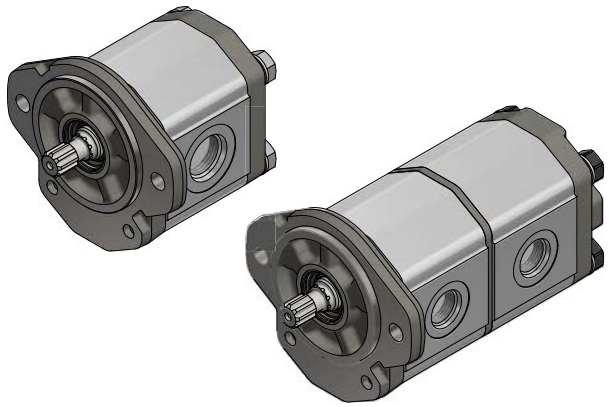


G Pump technical data (Aluminium body)

Displacement	cm³/v-cc/rev (in³/rev)	4 (0,24)	6 (0,37)	8 (0,49)	10,7 (0,65)	12 (0,73)	14,7 (0,90)	16 (0,98)	18 (1,10)	20,7 (1,26)	23,3 (1,42)	26,7 (1,62)
Cont. max. pressure	bar (psi)	275 (3990)					250 (3625)		225 (3265)	200 (2900)	180 (2610)	170 (2465)
Intermittent max. pressure	bar (psi)	300 (4350)					275 (3990)		250 (3625)	225 (3265)	200 (2900)	190 (2755)
Maximum peak pressure	bar (psi)	310 (4495)					285 (4135)		260 (3770)	235 (3410)	210 (3045)	200 (2900)
R.P.M. at cont. pressure		3500			3000		2500		2300		2000	
Max. R.P.M		4000			3500				3200		3000	2500
Min. R.P.M. at given pressures	100 bar (1450 psi)	500										
	175 bar (2540 psi)	1100		1200	1000		850				750	
	250 bar (3625 psi)	1400			1300		1200		1100		–	
	300 bar (4350 psi)	1750			1500		–					

Note: Pressures obtained with flanged bodies.

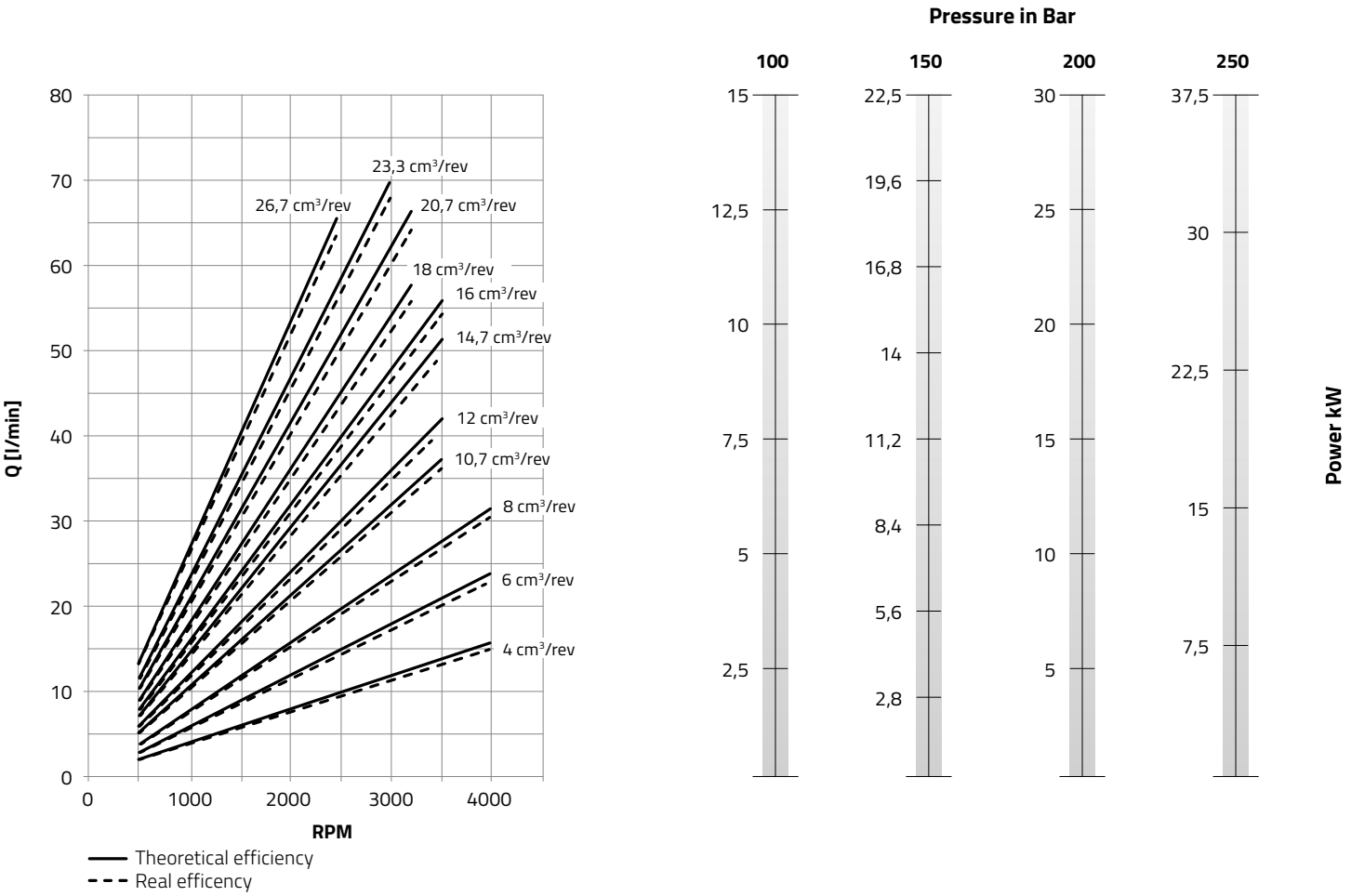
GN Pump technical data (Cast iron body)

Displacement	cm³/v-cc/rev (in³/rev)	4 (0,24)	6 (0,37)	8 (0,49)	10,7 (0,65)	12 (0,73)	14,7 (0,90)	16 (0,98)	18 (1,10)	20,7 (1,26)	23,3 (1,42)	26,7 (1,62)
Cont. max. pressure	bar (psi)	290 (4205)					275 (3990)		250 (3625)	235 (3410)	225 (3265)	215 (3120)
Intermittent max. pressure	bar (psi)	350 (5075)					330 (4785)		300 (4350)	275 (3990)	260 (3770)	250 (3625)
Maximum peak pressure	bar (psi)	360 (5220)					340 (4930)		310 (4495)	285 (4135)	270 (3915)	260 (3770)
R.P.M. at cont. pressure		3500			3000		2500		2300		2000	
Max. R.P.M		4000			3500				3200		3000	2500
Min. R.P.M. at given pressures	100 bar (1450 psi)	500										
	175 bar (2540 psi)	1100		1200	1000		850				750	
	250 bar (3625 psi)	1400			1300		1200		1100		–	
	300 bar (4350 psi)	1750			1500		–					

Note: With regard to all reversible pumps (G and GN), maximum pressure is 250 bar (3600 psi), except for those values where the pressure is lower.

Note: The definition of the pressure ranges is shown on page 7.

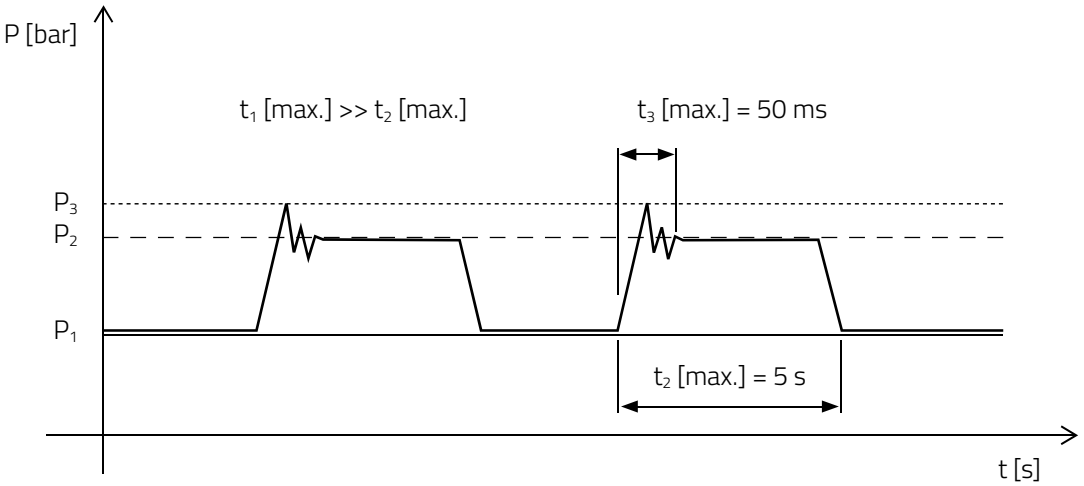
Flow, performance and power chart according to displacement



NOTE: The values shown in the above diagram have boeen obtained using 32cSt Kinematic viscosity oil.

Pressure definition

Technical data tables show 3 levels of maximum pressure to which a pump can be used:
P_1, t_1 – Maximum continuous pressure ——
P_2, t_2 – Maximum intermittent pressure — — —
P_3, t_3 – Maximum peak pressure ----------



								Optional					
Coding System	**1**	**G**	**15C**	**D**	**E**	**10**	**R**		**/**	**V**	**42**	**T*****	**-*****

Type

1	Without pulley
2	With pulley
5	Pump with floating shaft and back-up bearing

Model

G	Single – Aluminium body
GN	Single – Cast iron body
GM	Multiple (G+G)
GMN	Multiple (GN+GN)
GS	Multiple (G+G0)
GSN	Multiple (GN+G0)

Pump Displacement [cm³/rev] & [in³/rev]

4C	4,0	0,24
6C	6,0	0,37
8C	8,0	0,49
11C	10,7	0,65
12C	12,0	0,73
15C	14,7	0,90
16C	16,0	0,98
18C	18,0	1,10
21C	20,7	1,26
23C	23,3	1,42
27C	26,7	1,62

Rotation Direction

D	Clockwise
I	Counterclockwise
R	Reversible

Drive Shaft Form

D	SAE B - 13 teeth
E	European tapered 1:8
G	SAE A - 9 teeth
H	SAE A - Ø15,88 straight
J	German tapered 1:5
K	SAE - 11 teeth
L	SAE - Ø19,05 straight
T	DIN-5482 - 9 teeth
W	Multiple pumps
Z	Multiple pumps

For more options see shafts

Code

V	FKM seals and shaft seal
RV	Only FKM shaft seal
ID	Internal drain

Alternatives with Valves

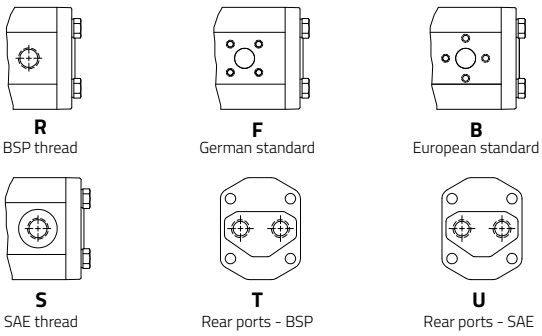
VA	Check valve
V@	Relief valve
VBP@	Low pressure relief valve
RC@V@	Priority flow valve
VC@V@	Flow control valve

See variants with valves

Chamber Type

	Standard
CI@	Common inlet
SS	Separate stages

Port Connection Forms



R BSP thread — **F** German standard — **B** European standard

S SAE thread — **T** Rear ports - BSP — **U** Rear ports - SAE

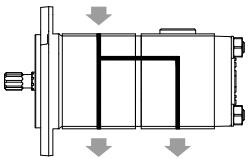
For more options see ports

Mounting Flange

09	SAE A - 2 bolts
10	European flange
22	German standard - 2 bolts
23	German standard
89	SAE B - 2 bolts
00	Multiple pumps

For more options see flanges

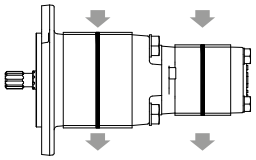
Part number example GM Pump



1	GM	15C	-	6C	D	E	10	R	-	CI1

- 1: Without pulley
- GM: GM Pump (G+G)
- 15C: Displacement of the Pump G-1 [cm³/rev]
- 6C: Displacement of the Pump G-2 [cm³/rev]
- D: Clockwise Rotation
- E: Shaft form: E
- 10: Front flange type: 10
- R: Connection type: R
- CI1: Common Inlet (Inlet1)

Part number example GS Pump



1	GS	15C	-	5C	D	E	10	R	-	SS

- 1: Without pulley
- GS: GS Pump (G+G0)
- 15C: Displacement of the Pump G [cm³/rev]
- 5C: Displacement of the Pump G0 [cm³/rev]
- D: Clockwise Rotation
- E: Shaft form: E
- 10: Front flange type: 10
- R: Connection type: R
- SS: Separate Stages

Pumps and motors codification with integrated valves

Relief valve

Tamper-proof sealable model and standard set pressure

	Pressure range
V11	Set at 80 bar (5-80 bar)
V12	Set at 160 bar (85-175 bar)
V13	Set at 200 bar (180-250 bar)

Tamper-proof sealed model and specific set pressure

	Pressure range
V41T* **	5-80 bar
V42T* **	85-175 bar
V43T* **	180-250 bar

In the relief valve with tamper-proof cap, the signs *** have to be replaced by the set pressure (3 numbers) of the valve.
See minimum set pressure curve (page 29).

Example 1: 1G18CDE10R/V12

Example 2: 1G11CDE10R/V41T060

Flow control valve with relief valve

VC	@	V	@

Controlled flow

05	5 l/min
08	8 l/min
12	12 l/min
16	16 l/min
22	22 l/min

Tamper-proof sealable model and standard set pressure

	Pressure range
11	Set at 80 bar (5-80 bar)
12	Set at 160 bar (85-175 bar)
13	Set at 200 bar (180-250 bar)

See minimum set pressure curve (page 30).

Example: 1G8CDE10R/VC05V13

Check valve

VA	See pressure diagram - flow (page 29). Example: 1G11CDE10R/VA

Low pressure relief valve

VBPT**	The signs ** have to be replaced by the set pressure (2 numbers). See minimum set pressure curve (page 29). Example: 1G15CDE10R/VBP14

Priority flow rate with relief valve

RC	@	V	@

Priority flow PF

05	5 l/min
06	6 l/min
08	8 l/min
10	10 l/min
12	12 l/min
14	14 l/min
16	16 l/min
18	18 l/min
20	20 l/min

Model without valve

00	Without relief valve

Tamper-proof sealable model and standard set pressure

	Pressure range
11	Set at 80 bar (5-80 bar)
12	Set at 160 bar (85-175 bar)
13	Set at 200 bar (180-250 bar)

Tamper-proof sealed model and specific set pressure

	Pressure range
41T* **	5-80 bar
42T* **	85-175 bar
43T* **	180-250 bar

In the relief valve with tamper-proof cap, the signs *** have to be replaced by the set pressure (3 numbers) of the valve. See minimum set pressure curve (page 30).

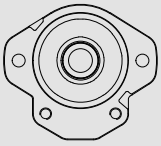
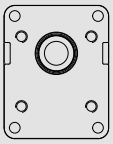
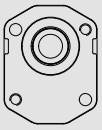
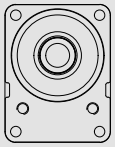
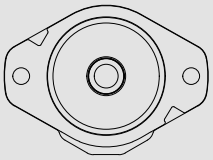
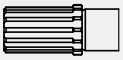
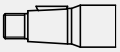
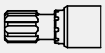
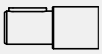
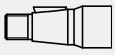
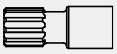
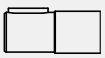
Example 1: 1G11CDE10R/RC08V41T060

Example 2: 1G16CDE10R/RC16V12

Return to Pumps
Return to Motors

Drive shaft-front flange common combinations

The table below only contains the most common combinations. Contact the Sales Department for other combinations.

	09  SAE A – 2 bolts	10  European	19  German 2 bolts	22  German 2 bolts	23  German	89  SAE B – 2 bolts
D  SAE B – 13 teeth						D 89
E  European tapered 1:8		E 10				
G  SAE A – 9 teeth	G 09					
H  SAE A – Ø15,88 straight	H 09					
J  German tapered 1:5				J 22	J 23	
K  SAE – 11 teeth	K 09					
L  SAE – Ø19,05 straight	L 09					
T  DIN-5482 – 9 teeth					T 23	
W  Tang			W19			

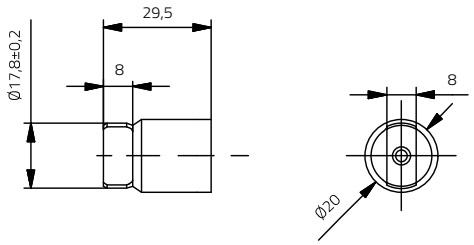
Drive shafts

Contact with the Sales Department for other combinations.

NOTE: The drive shaft lenght is given from the side A of the front flanges (see pages 14 and 15).

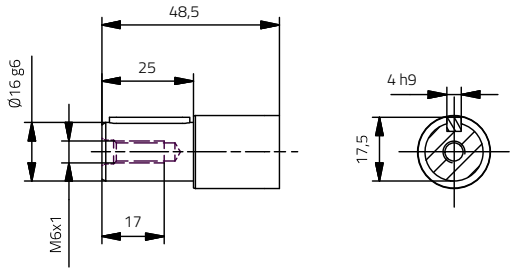
Shaft form B

Roquet Tang — Max. driving torque 65 Nm



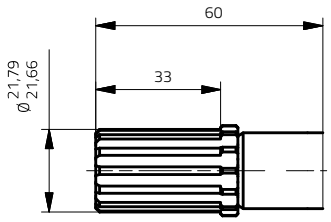
Shaft form C

UNE – Ø16 straight — Max. driving torque 55 Nm



Shaft form D

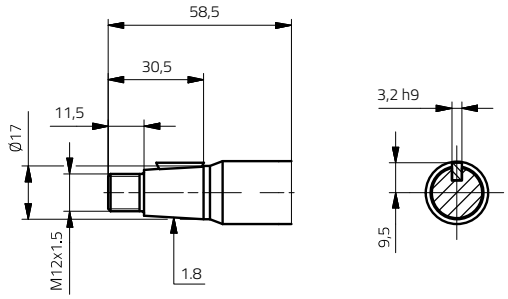
SAE B – 13 teeth — Max. driving torque 110 Nm



SAE J498b
13 teeth
Pitch 16/32
Side fit
Pressure angle 30 deg

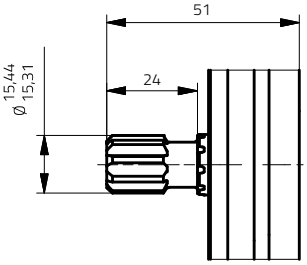
Shaft form E

European tapered 1:8 — Max. driving torque 160 Nm



Shaft form G

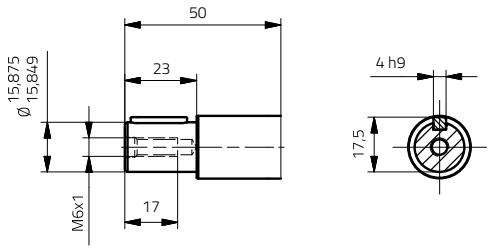
SAE A – 9 teeth — Max. driving torque 110 Nm



SAE J498b
9 teeth
Pitch 16/32
Side fit
Pressure angle 30 deg

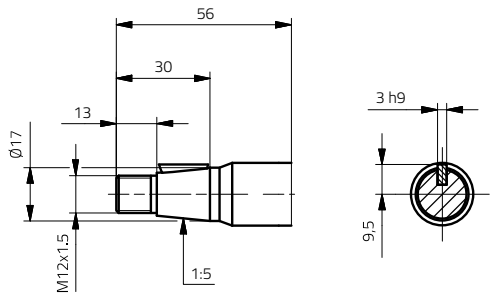
Shaft form H

SAE A – Ø15,88 straight — Max. driving torque 55 Nm



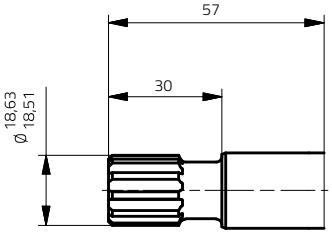
Shaft form J

German tapered 1:5 — Max. driving torque 155 Nm



Shaft form K

SAE – 11 teeth — Max. driving torque 184 Nm



SAE J498b
11 teeth
Pitch 16/32
Side fit
Pressure angle 30 deg

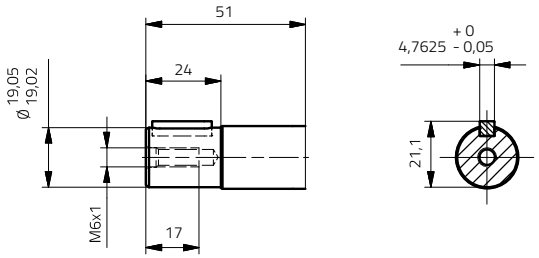
Drive shafts

Contact with the Sales Department for other combinations.

NOTE: The drive shaft lenght is given from the side A of the front flanges (see pages 14 and 15).

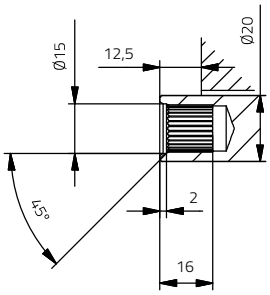
Shaft form L

SAE – Ø19,05 straight — Max. driving torque 100 Nm



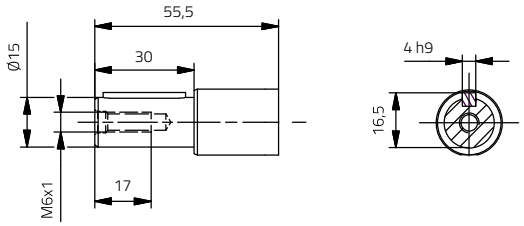
Shaft form Q

28 teeth — Max. driving torque 100 Nm



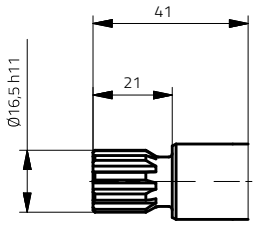
Shaft form R

Ø15 straight — Max. driving torque 55 Nm



Shaft form T

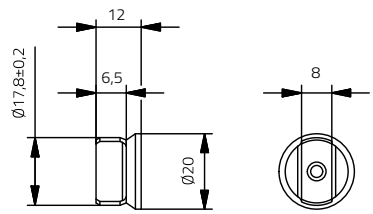
DIN-5482 – 9 teeth — Max. driving torque 130 Nm



DIN-5482
9 teeth
B 17x14

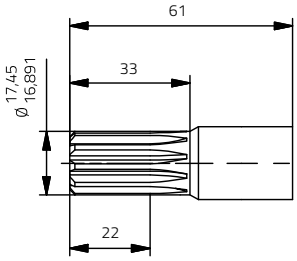
Shaft form W

Tang Ø17,8 — Max. driving torque 65 Nm



Shaft form X

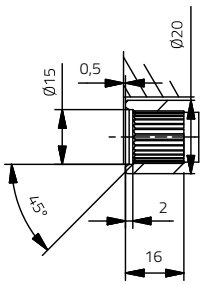
SAE A – 10 teeth — Max. driving torque 140 Nm



SAE J498b
10 teeth
Pitch 16/32
Side fit
Pressure angle 30 deg

Shaft form Z

28 teeth — Max. driving torque 100 Nm



The shaft doesn't protrude

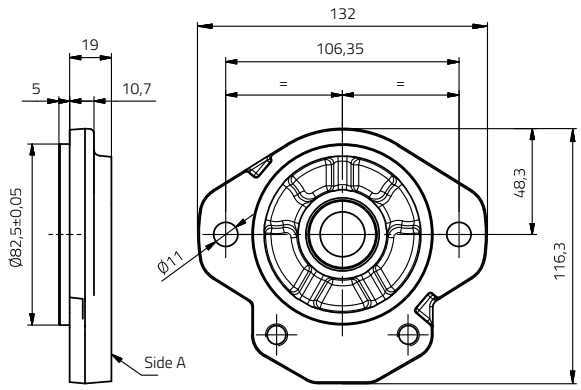
Return to Pumps
Return to Motors

Front flanges

Contact with the Sales Department for other combinations.

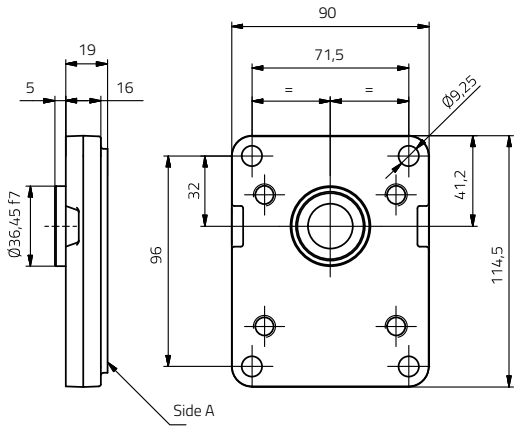
Front flange type 09

SAE A – 2 bolts



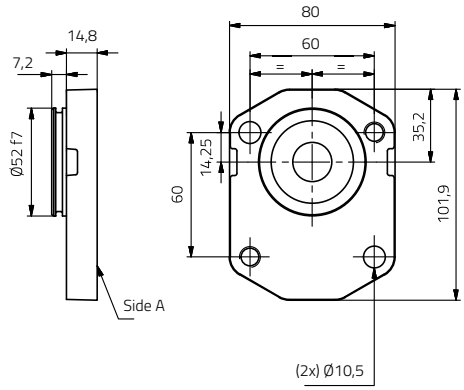
Front flange type 10

European standard



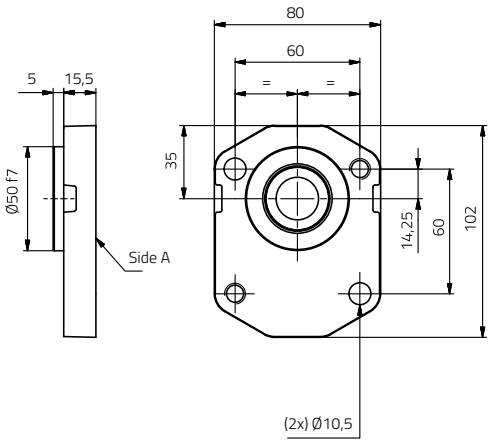
Front flange type 19

German standard – 2 bolts (Without shaft seal)



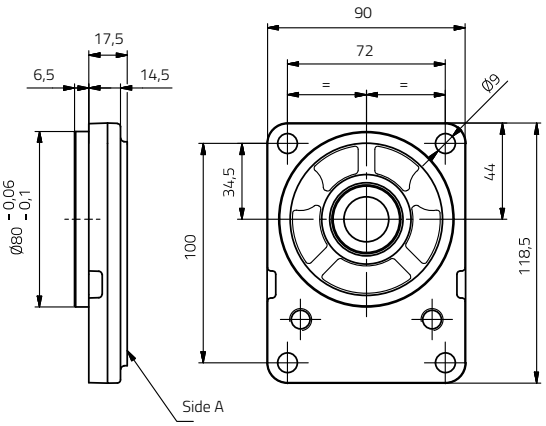
Front flange type 22

German standard – 2 bolts (With shaft seal)



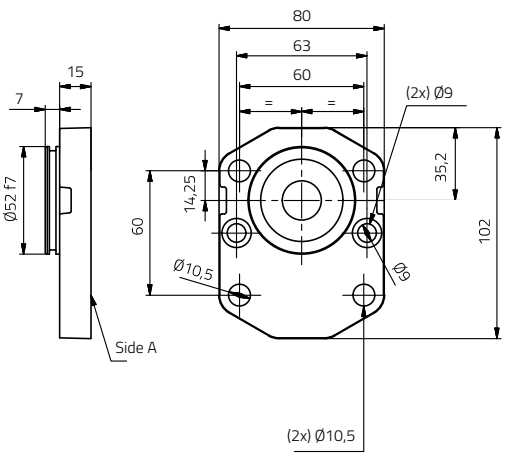
Front flange type 23

German standard



Front flange type 29

German standard (High pressure)

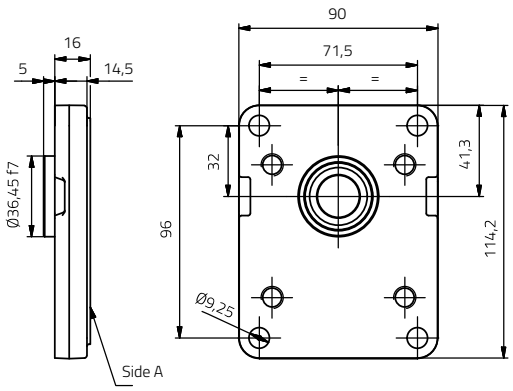


Front flanges

Contact with the Sales Department for other combinations.

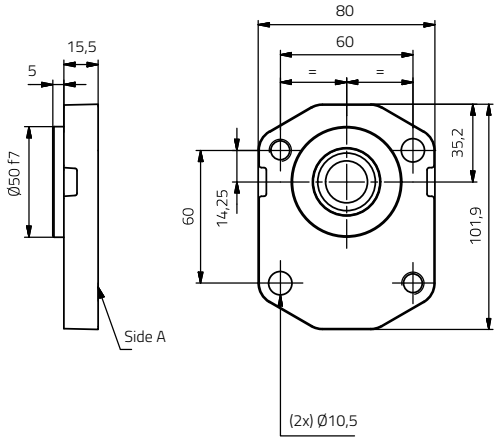
Front flange type 31

European standard for B shaft



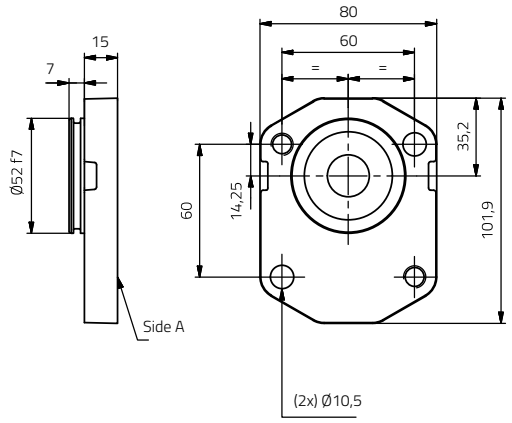
Front flange type 55

German standard – 2 bolts (opposed diagonal from 22 flange)



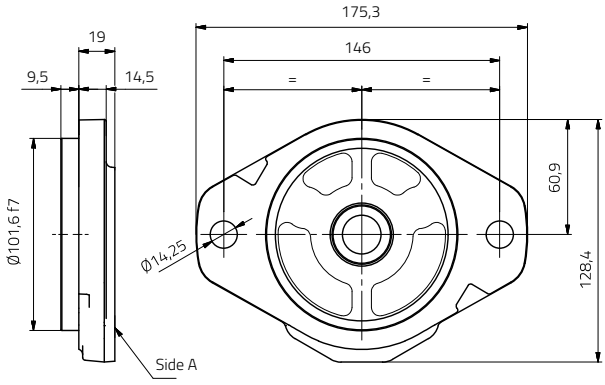
Front flange type 61

German standard – 2 bolts (opposed diagonal from 19 flange)

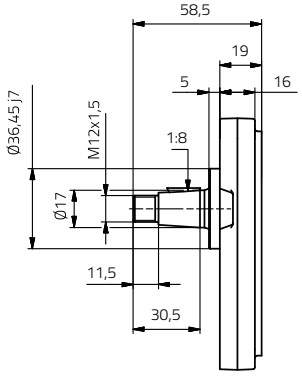


Front flange type 89

SAE B – 2 bolts



Example



NOTE: The useful length of the drive shaft varies depending on the front flange thickness.

Return to Pumps
Return to Motors

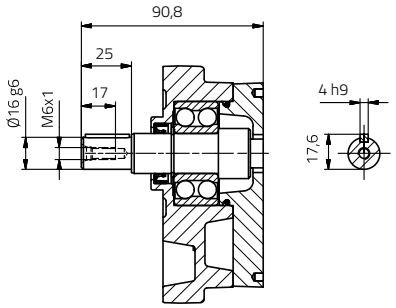
Front flanges and shaft with outrigger bearing

Each drive shaft and front flange on this page can be combined.

Maximum radial load 125 daN — Maximum axial load 125 daN

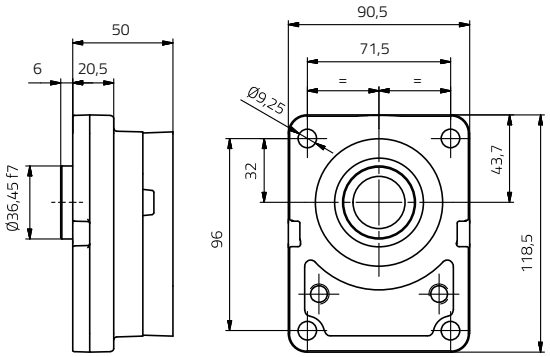
Shaft form C

Straight Ø16 — Max. driving torque 70 Nm



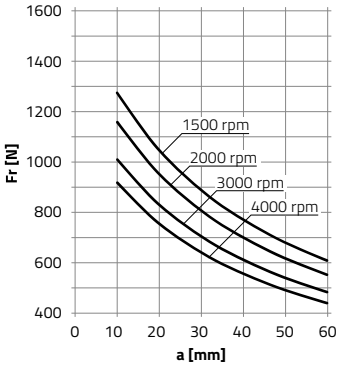
Front flange type 10

European standard



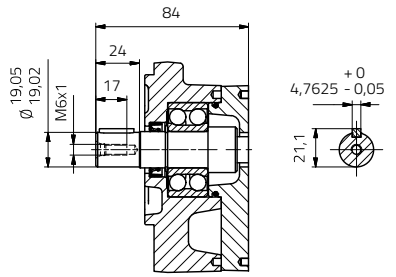
Outrigger bearing life · 1000 h

When an axial load is applied, Fr is reduced to 0.7Fa. Service life at L = 1000 h.



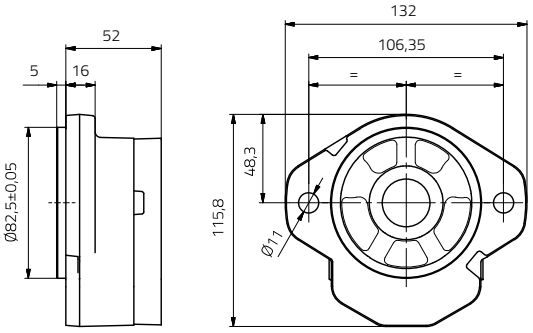
Shaft form L

SAE – Ø19,05 straight — Max. driving torque 100 Nm



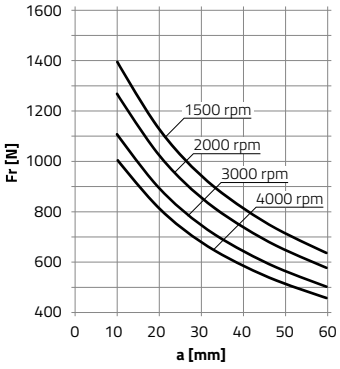
Front flange type 09

SAE A – 2 bolts



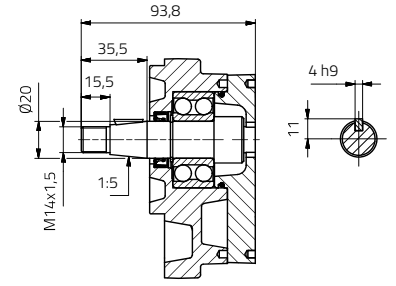
Outrigger bearing life · 1000 h

When an axial load is applied, Fr is reduced to 0.7Fa. Service life at L = 1000 h.



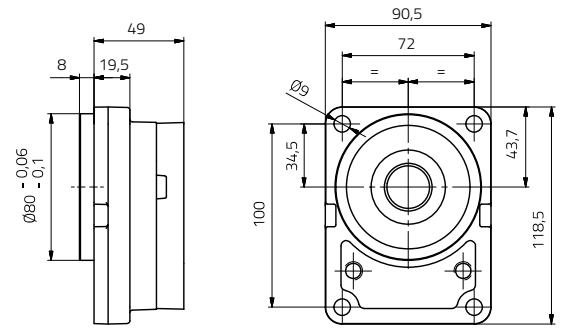
Shaft form V

German tapered 1:5 — Max. driving torque 100 Nm



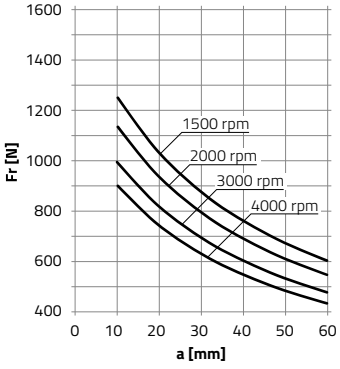
Front flange type 23

German standard



Outrigger bearing life · 1000 h

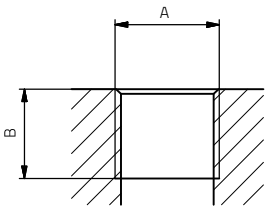
When an axial load is applied, Fr is reduced to 0.7Fa. Service life at L = 1000 h.



NOTE: Length "**a**" refers to the distance between the mating face and the equivalent force Fr applied.

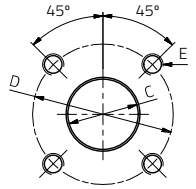
Ports

Side ports



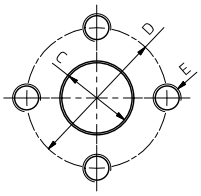
R Ports	1 rotation direction				Reversible	
Displacement [cm³/rev]	Suction		Pressure			
	A	B	A	B	A	B
4	3/8" BSP	15	3/8" BSP	15	3/8" BSP	15
6 ... 14,7	1/2" BSP	18	3/8" BSP	15	1/2" BSP	18
16 ... 26,7	3/4" BSP	17	1/2" BSP	18	3/4" BSP	17

Dimensions according to ISO 1179-1 (Parallel threads)



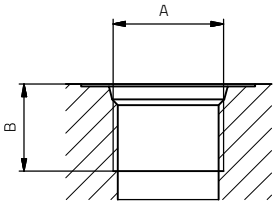
F Ports	1 rotation direction						Reversible		
Displacement [cm³/rev]	Suction			Pressure					
	C	D	E	C	D	E	C	D	E
4 ... 6	15	40	M6	15	35	M6	20	40	M6
8 ... 26,7	20	40	M6	15	35	M6	20	40	M6

Flanged ports - German standard



B Ports	1 rotation direction						Reversible		
Displacement [cm³/rev]	Suction			Pressure					
	C	D	E	C	D	E	C	D	E
4 ... 6	13,5	30	M6	13,5	30	M6	13,5	30	M6
8 ... 12	20	40	M8	15	30	M6	15	30	M6
15 ... 26,7	20	40	M8	15	30	M6	20	40	M8

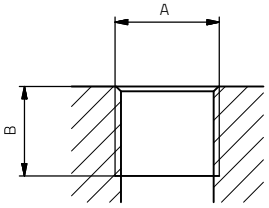
Flanged ports - European standard



S Ports	1 rotation direction				Reversible	
Displacement [cm³/rev]	Suction		Pressure			
	A	B	A	B	A	B
4 ... 26,7	1" 1/16-12 UNF	19	7/8"-14 UNF	17	7/8"-14 UNF	17

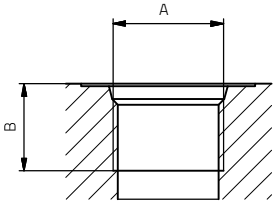
Dimensions according to ISO 11926-1 (Parallel threads)

Rear ports



T Ports	1 rotation direction + Reversible				Drain	
Displacement [cm³/rev]	Suction		Pressure			
	A	B	A	B	A	B
4 ... 26,7	1/2" BSP	15	1/2" BSP	15	1/4" G	14

Dimensions according to ISO 1179-1 (Parallel threads)



U Ports	1 rotation direction				Reversible		Drain	
Displacement [cm³/rev]	Suction		Pressure					
	A	B	A	B	A	B	A	B
4 ... 26,7	1"1/16-12 UNF	19	7/8"-14 UNF	17	7/8"-14 UNF	17	9/16"-18 UNF	14

Dimensions according to ISO 11926-1 (Parallel threads)

Return to Pumps
Return to Motors