

#### APPLICATION

Gear pump type ZP is used primarily for oil and petroleum products, but also can be used for similar non-aggressive media. Particularly suitable for manipulation with high density media, viscosity 5 - 300 cSt(mm /s).

These pumps are successfully used for different purposes, and in particular:

- in power plants for supplying liquid fuel burners and furnaces
- in agriculture for the circulation of hot oil (drying plants)
- at petrol stations and fuel depots, handling with heavy petroleum products
- in the food industry, for the pumping of animal and plant oils and fats

Gear pumpa type ZP is applicable only on media with lubricating properties, since the operating fluid lubricates the pump.

#### DESIGN FEATURES

Pump dimensions are listed in the table below.

The gear pump is completely closed. It's equipped with a relief-overflow valve that lets the increased pressure of the medium through the overflow channel in to the suction side of pump. This ensures the pump and valve terminal system against excessive pressure increases, but does not allow the interruption of flow in the long term, because the small amount of hot oil can quickly cause damage to pump.

Supply and suction lift for the gear pump ZP is shown in the diagram of supply.

Below stated dimensions apply to standard gear pumps for built motors as recommended by IEC standards.

Maximum operating conditions:

Part Name	Material
Housing	cast iron
Gears	1.7131; AISI 5115 1.7147; AISI 4820* 1.8507; AISI A355-D*
Shaft	1.4541; AISI 321* 1.0050 ; E 295 1.8507; AISI A355-D* 1.4021; AISI 420*
Clutch	cast iron
Flanges	EN1092, DIN2635, ANSI B16.5

\*-on request for special application

#### INSTALLATION AND MAINTENANCE

When installing pumps, must comply with the direction of flow arrow which is placed on the pump. Base station is not provided for the reception of forces that might occur due to thermal expansion of pipelines. When using the pump for discontinuous operation with media of high freezing point (fuel oil, tallow, ...) it is necessary to predict the heat pump to a temperature that will guarantee the current state of media remaining in the pump. Before the inlet to the pump must be mounted filter.

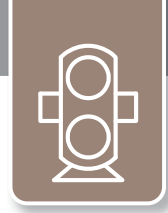
#### DRIVE

Pump can be delivered separately or assembled with standardized three-phase (380V, 50 Hz) synchronous motors, squirrel cage, closed design (IP54 protection). On request can be supplied with ATEX certified motors. Electric motor is the only part of the electrical equipment that is supplied with a gear pump type ZP.

#### TESTING AND DELIVERY

Certificate of production testing, "p-Q" diagram, and the declaration of defined quantities and pressures of supply is delivered with each pump. Contemporary construction, precision machining and detailed control of each pump guarantees perfect performance and stability in the work. Every pump comes protected from corrosion, and flange surfaces are protected from mechanical damage.

# Gear Pumps type ZP



type	DN	PN	ASSEMBLY DIMENSIONS (mm)									ELECTRO MOTOR			WEIGHT (kg)	
			A	C	D	G	H	I	J	K	d	kW	min-1	A	pump	assembly
ZP-1	20 (3/4")	40*	438	218	57	220	140	128	74	182	9	0.37	720	1.4	8	25
			438	229			140					0.55		1.9		27.5
			438	254			160					0.75		2.35		37
			438	218			140					0.75	960	2.2		25
			438	229			140					1.1		3.25		27.5
			438	218			140					1.1	1420	2.7		25
			438	273			140					1.5		3.5		27.5

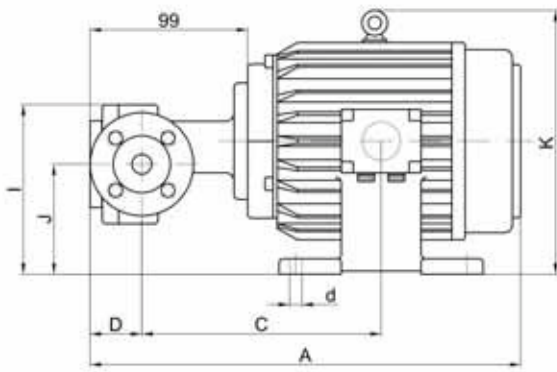
type	DN	PN	ASSEMBLY DIMENSIONS (mm)												ELECTRO MOTOR			WEIGHT (kg)			
			A	B	C	D	E	F	G	H	I	J	K	L	d	kW	min-1	A	pump	assembly	
ZP-2	25 (1")	40*	480	428	328	50	115	190	250	135	240	91	294	171	18	0.75	720	2.35	14	60	
			480	428	328	50	115	190	250	135	240	91	294	171	18	1.1		3.5		62	
			550	466	335	50	115	190	250	135	260	91	385	171	18	1.5		4.1		73	
			480	428	328	50	115	190	250	135	240	91	294	171	18	1.5	960	3.9		60	
			480	466	335	50	115	190	250	135	240	91	336	171	18	2.2		5.2		73	
			550	622	374	50	115	190	250	135	240	91	336	191	18	3	6.8	90			
			480	428	328	50	115	190	250	135	240	91	294	171	18	3	1420	6.7		64	
			480	466	335	50	115	190	250	135	240	91	294	171	18	4		8.6		74	
ZP-3	32 (1 1/4")	40*	671	620	418	50	153	246	277	184	308	122	410	202	18	2.2	720	5.5	28	103	
			709	620	437	50	153	246	277	184	308	122	410	202	18	3		7.6		113	
			709	620	437	50	153	270	277	184	308	122	410	202	18	3				34	119
			671	620	418	50	153	246	277	184	308	122	410	202	18	3	960	6.8		28	108
			709	620	437	50	153	246	277	184	308	122	410	202	18	5.5		12.2		28	123
			709	620	437	50	153	270	277	184	308	122	410	202	18	5.5		34		130	
			620	620	379	50	153	246	277	184	308	122	381	202	18	4	1420	8.6		28	92
			709	620	437	50	153	270	277	184	308	122	410	202	18	5.5				34	114
709	620	437	50	153	270	277	184	308	122	410	202	18	7.5		34	128					
ZP-5	65 (2,5")	40*	970	870	573	80	195	295	384	330	420	178	513	278	18	7.5	720	17	75	235	
			1040	870	598	80	195	295	384	330	420	178	554	278	18	11		24.5		286	
			970	870	573	80	195	295	384	330	420	178	513	278	18	11	960	22.7		241	
			1040	870	598	80	195	295	384	330	420	178	554	278	18	15		30.5		286	
			1040	870	598	80	210	320	384	330	420	178	545	278	18	15	1420	30.5		292	
			1040	870	598	80	210	320	384	330	420	178	545	278	18	15		30.5		82	292
1040	870	598	80	210	320	384	330	420	178	545	278	18	22	43	292						
ZP-6	100 (4")	16*	1200	1100	685	125	262	445	400	314	440	173	620	293	18	15	960	32	122	380	
			1200	1100	582	125	262	445	400	314	440	173	620	293	18	18		37		430	
			1200	1100	595	125	262	445	400	314	440	173	620	293	18	22	1420	43		377	

\* other class of flanges available on request

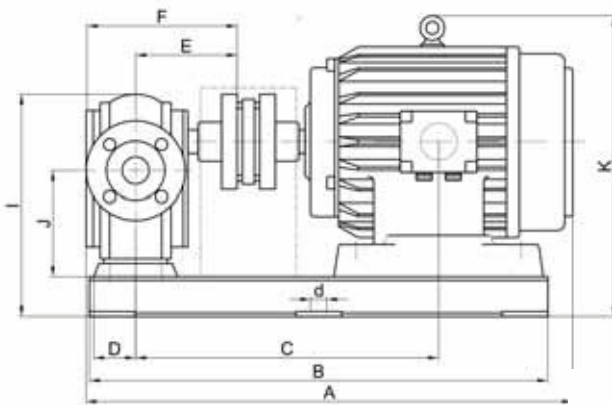
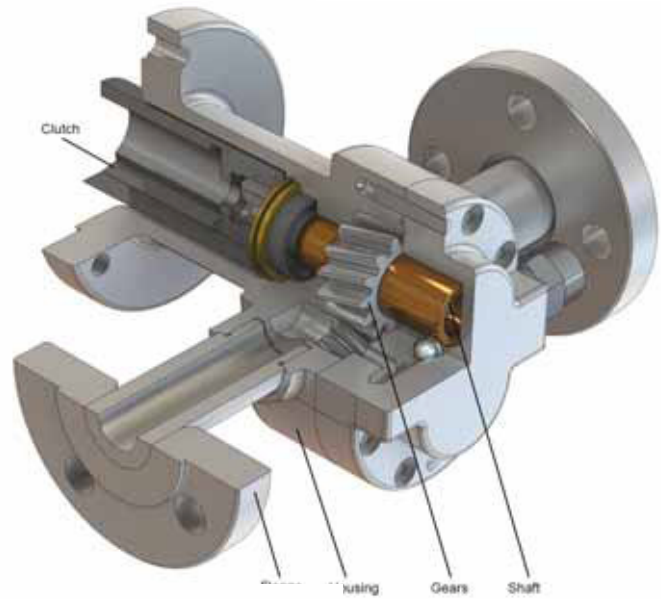
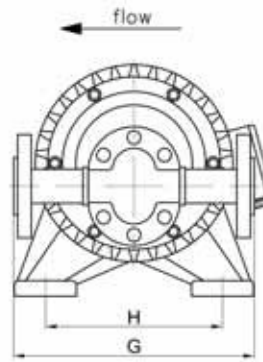
\*\* if not otherwise mentioned, direction of flow is as on the picture



# Gear Pumps type ZP



**ZP-1**



**ZP-2  
ZP-3  
ZP-5**

