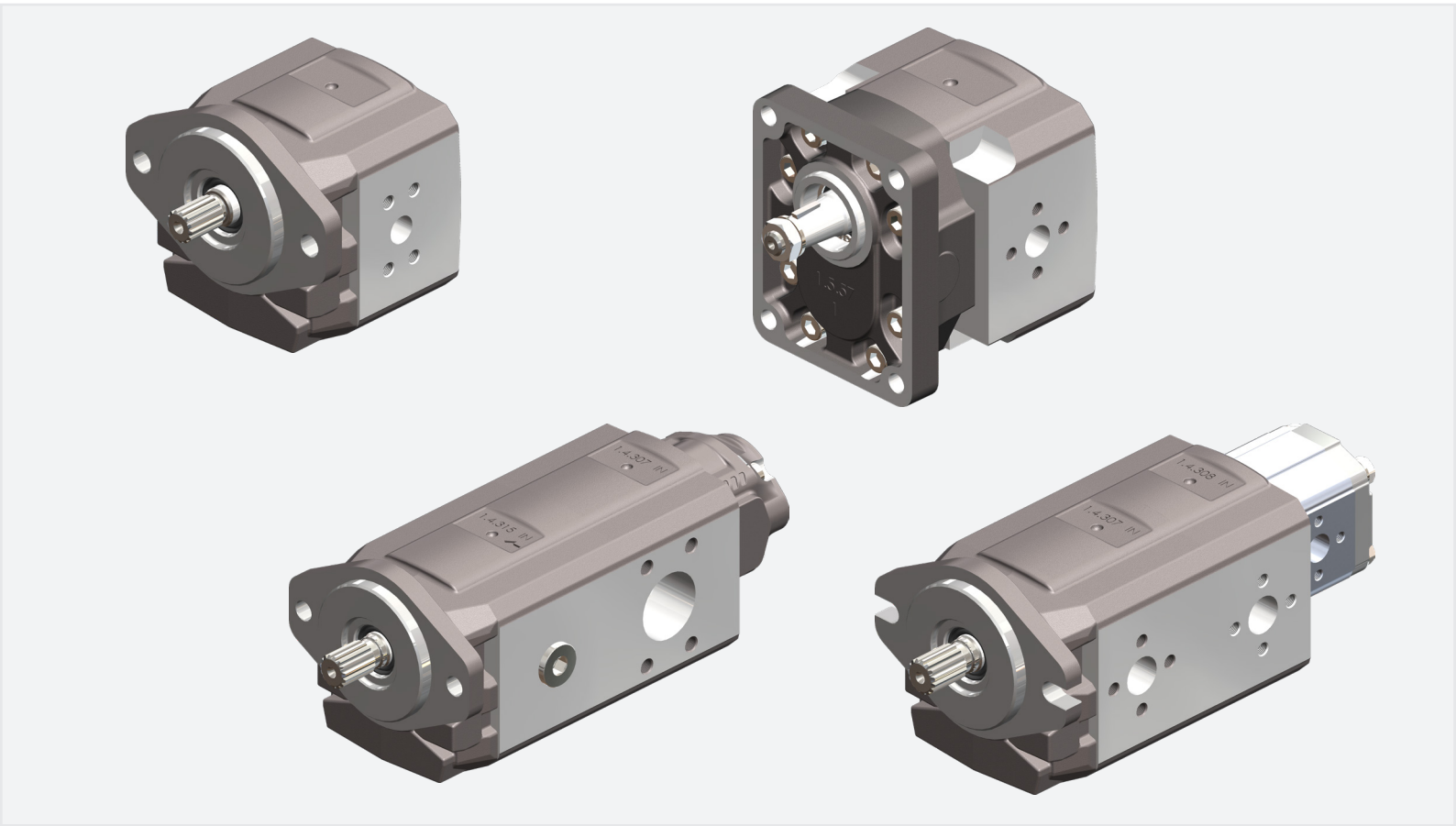
OMFB
HYDRAULIC POWER CONTROL

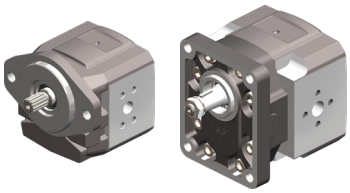
CAST IRON GEAR PUMPS AND MOTORS
GPM - GMM

OMFB introduced a new line of CAST IRON GEAR PUMPS and MOTORS in the GROUP 3 of GPM - GMM series. These new products are meant for all those applications where the standard aluminum pumps have limits in temrs of performance. With the double housing structure these pumps have a compact design and can maintain high performances and working pressures. Thanks to this special design, they are suitable for the agricultural sector and all mobile applications where high efficiency at high temperatures, low noise and long life expectancy are required.

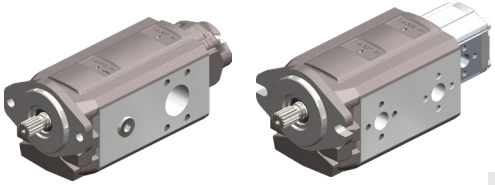


GPM PUMPS

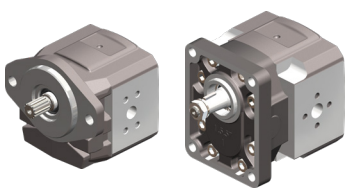
SINGOLE



MULTIPLE



GMM MOTORS



Index

General working conditions

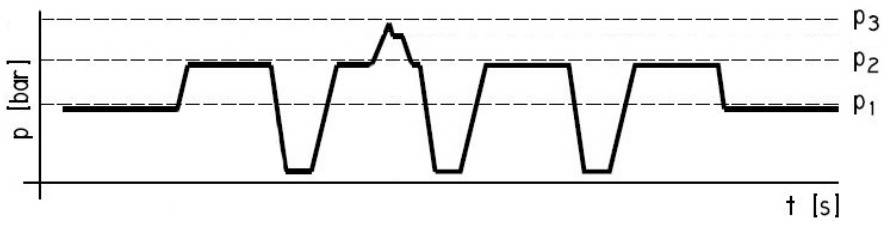
Fluid	Mineral or synthetic compatible with the following seals: NBR, FKM, FPM, Nylon				
Fluid temperature range	NBR seals	from -25°C to +80°C			
Kinematic viscosity suggested	Average ambient temp. (°C)	< -10	-10÷10	10÷35	> 35
	VG (cSt = mm²/s)	22	32	46	68
Optimale kinematic viscosity	VG= 10 cSt ÷ 100 cSt				
Max kinematic viscosity suggested at the start-up	VG= 750 cSt				
Viscosity index suggested VI > 100	Working temperature -15°C ÷ 100°C				
Oil filtering	> 200 bar: 10 µm < 200 bar: 25 µm				
Pumps rotation	Unidirectional (Right or Left)				
Motors rotation	Reversible Unidirectional				

In case of usage under higher temperatures or with special fluids, please consult our technical sales office for the choise of the most suitable type of gaskets and thrust plates.

Pumps and motors technical features

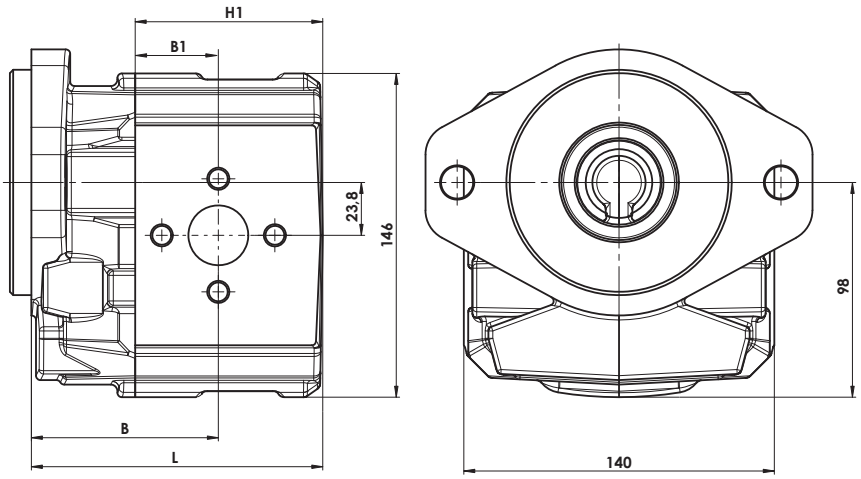
Pump type	Motor type	Displacement cm³/rev	Working pressure P1 bar	P2 bar	P3 bar	Max. continuous speed PUMPS rpm	Max. continuous speed MOTORS rpm	Min. speed rpm
GPM 22	GMM 22	22,15	285	300	320	3000	3800	300
GPM 27	GMM 27	26,16						
GPM 34	GMM 34	33,88	280	300	320		3500	
GPM 38	GMM 38	38,50						
GPM 41	GMM 41	41,50						
GPM 43	GMM 43	43,12						
GPM 51	GMM 51	50,82	270	290	310	2500	3000	
GPM 56	GMM 56	55,50						
GPM 61	GMM 61	60,06	250	270	290			
GPM 73	GMM 73	72.88	220	240	250			

Pressure definition



P1 = Max. continuous pressure (100%)
P2 = Max. Intermittent pressure (20 sec.max.)
P3 = Max. peak pressure (2 sec.max.)

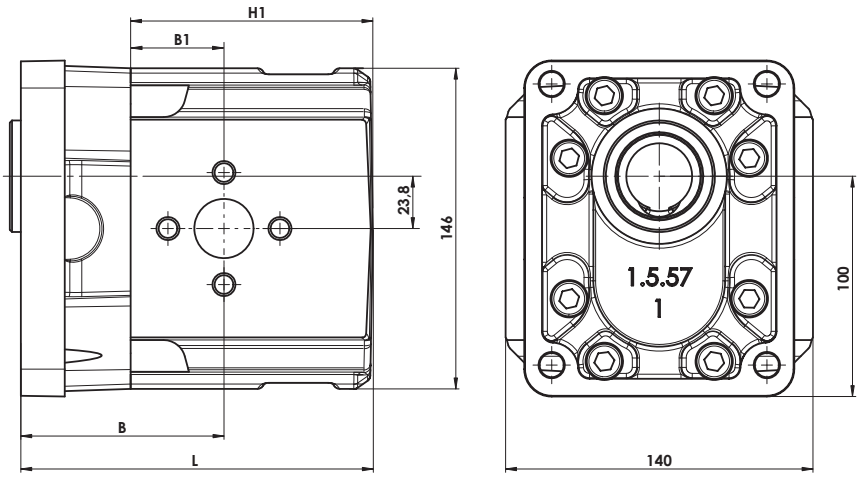
Single pumps GPM and motors GMM dimensions - SAE-B flange



Pump type	Displacement cm³/rev	L mm	B mm		B1 mm		H1 mm	Weight Kg
GPM 22	22,15	128,9	75,8	81,8*	29	35*	82,1	16,3
GPM 27	26,16	131,4	78,3	84,3*	31,5	37,5*	84,6	16,5
GPM 34	33,88	136,4	83,3	89,3*	36,5	42,5*	89,6	16,7
GPM 38	38,50	139,4	86,3		39,5		92,6	17
GPM 41	41,50	141,4	88,3		41,5		94,6	17,7
GPM 43	43,12	142,4	89,3		42,5		95,6	18
GPM 51	50,82	147,4	94,3		47,5		100,6	18,3
GPM 56	55,50	150,4	97,3		50,5		103,6	19
GPM 61	60,06	153,4	100,3		53,5		106,6	19,5
GPM 73	72.88	161,4	108,3		61,5		114,6	20,3

* European ports only

Single pumps GPM and motors GMM dimensions - EUROPEAN flange

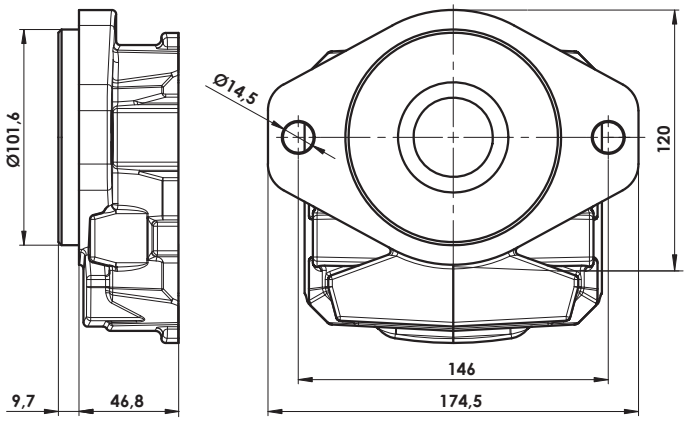


Pump type	Displacement cm³/rev	L mm	B mm		B1 mm		H1 mm	Weight Kg
GPM 22	22,15	132.1	75,8	81,8*	29	35*	82,1	15,3
GPM 27	26,16	134,6	78,3	84,3*	31,5	37,5*	84,6	15,5
GPM 34	33,88	139,6	83,3	89,3*	36,5	42,5*	89,6	15,7
GPM 38	38,50	142,6	86,3		39,5		92,6	16
GPM 41	41,50	144,6	88,3		41,5		94,6	16,7
GPM 43	43,12	145,6	89,3		42,5		95,6	17
GPM 51	50,82	150,6	94,3		47,5		100,6	17,3
GPM 56	55,50	153,6	97,3		50,5		103,6	18
GPM 61	60,06	156,6	100,3		53,5		106,6	18,5
GPM 73	72.88	164,6	108,3		61,5		114,6	19,3

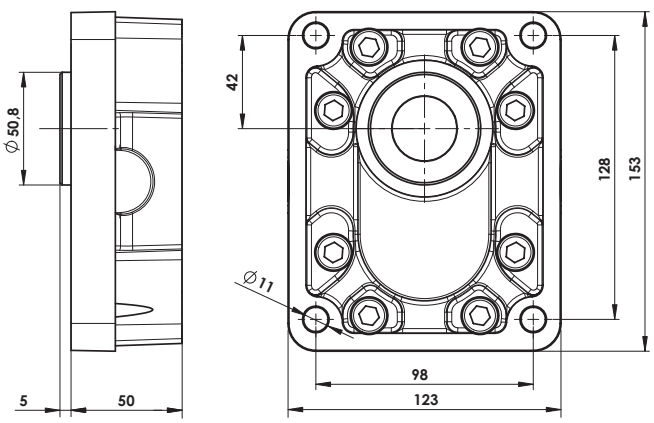
* European ports only

Flange

B2

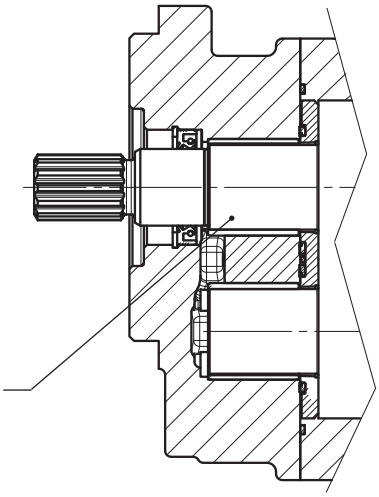


EU



Pumps and motors shaft support type

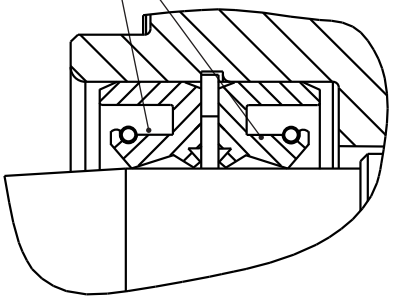
0



Pumps and motors are provided, in the **STANDARD** configuration, without bearing support.

Versions with integrated support available under request, please contact our technical sales department.

Gaskets



STANDARD gaskets
Double counterbalanced oil seal specific for:

- Pumps **P**
- Motors **R**

Sealing system for High Pressure **T**

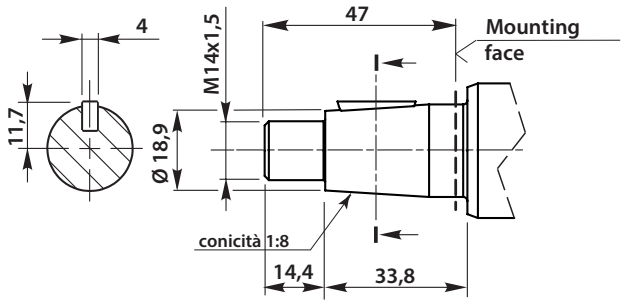
Gaskets material:

- NBR **N**
- FKM **F**

Special gaskets are available on request.

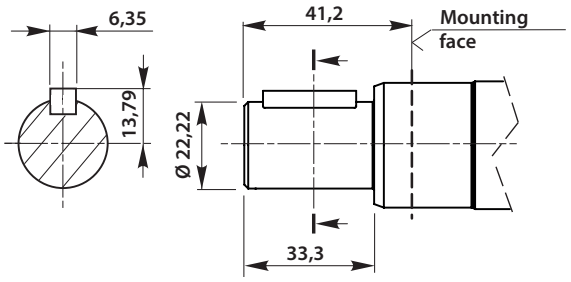
Shafts

8 1:8 CONICAL EUROPEAN shaft



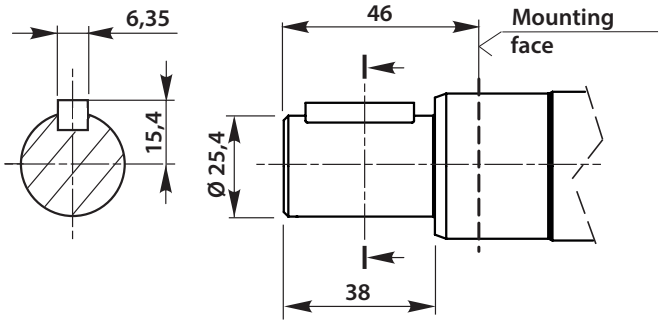
Transmissible torque 240Nm

4 SAE B CYLINDRICAL shaft



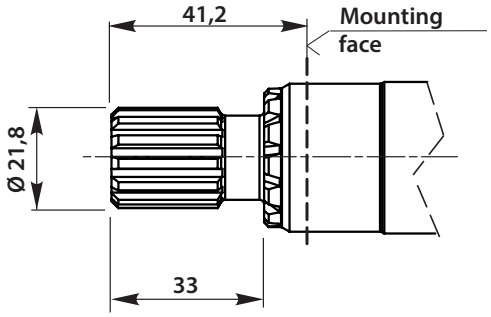
Transmissible torque 200Nm

6 SAE BB CYLINDRICAL shaft



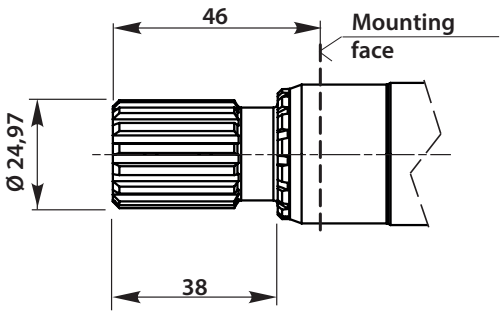
Transmissible torque 280Nm

1 SAE B 13T shaft



Transmissible torque 280Nm

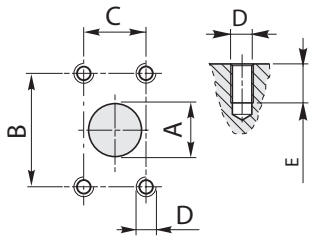
2 SAE BB 15T shaft



Transmissible torque 400Nm

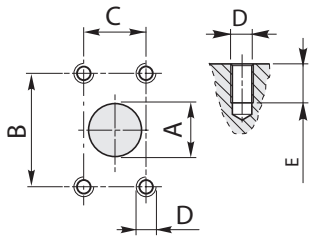
Ports

SAE J518



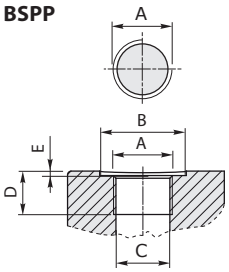
Pump type	Displacement cm³/rev	Ports thread - Metric											
		A IN		A OUT		B IN	B OUT	C IN	C OUT	D IN	D OUT	E IN	E OUT
GPM 22	22,15	W5	25,4	W4	19	52,4	47,5	26,2	22,2	M10		17	
GPM 27	26,16												
GPM 34	33,88												
GPM 38	38,50												
GPM 41	41,50	W6	30,5	W5	25,4	58,7	52,4	30,2	26,2				
GPM43	43,12												
GPM 51	50,82												
GPM 56	55,50	W7	39,3	W6	30,5	69,8	58,7	35,7	30,2	M12	M10		
GPM 61	60,06												
GPM 73	72.88												

SAE J518



Pump type	Displacement cm³/rev	Ports thread - UNC											
		A IN		A OUT		B IN	B OUT	C IN	C OUT	D IN	D OUT	E IN	E OUT
GPM 22	22,15	Z5	25,4	Z4	19	52,4	47,5	26,2	22,2	3/8-16 UNC-2B	3/8-16 UNC-2B	17	
GPM 27	26,16												
GPM 34	33,88												
GPM 38	38,50												
GPM 41	41,50	Z6	30,5	Z5	25,4	58,7	52,4	30,2	26,2	7/16-14 UNC-2B	3/8-16 UNC-2B		
GPM 43	43,12												
GPM 51	50,82												
GPM 56	55,50	Z7	39,3	Z6	30,5	69,8	58,7	35,7	30,2	1/2-13 UNC-2B	7/16-14 UNC-2B		
GPM 61	60,06												
GPM 73	72.88												

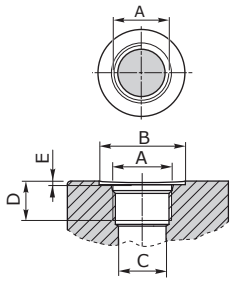
BSPP



Pump type	Displacement cm³/rev	Ports thread - Gas											
		A IN		A OUT		B IN	B OUT	C IN	C OUT	D IN	D OUT	E IN	E OUT
GPM 22	22,15	G5	G1	G4	G3/4	49	39	30,5	24,5	22	18	2,5	
GPM 27	26,16												
GPM 34	33,88												
GPM 38	38,50												
GPM 41	41,50	G6	G1-1/4	G5	G1	56	49	39	30,5	24	22		
GPM 43	43,12												
GPM 51	50,82												
GPM 56	55,50												
GPM 61	60,06												
GPM 73	72.88												

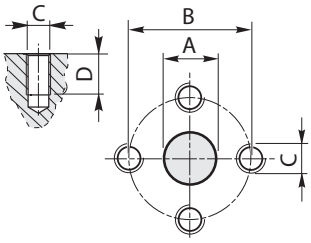
PORTS

SAE J514



Pump type	Displacement cm³/rev	Ports thread - UNF											
		A				B		C		D		E	
		IN		OUT		IN	OUT	IN	OUT	IN	OUT	IN	OUT
GPM 22	22,15	U5	1 5/16"-12 UNF-2B	U4	1 1/16"-12 UNF-2B	49	42	30,5	24,8	20		2	
GPM 27	26,16												
GPM 34	33,88												
GPM 38	38,50												
GPM 41	41,50	U6	1 5/8"-12 UNF-2B	U5	1 5/16"-12 UNF-2B	58	49	39,1	30,5				
GPM 43	43,12												
GPM 51	50,82												
GPM 56	55,50												
GPM 61	60,06												
GPM 73	72.88												

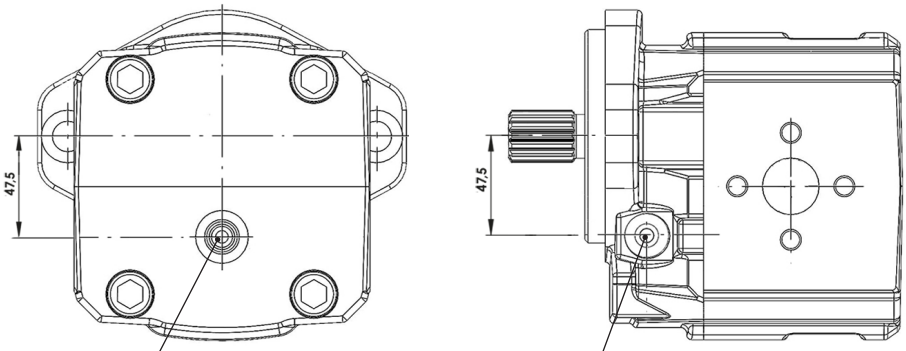
European flange



Pump type	Displacement cm³/rev	Ports thread - European									
		A				B		C		D	
		IN		OUT		IN	OUT	IN	OUT	IN	OUT
GPM 22	22,15	E5	27	E4	19	51	40	M10	M8	15	18
GPM 27	26,16										
GPM 34	33,88										
GPM 38	38,50										
GPM 41	41,50										
GPM 43	43,12										
GPM 51	50,82										
GPM 56	55,50	E6	33	E5	27	62	51	M12	M10	17	15
GPM 61	60,06										
GPM 73	72.88										

Motors drain ports

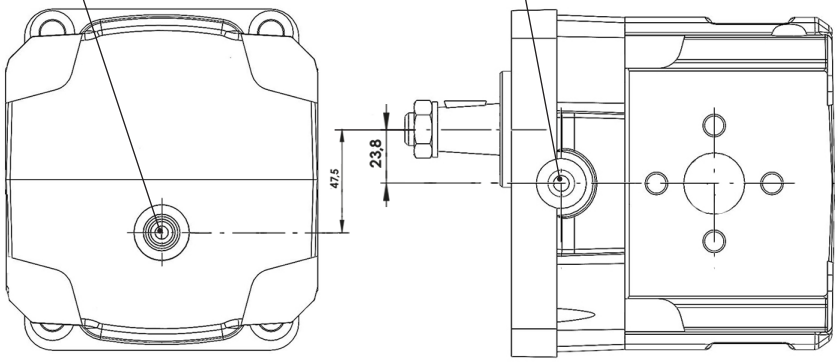
SAE B
Version



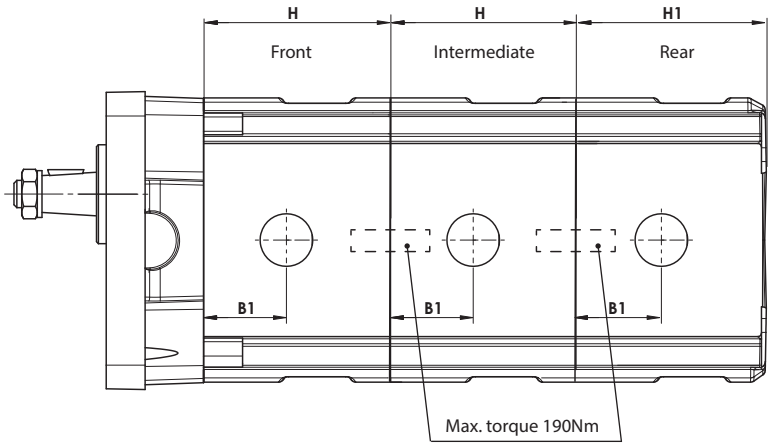
Rear **STANDARD**
drain - G3/8

Side **OPTIONAL**
drain - G1/4

EUROPEAN
Version



Group 3 dimensions

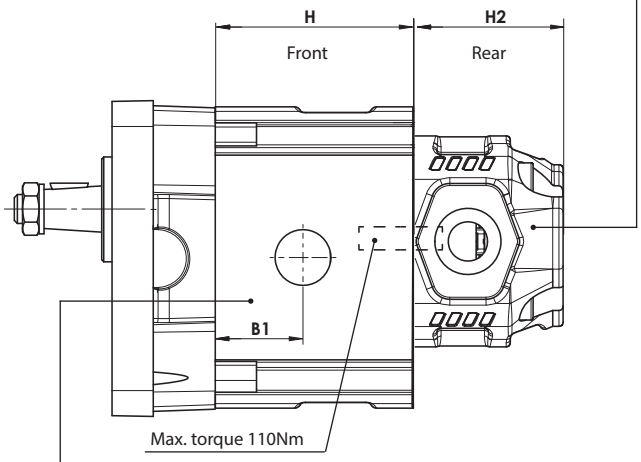


Pump type	Displacement cm³/rev	H mm	H1 mm	B1 mm	
GPM 22	22,15	97	82,1	29	35*
GPM 27	26,16	99,5	84,6	31,5	37,5*
GPM 34	33,88	104,5	89,6	36,5	42,5*
GPM 38	38,50	107,5	92,6	39,5	
GPM 41	41,50	109,5	94,6	41,5	
GPM 43	43,12	110,5	95,6	42,5	
GPM 51	50,82	115,5	100,6	47,5	
GPM 56	55,50	118,5	103,6	50,5	
GPM 61	60,06	121,5	106,6	53,5	
GPM 73	72.88	129,5	114,6	61,5	

* European ports only

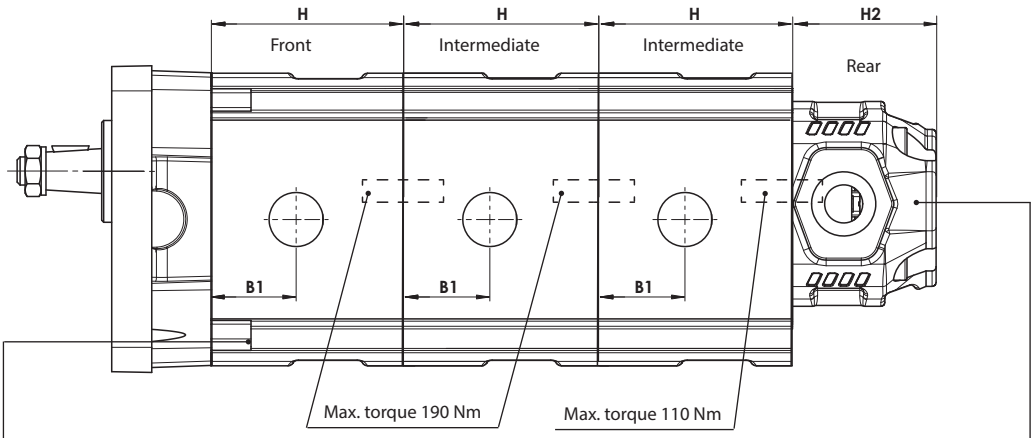
Group 3 + Group 2 dimensions

Pump type	Displacement cm³/rev	H2 mm
G2P 06	6,3	56
G2P 08	8,18	59
G2P 10	10,06	62
G2P 12	11,92	
G2P 14	13,8	68
G2P 16	16,03	71,5
G2P 20	20,12	78
G2P 25	25,15	86
G2P 32	32,04	97



Pump type	Displacement cm³/rev	H mm	B1 mm	
GPM 22	22,15	97	29	35*
GPM 27	26,16	99,5	31,5	37,5*
GPM 34	33,88	104,5	36,5	42,5*
GPM 38	38,50	107,5	39,5	
GPM 41	41,50	109,5	41,5	
GPM 43	43,12	110,5	42,5	
GPM 51	50,82	115,5	47,5	
GPM 56	55,50	118,5	50,5	
GPM 61	60,06	121,5	53,5	
GPM 73	72.88	129,5	61,5	

* European ports only

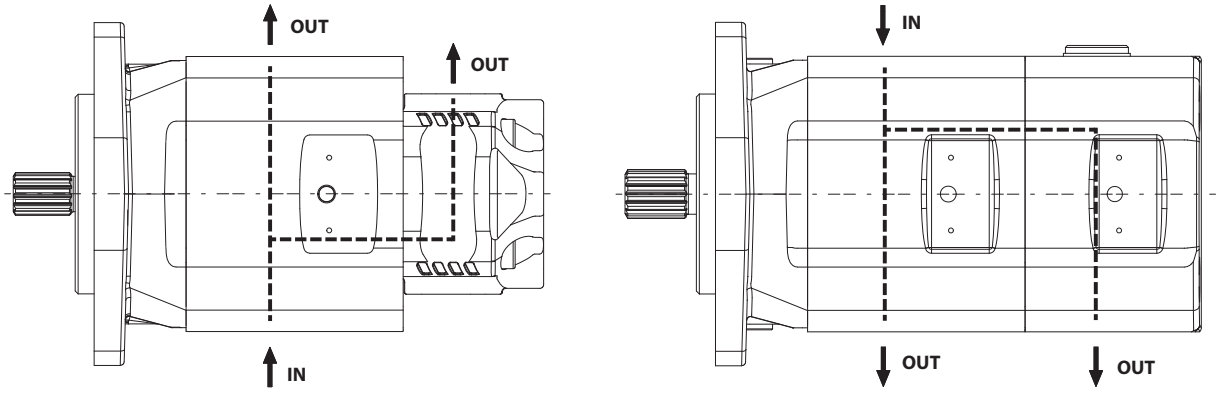


Pump type	Displacement cm³/rev	H mm	B1 mm	
GPM 22	22,15	97	29	35*
GPM 27	26,16	99,5	31,5	37,5*
GPM 34	33,88	104,5	36,5	42,5*
GPM 38	38,50	107,5	39,5	
GPM 41	41,50	109,5	41,5	
GPM 43	43,12	110,5	42,5	
GPM 51	50,82	115,5	47,5	
GPM 56	55,50	118,5	50,5	
GPM 61	60,06	121,5	53,5	
GPM 73	72.88	129,5	61,5	

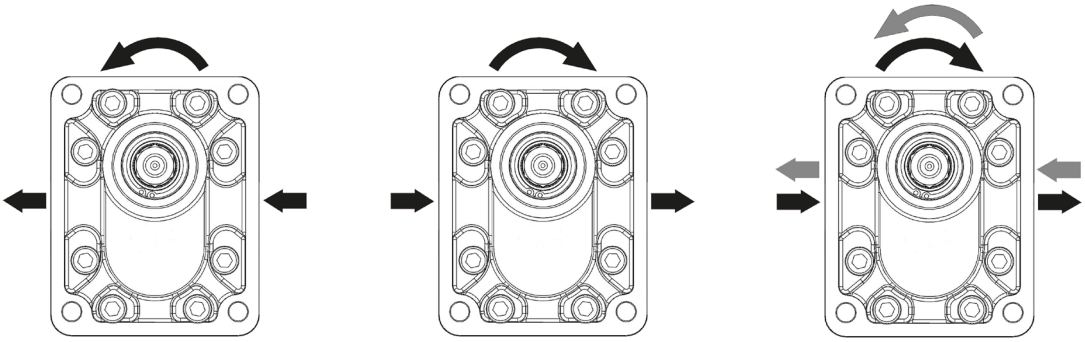
* European ports only

Pump type	Displacement cm³/rev	H2 mm
G2P 06	6,3	56
G2P 08	8,18	59
G2P 10	10,06	62
G2P 12	11,92	
G2P 14	13,8	68
G2P 16	16,03	71,5
G2P 20	20,12	78
G2P 25	25,15	86
G2P 32	32,04	97

Multiple pumps with **single suction port** are available. For information, please contact our Sales Service.



Rotation direction looking at the shaft

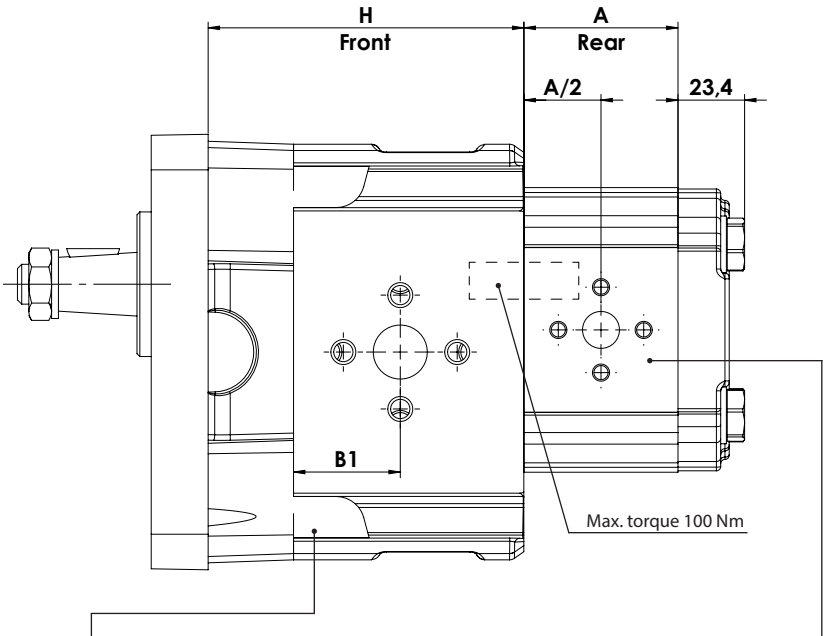


Left rotation (internal drain) **SI**

Right rotation (internal drain) **DI**

Reversible rotation (internal drain) **XI**

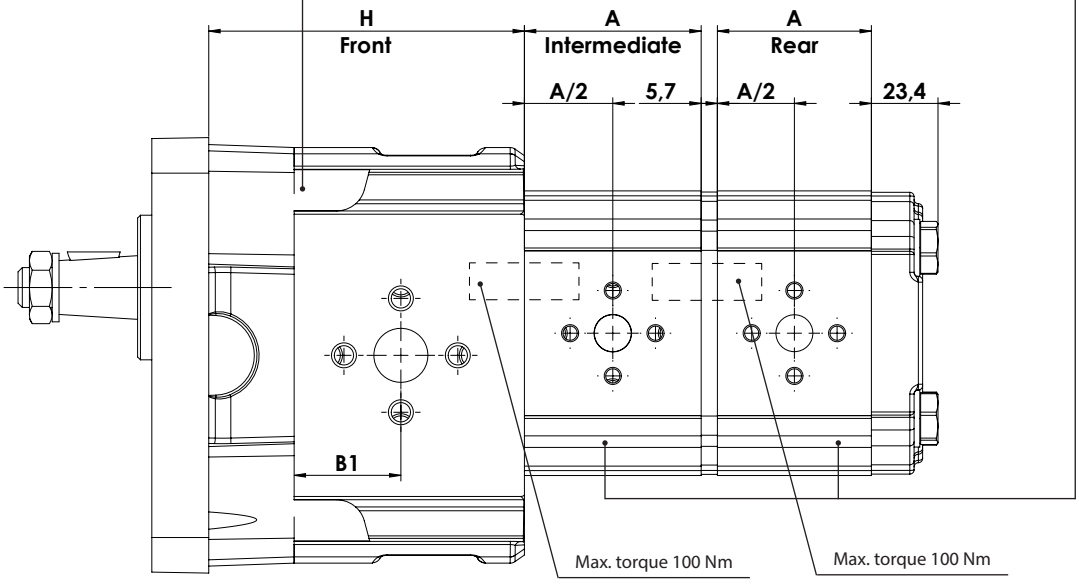
Group 3 (Cast iron) + Group 2 (aluminium) Dimensions



Pump type	Displacement cm³/rev	H mm	B1 mm	
GPM 22	22,15	97	29	35*
GPM 27	26,16	99,5	31,5	37,5*
GPM 34	33,88	104,5	36,5	42,5*
GPM 38	38,50	107,5	39,5	
GPM 41	41,50	109,5	41,5	
GPM 43	43,12	110,5	42,5	
GPM 51	50,82	115,5	47,5	
GPM 56	55,50	118,5	50,5	
GPM 61	60,06	121,5	53,5	
GPM 73	72.88	129,5	61,5	

* European ports only

Pump type	Displacement cm³/rev	A mm
2AP 06	6,6	51,6
2AP 08	8,3	54,1
2AP 11	11,4	58,5
2AP 14	13,9	62,1
2AP 16	16,8	66,6
2AP 19	19,3	70
2AP 22	21,9	79,7
2AP 25	24,7	83,9

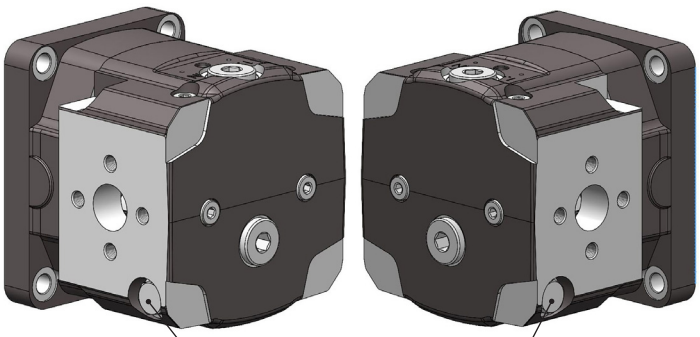


Group 3 (Cast iron) + Group 2 (aluminium) + Group 2 (aluminium) Dimensions

Integrated valves for motors

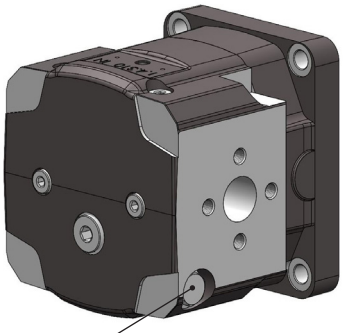
Anti-cavitation and anti-cavitation/shock valves integrated directly in the engine body are available on request. This solution allows to optimize the layout of the system and guarantees a faster response in the pressure peak control.

Bidirectional motor



Note: N° 2 valves

Unidirectional motor

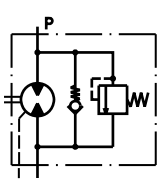


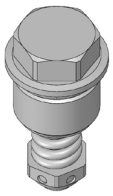
Note: N° 1 inlet valve

Valve type	Motor use	
Any		00
Anticavitation-Antishock valve	Reversible motor	AR
Anticavitation-Antishock valve	Unidirectional motor DX	AD
Anticavitation-Antishock valve	Unidirectional motor SX	AS
Anticavitation valve	Unidirectional motor DX	BD
Anticavitation valve	Unidirectional motor SX	BS

For these valves please specify the value of range

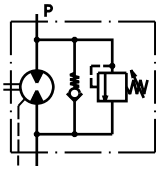
Antishock - Anticavitation valves with FIXED range

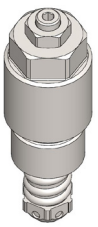




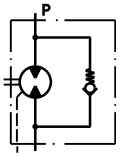
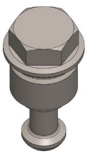
Range (bar)	Code	
50	PWS1M200050	05
70	PWS1M200070	07
90	PWS1M200090	09
110	PWS1M200110	11
130	PWS1M200130	13
150	PWS1M200150	15
180	PWS1M200180	18
200	PWS1M200200	20
230	PWS1M200230	23
260	PWS1M200260	26
290	PWS1M200290	29
320	PWS1M200320	32

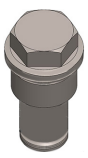
Antishock - Anticavitation valves with range ADJUSTABLE





Range (bar)	Code	
20÷100	PWA1M200S00	S0
101÷170	PWA1M200T00	T1
171÷250	PWA1M200F00	F1
251÷350	PWA1M200C00	C2

Anticavitation valve	Code
 	PWR1M200000

Valve replacement cap	Code
 	PWP1M200000

HOW TO ORDER - SINGLE PUMP/MOTOR

1	-	2	3	-	4	5	-	6	7	8	-	9	/	10	-	11	/	12	/	13	(	14	)
																				0 0			

fixed parameter already filled in

◑ **ONLY** for engines with valve (see page 11)

1	Type
	GPM
	GMM

2	Flange	
	SAE B 2 holes	**B2**
	European	**EU**

3	Shaft	
	SAE B 13T	**1**
	SAE BB 15T	**2**
	SAE B Cylindrical	**4**
	SAE BB Cylindrical	**6**
	European con. 1:8	**8**

4	Rotation + drains	
	Left (internal drain)	**SI**
	Right (internal drain)	**DI**
	Reversible (internal drain)	**XI**
	Reversible (rear external drain G3/8)	**XG**
	Reversible (side external drain G1/4)	**XQ**

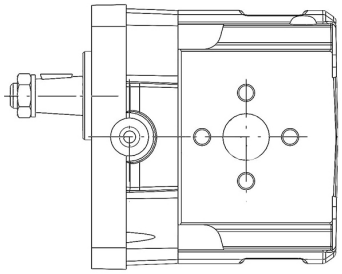
5	Valves predisposition	
	Any	**00**
	Anticavitation-antishock valve (reversible motor)	**AR**
	Anticavitation-antishock valve (right motor)	**AD**
	Anticavitation-antishock valve (left motor)	**AS**
	Anticavitation valve (right motor)	**BD**
	Anticavitation valve (left motor)	**BS**

6	Support type	
	Standard without bearing	**0**

7	Gaskets	
	PUMPS standard	**P**
	MOTORS standard	**R**
	High Pressure Sealing System	**T**

8	Gaskets material	
	NBR	**N**
	FKM	**F**

9	Displacement cm³/rev	
	22,15	**22**
	26,16	**27**
	33,88	**34**
	38,50	**38**
	41,50	**41**
	43,12	**43**
	50,82	**51**
	55,50	**56**
	60,06	**61**
	72.88	**73**



10	Thread type	Displacement	Port		
	SAE J518 Metric	22-27 34-38	IN	25,4	**W5**
			OUT	19	**W4**
		41-43 51	IN	30,5	**W6**
			OUT	25,4	**W5**
		56-61 73	IN	39,3	**W7**
			OUT	30,5	**W6**
	SAE J518 UNC	22-27 34-38	IN	25,4	**Z5**
			OUT	19	**Z4**
		41-43 51	IN	30,5	**Z6**
			OUT	25,4	**Z5**
		56-61 73	IN	39,3	**Z7**
			OUT	30,5	**Z6**
	BSPP Gas	22-27 34-38	IN	G1	**G5**
			OUT	G3/4	**G4**
		41-43-51 56-61-73	IN	G1-1/4	**G6**
			OUT	G1	**G5**
	UNF	22-27 34-38	IN	1 5/16"-12 UNF-2B	**U5**
			OUT	1 1/16"-12 UNF-2B	**U4**
		41-43-51 56-61-73	IN	1 5/8"-12 UNF-2B	**U6**
			OUT	1 5/16"-12 UNF-2B	**U5**
	European	22-27-34 38-41-43-51	IN	27	**E5**
			OUT	19	**E4**
		56-61-73	IN	33	**E6**
			OUT	27	**E5**

11	Ports position	
	Side IN/OUT	**I**

12	Coating	
	Standard black	**0**

◑ Field No. 14 shall be completed ONLY if a valve is present.

For example coding see page 15

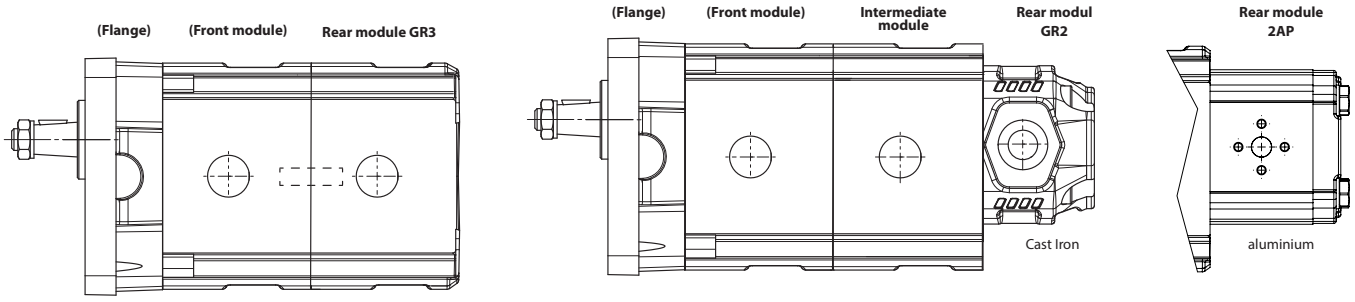
HOW TO ORDER - MULTIPLE PUMP

1		2		3		4		5		6	7	8		12		13
			-		-		-		-				/		/	0 0

fixed parameter already filled in

The coding part above is to be completed following the indications on the previous page for a single pump (except point 1). Other data specified below, which should be repeated for the number of modules, must be added to the coding.

-	15	09	/	10	-	11	-	15	09	/	10	11



1	Pump type	
	Double	GTD
	Triple	GTT
	Quadruple	GTQ

Composition multiple pump
Flange + Front module + Rear module
Flange + Front module + Intermediate module + Rear module
Flange + Front module + 2 x Intermediate module + Rear module

09			
Displacement Module **GR3**		Displacement Module **GR2**	
22,15 cm³/rev	22	6,3 cm³/rev	06
26,16 cm³/rev	27	8,18 cm³/rev	08
33,88 cm³/rev	34	10,06 cm³/rev	10
38,50 cm³/rev	38	11,92 cm³/rev	12
41,50 cm³/rev	41	13,8 cm³/rev	14
43,12 cm³/rev	43	16,03 cm³/rev	16
50,82 cm³/rev	51	20,12 cm³/rev	20
55,50 cm³/rev	56	25,15 cm³/rev	25
60,06 cm³/rev	61	32,04 cm³/rev	32
72.88 cm³/rev	73		

11	Ports position	
	Side IN/OUT	I

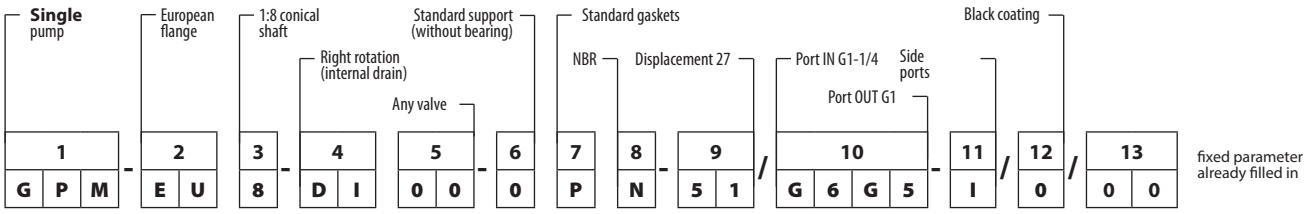
15	Type
	GPM (Gruppo 3)
	G2P (Gruppo 2)
	2AP (Gruppo 2)

10	Intermediate module and Rear module thread type	Displacement	Ports		
	SAE J518 Metrica	22-27 34-38	IN	25,4	W5
			OUT	19	W4
		41-43 51	IN	30,5	W6
			OUT	25,4	W5
		56-61 73	IN	39,3	W7
			OUT	30,5	W6
	SAE J518 UNC	22-27 34-38	IN	25,4	Z5
			OUT	19	Z4
		41-43 51	IN	30,5	Z6
			OUT	25,4	Z5
		56-61 73	IN	39,3	Z7
			OUT	30,5	Z6
	UNF	22-27 34-38	IN	1 5/16"-12 UNF-2B	U5
			OUT	1 1/16"-12 UNF-2B	U4
		41-43-51 56-61-73	IN	1 5/8"-12 UNF-2B	U6
			OUT	1 5/16"-12 UNF-2B	U5
	Europea	04-06-08	IN	13	E3
			OUT		
		22-27-34 38-41-43-51	IN	27	E5
			OUT	19	E4
		56-61-73	IN	33	E6
			OUT	27	E5
	BSPP Gas	22-27 34-38	IN	G1	G5
			OUT	G3/4	G4
		41-43-51 56-61-73	IN	G1-1/4	G6
			OUT	G1	G5
	BSPP - Gas *	Tutte	IN	G3/4	G4
			OUT	G1/2	G3

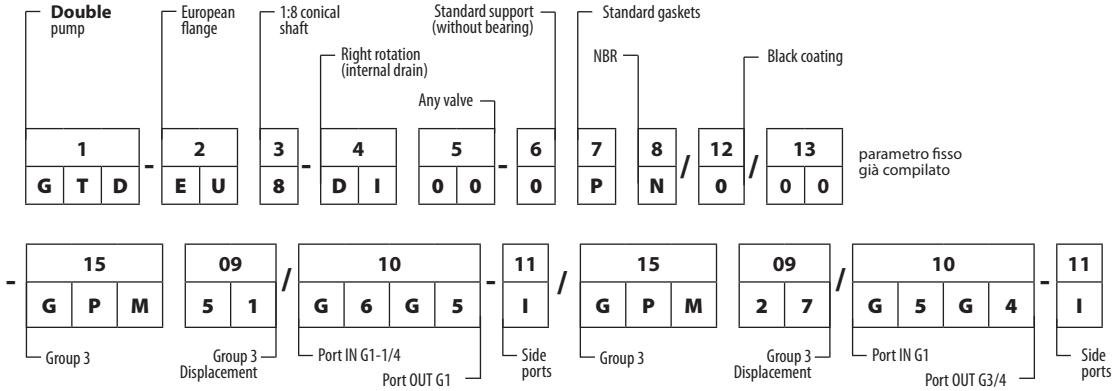
* G2P cast iron models are available only with threaded ports

For example coding see page 15

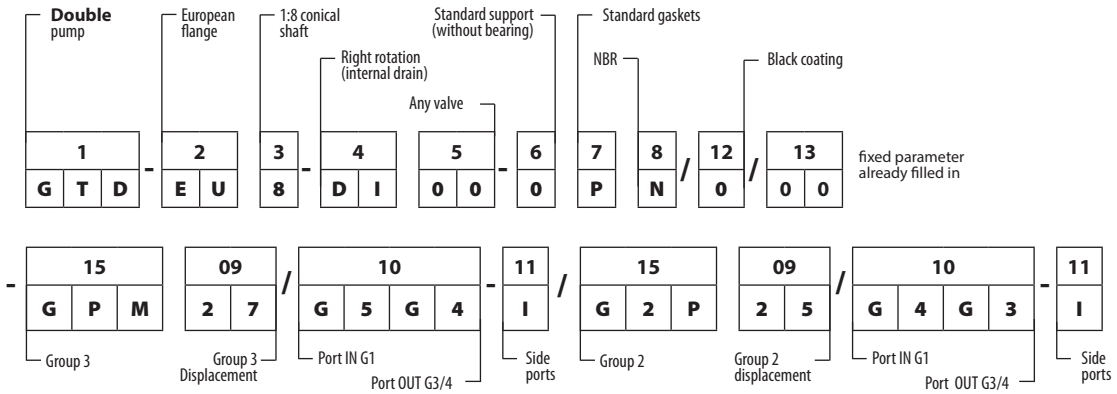
example of SINGLE PUMP ORDER



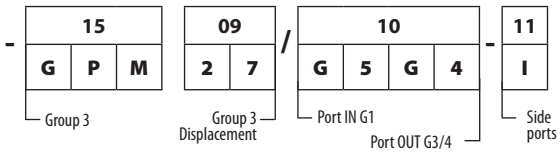
example of DOUBLE PUMP ORDER - SAME GROUP



example of DOUBLE PUMP ORDER - DIFFERENT GROUPS



For the **TRIPLE** and **QUADRUPLE** pumps composition, please repeat the previous schemes by adding the additional desired modules.



example of MOTOR WITH VALVE ORDER