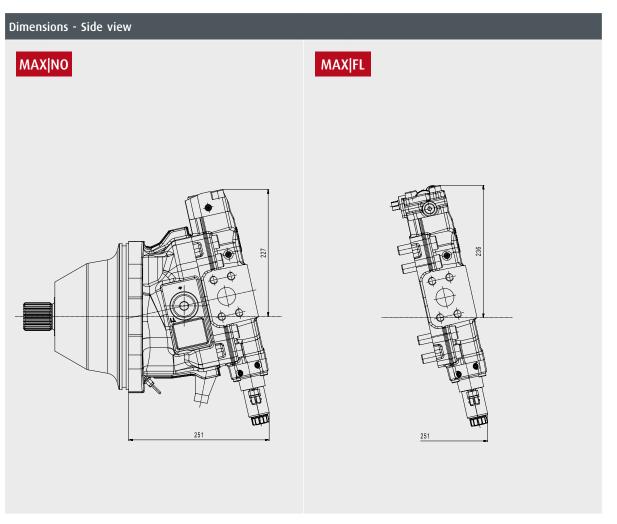
Work Ports

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Functions/Options

Technical Specification | Functions/Options | Flushing | Plug-In | CMV 215

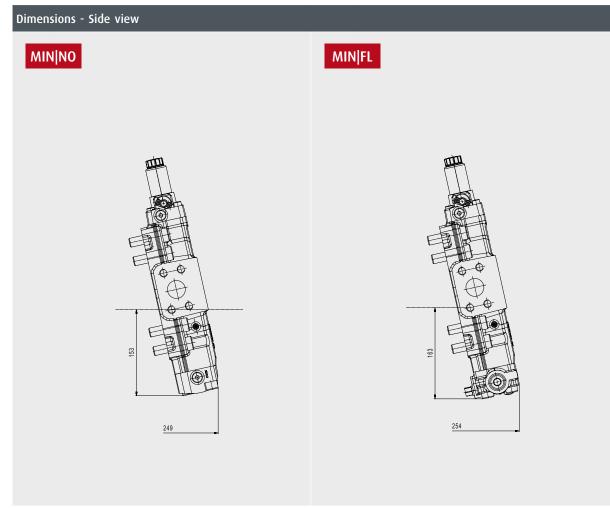
In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.



Examle configuration with control considering default position Vgmax. Flushing function is not provided.

Examle configuration with control considering

default position Vgmax. Flushing function is provided.



Examle configuration with control considering default position Vgmin. Flushing function is not provided.

Examle configuration with control considering default position Vgmin. Flushing function is provided.







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Flushing

In combination with ISO 3019-1 / SAE J744

CMV 60-215

In combination with ISO 3019-2 metric

CMV 60-215

In combination with PLUG-IN, SIM. TO ISO 3019-2

CMV 60-215



Technical Specification | Functions/Options | Flushing | Plug-In | CMV 60-215

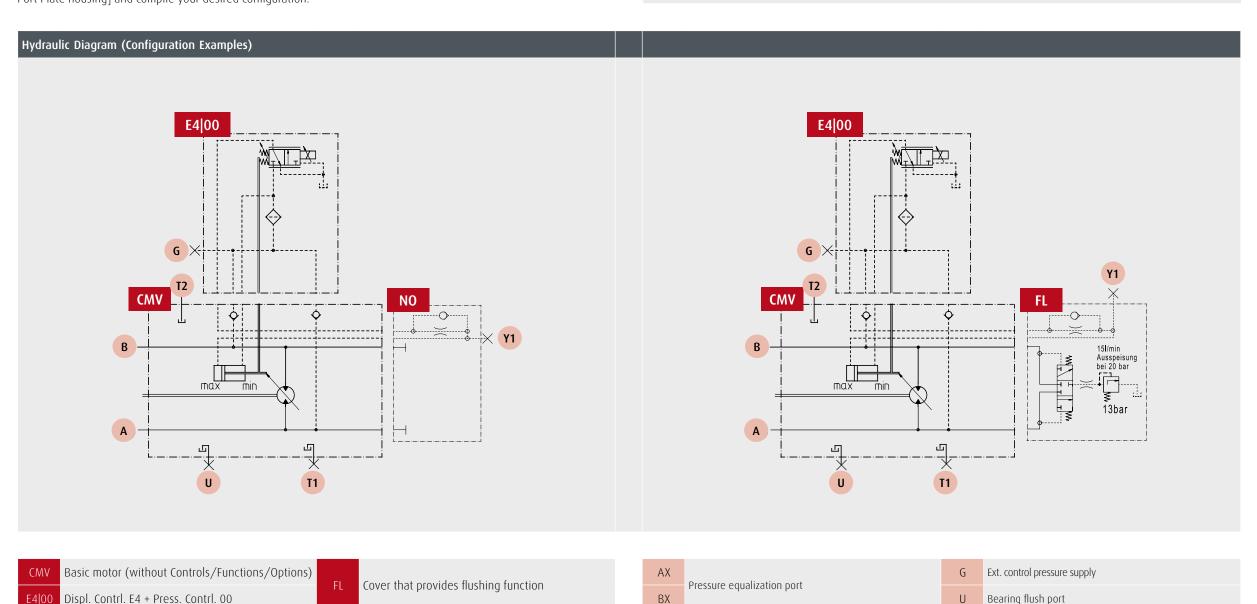
In the following you will find the technical specifications of the flushing function. They are clustered according to the related mounting flange and nominal size. First get an overview of the table data showing pressure and flow data of this function. Beyond that you will find the dimensions of the related components in combination with each mounting flange and nominal size. In the section [Model Code & Availability], you can then check the availability of the flushing function in combination with additional functions integrated in the port plate housing. So please have a look at modelcode [item 10. Port Plate housing] and compile your desired configuration.

A High pressure work port

B High pressure work port

Blind cover that closes the interface of the

portplate and does not provide flushing function



Drain / vent port

Y1 Measuring port

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