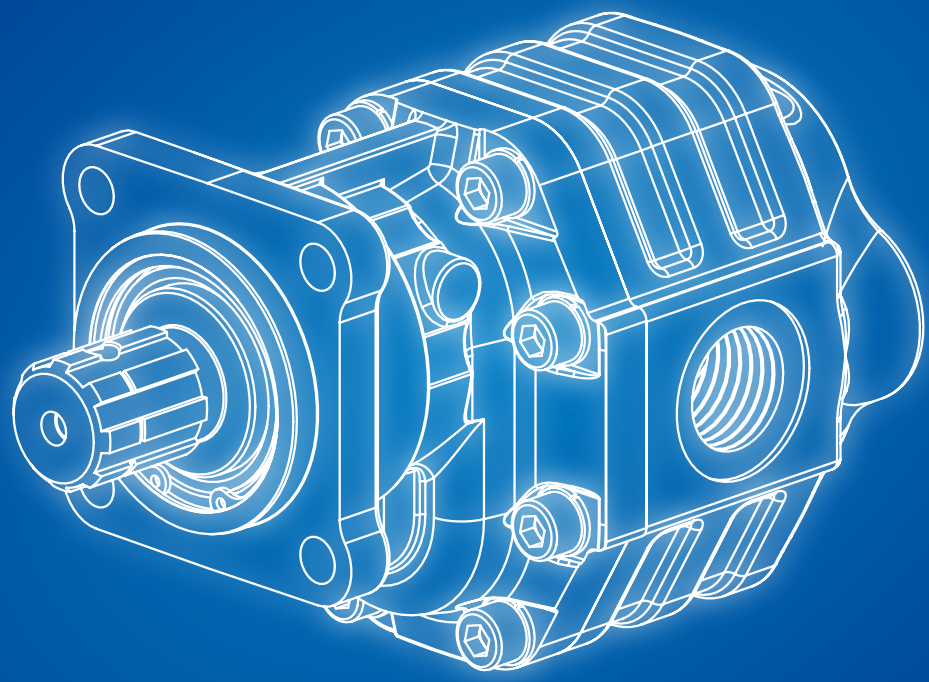
HYDROSILA



GEAR PUMPS

series T

HS-GPT-04/042025

CODING OF CATALOGUES

HS - GPT- 04/042025

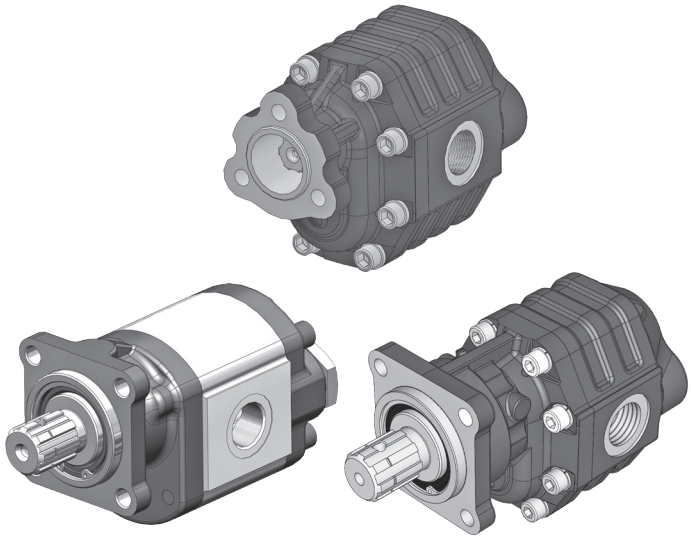
HS	–	GP	T	–	04	/	04	2025
HYDROSILA					№ EDITION		MONTH OF ESTABLISHMENT	YEAR OF ESTABLISHMENT

TYPE OF HYDRAULIC MACHINES	TYPE	SERIES	
Gear pumps	GP	K	
		T	
		M	A
Gear motors	GM	K	
Axial piston machines for closed circuit	A	C	
Axial piston machines for open circuit		J	
Bent-axis axial piston machines		B	
Control valves	V	-	
In-line mounting hydraulic valves	LV	-	
Hydraulic cylinders	C	-	
Quick-release coupling	Q	-	
Hydrocomponents for truck applications	HCT	-	
Quick-release coupling, Fitting, High pressure hoses	QFH	-	

CONTENTS

FEATURES	**2**
DESIGN FEATURES. EXPLOSION SCHEME GP2.5T, GP3T, GP4T	**3-4**
DEFINITION OF PRESSURES. WORKING CONDITIONS. FILTRATION INDEX RECOMMENDED	**5**
DEFINITION OF PUMP SHAFT ROTATIONAL DIRECTION. FORMULAS	**6-7**
PORT CONNECTIONS	**8**
GP2.5T	
Technical data and assembling dimensions	**9**
Mounting flange - ISO standard	**10**
Ports	**11**
Performance curves	**12-15**
Ordering instructions	**16**
GP3T	
Technical data and assembling dimensions	**17**
Mounting flange - ISO standard	**18**
Mounting flange - UNI standard	**19**
Mounting flange - ISO standard	**20**
Ports	**21**
Performance curves	**22-24**
Ordering instructions	**25**
GP4T	
Technical data and assembling dimensions	**26**
Mounting flange - ISO standard	**27**
Performance curves	**28-30**
Ordering instructions	**31**
НАСОСЫ СЕКЦИОННЫЕ MULTIPLE PUMPS	
GP3T+GP3T. Mounting flange - ISO standard	**32-33**
GP3T+GP3T. Mounting flange - UNI standard	**34-35**
GP4T+GP3T. Mounting flange - ISO standard	**36-37**
RECOMMENDATIONS ON INSTALLATION	**38**
NOTES	**39-40**

FEATURES



Gear pumps series "T" are manufactured with left, right and reversible rotation of drive shaft hydraulic systems of various mobile machines: trucks, truck mounted cranes, aerial work platform, municipal vehicles and other types of machines.

- ♦ Mounting flanges and shafts according to European (ISO) and Italian (UNI) standards.
- ♦ Direct installation on PTO.
- ♦ High efficiency for the whole working life.
- ♦ Rear and side ports.
- ♦ Low working noise.

Displacements
16-150 cm^3/rev

Pressure
Max. continuous pressure - 290 bar
Max. intermittent pressure - 315 bar
Max. peak pressure - 325 bar

Rotational speed
Max. speed - 3000 min^{-1}
Min. speed - 300 min^{-1}

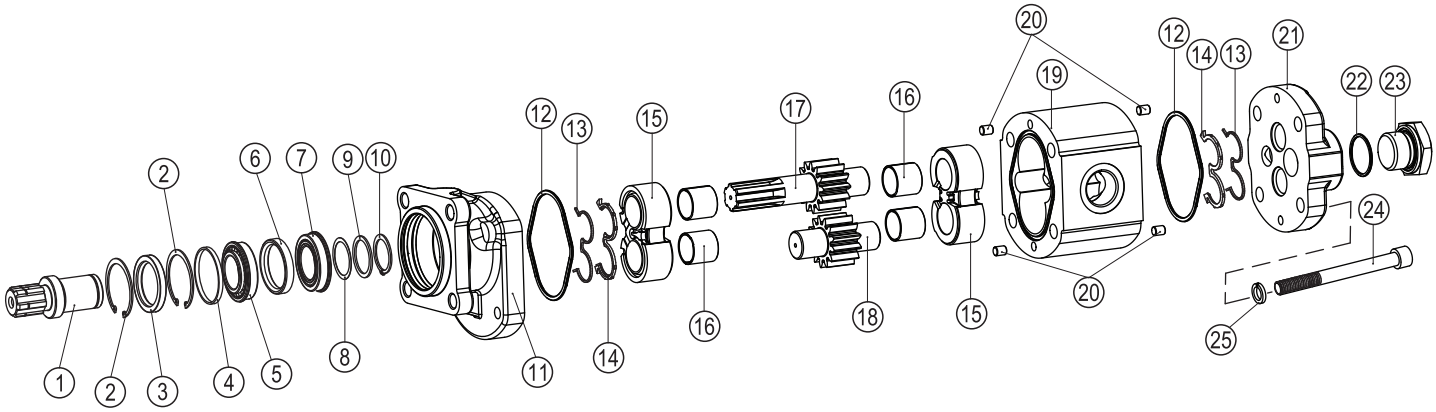
DESIGN FEATURES

Gear pumps Group 2.5 are manufactured with thru-bolt of rolled aluminium. Mounting flange and rear cover are made of cast iron. Solid bushings are manufactured by injection molding of anti-friction high-strength aluminum alloy.

To minimize leaks and get a high efficiency the bushings are securely seald.

The main characteristic this pumps is availability in mounting flange of rolled angular contact bearings, which perceive the axial and radial loads and allow the installation of the drive shaft pulley or gears including helical.

EXPLOSION SCHEME



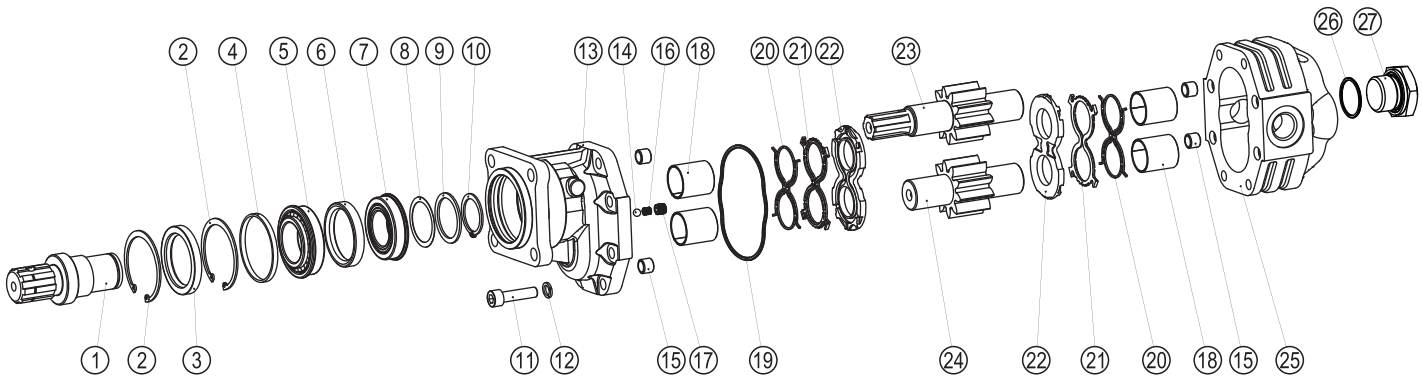
1. Shaft **2.** Retaining ring **3.** Shaft seal **4.** Ring **5.** Roller bearing **6.** Washer **7.** Bearing **8.** Washer **9.** Thrust washer **10.** Retaining ring **11.** Screw **12.** Washer **13.** Mounting flange **14.** Ball **15.** Centering pin **16.** Spring **17.** Screw **18.** Bearing housing **19.** Sealing ring **20.** Anti-extrusion plate **21.** Compensation seal **22.** Thrust plate **23.** Drive shaft **24.** Driven shaft **25.** Body

DESIGN FEATURES

Gear pumps Group 3 and 4 are manufactured with cast iron. The faces of the gears are secured with brass compensators equiped with compensating chambers and sealed with O-rings and protective elements. The gears rotate in PTFE sliding bearings pressed into the housing parts.

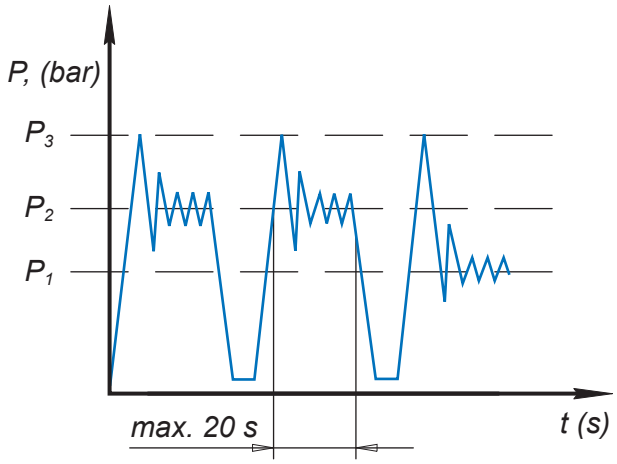
The main characteristic this pumps is availability in mounting flange of rolled angular contact bearings, which perceive the axial and radial loads and allow the installation of the drive shaft pulley or gears including helical.

EXPLOSION SCHEME



1. Shaft **2.** Retaining ring **3.** Shaft seal **4.** Ring **5.** Roller bearing **6.** Washer **7.** Bearing **8.** Washer **9.** Thrust washer **10.** Retaining ring **11.** Grub screw **12.** Washer **13.** Mounting flange **14.** Ball **15.** Centering pin **16.** Spring **17.** Grub screw **18.** Slide bearing **19.** Sealing ring **20.** Anti-extrusion plate **21.** Compensation seal **22.** Thrust plate **23.** Drive shaft **24.** Driven shaft **25.** Body **26.** Sealing ring **27.** Metal cap

DEFINITION OF PRESSURES



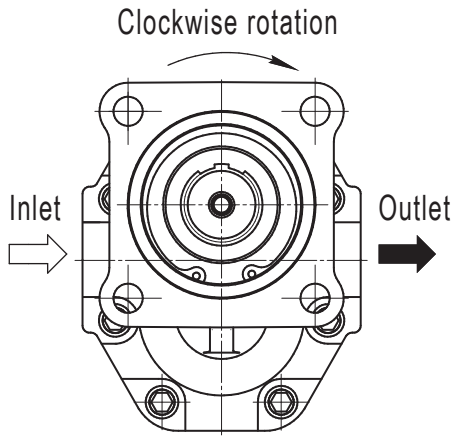
P_3 - peak pressure
P_2 - max. intermittent pressure (1/3 of working time)
P_1 - max. continuous pressure

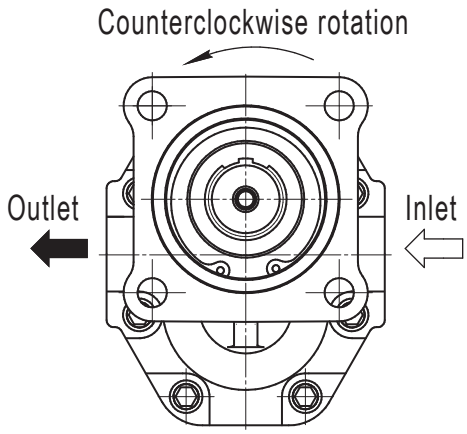
WORKING CONDITIONS

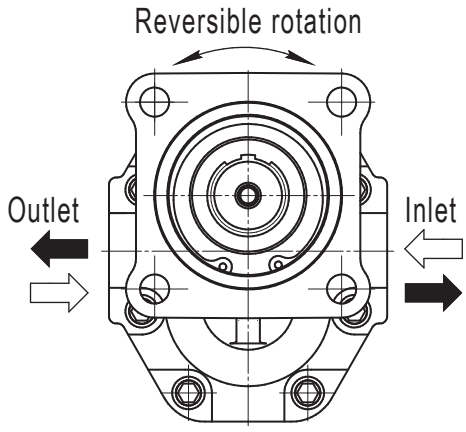
Pump inlet pressure (absolute pressure)	0,5 ÷ 2,5 bar
Minimum operating fluid viscosity	15 mm^2/sec
Max. starting viscosity (cold start)	1000 mm^2/sec
Fluid viscosity recommended range	17 ÷ 65 mm^2/sec
Fluid operating temperature range with NBR seals	-40 ÷ +100 °C
Fluid operating temperature range with FPM seals (Viton)	-20 ÷ +170 °C
Hydraulic fluid	mineral oil

FILTRATION INDEX RECOMMENDED

Maximum continuous pressure	>200 bar	<200 bar
Contamination class ISO 4406	18/15	19/16
Contamination class NAS 1638	9	10
Achieved with filter $ß_x$=75	15µm	25µm


Clockwise rotation
Inlet
Outlet


Counterclockwise rotation
Outlet
Inlet


Reversible rotation
Outlet
Inlet

FORMULAS

Outlet flow

$$Q = \frac{q \cdot n \cdot \eta_v}{1000} \quad [l/min]$$

Input torque

$$M = \frac{q \cdot \Delta p}{62{,}8 \cdot \eta_m} \quad [N \cdot m]$$

Input power

$$P = \frac{q \cdot n \cdot \Delta p \cdot 10^{-3}}{600 \cdot \eta_m} \quad [kW]$$

Volumetric efficiency at low rpm

$$\eta_v' = 1 - \frac{n_{nom}}{n} (1 - \eta_v)$$

q displacement (cm^3/rev)

n speed (min^{-1})

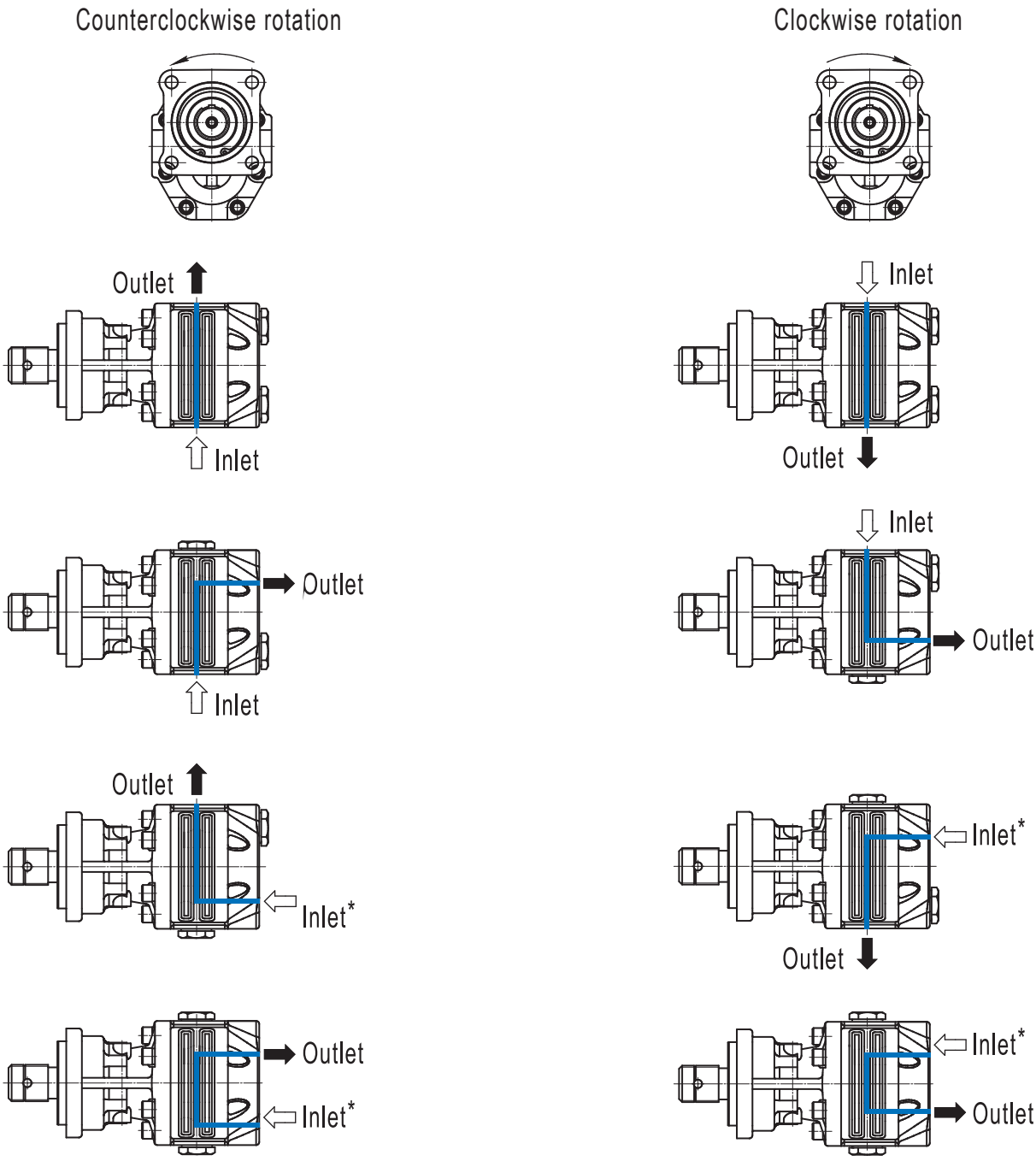
η_v volumetric efficiency (0,94 min)

Δp pressure (bar)

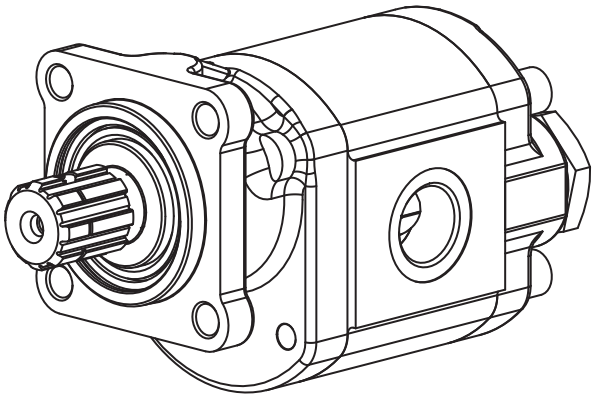
η_m mechanical efficiency (0,88 min)

PORT CONNECTIONS

The design of gear pumps "T" series provides rear and side connections of hydraulic lines, which ensures quick and convenient pump mounting technique.



* Except pumps GP3T with displacement 82 and 100 cm^3, and GP4T all dimensions this type

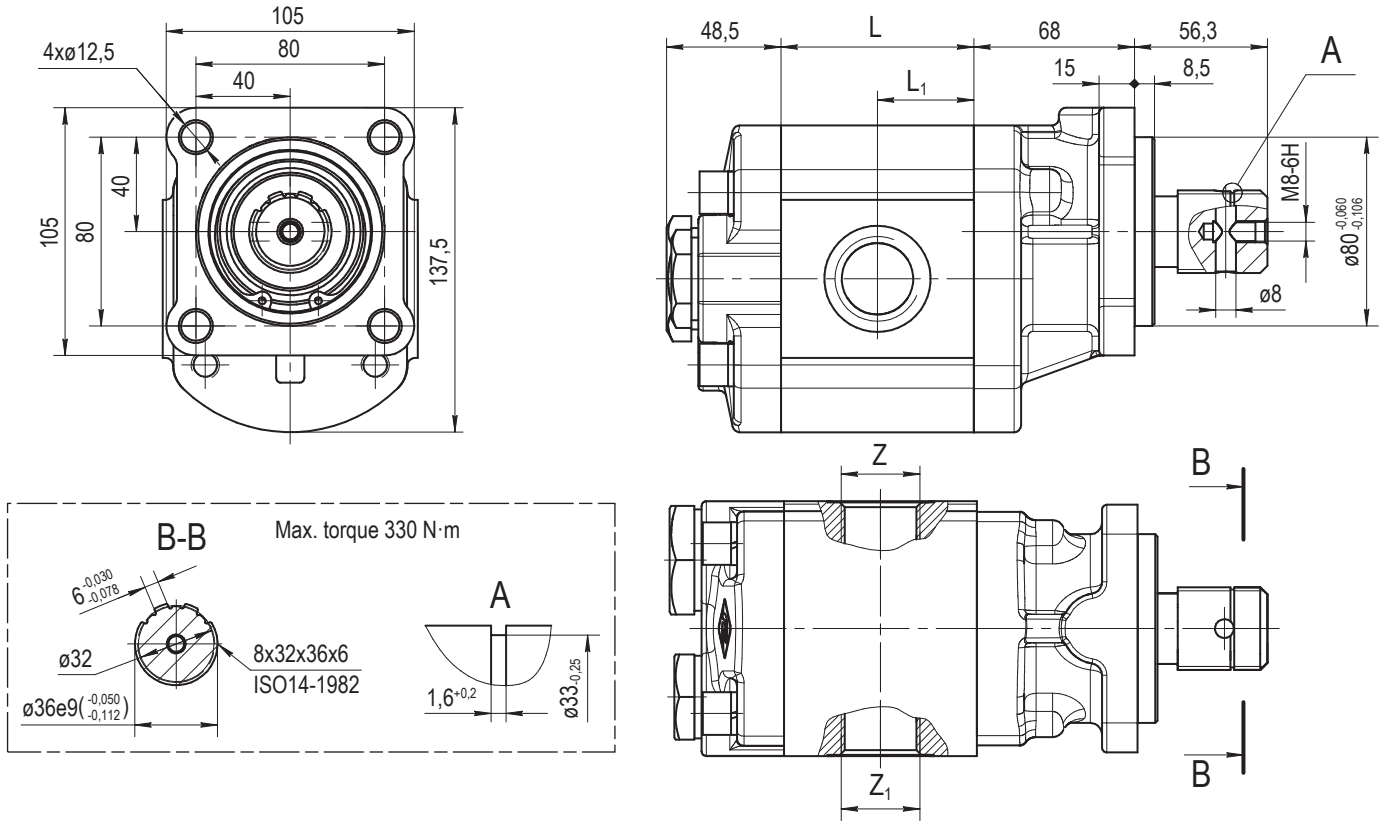


Displacements
16-45 cm^3/rev

Pressure
Max. continuous pressure - 250 bar
Max. intermittent pressure - 280 bar
Max. peak pressure - 300 bar

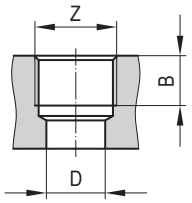
Rotational speed
Max. speed - 3000 min^{-1}
Min. speed - 500 min^{-1}

Type		GP2.5T16	GP2.5T19	GP2.5T20	GP2.5T23	GP2.5T25	GP2.5T28	GP2.5T30	GP2.5T32	GP2.5T36	GP2.5T37	GP2.5T38	GP2.5T40	GP2.5T45
Displacement	**cm^3/rev**	16	19	20	23	25	28	30	32	36	37	38	40	45
Maximum continuous pressure, P_1	**bar**	250							230		200		170	
Maximum intermittent pressure, P_2	**bar**	280							250		220		190	
Max. peak pressure, P_3	**bar**	300							260		240		210	
Max. speed, n_{max}	**min^{-1}**	3000									2750		500	
Min. speed at $P_1 \leq 100$ bar, n_{min}	**min^{-1}**	700				600					500			



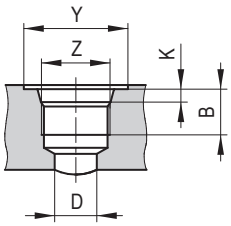
Type			Dimensions mm				Weight kg
			L	L_1	Z	Z_1	
GP2.5T16	R L	Z1C5G-V	71,80	35,90	G3/4"	G1/2"	9,9
GP2.5T19			75,00	37,50			10,1
GP2.5T20			76,20	38,10			10,2
GP2.5T23			79,50	39,75			10,3
GP2.5T25			81,70	40,85	G1"	G3/4"	10,4
GP2.5T28			85,00	42,50			10,5
GP2.5T30			87,30	43,65			10,6
GP2.5T32			89,50	44,75			10,7
GP2.5T36			94,00	47,00			11,0
GP2.5T37			95,00	47,50			11,0
GP2.5T38			96,00	48,00			11,0
GP2.5T40			98,00	49,00			11,1
GP2.5T45			103,50	51,75			11,4

Ordering example: GP2.5T28R-Z1C5G-V
Rotation: R - Clockwise; L - Counterclockwise.



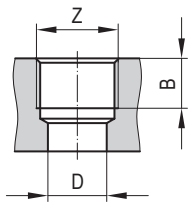
E METRIC THREADED

Type	Inlet			Outlet		
	Z	B	D	Z	B	D
GP2.5T16-23	M27x2	19	22	M22x1,5	16	18
GP2.5T25-45	M33x2	21	25	M27x2	19	22



F SAE THREADED

Type	Inlet					Outlet				
	Z	B	D	Y	K	Z	B	D	Y	K
GP2.5T16-23	1-1/16-12 UN (SAE#12)	19	20	42	3,3	7/8-14 UNF (SAE#10)	19	15	32	2,5
GP2.5T25-45	1-5/16-12 UN (SAE#16)		23	51		1-1/16-12 UN (SAE#12)		20	42	3,3

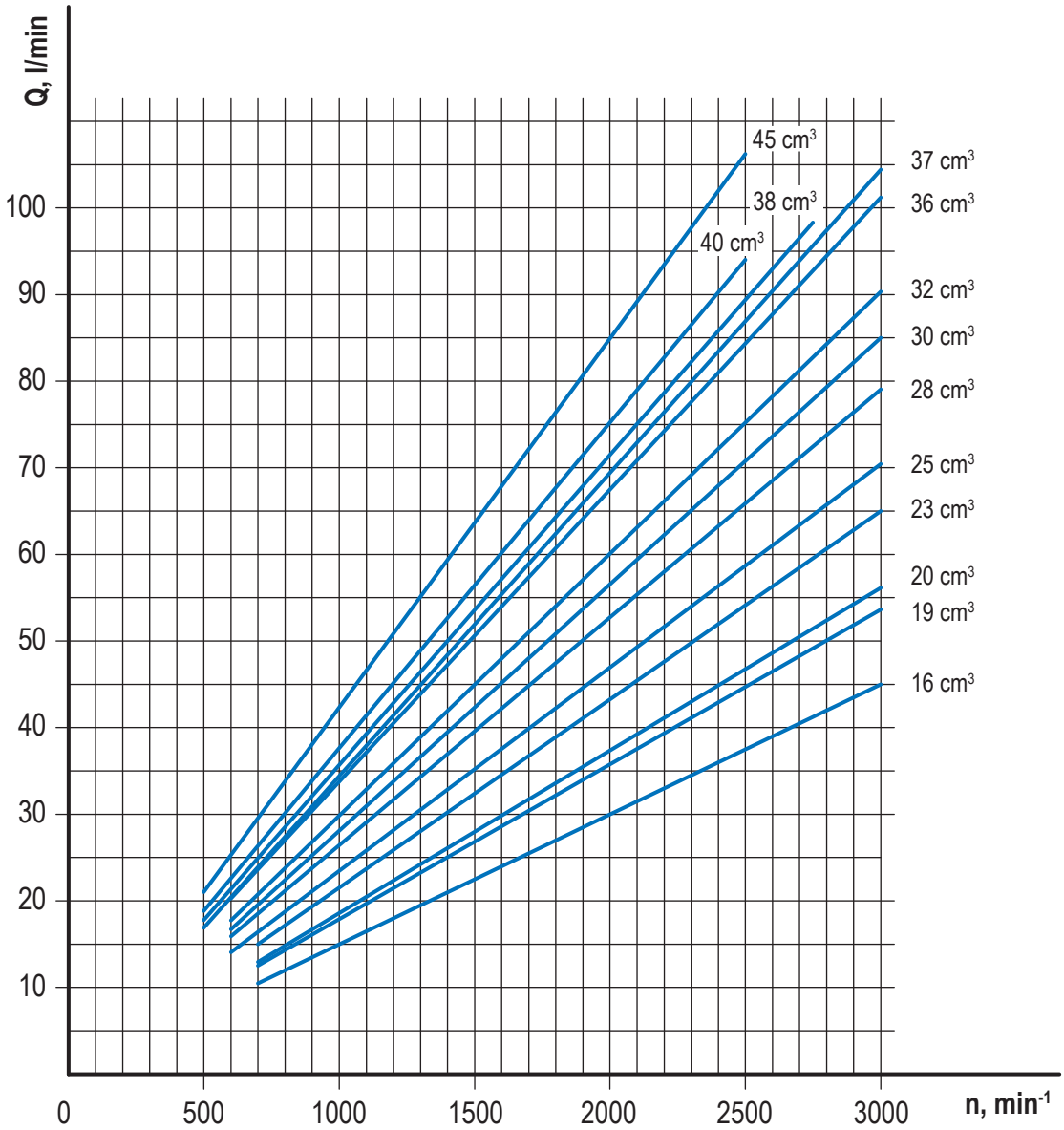


G GAS THREADED

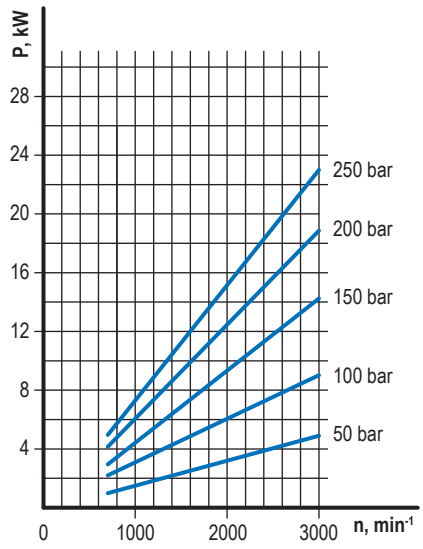
Type	Inlet			Outlet		
	Z	B	D	Z	B	D
GP2.5T16-23	3/4″ GAS	19	20	1/2″ GAS	16	13
GP2.5T25-45	1″ GAS	21	27	3/4″ GAS	19	20

PERFORMANCE CURVES

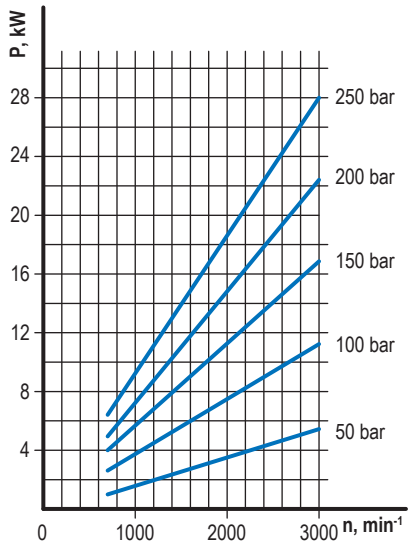
Performance curves carried out with oil viscosity at 16 mm²/sec, oil temperature at 60°C and max. continuous pressures for each type.



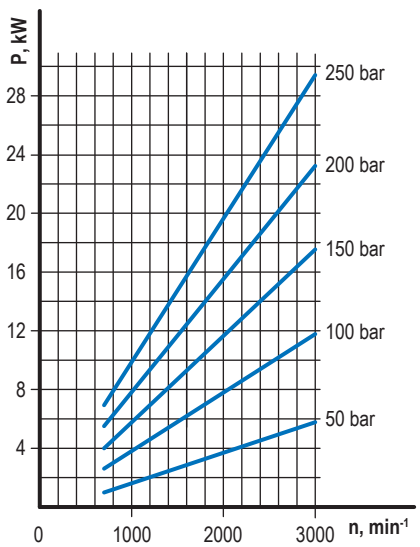
Performance curves carried out with oil viscosity at 16 mm²/sec and oil temperature at 60°C.



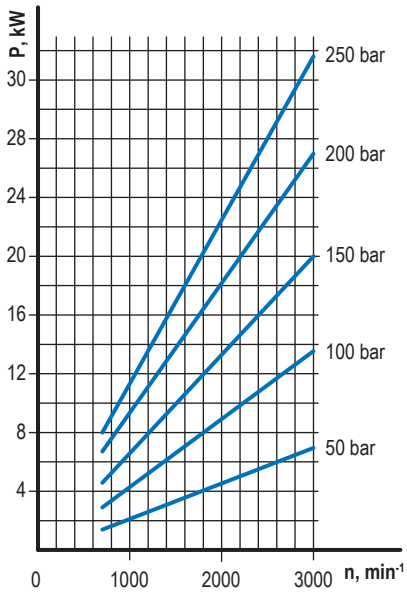
GP2.5T16



GP2.5T19



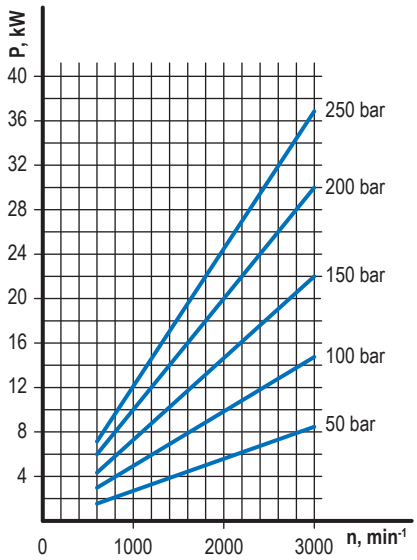
GP2.5T20



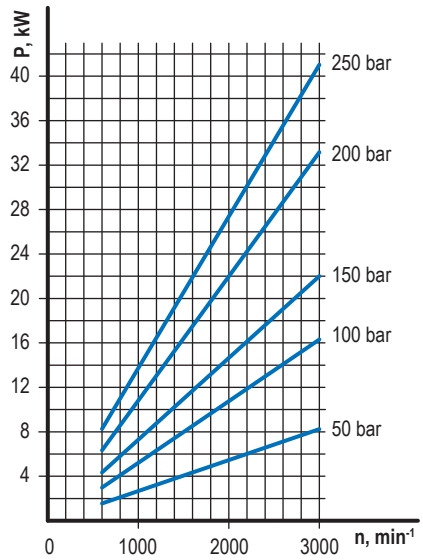
GP2.5T23

PERFORMANCE CURVES

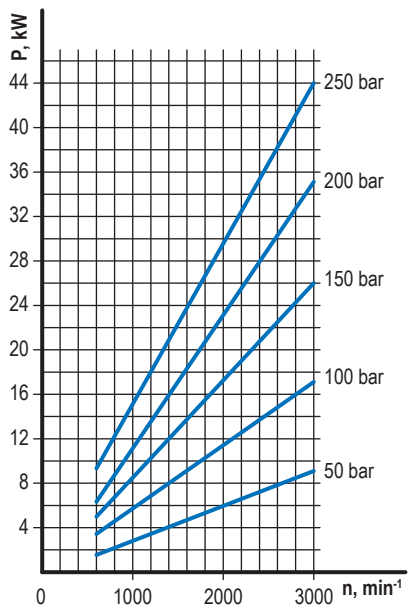
Performance curves carried out with oil viscosity at 16 mm²/sec and oil temperature at 60°C.



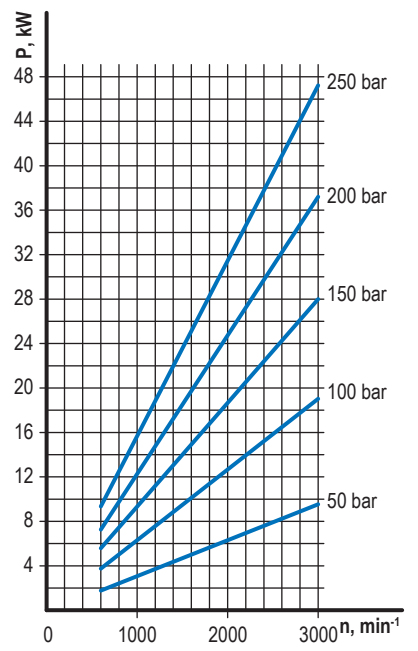
GP2.5T25



GP2.5T28

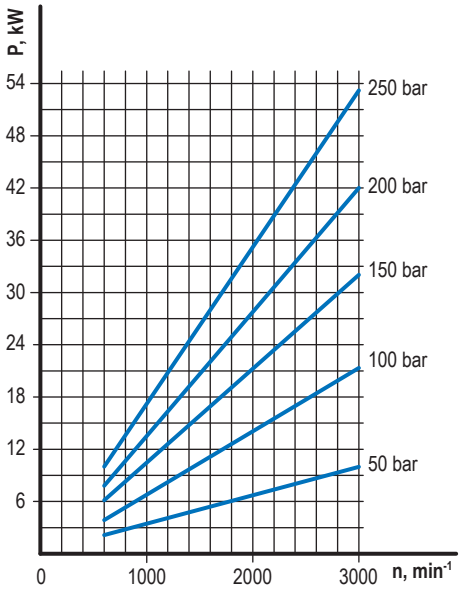


GP2.5T30

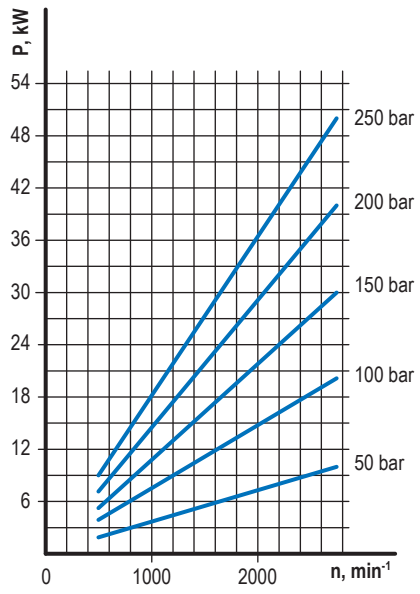


GP2.5T32

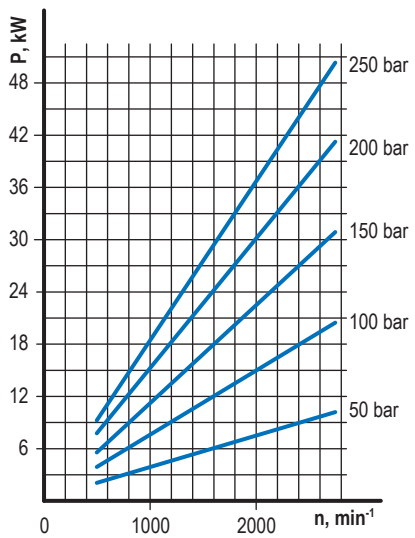
Performance curves carried out with oil viscosity at 16 mm²/sec and oil temperature at 60°C.



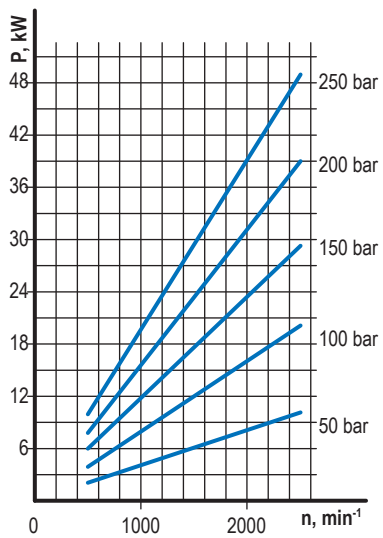
GP2.5T36



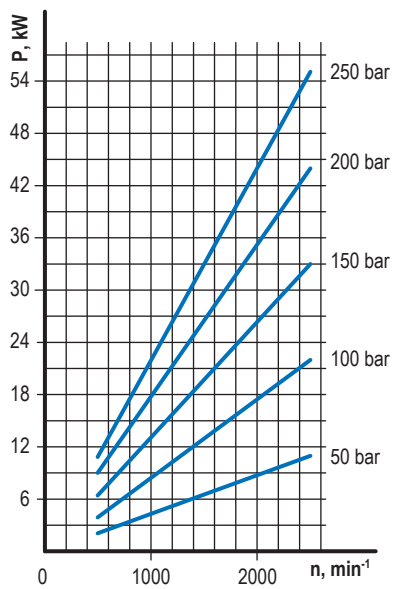
GP2.5T37



GP2.5T38

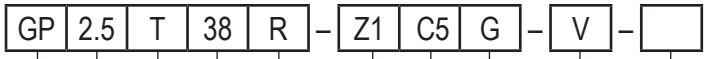


GP2.5T40



GP2.5T45

ORDERING INSTRUCTIONS



GEAR PUMP	GP

GROUP	2.5

SERIES	T

DISPLACEMENT	CODE
16 cm^3/rev	16
19 cm^3/rev	19
20 cm^3/rev	20
23 cm^3/rev	23
25 cm^3/rev	25
28 cm^3/rev	28
30 cm^3/rev	30
32 cm^3/rev	32
36 cm^3/rev	36
37 cm^3/rev	37
38 cm^3/rev	38
40 cm^3/rev	40
45 cm^3/rev	45

ROTATION	CODE
Clockwise rotation	R
Counterclockwise rotation	L

*SPECIFICATION OF CONSUMER

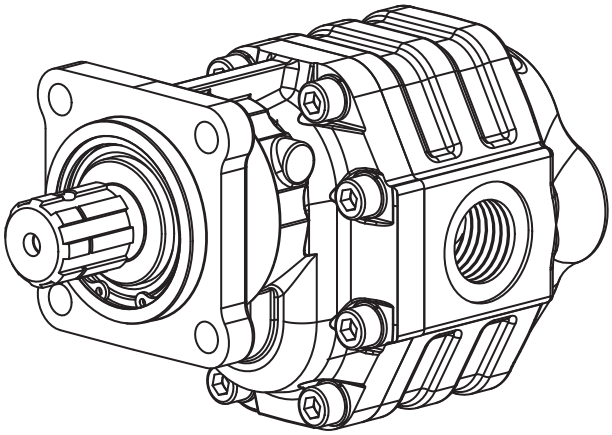
SEAL MATERIAL	CODE
FPM	V

PORTS	CODE
METRIC THREADED	E
SAE THREADED	F
GAS THREADED PORTS	G

MOUNTING FLANGES	CODE
ISO	C5

DRIVE SHAFTS	CODE
DIN 5462 B8x32x6g7	Z1

* Specification of consumer assigned if necessary after clarify special conditions with the customer



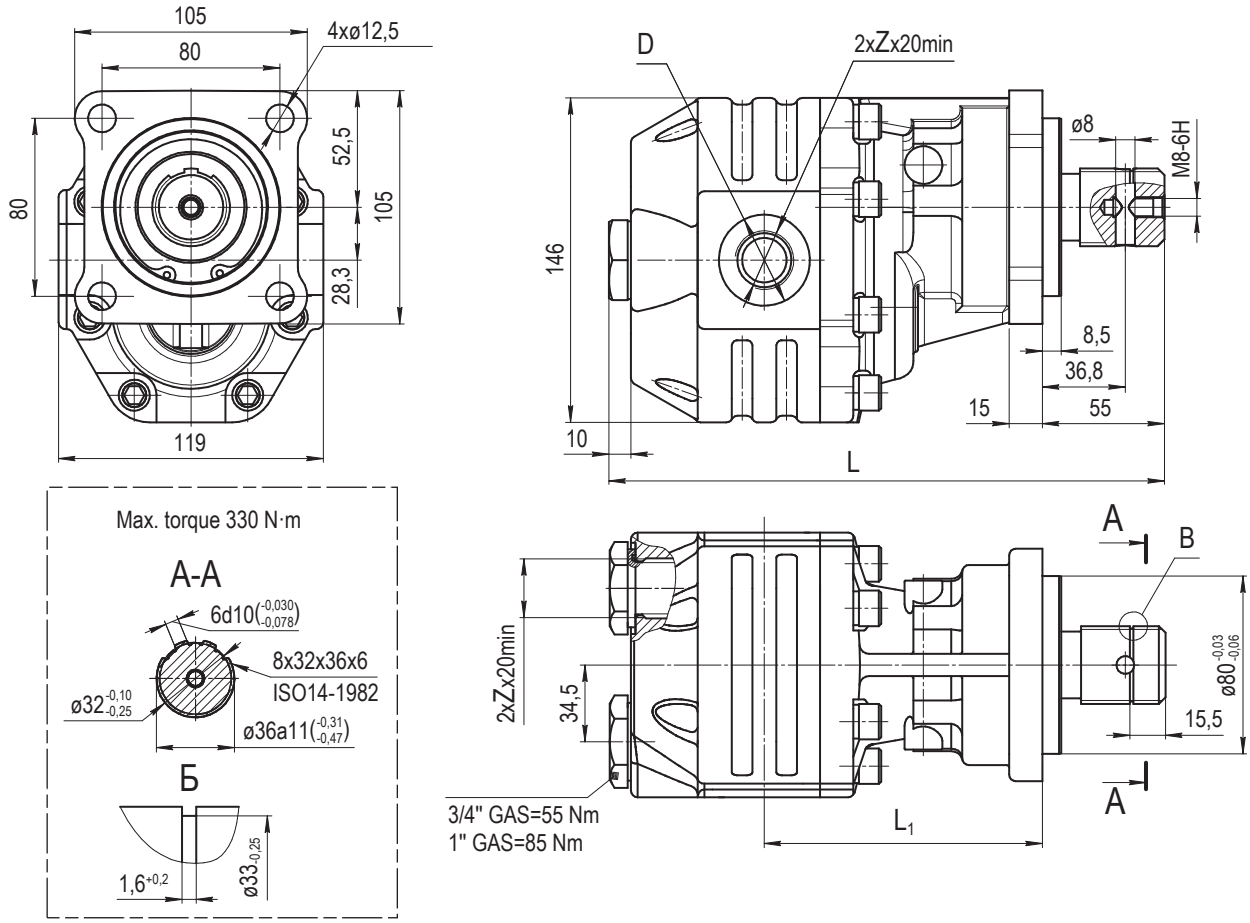
Displacements
34-100 cm^3/rev

Pressure
Max. continuous pressure - 280 bar
Max. intermittent pressure - 300 bar
Max. peak pressure - 310 bar

Rotational speed
Max. speed - 2800 min^{-1}
Min. speed - 500 min^{-1}

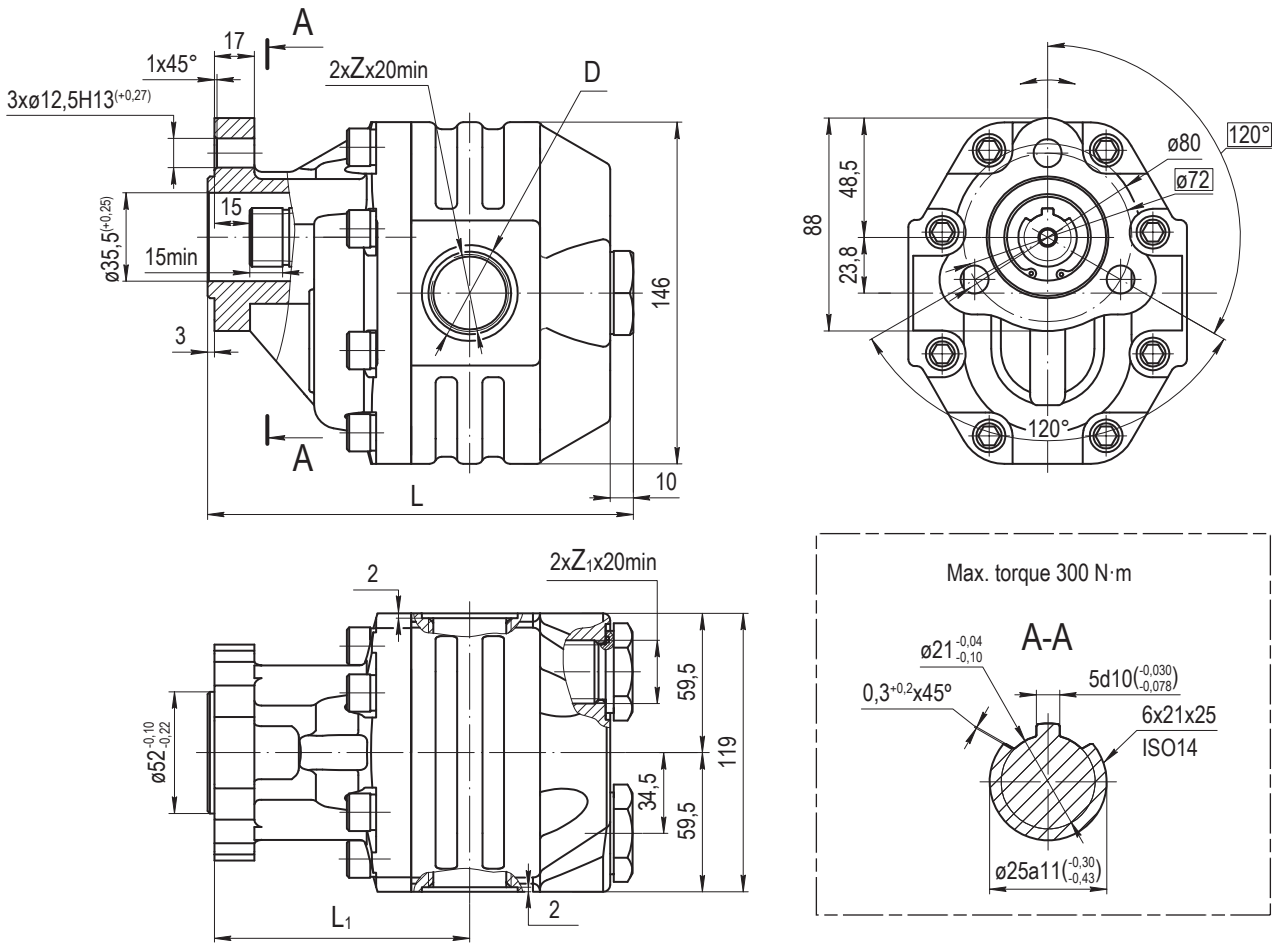
Type		GP3T34	GP3T43	GP3T51	GP3T61	GP3T82	GP3T100
Displacement	**cm^3/rev**	34	43	51	61	82	100
Maximum continuous pressure, P_1	**bar**	280	270	240	220	190	180
Maximum intermittent pressure, P_2	**bar**	300	280	260	240	210	200
Max. peak pressure, P_3	**bar**	310	300	280	250	220	
Max. speed, n_{max}	**min^{-1}**	2800	2500		2000	1800	
Min. speed at $P_1 \leq 100$ bar, n_{min}	**min^{-1}**	500					

* Maximum pressures for reversible pumps are 15% lower than shown in table.



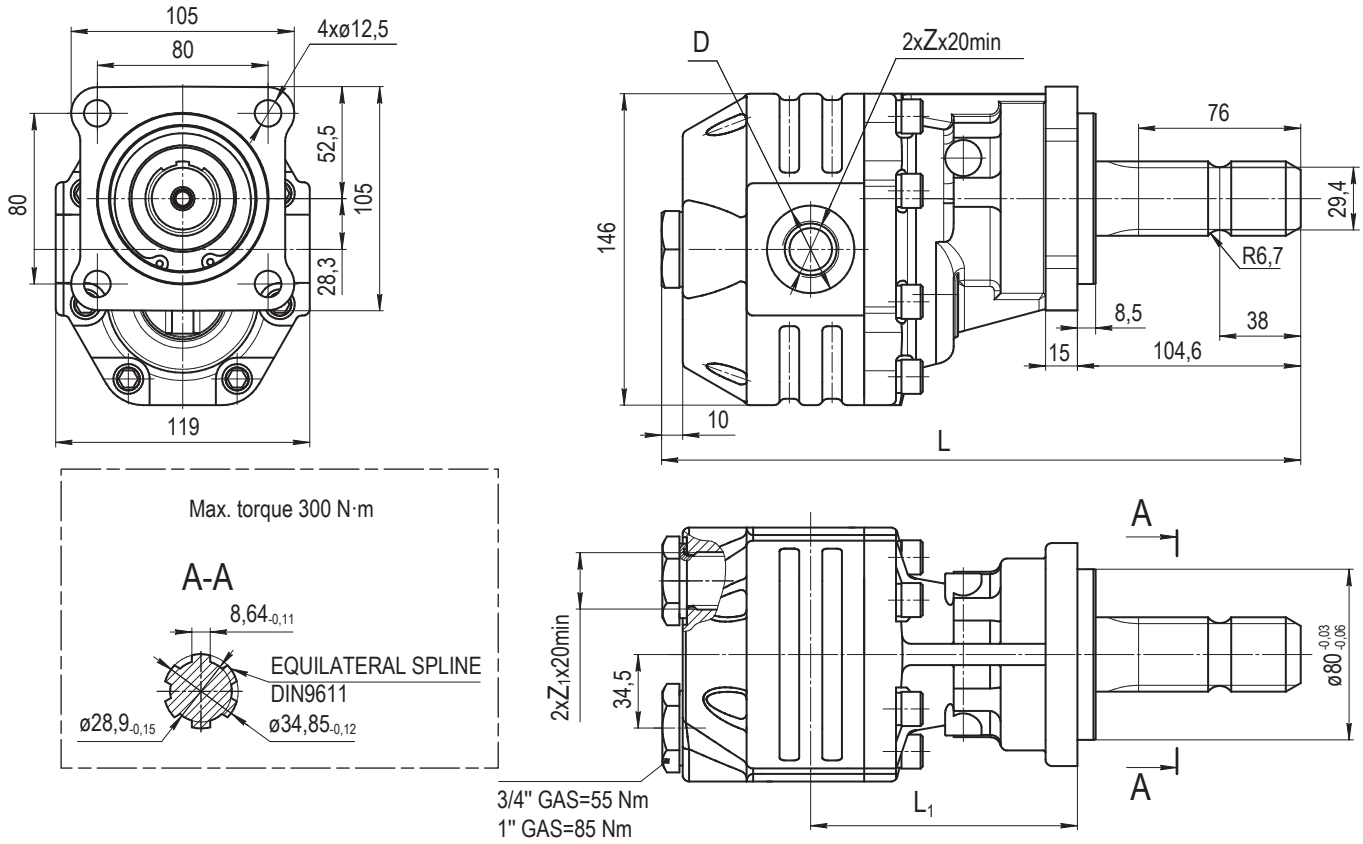
Type			Dimensions mm					Weight kg
			L	L_1	D	Z	Z_1	
GP3T34	R L B	Z1C5G-V	250	125	ø41	3/4" GAS		12,9
GP3T43			256	130				13,4
GP3T51			263	130,5	ø45	1" GAS		13,6
GP3T61			269	136,5				14,2
GP3T82			280	140,5	ø54	1 1/4" GAS	–	15,4
GP3T100			292	146				16,3

Ordering example: GP3T61L-Z1C5G-V
Rotation:
R - Clockwise; L - Counterclockwise; B - Reversible.



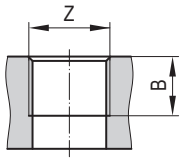
Type			Dimensions mm					Weight kg
			L	L_1	D	Z	Z_1	
GP3T34	R L B	Z2C7G-V	182	109	ø41	3/4" GAS		12,8
GP3T43			188	114				13,3
GP3T51			193	114,5	ø45	1" GAS		13,5
GP3T61			199	120,5				14,1
GP3T82			202	124,5	ø54	1 1/4" GAS	–	15,2
GP3T100			214	130				16,1

Ordering example: GP3T34R-Z2C7G-V
Rotation:
R - Clockwise; L - Counterclockwise; B - Reversible.



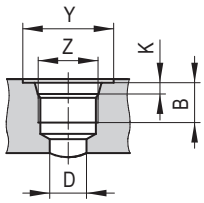
Type			Dimensions mm					Weight kg
			L	L_1	D	Z	Z_1	
GP3T34	R L B	Z3C5G-V	300	125	ø41	3/4" GAS		12,9
GP3T43			306	130				13,4
GP3T51			313	130,5	ø45	1" GAS		13,6
GP3T61			319	136,5				14,2
GP3T82			330	140	ø54	1 1/4" GAS	–	15,4
GP3T100			342	146				16,3

Ordering example: GP3T61L-Z3C5G
Rotation:
R - Clockwise; L - Counterclockwise; B - Reversible.



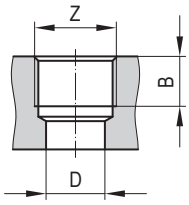
E METRIC THREADED

Type	Inlet		Outlet	
	Z	B	Z	B
GP3T34	M33x2	24	M33x2	24
GP3T43				
GP3T51				
GP3T61	M42x2		M42x2	
GP3T82				
GP3T100				



F SAE THREADED

Type	Inlet					Outlet				
	Z	B	D	Y	K	Z	B	D	Y	K
GP3T34	1 5/16-12 UN	20	23	49	3,3	1 1/16-12 UN	19	20	41	3,3
GP3T43	1 5/8-12 UN		30	58		1 5/16-12 UN	20	23	49	
GP3T51										
GP3T61										
GP3T82	1 7/8-12 UN		37	65		1 5/8-12 UN		30	58	
GP3T100										

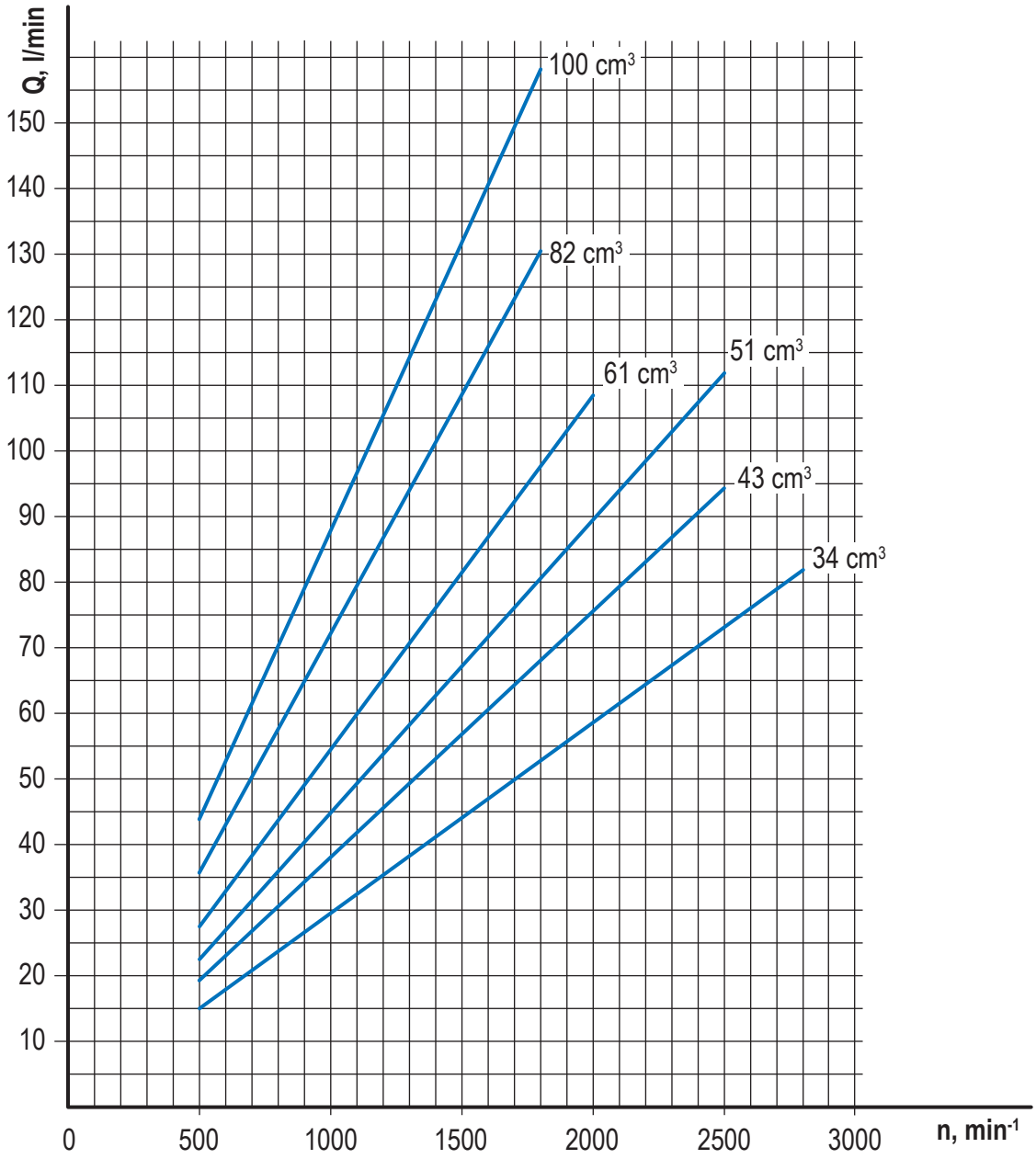


G GAS THREADED

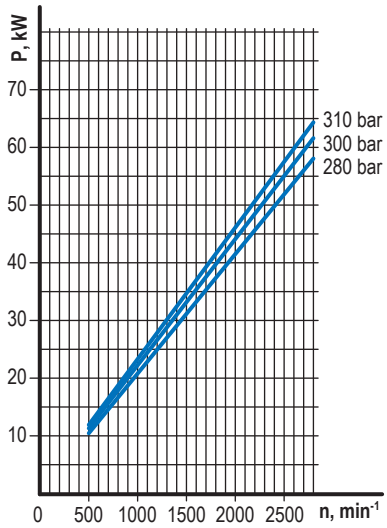
Type	Inlet			Outlet		
	Z	B	D	Z	B	D
GP3T34	3/4" GAS	19	20	3/4" GAS	19	20
GP3T43						
GP3T51	1" GAS	21	27	1" GAS	21	27
GP3T61						
GP3T82	1 1/4" GAS		33	1 1/4" GAS		33
GP3T100						

PERFORMANCE CURVES

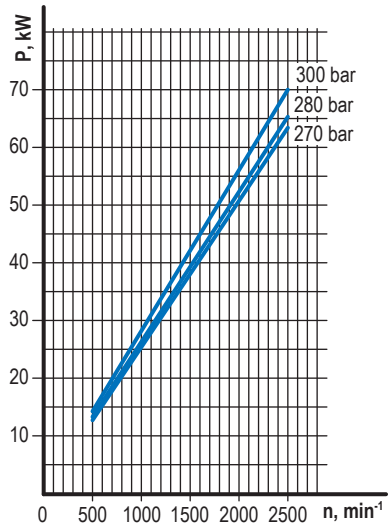
Performance curves carried out with oil viscosity at 30 mm²/sec, oil temperature at 50°C and max. continuous pressures for each type.



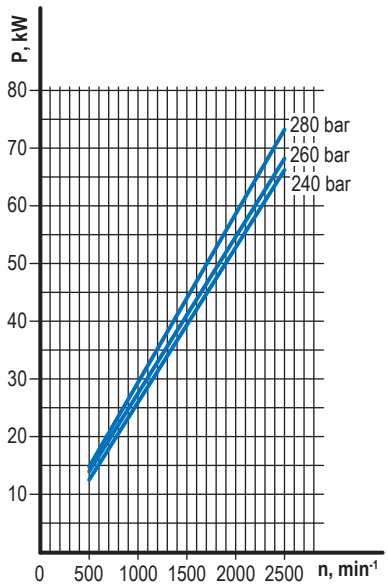
Performance curves carried out with oil viscosity at 16 mm²/sec and oil temperature at 60°C.



GP3T34

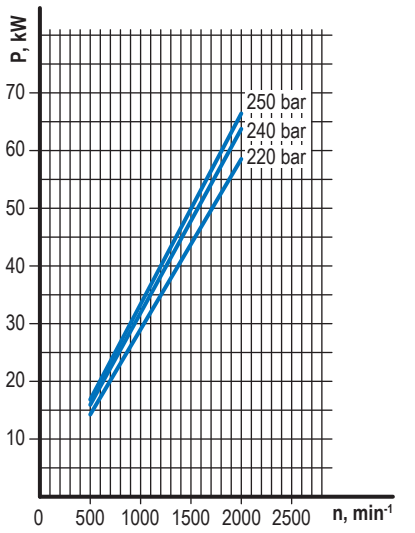


GP3T43

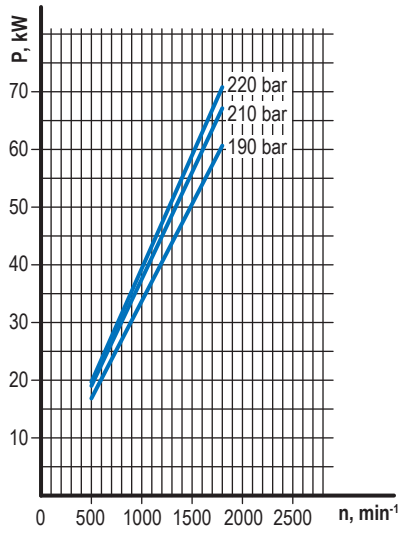


GP3T51

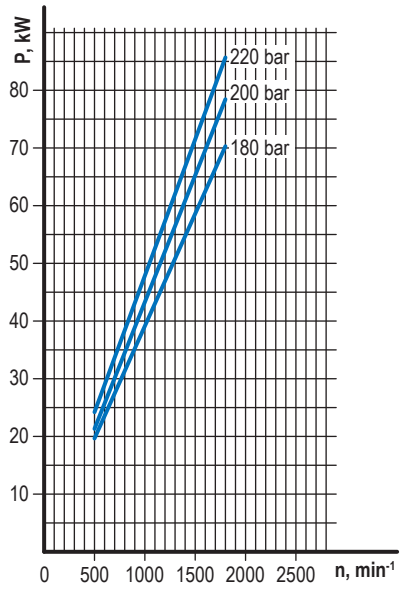
Performance curves carried out with oil viscosity at 16 mm²/sec and oil temperature at 60°C.



GP3T61



GP3T82



GP3T100

ORDERING INSTRUCTIONS

GP	3	T	61	R	–	Z1	C5	G	–	V	–	

GEAR PUMP	GP

GROUP	3

SERIES	T

DISPLACEMENT	CODE
34 cm^3/rev	34
43 cm^3/rev	43
51 cm^3/rev	51
61 cm^3/rev	61
82 cm^3/rev	82
100 cm^3/rev	100

ROTATION	CODE
Clockwise rotation	R
Counterclockwise rotation	L
Reversible rotation	B

*SPECIFICATION OF CONSUMER

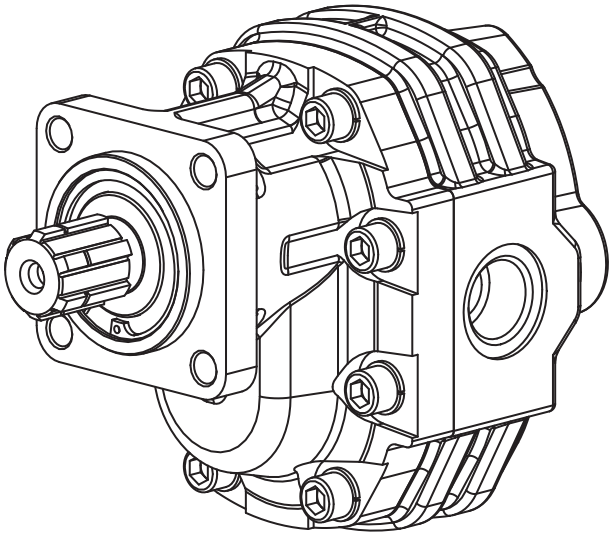
SEAL MATERIAL	CODE
FPM	V

PORTS	CODE
METRIC THREADED	E
SAE THREADED	F
GAS THREADED PORTS	G

MOUNTING FLANGES	CODE
ISO	C5
UNI	C7

DRIVE SHAFTS	CODE
DIN 5462 B8x32x6g7	Z1
ISO14 Shaft 6x21x25	Z2
DIN 9611 Equilateral Spline	Z3

* Specification of consumer assigned if necessary after clarify special conditions with the customer

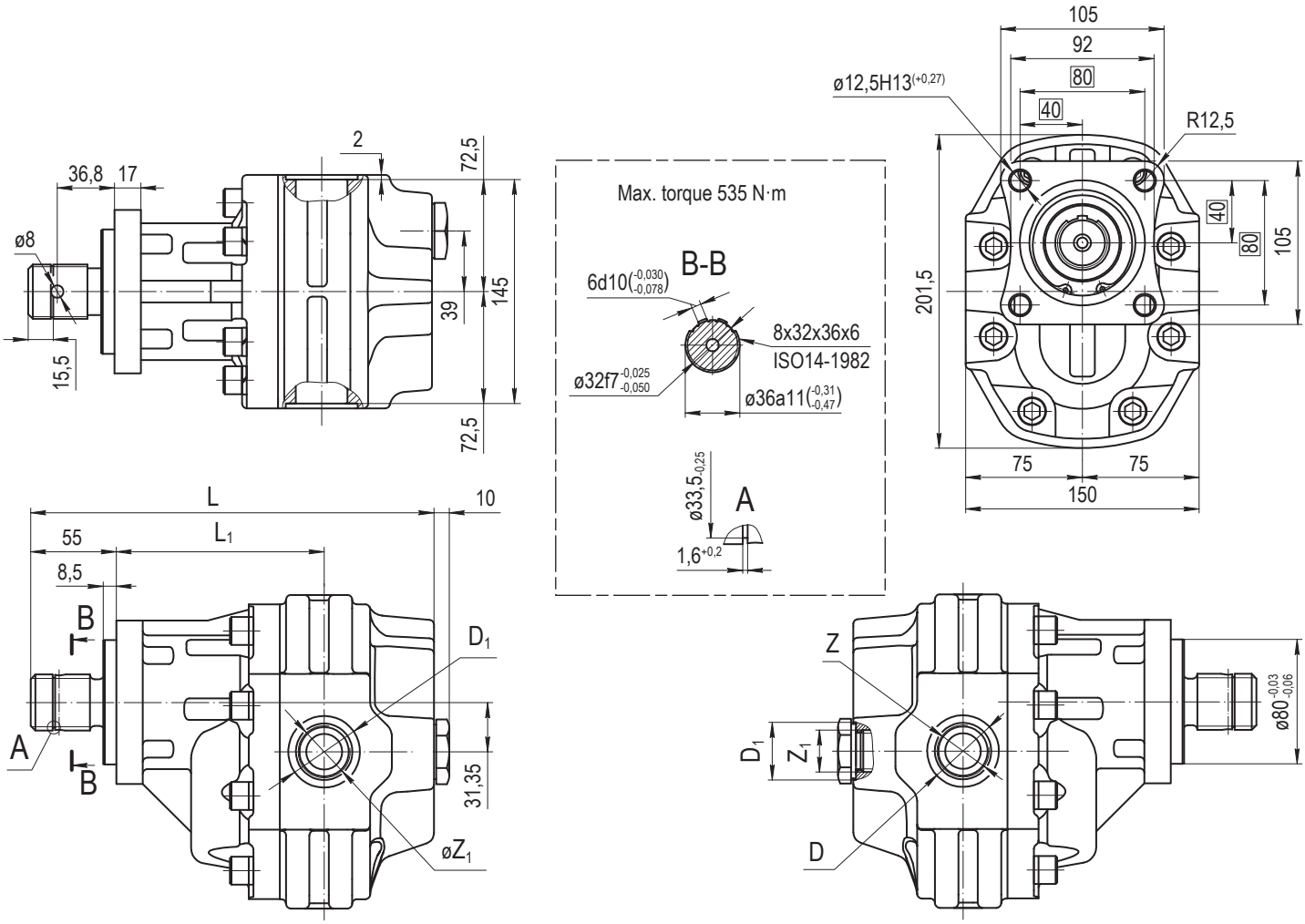


Displacements
63-150 cm^3/rev

Pressure
Max. continuous pressure - 290 bar
Max. intermittent pressure - 315 bar
Max. peak pressure - 325 bar

Rotational speed
Max. speed - 2700 min^{-1}
Min. speed - 300 min^{-1}

Обозначение Type		GP4T63	GP4T73	GP4T86	GP4T100	GP4T119	GP4T135	GP4T150
Рабочий объем Displacement	cm^3/rev	63	73	86	100	119	135	150
Максимальное продолжительное давление, P_1 Maximum continuous pressure, P_1	bar	290	280	260	250	240	220	180
Максимальное кратковременное давление, P_2 Maximum intermittent pressure, P_2	bar	315	300	280	270	260	250	210
Максимальное пиковое давление, P_3 Max. peak pressure, P_3	bar	325	315	290	280	270	260	220
Максимальная частота вращения, n_{max} Max. speed, n_{max}	min^{-1}	2700					2500	
Минимальная частота вращения при $P_1 \leq 100$ bar, n_{min} Min. speed at $P_1 \leq 100$ bar, n_{min}	min^{-1}	300						

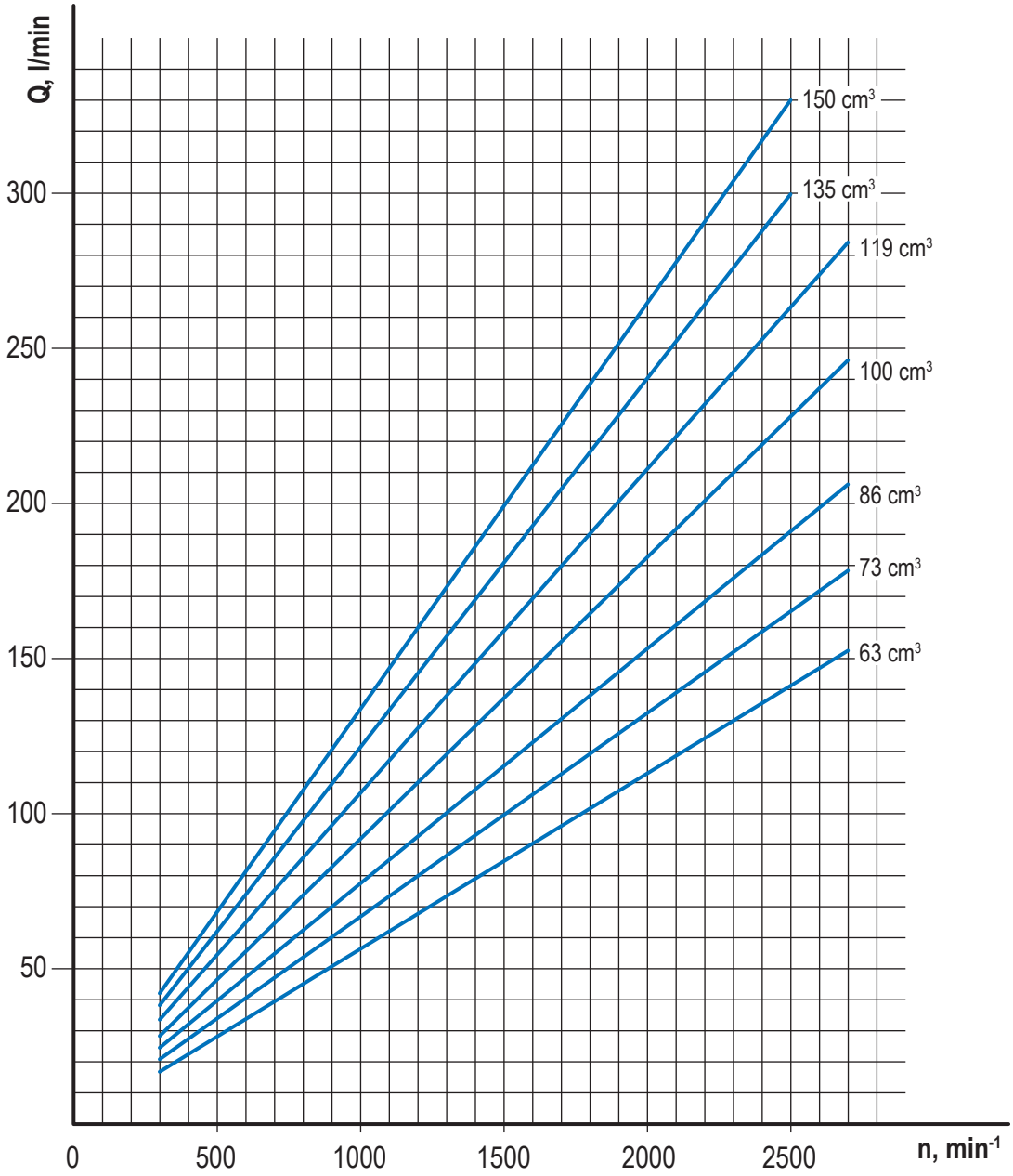


Type			Dimensions mm						
			L	L1	D	D1	Z	Z1	Weight kg
GP4T63	R L	Z1C5G-V	259	136,5	ø46,1	ø37	1" GAS	3/4" GAS	23,5
GP4T73			262	140,5					23,7
GP4T86			266	141,0	ø54	ø46,1	1 1/4" GAS	1" GAS	24,5
GP4T100			272	144,5					25,1
GP4T119			278	150,5					25,8
GP4T135			284	153,5	ø60,5		1 1/2" GAS		26,7
GP4T150			289	158,5					27,3

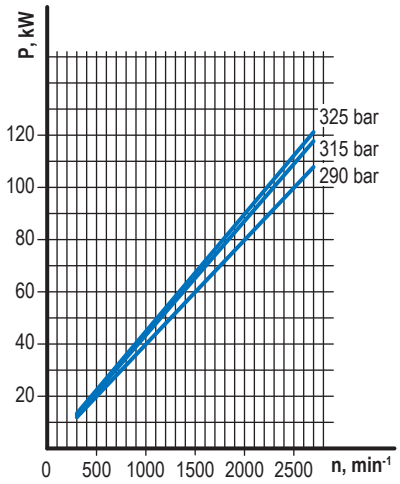
Ordering example: GP4T86R-Z1C5G
Rotation: R - Clockwise; L - Counterclockwise.

PERFORMANCE CURVES

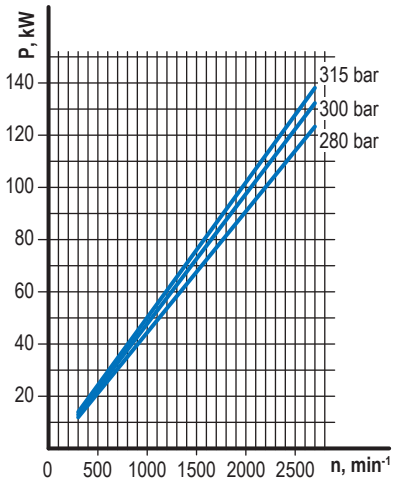
Performance curves carried out with oil viscosity at 30 mm²/sec, oil temperature at 50°C and max. continuous pressures for each type.



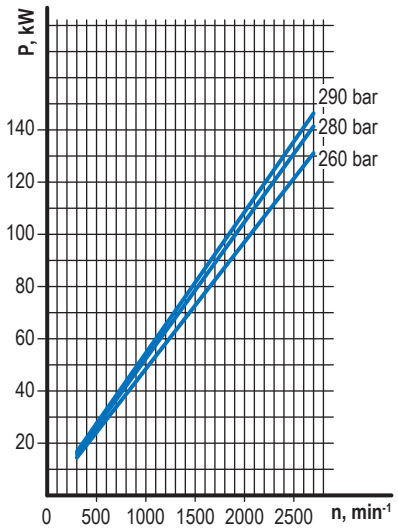
Performance curves carried out with oil viscosity at 16 mm²/sec and oil temperature at 60°C.



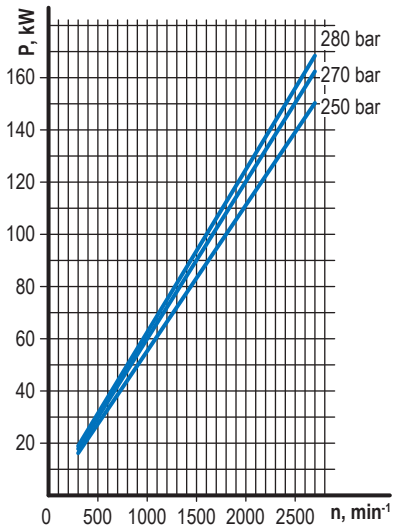
GP4T63



GP4T73

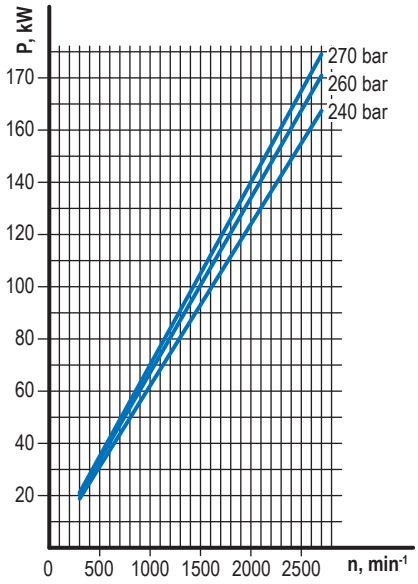


GP4T86

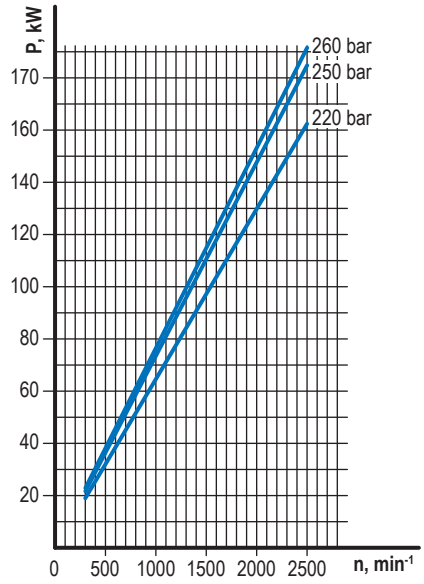


GP4T100

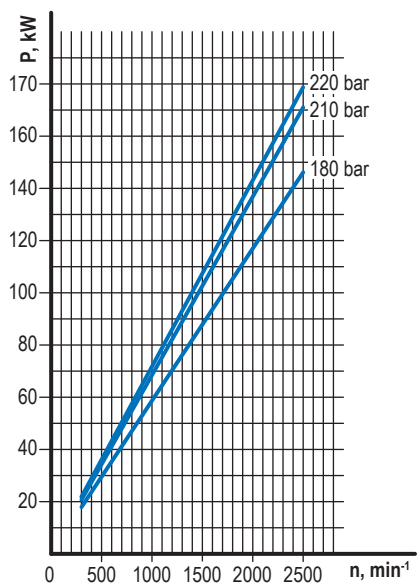
Performance curves carried out with oil viscosity at 16 mm²/sec and oil temperature at 60°C.



GP4T119



GP4T135



GP4T150

ORDERING INSTRUCTIONS

GP	4	T	63	R	–	Z1	C5	G	–	V	–	

GEAR PUMP	GP

GROUP	4

SERIES	T

DISPLACEMENT	CODE
63 cm^3/rev	**63**
73 cm^3/rev	**73**
86 cm^3/rev	**86**
100 cm^3/rev	**100**
119 cm^3/rev	**119**
135 cm^3/rev	**135**
150 cm^3/rev	**150**

ROTATION	CODE
Clockwise rotation	**R**
Counterclockwise rotation	**L**

*SPECIFICATION OF CONSUMER

SEAL MATERIAL	CODE
FPM	**V**

PORTS	CODE
GAS THREADED PORTS	**G**

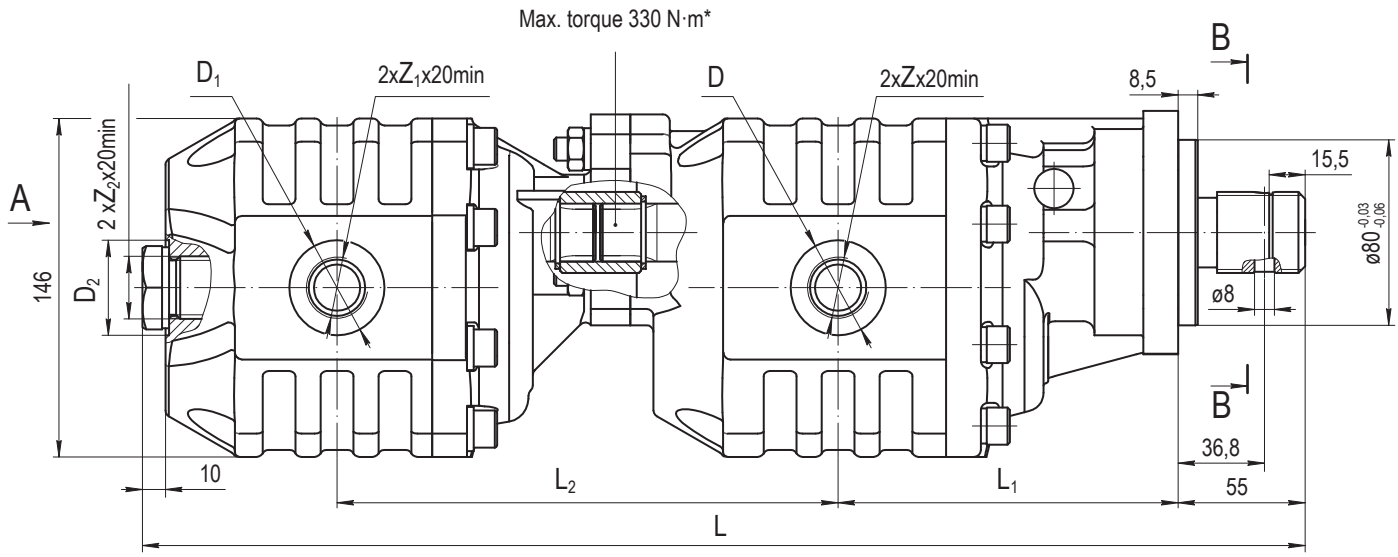
MOUNTING FLANGES	CODE
ISO	**C5**

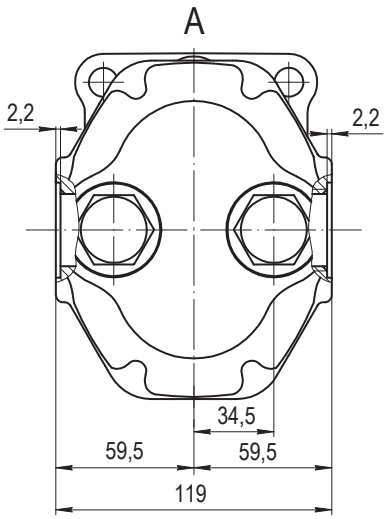
DRIVE SHAFTS	CODE
DIN 5462 B8x32x6g7	**Z1**

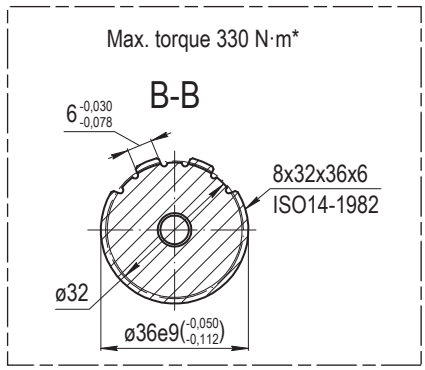
* Specification of consumer assigned if necessary after clarify special conditions with the customer

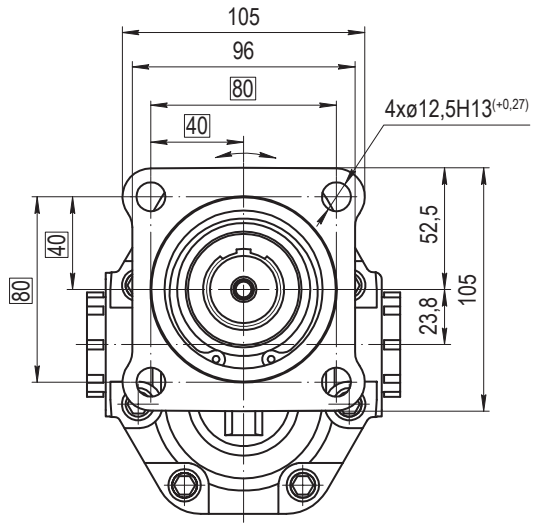
MULTIPLE PUMPS

MULTIPLE PUMPS GROUPS 3+3. MOUNTING FLANGE - ISO STANDARD



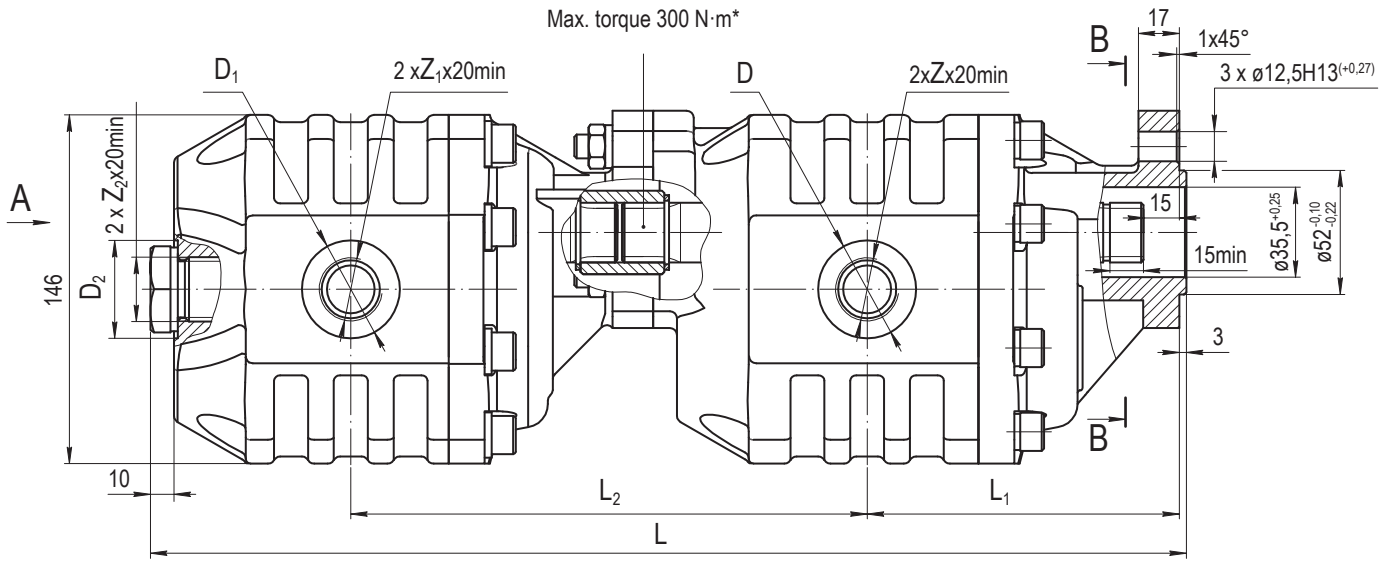


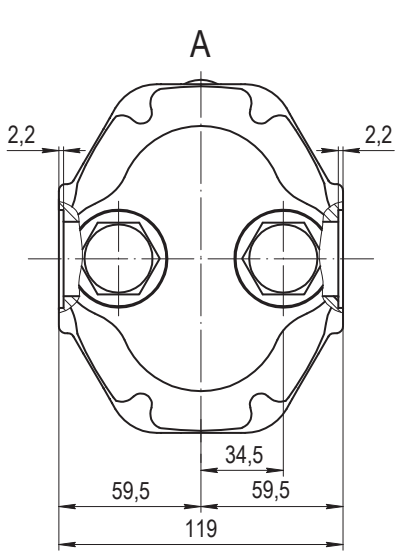


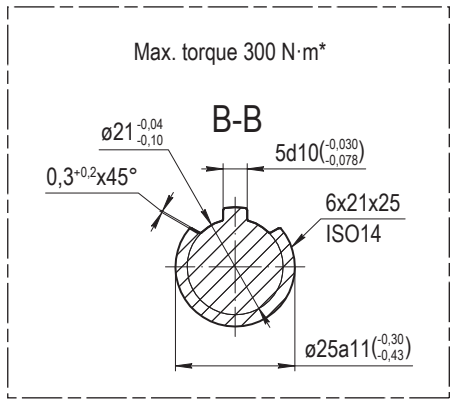


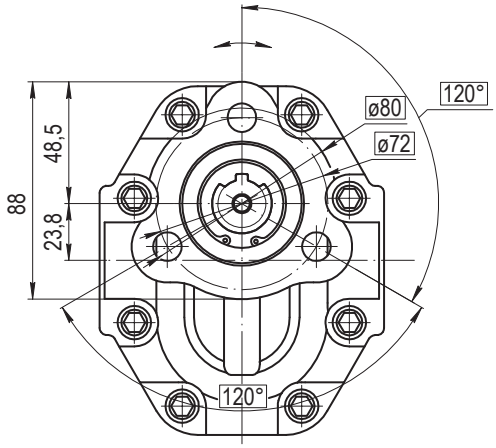
* A pump's torque is equal to the sum of all the pump sections' torques. The total torque mustn't exceed the maximum permitted torque for a pump's driveshaft. For difining the maximum permitted torque of every section use the formula on page 7.

Type			Dimensions mm									
			L	L_1	L_2	D	D_1	D_2	Z	Z_1	Z_2	Weight kg
GP3T34/3T34	R L	Z1C5GG-V	426	125	176	ø41			3/4" GAS			27,0
GP3T43/3T34			433	130	177							27,5
GP3T43/3T43			438		182							28,1
GP3T51/3T34			442	130,5	181,5	ø46,1	ø41		1" GAS	3/4" GAS		27,8
GP3T51/3T43			447,5		186,5							28,3
GP3T51/3T51			448		187	ø46,1				1" GAS		28,5
GP3T61/3T34			448,5	136,5	181,5	ø46,1	ø41			3/4" GAS		28,4
GP3T61/3T43			453,5		186,5							28,9
GP3T61/3T51			454		187	ø46,1				1" GAS		29,1
GP3T61/3T61			460		193							29,8
GP3T82/3T34			460,5	140,5	190,5	ø54	ø41		1 1/4" GAS	3/4" GAS		29,6
GP3T82/3T43			465,5		195,5							30,2
GP3T82/3T51			466		196		ø46,1			1" GAS		30,4
GP3T100/3T34			479	146	197	ø54	ø41			3/4" GAS		30,6
GP3T100/3T43			484		202							31,1
GP3T100/3T51			484,5		202,5		ø46,1			1" GAS		31,3
GP3T100/3T61			490,5		208,5							32,0



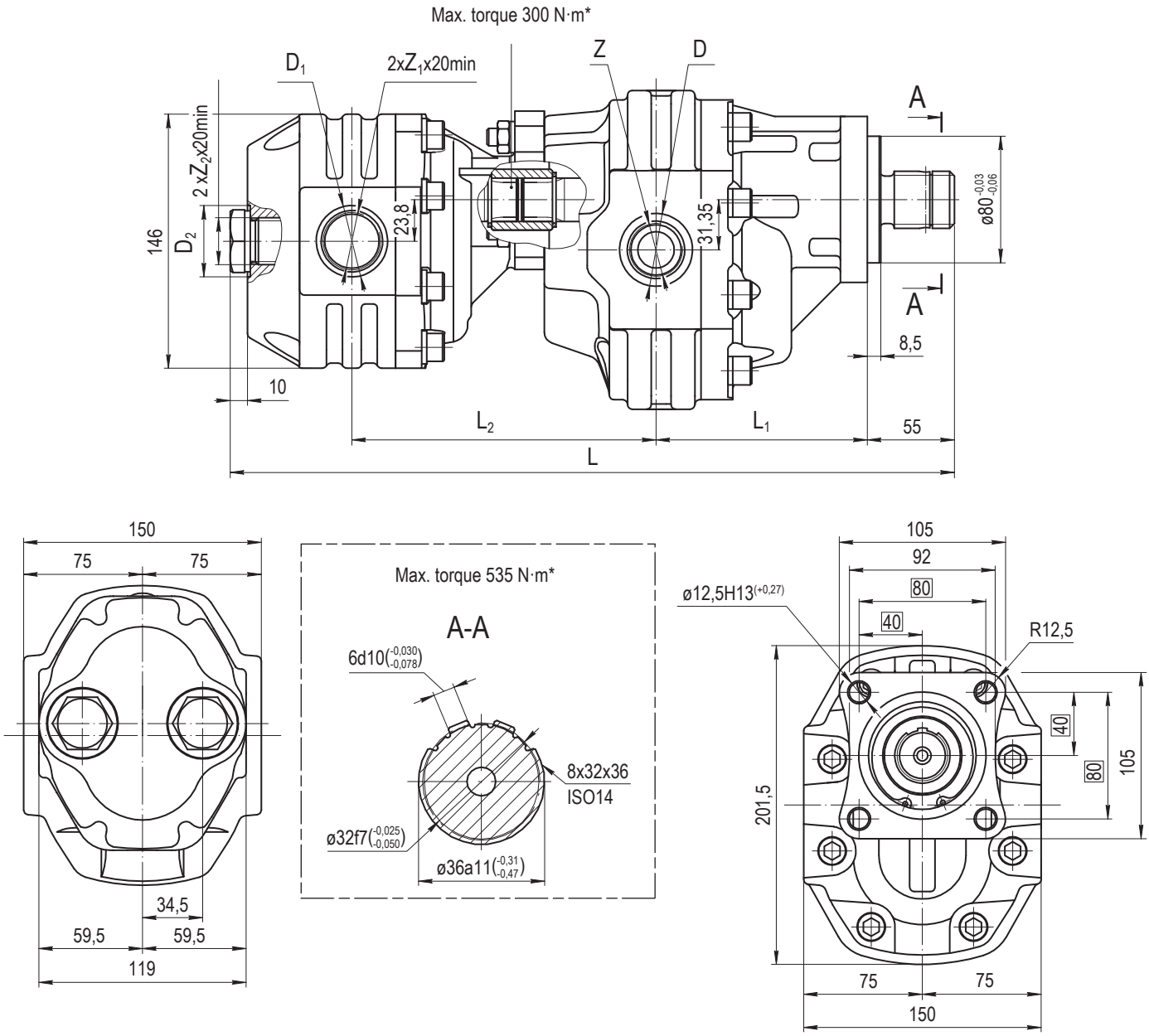






* A pump's torque is equal to the sum of all the pump sections' torques. The total torque mustn't exceed the maximum permitted torque for a pump's driveshaft. For difining the maximum permitted torque of every section use the formula on page 7.

Type			Dimensions mm									Weight kg
			L	L_1	L_2	D	D_1	D_2	Z	Z_1	Z_2	
GP3T34/3T34	R L	Z2C7GG-V	355	109	179	ø41			3/4" GAS			26,9
GP3T43/3T34			362	114	177							27,5
GP3T43/3T43			367		182							28,0
GP3T51/3T34			371,5	114,5	181,5	ø46,1	ø41		1" GAS	3/4" GAS		27,7
GP3T51/3T43			376,5		186,5							28,2
GP3T51/3T51			377		187	ø46,1				1" GAS		28,5
GP3T61/3T34			374,5	120,5	181,5	ø46,1	ø41			3/4" GAS		28,4
GP3T61/3T43			382,5		186,5							28,9
GP3T61/3T51			383		187	ø46,1				1" GAS		29,1
GP3T61/3T61			389		193							29,8
GP3T82/3T34			389,5	124,5	190,5	ø54	ø41		1 1/4" GAS	3/4" GAS		29,6
GP3T82/3T43			394,5		195,5							30,1
GP3T82/3T51			395		196		ø46,1			1" GAS		30,2
GP3T100/3T34			408	130	197	ø54	ø41			3/4" GAS		30,3
GP3T100/3T43			413		202							30,9
GP3T100/3T51			413,5		202,5		ø46,1			1" GAS		31,2
GP3T100/3T61			419,5		208,5							31,7



* A pump's torque is equal to the sum of all the pump sections' torques. The total torque mustn't exceed the maximum permitted torque for a pump's driveshaft. For difining the maximum permitted torque of every section use the formula on page 7.

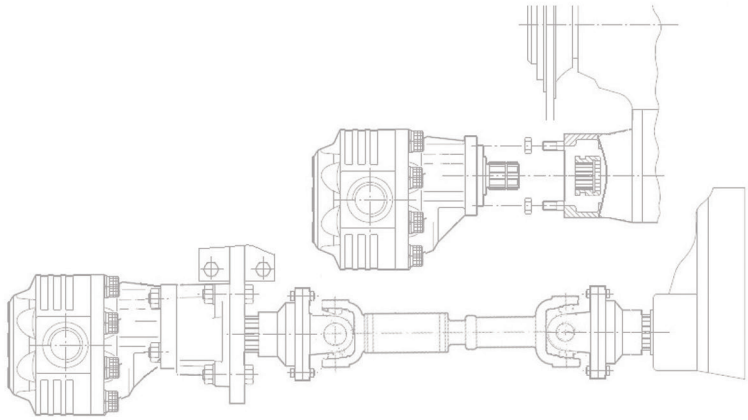
Type			Dimensions mm									Weight kg
			L	L_1	L_2	D	D_1	D_2	Z	Z_1	Z_2	
GP4T63/3T34	R L	Z1C5GG-V	435	177	173,5	ø46,1	ø41		1" GAS	3/4" GAS		36,4
GP4T63/3T43			441		178,5							36,9
GP4T63/3T51			446		179		ø45			1" GAS		37,1
GP4T63/3T61			452		185							37,7
GP4T73/3T34			438	187	172,5		ø41			3/4" GAS		36,6
GP4T73/3T43			444		177,5							37,1
GP4T73/3T51			449		178		ø45			1" GAS		37,3
GP4T73/3T61			455		184							37,9
GP4T86/3T34			442	193	176	ø54	ø41		1 1/4" GAS	3/4" GAS		37,4
GP4T86/3T43			448		181							37,9
GP4T86/3T51			453		181,5		ø45			1" GAS		38,1
GP4T86/3T61			459		187,5							38,7
GP4T100/3T34			448	206	178,5		ø41			3/4" GAS		38,0
GP4T100/3T43			454		183,5							38,5
GP4T100/3T51			459		184		ø45			1" GAS		38,7
GP4T100/3T61			465		190							39,3
GP4T100/3T82			468		194		ø54	–		1 1/4" GAS	–	40,5
GP4T119/3T34			454	208,5	178,5		ø41			3/4" GAS		38,7
GP4T119/3T43			460		183,5							39,2
GP4T119/3T51			465		184		ø45			1" GAS		39,4
GP4T119/3T61			471		190							40,0
GP4T135/3T34			460	206	181,5	ø60,5	ø41		1 1/2" GAS	3/4" GAS		39,6
GP4T135/3T43			466		186,5							40,1
GP4T135/3T51			471		187		ø45			1" GAS		40,3
GP4T150/3T34			465	208,5	181,5		ø41			3/4" GAS		40,2
GP4T150/3T43			471		186,5							40,7

RECOMMENDATIONS ON INSTALLATION

Before mounting a gear pump (motor), please, check the hydraulic system (all its components). Early pump (motor) breakdown may occur due to non-observance of usage rules and the condition of the system.

WHEN INSTALLING YOU SHOULD KEEP THE NEXT REQUIREMENTS:

1. Check the rotation of the pump to be consistent with the drive shaft one. To define the rotation direction, check the drive shaft: right - clockwise, left - counterclockwise.
2. The pump is mounted with the screws (nuts), avoiding warp, which can cause radial and axial loads. The screws should be fixed with lock washers.
3. When mounting corners, nipples and others clean the line and o-rings. Grease the o-rings. Inlet and delivery lines should be adjusted with the help of flange.
4. Check the fluid for contamination. If necessary change it. When changing the fluid, change the filter element and the tank valve.
5. After installation it's recommended to fulfill pump run in at low loads. Check all the components of hydraulic system.



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