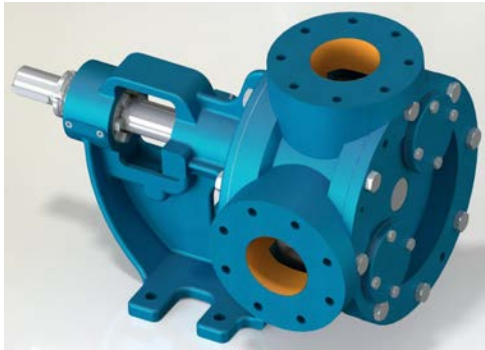




4" GRSJ Internal Eccentric Gear Pump



Performance:

Flow rate	90 m ³ /h
Pressure	1 - 14 bar
Temperature	0 - 200 °C
Speed	400 d/d
Viscosity	100 - 250000 SSU

Technical Features:

- ✓ Internal eccentric gear pump
- ✓ 4" flanged ports
- ✓ Compact design
- ✓ Reliable construction thanks to only two moving parts
- ✓ Various material options
- ✓ Available with external bypass, jacketed and blind cover
- ✓ 230v, three phase 50/60hz motors available
- ✓ Gearbox and belt pulley drive available
- ✓ Manufactured according to CE regulations

Applications:

- ✓ Fuel oil, diesel fuel and gas oil transfer
- ✓ Small scale thermal oil applications including Marlotherm, Duratherm, Paratherm, Multitherm, Mobiltherm and Dowtherm
- ✓ Lubrication applications
- ✓ Coolant transfer
- ✓ Any transfer of low to medium viscosity fluids with lubricating properties
- ✓ Not suitable for fluids containing abrasive particles

Material Options:

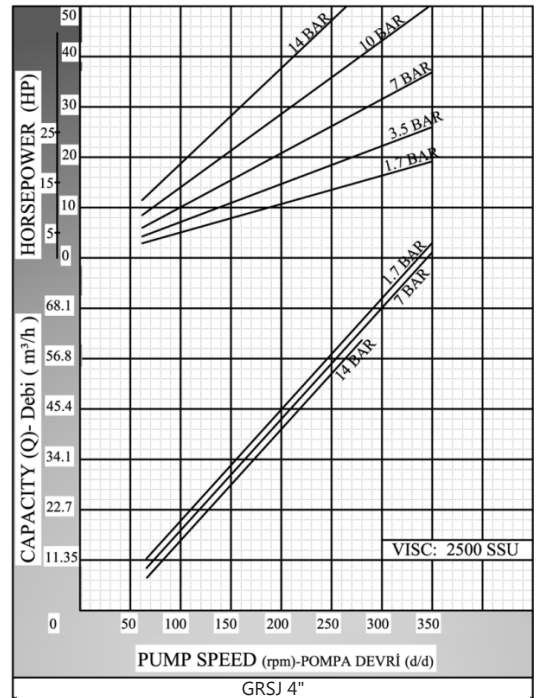
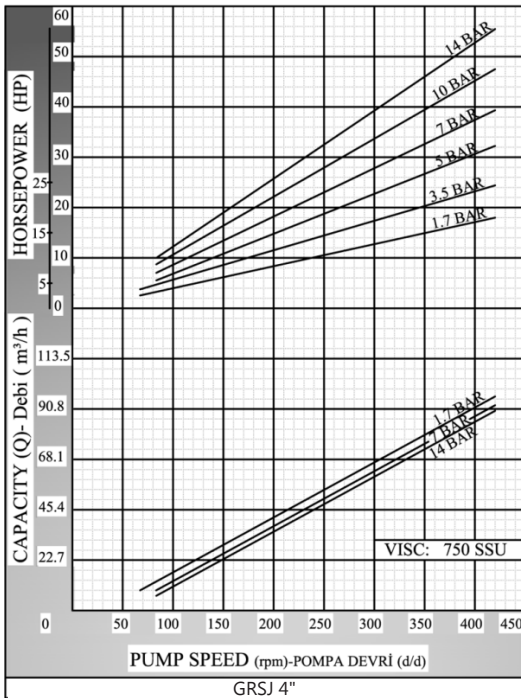
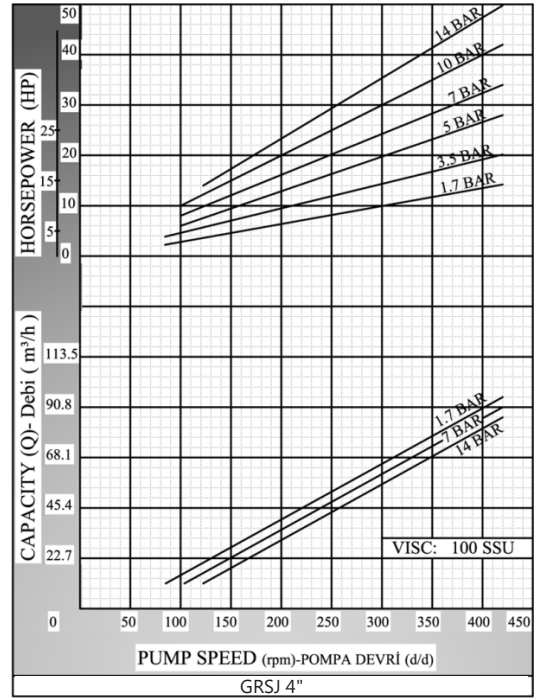
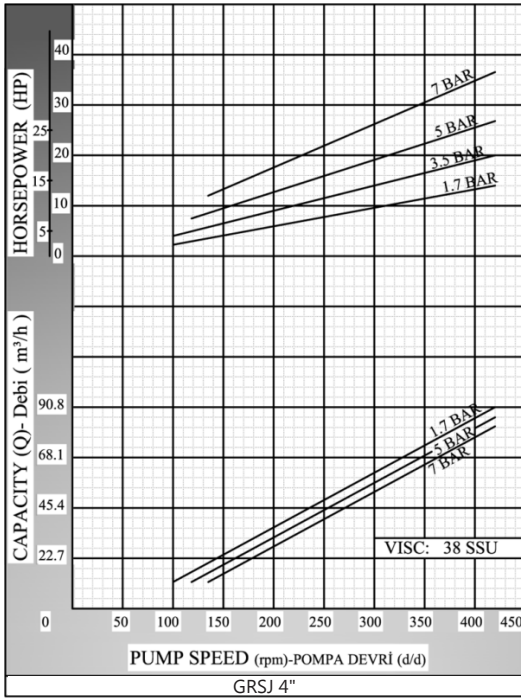
- ✓ Pump body, covers: Pig cast iron, Spheroidal cast iron, cast steel, AISI 304/316 CrNi Stainless Steel
- ✓ Gears: Spheroidal cast iron, cast steel, AISI 304/316 CrNi Stainless Steel
- ✓ Bearings: Snbz 12 bronze, carbon graphite, silicon carbide, hard metal coated steel, bearing
- ✓ Sealing: Soft seal or packing gland, Rotatherm seal, lip seal, mechanical seal, cartridge type mechanical seal

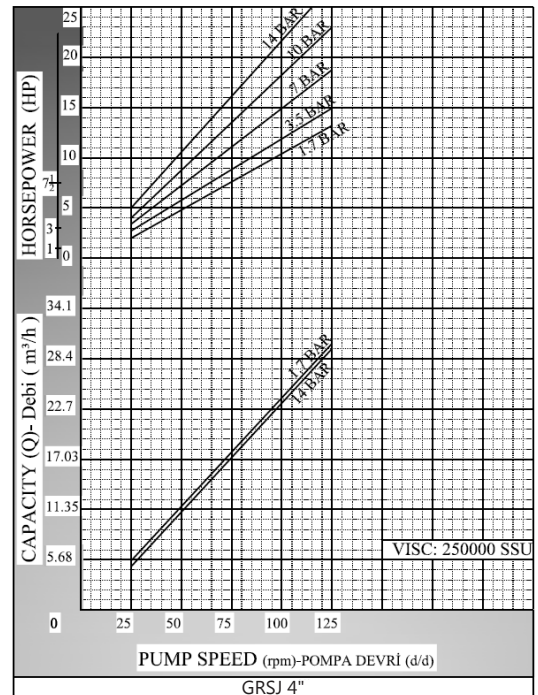
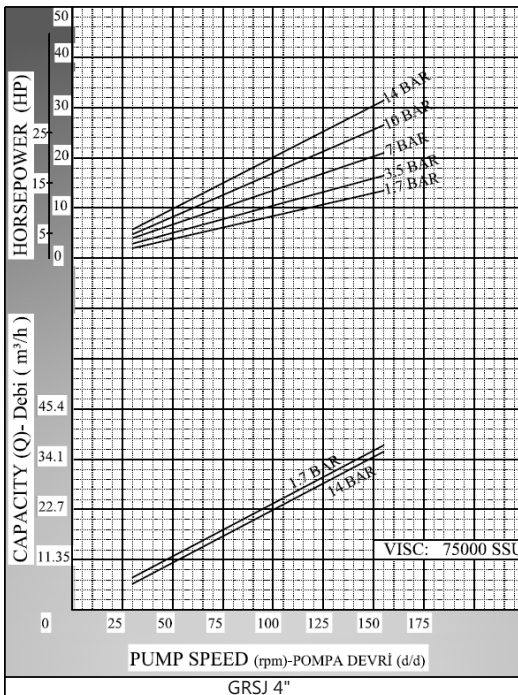
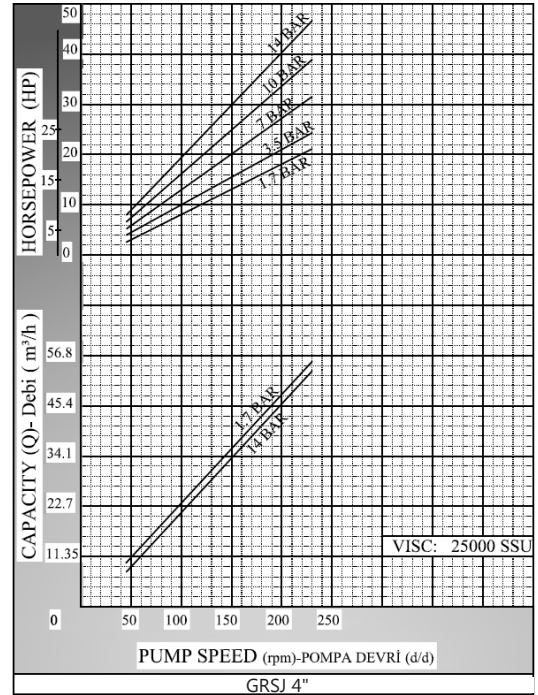
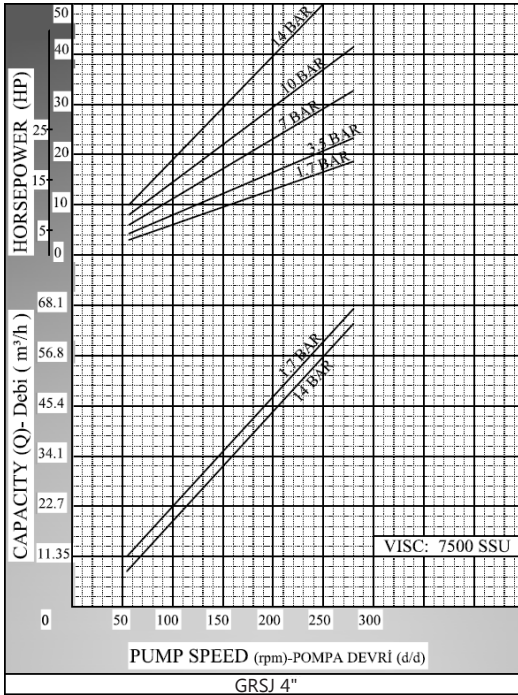
Capacity & Power Table						
Capacity (Q)	Speed (rpm)	Pressure				Viscosity
		3 Bar	5 Bar	7 Bar	10 Bar	
46	200	20 HP	25 HP	30 HP	40 HP	25000 SSU
57	250	20 HP	25 HP	30 HP	40 HP	7500 SSU
68	300	25 HP	30 HP	40 HP	50 HP	2500 SSU
80	350	25 HP	30 HP	40 HP	50 HP	750 SSU





Pump Dimensions - Capacity Graphs:

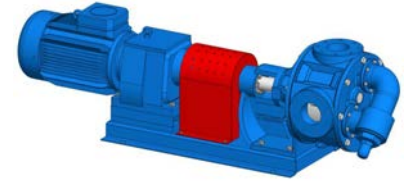
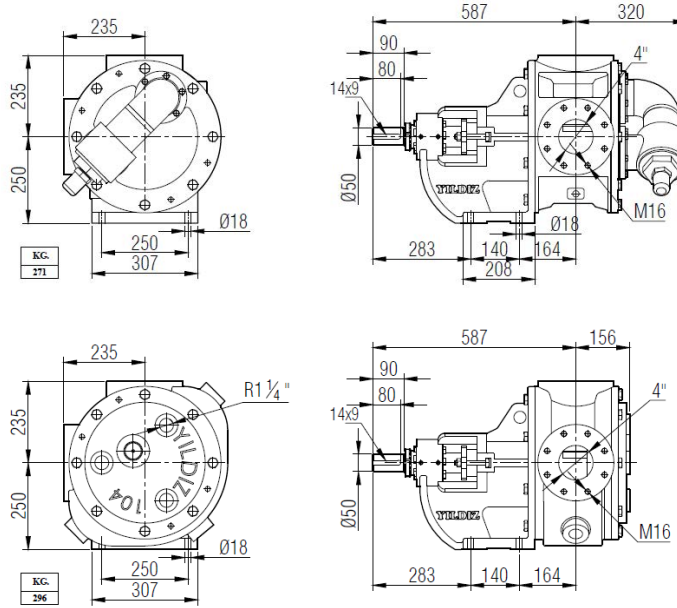






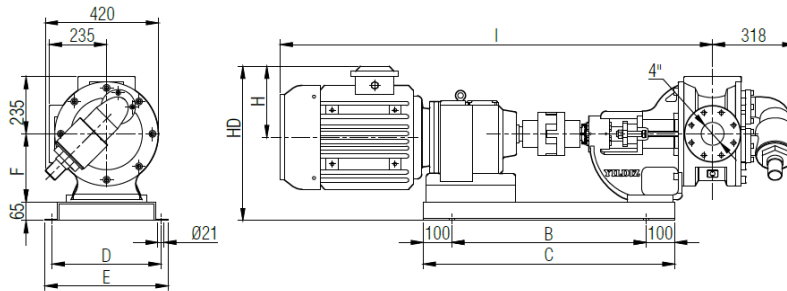
Pump Dimensions:

GRSJ 4"



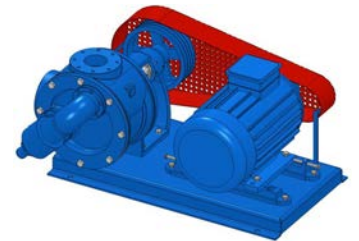
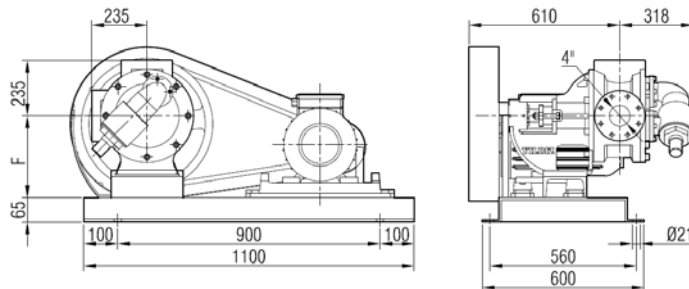
Coupling Dimensions - Gearbox drive:

GRSJ 4"



Motor Power & Speed			I	HD	H	B	C	D	E	F	Kg
10 hp / 7.5 kw	93/400 d/d (rpm)	IRAM72/132M	1366	481	182	680	880	390	430	250	402
15 hp / 11 kw	187/400 d/d (rpm)	IRAM72/C132M									404
20 hp / 15 kw	130/400 d/d (rpm)	IRAM82/160L	1551	527	225	750	950	390	430	250	537
25 hp / 18.5 kw	145/400 d/d (rpm)	IRAM82/180M	1563	550	248						557
30 hp / 22 kw	237/400 d/d (rpm)	IRAM82/180L	1600	568	275	830	1030	420	460	250	582
40 hp / 30 kw	204/400 d/d (rpm)	IRAM92/200L	1725								678

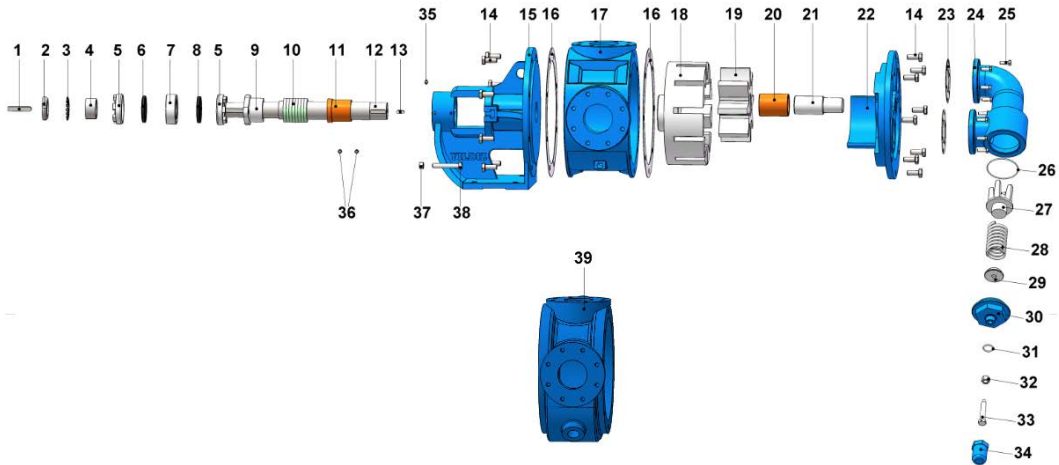
Belt Pulley Coupling Pump Dimensions:



Motor Power & Speed		Pump Speeds				F ₍₁₎	F ₍₂₎	F ₍₃₎	F ₍₄₎	Kg
		N1	N2	N3	N4					
		d/d	d/d	d/d	d/d					
15 hp / 11 kw	MOTOR 160M	450	400	350	310	250	250	250	250	480
20 hp / 15 kw	MOTOR 160L									490
25 hp / 18.5 kw	MOTOR 180M									520
30 hp / 22 kw	MOTOR 180L									530

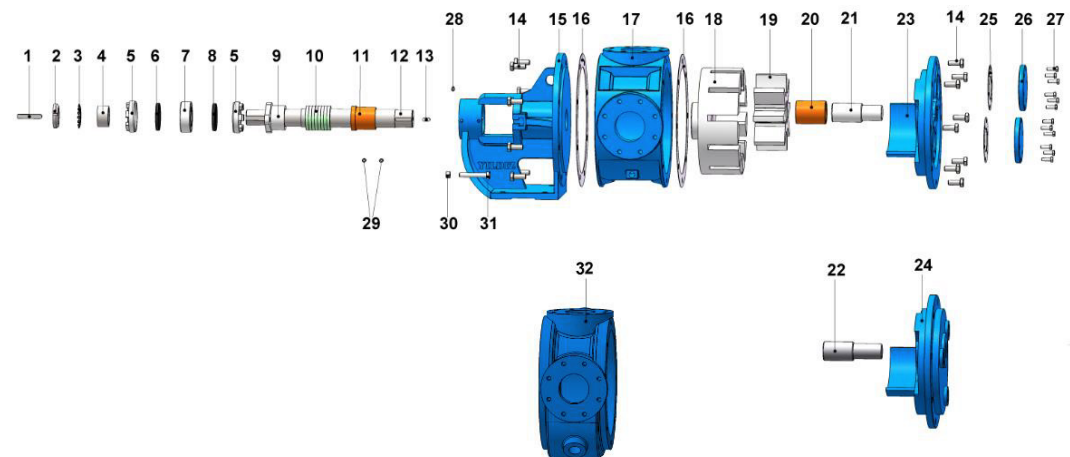


Spare Parts List - Sealed with soft seal, and pressure relief valve on cover:



No.	Part Name.	Qty.	No.	Part Name.	Qty.	No.	Part Name.	Qty.
1	Coupling Key 14x9 80 AB	1	14	Hex Bolt M16x40	16	27	Valve	1
2	Lock Nut	1	15	Bracket	1	28	Spring	1
3	Lock Washer	1	16	Bracket & Cover Gasket	2	29	Washer	1
4	Spacer	1	17	Casing (w/ 90° Flanged Ports)	1	30	Bypass Cover	1
5	Adjusting Nut	2	18	Rotor Gear	1	31	Cap O-Ring	1
6	Lip Seal ø68xø90x10	1	19	Idler Gear	1	32	Nut M16	1
7	Ball Bearing (3211)	1	20	Idler Bushing	1	33	Adjusting Screw M16x90	1
8	Lip Seal ø60xø90x10	1 TK	21	Cover Pin	1	34	Cap	1
9	Packing Press	1	22	Cover	1	35	Greasing Fitting R3/8"	1
10	Soft Seal / Packing Gland	1	23	Bypass Gasket	2	36	Grub Screw M8x20	4
11	Bracket Bushing	1	24	Pressure Relief Valve - Bypass	1	37	Nut M14	2
12	Shaft	1	25	Hex Bolt M10x30	12	38	Square Screw M14x90	2
13	Rotor Key 12x8x55 A	1	26	Bypass O-Ring	1	39	Casing (90° Flanged Ports & w/ Heating Jacket)	1

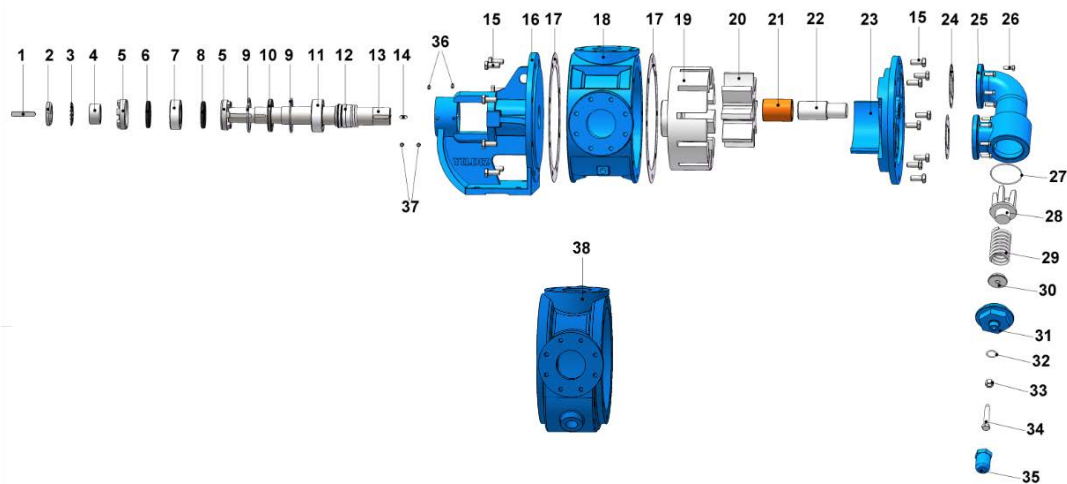
Spare Parts List - Sealed with soft seal, jacketed and with blind cover:



No.	Part Name.	Qty.	No.	Part Name.	Qty.	No.	Part Name.	Qty.
1	Coupling Key 14x9x80 AB	1	12	Shaft	1	23	Cover	1
2	Lock Nut	1	13	Rotor Key 12x8x55 A	1	24	Jacketed Cover	1
3	Lock Washer	1	14	Hex Bolt M16x40	16	25	Bypass Gasket	2
4	Spacer	1	15	Bracket	1	26	Pressure Relief Valve - Bypass	2
5	Adjusting Nut	2	16	Bracket & Cover Gasket	2	27	Hex Bolt M10x30	12
6	Lip Seal ø68xø90x10	1	17	Casing (w/ 90° Flanged Ports)	1	28	Greasing Fitting R3/8"	1
7	Ball Bearing (3211)	1	18	Rotor Gear	1	29	Grub Screw M8x20	4
8	Lip Seal ø60xø90x10	1	19	Idler Gear	1	30	Nut M14	2
9	Packing Press	1	20	Idler Bushing	1	31	Square Screw M14x90	2
10	Soft Seal / Packing Gland	1 TK	21	Cover Pin	1	32	Casing (90° Flanged Ports & w/ Heating Jacket)	1
11	Bracket Bushing	1	22	Cover Pin	1			

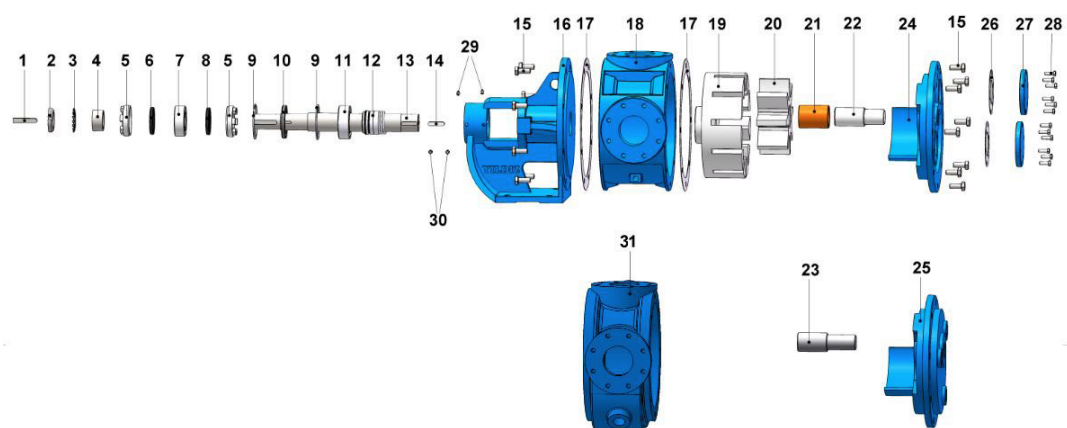


Spare Parts List - Sealed with mechanical seal, and pressure relief valve on cover:



No.	Part Name.	Qty.	No.	Part Name.	Qty.	No.	Part Name.	Qty.
1	Coupling Key 14x9x80 AB	1	14	Rotor Key 12x8x55 A	1	27	Bypass O-Ring	1
2	Lock Nut	1	15	Hex Bolt M16x40	16	28	Valve	1
3	Lock Washer	1	16	Bracket	1	29	Spring	1
4	Spacer	1	17	Bracket & Cover Gasket	2	30	Washer	1
5	Adjusting Nut	2	18	Casing (w/ 90° Flanged Ports)	1	31	Bypass Cover	1
6	Lip Seal $\phi 68 \times \phi 90 \times 10$	1	19	Rotor Gear	1	32	Cap O-Ring	1
7	Ball Bearing (3211)	1	20	Idler Gear	1	33	Nut M16	1
8	Lip Seal $\phi 60 \times \phi 90 \times 10$	1	21	Idler Bushing	1	34	Adjusting Screw M16x90	1
9	Internal Circlip ($\phi 110$)	2	22	Cover Pin	1	35	Cap	1
10	Lip Seal $\phi 60 \times \phi 110 \times 12$	1	23	Cover	1	36	Greasing Fitting R3/8"	2
11	Ball Bearing (3212)	1	24	Bypass Gasket	2	37	Grub Screw M12x16	4
12	Mechanical Seal $\phi 60$	1	25	Pressure Relief Valve - Bypass	1	38	Casing (90° Flanged Ports & w/ Heating Jacket)	1
13	Shaft	1	26	Hex Bolt M10x30	12			

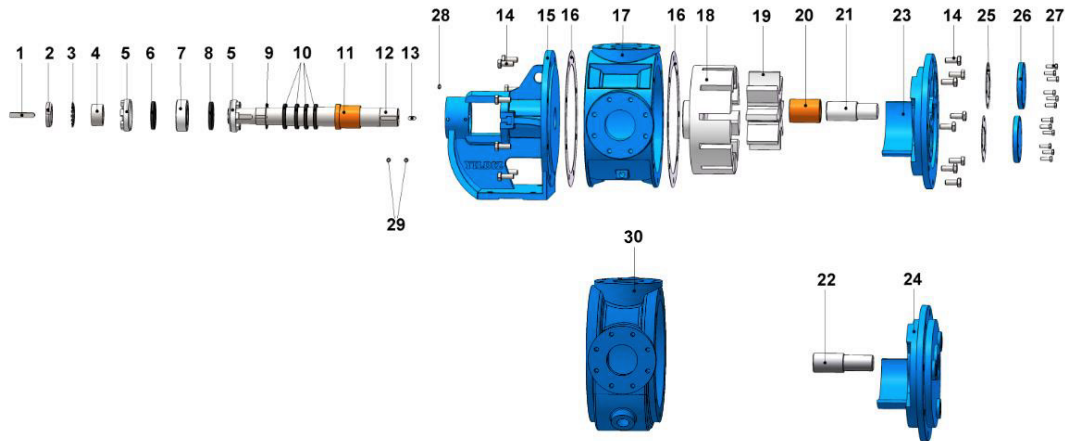
Spare Parts List - Sealed with mechanical seal, jacketed, and with blind cover:



No.	Part Name.	Qty.	No.	Part Name.	Qty.	No.	Part Name.	Qty.
1	Coupling Key 14x9x80 AB	1	12	Mechanical Seal $\phi 60$	1	23	Jacketed Cover Pin	1
2	Lock Nut	1	13	Shaft	1	24	Cover	1
3	Lock Washer	1	14	Rotor Key 12x8x55 A	1	25	Jacketed Cover	1
4	Spacer	1	15	Hex Bolt M16x40	16	26	Bypass Gasket	2
5	Adjusting Nut	2	16	Bracket	1	27	Pressure Relief Valve - Bypass	2
6	Lip Seal $\phi 68 \times \phi 90 \times 10$	1	17	Bracket & Cover Gasket	2	28	Hex Bolt M10x30	12
7	Ball Bearing (3211)	1	18	Casing (w/ 90° Flanged Ports)	1	29	Greasing Fitting R3/8"	2
8	Lip Seal $\phi 60 \times \phi 90 \times 10$	1	19	Rotor Gear	1	30	Grub Screw M8x20	4
9	Internal Circlip ($\phi 110$)	2	20	Idler Gear	1	31	Casing (90° Flanged Ports & w/ Heating Jacket)	1
10	Lip Seal $\phi 60 \times \phi 110 \times 12$	1	21	Idler Bushing	1			
11	Ball Bearing (3212)	1	22	Cover Pin	1			

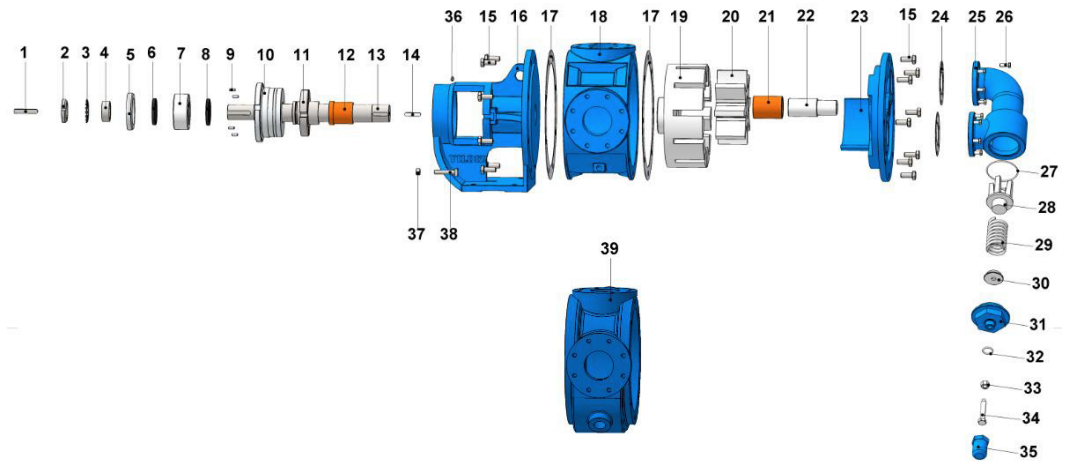


Spare Parts List - Sealed with lip seal, jacketed, and with blind cover:



No.	Part Name.	Qty.	No.	Part Name.	Qty.	No.	Part Name.	Qty.
1	Coupling Key 14x9x80 AB	1	11	Bracket Bushing	1	21	Cover Pin	1
2	Lock Nut	1	12	Shaft	1	22	Jacketed Cover Pin	1
3	Lock Washer	1	13	Rotor Key 12x8x55 A	1	23	Cover	1
4	Spacer	1	14	Hex Bolt M16x40	16	24	Jacketed Cover	1
5	Adjusting Nut	2	15	Bracket	1	25	Bypass Gasket	2
6	Lip Seal $\phi 68 \times \phi 90 \times 10$	1	16	Bracket & Cover Gasket	2	26	Pressure Relief Valve - Bypass	2
7	Ball Bearing (3211)	1	17	Casing (w/ 90° Flanged Ports)	1	27	Hex Bolt M10x30	12
8	Lip Seal $\phi 60 \times \phi 90 \times 10$	1	18	Rotor Gear	1	28	Greasing Fitting R3/8"	1
9	Internal Circlip ($\phi 80$)	1	19	Idler Gear	1	29	Grub Screw M8x20	4
10	Lip Seal ($\phi 60 \times \phi 80 \times 10$)	4	20	Idler Bushing	1	30	Casing (90° Flanged Ports & w/ Heating Jacket)	1

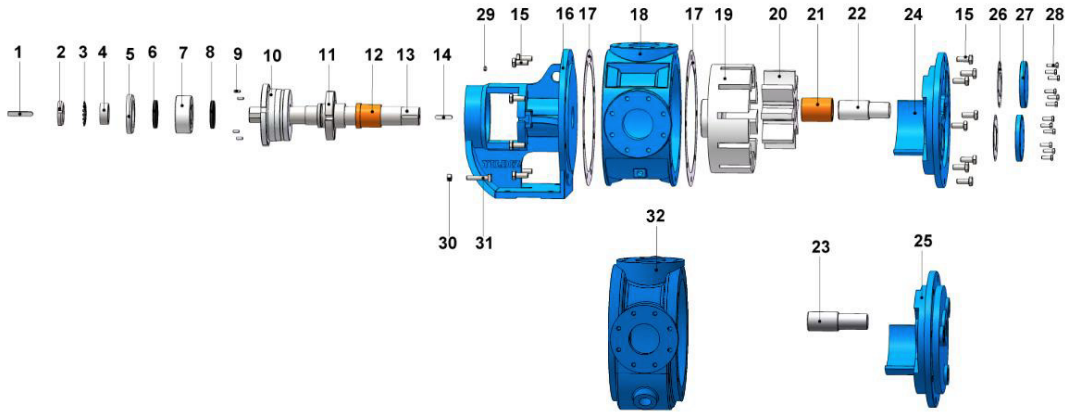
Spare Parts List - Sealed with cartex mechanical seal, and pressure relief valve on cover:



No.	Part Name.	Qty.	No.	Part Name.	Qty.	No.	Part Name.	Qty.
1	Coupling Key 14x9x80 AB	1	14	Rotor Key 12x8x55 A	1	27	Bypass O-Ring	1
2	Lock Nut	1	15	Hex Bolt M16x40	16	28	Valve	1
3	Lock Washer	1	16	Bracket (w/ Cartex Mechanical Seal)	1	29	Spring	1
4	Spacer (Cartex)	1	17	Bracket & Cover Gasket	2	30	Washer	1
5	Pulley Cover	1	18	Casing (w/ 90° Flanged Ports)	1	31	Bypass Cover	1
6	Lip Seal $\phi 68 \times \phi 90 \times 10$	1	19	Rotor Gear	1	32	Cap O-Ring	1
7	Ball Bearing (3311)	1	20	Idler Gear	1	33	Nut M16	1
8	Lip Seal $\phi 60 \times \phi 90 \times 10$	1	21	Idler Bushing	1	34	Adjusting Screw M16x90	1
9	Grub Screw M8x20	4	22	Cover Pin	1	35	Cap	1
10	Pulley	1	23	Cover	1	36	Greasing Fitting R3/8"	1
11	Cartex Mechanical Seal $\phi 60$	1	24	Bypass Gasket	2	37	Nut M14	2
12	Bracket Bushing	1	25	Pressure Relief Valve - Bypass	1	38	Square Screw M14x70	2
13	Shaft	1	26	Hex Bolt M10x30	12	39	Casing (90° Flanged Ports & w/ Heating Jacket)	1

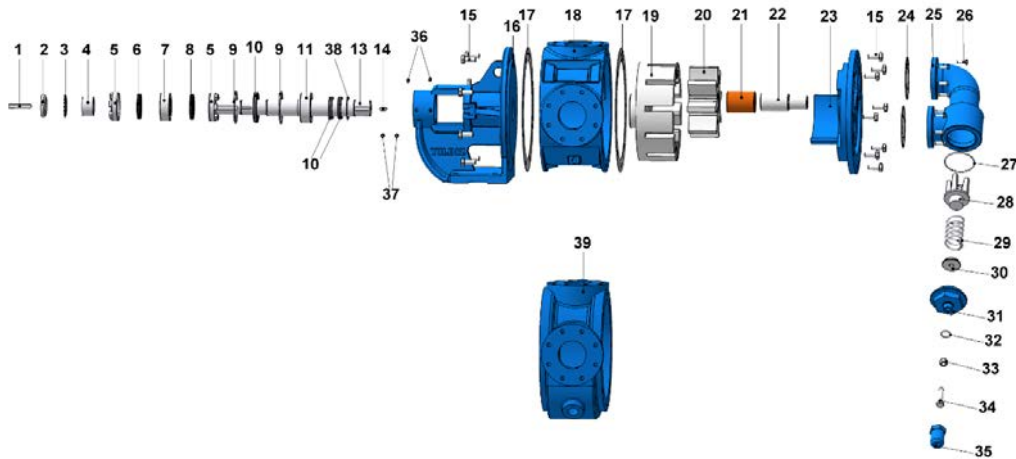


Spare Parts List - Sealed with cartex mechanical seal, jacketed, and with blind cover:



No.	Part Name.	Qty.	No.	Part Name.	Qty.	No.	Part Name.	Qty.
1	Coupling Key 12x9x80 AB	1	12	Bracket Bushing	1	23	Jacketed Cover Pin	1
2	Lock Nut	1	13	Shaft	1	24	Cover	1
3	Lock Washer	1	14	Rotor Key 12x8x55 A	1	25	Jacketed Cover	1
4	Spacer (Cartex)	1	15	Hex Bolt M16x40	16	26	Bypass Gasket	2
5	Pulley Cover	1	16	Bracket (w/ Cartex Mechanical Seal)	1	27	Pressure Relief Valve - Bypass	2
6	Lip Seal $\phi 68 \times \phi 90 \times 10$	1	17	Bracket & Cover Gasket	2	28	Hex Bolt M10x30	12
7	Ball Bearing (3311)	1	18	Casing (w/ 90° Flanged Ports)	1	29	Greasing Fitting R3/8"	1
8	Lip Seal $\phi 60 \times \phi 90 \times 10$	1	19	Rotor Gear	1	30	Nut M14	2
9	Grub Screw M8x20	4	20	Idler Gear	1	31	Square Screw M14x70	2
10	Pulley	1	21	Idler Bushing	1	32	Casing (90° Flanged Ports & w/ Heating Jacket)	1
11	Cartex Mechanical Seal $\phi 60$	1	22	Cover Pin	1			

Spare Parts List - Sealed with chesteron lip seal, and pressure relief valve on cover:



No.	Part Name.	Qty.	No.	Part Name.	Qty.	No.	Part Name.	Qty.
1	Coupling Key 14x9x80 AB	1	14	Rotor Key 12x8x55 A	1	27	Bypass O-Ring	1
2	Lock Nut	1	15	Hex Bolt M16x40	16	28	Valve	1
3	Lock Washer	1	16	Bracket	1	29	Spring	1
4	Spacer	1	17	Bracket & Cover Gasket	2	30	Washer	1
5	Adjusting Nut	2	18	Casing (w/ 90° Flanged Ports)	1	31	Bypass Cover	1
6	Lip Seal $\phi 68 \times \phi 90 \times 10$	1	19	Rotor Gear	1	32	Cap O-Ring	1
7	Ball Bearing (3211)	1	20	Idler Gear	1	33	Nut M16	1
8	Lip Seal $\phi 60 \times \phi 90 \times 10$	1	21	Idler Bushing	1	34	Adjusting Screw M16x90	1
9	Internal Circlip ($\phi 110$)	2	22	Cover Pin	1	35	Cap	1
10	Lip Seal $\phi 60 \times \phi 110 \times 12$	1	23	Cover	1	36	Greasing Fitting R3/8"	2
11	Ball Bearing (3212)	1	24	Bypass Gasket	2	37	Grub Screw M12x16	4
12	Chesterton Lip Seal $\phi 35 \times \phi 53 \times 10$	2	25	Pressure Relief Valve - Bypass	1	38	Internal Circlip ($\phi 80$)	1
13	Shaft	1	26	Hex Bolt M10x30	12	39	Casing (90° Flanged Ports & w/ Heating Jacket)	1