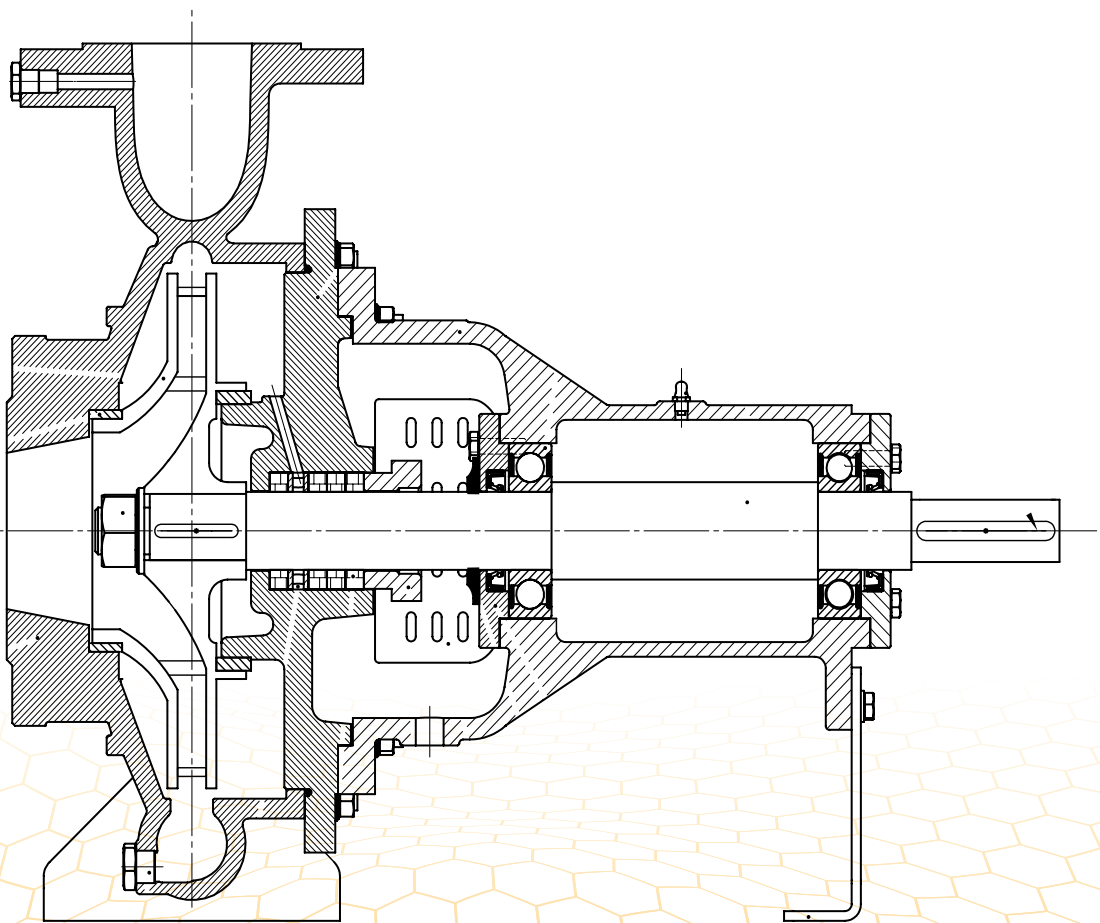




END SUCTION CENTRIFUGAL PUMP



General Information

Discharge Flange	ON 32 - DN 250
Capacity	1700 m ³ /h
Head	100m
Frequency	Three-phase 50Hz - 60Hz*
Temperature of Pumped Liquid	From -25°C to+ 140°C
Maximum Operating Pressure	10 bar (16 bar)*

Depending on the type of liquid, operating temperature and pressure. The pump material changes. Please contact our company for detailed information.

Transferable Liquids

- ▶ Clean or slightly dirty, non-abrasive, low-viscosity fluids.

Shaft Sealing

- ▶ Soft packing is used in standard production.
- ▶ it is possible to use mechanical seal according to customer request or type of liquid.

Applications

Water Treatment and Pressurization	Power Plants
Heating, Ventilating and Air Conditioning	Oil Industry
Agricultural Irrigation and Drainage	Chemical Industry
Food and beverage Industry	Mining
Iron and Steel Industry	Marine
Building System	Fire Fighting

Design Features

- ▶ ETKF series pumps have designed for pumping non-abrasive and small particulars liquids.
- ▶ ETKF series pump has just one impeller, pump and motor is connecting by coupling. it gives your advantages for easy disassembling.
- ▶ Pump Dimensions are according to EN 733 - DiN 24255 standard.
- ▶ Suction and discharge, flanges according to EN 1092-2 / PN 16.
- ▶ ETKF series have a closed impeller, impeller blades located between the balancing holes to minimize the axial load is taken in dynamic load balancing.
- ▶ Sealing is provided by gland packing. Sealing is provided by also mechanical seal as customer request.
- ▶ Easy disassembly to pump and change impeller, bearings, and seals.
- ▶ All impellers are statically and dynamically balanced according to ISO 1940 class 6.3.
- ▶ in addition to 29 models, 10 complementary models are designed in according to EN 733 standards. The main dimensions of complementary models may differ from other manufacturers.
- ▶ Direction of rotation is clockwise viewed from the driver end.
- ▶ Optionally, pumps can be manufactured with shaft bushings and/or wear rings.

Pump Code	
ETKF	Nominal Impeller Diameter (mm)
100	Discharge Flange (DN)
250	Pump Type

Part List	Volute Casing	Seal Box	Impeller	Shaft	Bearing Housing	Wear Ring	Shaft Wear Bushing	Mech. Seal (*)
0.6025	☉	☉	☉		☉	☉		
0.7040	☉	☉	☉		☉	☉		
1.7043	☉	☉	☉		☉	☉		
1.0619	☉	☉	☉		☉	☉		
1.4308	☉	☉	☉		☉	☉		
1.4309	☉	☉	☉		☉	☉		
1.4308	☉	☉	☉		☉	☉		
1.4309	☉	☉	☉		☉	☉		
1.4500	☉	☉	☉			☉		
1.4517	☉	☉	☉			☉		
1.4469	☉	☉	☉			☉		
1.4317	☉	☉	☉			☉		
1.4008	☉	☉	☉			☉		
2.150.01	☉	☉	☉			☉		
2.150.01			☉			☉		
2.150.01			☉			☉		
1.0503				☉			☉	
1.4021				☉			☉	
1.4021+QT				☉			☉	
1.4301				☉			☉	
1.4404				☉			☉	
1.4460			☉					
1.4462				☉			☉	

EN 12756 / DIN 24250

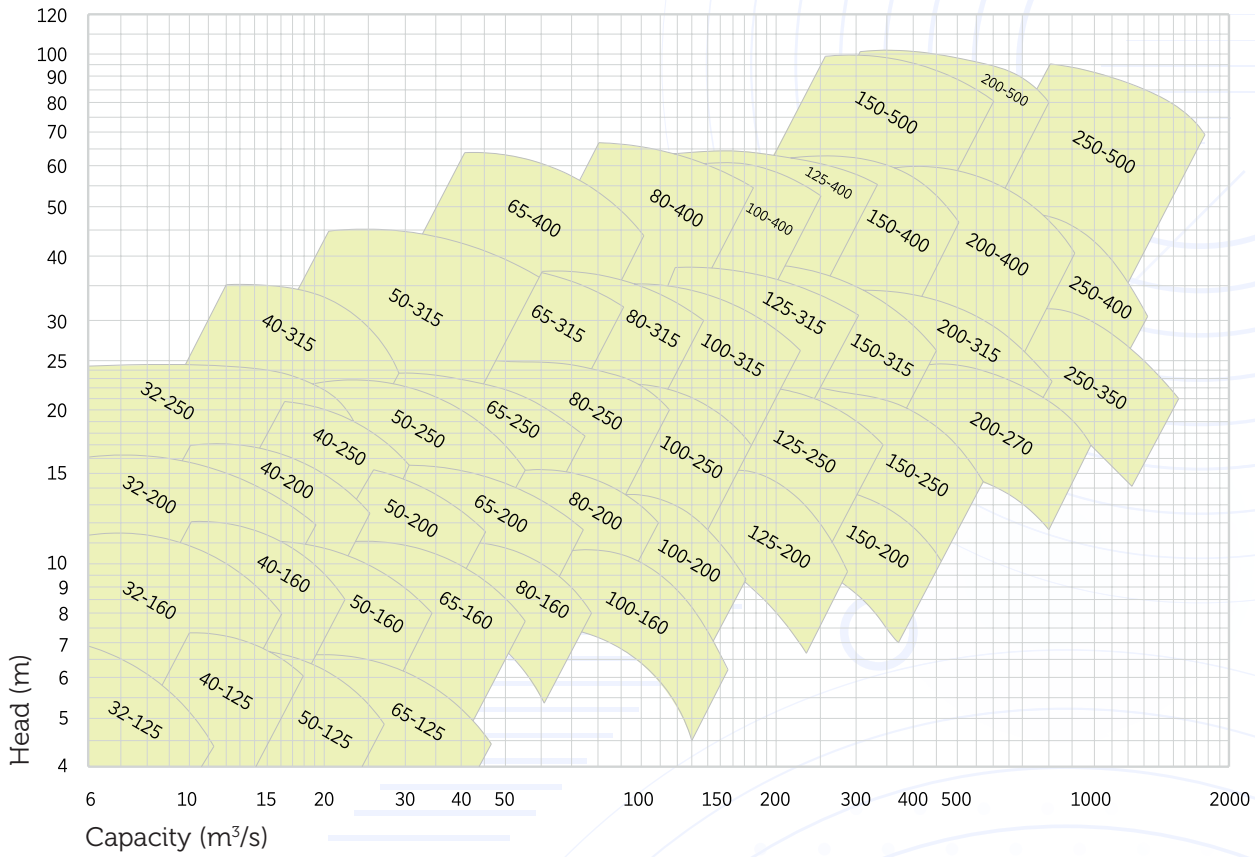
(*) Options: Different brand and type mechanical seal can be use can according to customer request.

☉ Standart Manufacturing ☉ Optional

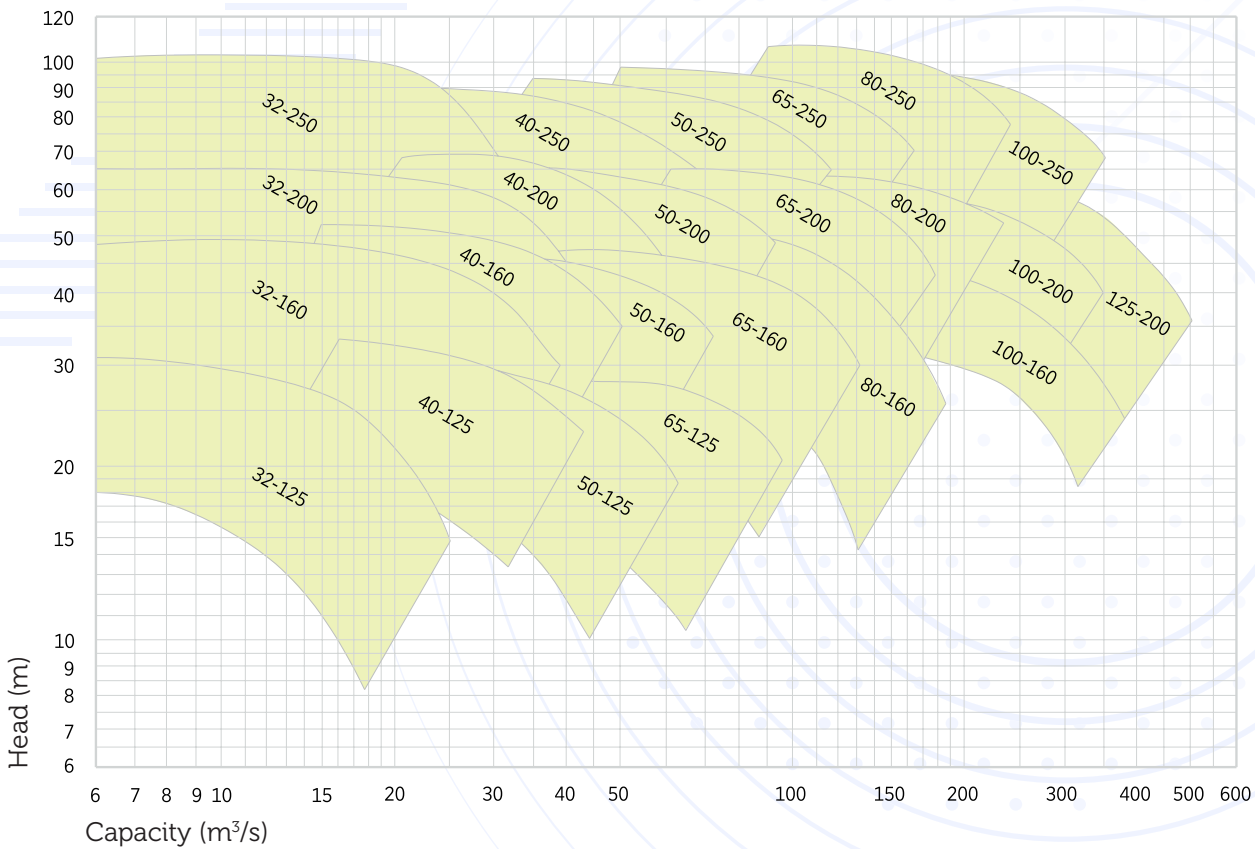
Description	DIN	EN	AISI/SAE/ASTM
Cast Iron	0.6025	EN-GJL-250 (GG25)	A 48 Class 40-B
Ductile Iron Casting	0.7040	EN-GJS-400-18-LT (GGG 40)	A 536 60-40-18
Ductile Iron Casting	1.7043	EN-GJS-400-18-LT (GGG 40.3)	A 536 60-40-18
Steel Casting	1.0619	GP 240 GHGS-C25	A2 16 WCB
Chrome Nickel Steel Casting	1.4308	G-X5 Cr-Ni 19-10	A 351 CF8
Chrome Nickel Steel Casting (Low Carbon)	1.4309	G-X5 Cr-Ni 19-11	A351 CF3
Chrome Nickel Molybdenum Steel Casting	1.4308	G-X5 Cr-Ni-Mo 19-11-2	A 351 CF8M
Chrome Nickel Molybdenum Steel Casting (L.C)	1.4309	G-X2 Cr-Ni-Mo 19-11-2	A 351 CF3M
Austenitic Steel Casting	1.4500	G-X7 Cr-Ni-Mo-Cu N 25-6-3-3	A 351 CN7M
Austenitic - Ferritic Steel Casting (Dublex)	1.4517	G-X2 Cr-Ni-Mo-Cu N 25-6-3-3	A 890 CD4MCuN
Austenitic - Ferritic Steel Casting (S.D.)	1.4469	G-X2 Cr-Ni-Mo-N 26-7-4	A 890 CE3MN
Martensitic Stainless Steel Casting	1.4317	G-X4 Cr-Ni 13-4	A 352 CA6NM
Martensitic Stainless Steel Casting	1.4008	G-X7 Cr-Ni-Mo 12-1	A 217 CA15
Bronze Casting (Tinned)	2.150.01	G-Cu Sn 10	B 427 C90700
Bronze Casting (Nickel Alloy)	2.150.01	G-Cu Al10 Ni	B 148 C95500
Bronze Casting (Leaded)	2.150.01	G-Cu Sn 5 Zn Pb	B 584 C83600
Carbon Steel	1.0503	C45	AISI 1045
Chromium Steel	1.4021	X20 Cr13	A 276 Type 420
Chrome Steel (Heat Treatment)	1.4021	X20 Cr13	A 276 Type 420+QT
Chrome Nickel Steel	1.4301	X5 Cr-Ni 18-10	A 276 Type 304
Chrome Nickel Molybdenum Steel (L.C.)	1.4404	X2 Cr-Ni-Mo-N 17-12-2	A 276 Type 316L
Duplex (Austenitic-Ferritic) Steel	1.4460	X3 Cr-Ni-Mo-N 27-5-2	AISI 329
Duplex (Austenitic-Ferritic) Steel	1.4462	X2 Cr-Ni-Mo-N 22-5-3	UNS S32205

Mechanical Seal				Soft Packing				
Pump Type	Shaft	Mechanical Seal	Bearing Box	Bearing		Soft Packing Support	Soft Packing Length	Casing Support
				Coupling Side	Impeller Side			
32-125	1 No.	MG1 30 mm	1 No.	2x6306		1 No.	8-380	1 No.
32-160	1 No.	MG1 30 mm	2 No.	2x6306		1 No.	8-380	2 No.
32-200	1 No.	MG1 30 mm	1 No.	2x6306		1 No.	8-380	3 No.
32-250	2 No.	MG1 30 mm	2 No.	2x6306		1 No.	8-380	4 No.
40-125	1 No.	MG1 30 mm	1 No.	2x6306		1 No.	8-380	1 No.
40-160	1 No.	MG1 30 mm	2 No.	2x6306		1 No.	8-380	2 No.
40-200	1 No.	MG1 30 mm	1 No.	2x6306		1 No.	8-380	3 No.
40-250	2 No.	MG1 30 mm	2 No.	2x6306		1 No.	8-380	4 No.
40-315	3 No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	7 No.
50-125	1 A No.	MG1 30 mm	1 No.	2x6306		1 No.	8-380	2 No.
50-160	1 A No.	MG1 30 mm	2 No.	2x6306		1 No.	8-380	3 No.
50-200	1 A No.	MG1 30 mm	1 No.	2x6306		1 No.	8-380	3 No.
50-250	4 No.	MG1 30 mm	2 No.	2x6306		1 No.	8-380	4 No.
50-315	5 No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	8 No.
65-125	1 B No.	MG1 30 mm	1 No.	2x6306		1 No.	8-380	3 No.
65-160	1 B No.	MG1 30 mm	2 No.	2x6306		1 No.	8-380	3 No.
65-200	1 A No.	MG1 30 mm	1 No.	2x6306		1 No.	8-380	4 No.
65-250	5 No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	7 No.
65-315	5 No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	8 No.
65-400	5 No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	10 No.
80-160	1 A No.	MG1 30 mm	2 No.	2x6306		1 No.	8-380	4 No.
80-200	5 No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	6 No.
80-250	5 A No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	7 No.
80-315	5 No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	9A No.
80-400	6 No.	MG1 30 mm	4 No.	2x6310		3 No.	12-630	9B No.
100-160	1 No.	MG1 30 mm	2 No.	2x6306		1 No.	8-380	5 No.
100-200	5 No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	7 No.
100-250	5 A No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	8 No.
100-315	5 A No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	9A No.
100-400	6 no.	MG1 50 mm	4 no.	2x6310		3 No.	12-630	9B No.
125-200	5 A No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	9A No.
125-250	5 A No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	9A No.
125-315	6 A No.	MG1 50 mm	5 No.	2x6310		3 No.	12-630	9B No.
125-400	6 No.	MG1 50 mm	4 No.	2x6310		3 No.	12-630	12 No.
150-200	5 A No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	11 No.
150-250	5 A No.	MG1 40 mm	3 No.	2x6308		2 No.	10-500	11 No.
150-315	6 A No.	MG1 50 mm	5 No.	2x6310		3 No.	12-630	9B No.
150-400	6 No.	MG1 50 mm	4 No.	2x6310		3 No.	12-630	12 No.
150-500	7 No.	MG1 60 mm	6 No.	2x6312		4 No.	12-940	14 No.
200-270	8 No.	MG1 50 mm	5 No.	2x6310		3 No.	12-630	13 No.
200-315	9 No.	MG1 50 mm	5 No.	2x6310		3 No.	12-630	13 No.
200-400	7 No.	MG1 60 mm	6 No.	2x6312		4 No.	12-940	14 No.
200-500	10 No.	MG1 85 mm	7 No.	7315	NU 2315	5 No.	16-1335	15 No.
250-350	10 No.	MG1 85 mm	7 No.	7315	NU 2315	4 No.	16-1335	15A No.
250-400	7 No.	MG1 60 mm	6 No.	2x6312		5 No.	12-940	14 No.
250-500	10 No.	MG1 85 mm	7 No.	7315	NU 2315	5 No.	16-1335	15A No.

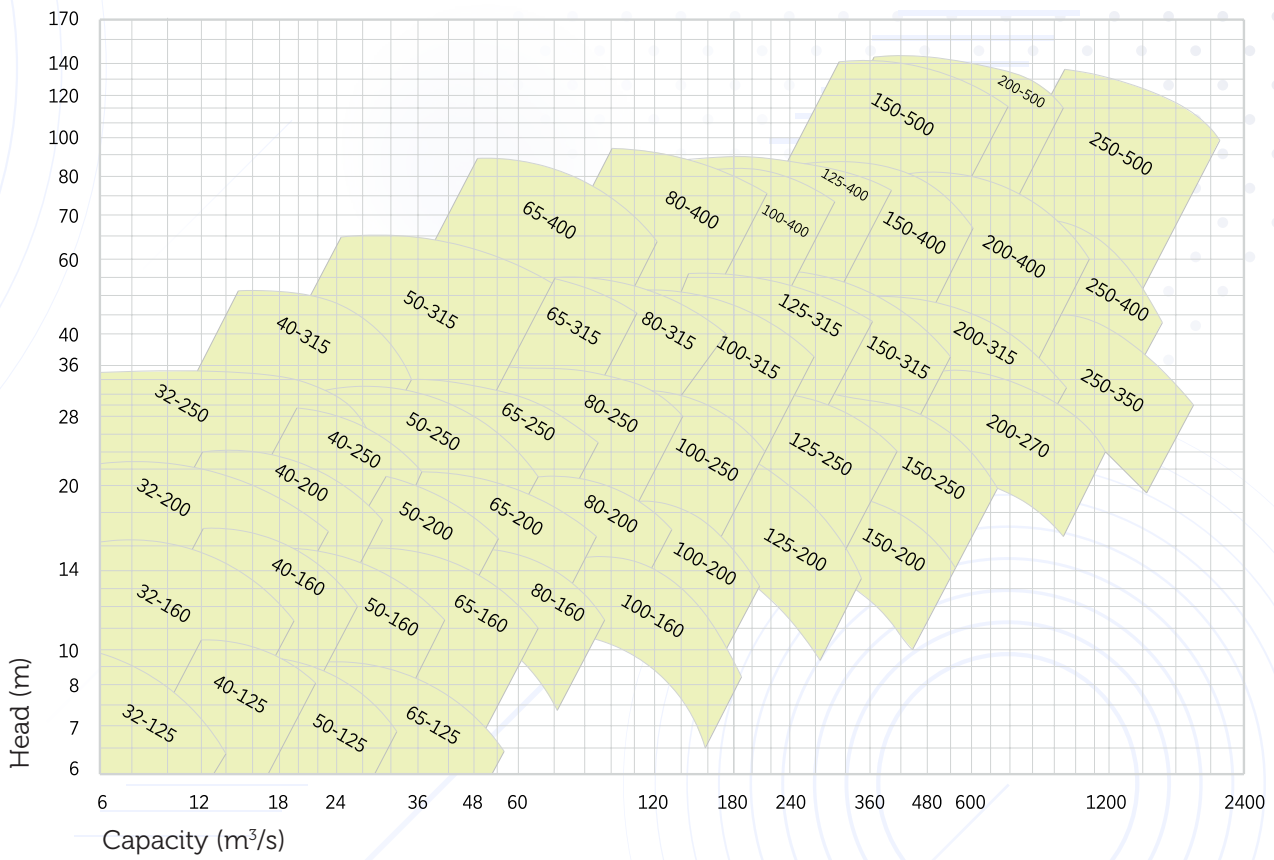
1450 rpm (50 Hz)



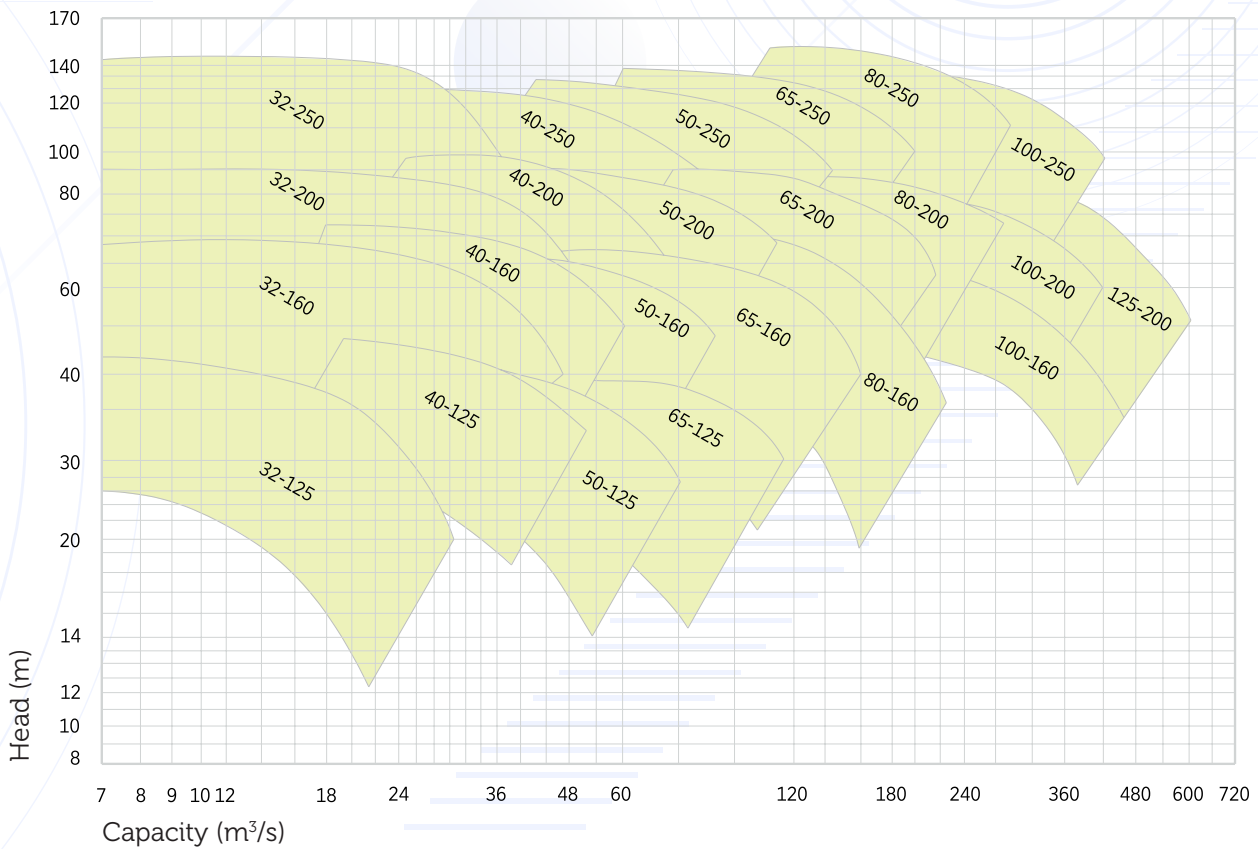
2900 rpm (50 Hz)

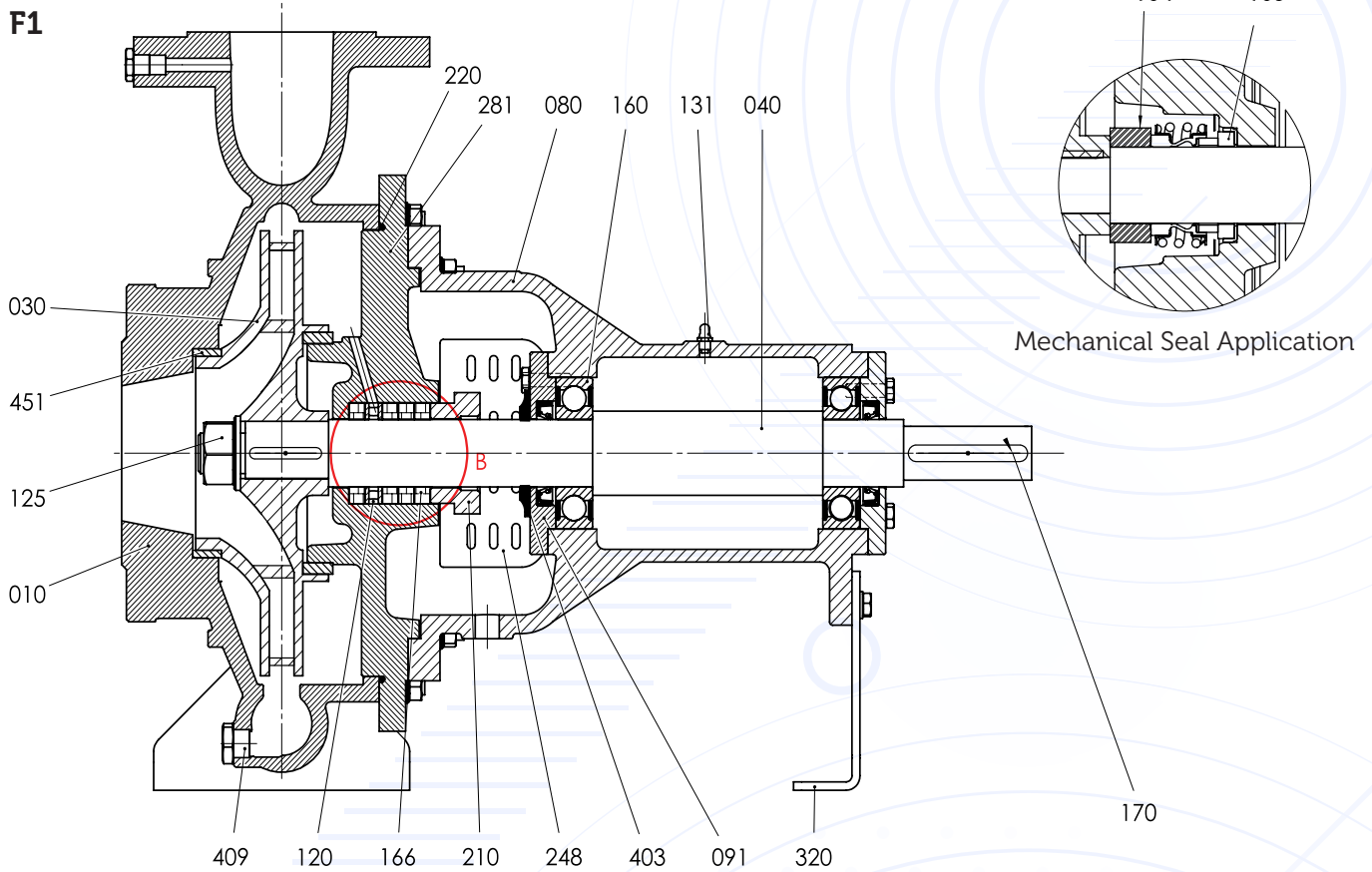


1750 rpm (60 Hz)

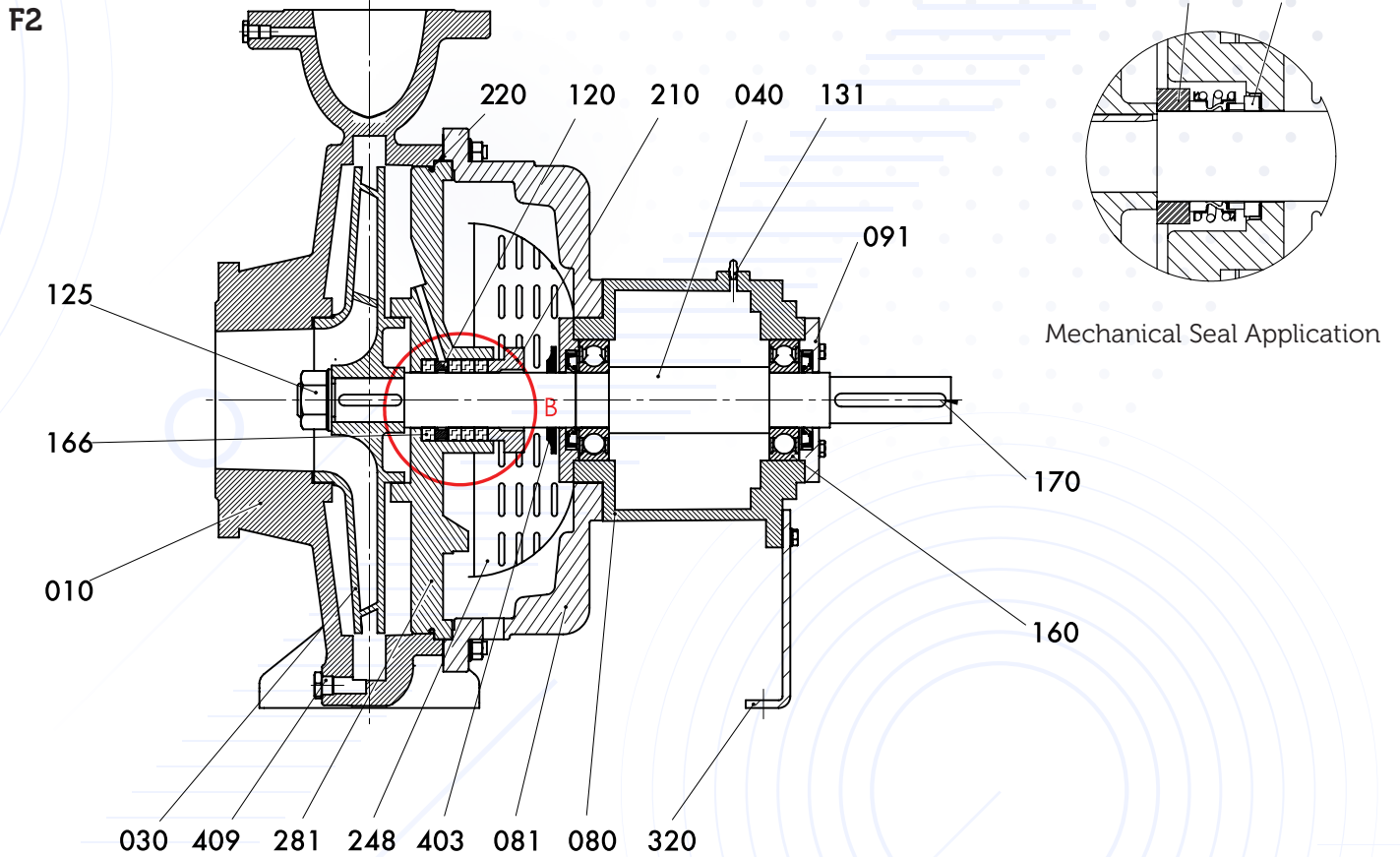


3500 rpm (60 Hz)

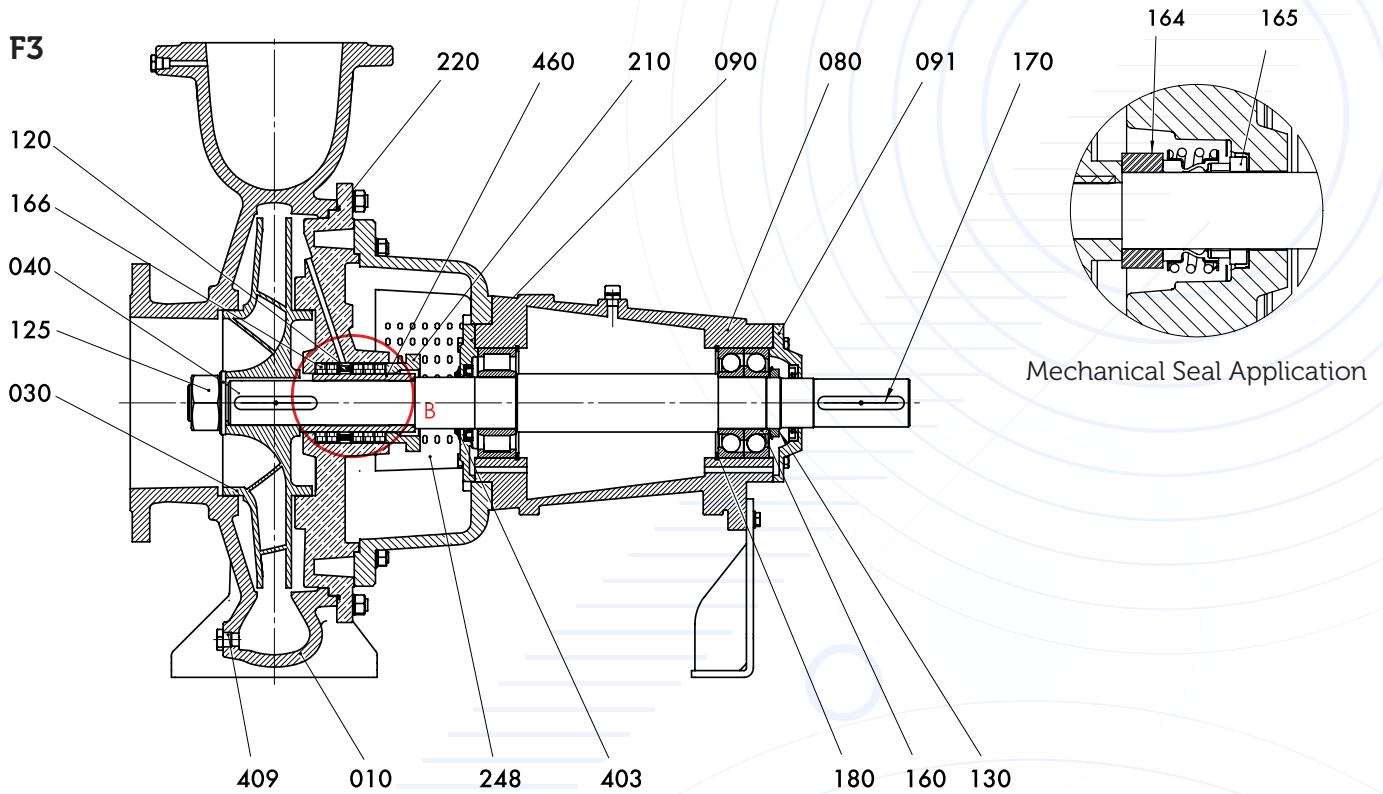




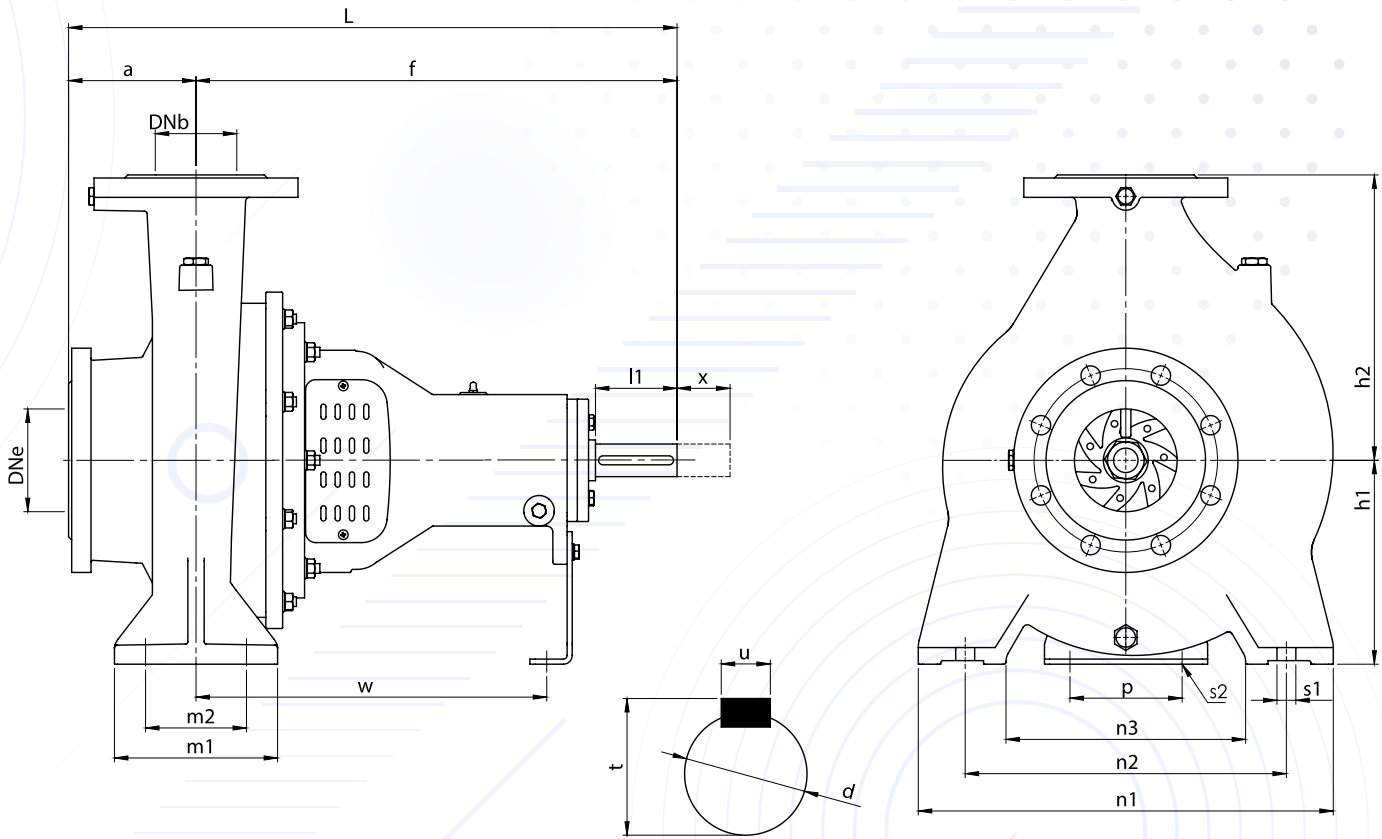
Part List	Part No.
Volute Casting	010
Impeller	030
Shaft	040
Bearing Housing	080
Bearing Cover	091
Flushing Ring	120
Nut	125
Grease Nipple	131
Bearing	160
Mechanical Seal Setting Sleeve	164
Mechanical Seal	165
Soft Packing	166
Key	170
Connection Support	210
O-Ring	220
Protection Sheet	248
Seal Box	281
Supporting Feet	320
Throw Protection	403
Drain Plug	409
Wear Ring	451



Part List	Part No.
Volute Casting	010
Impeller	030
Shaft	040
Bearing Housing	080
Interconnection Cage	081
Bearing Cover	091
Flushing Ring	120
Nut	125
Grease Nipple	131
Bearing	160
Mechanical Seal Setting Sleeve	164
Mechanical Seal	165
Soft Packing	166
Key	170
Connection Support	210
O-Ring	220
Protection Sheet	248
Seal Box	281
Supporting Feet	320
Throw Protection	403
Drain Plug	409



Part List	Part No.
Volute Casting	010
Impeller	030
Shaft	040
Bearing Housing	080
Bearing Cover (Inside)	090
Bearing Cover (Coupling)	091
Flushing Ring	120
Nut	125
Bearing Setting Sleeve	130
Bearing	160
Mechanical Seal Setting Sleeve	164
Mechanical Seal	165
Soft Packing	166
Key	170
Ring	180
Connection Support	210
O-Ring	220
Protection Sheet	248
Throw Protection	403
Drain Plug	409
Shaft Sleeve	460

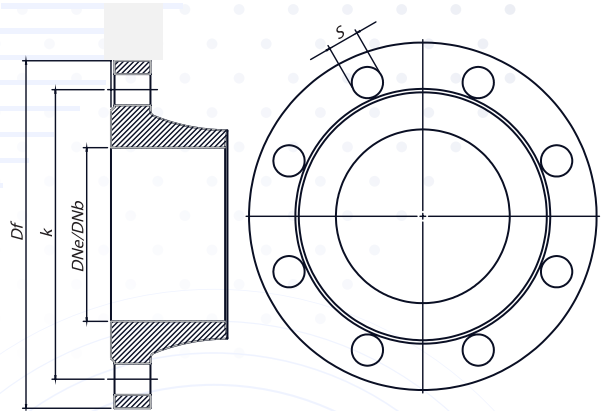


Pump Type		Form	Outside Dimensions							Supporting Foot Dimensions							Shaft Dimensions					Spacing	W. kg	
EN 733	Other		DNe	DNb	a	f	L	h1	h2	m1	m2	n1	n2	n3	s1	p	s2	w	d	l1	t			u
32-125		F1	50	32	80	360	440	112	140	100	70	190	140	90	14	110	14	260	24	50	27	8	100	30
32-160		F1	50	32	80	360	440	132	160	100	70	240	190	140	14	110	14	260	24	50	27	8	100	35
32-200		F1	50	32	80	360	440	160	180	100	70	240	190	140	14	110	14	260	24	50	27	8	100	40
	32-250	F1	50	32	100	360	460	180	225	125	95	320	255	190	14	110	14	260	24	50	27	8	100	52
40-125		F1	65	40	80	360	440	112	140	100	70	210	160	110	14	110	14	260	24	50	27	8	100	31
40-160		F1	65	40	80	360	440	132	160	100	70	240	190	140	14	110	14	260	24	50	27	8	100	37
40-200		F1	65	40	100	360	460	160	180	100	70	265	212	165	14	110	14	260	24	50	27	8	100	44
40-250		F1	65	40	100	360	460	180	225	125	95	320	250	190	14	110	14	260	24	50	27	8	100	55
	40-315	F1	65	40	100	460	560	200	250	125	95	345	280	190	14	110	14	335	32	80	35	10	110	77
50-125		F1	65	50	100	360	460	132	160	100	70	240	190	140	14	110	14	260	24	50	27	8	100	35
50-160		F1	65	50	100	360	460	160	180	100	70	265	212	165	14	110	14	260	24	50	27	8	100	43
50-200		F1	65	50	100	360	460	160	200	100	70	265	212	165	14	110	14	260	24	50	27	8	100	45
50-250		F1	65	50	100	360	460	180	225	125	95	320	250	190	14	110	14	260	24	50	27	8	100	60
	50-315	F1	80	50	125	470	595	225	280	125	95	345	280	190	19	110	14	340	32	80	38	10	140	88
65-125		F1	80	65	100	360	460	160	180	125	95	280	212	150	14	110	14	260	24	50	27	8	100	38
65-160		F1	80	65	100	360	460	160	200	125	95	280	212	150	14	110	14	260	24	50	27	8	100	47
65-200		F1	80	65	100	360	460	180	225	125	95	320	250	190	14	110	14	260	24	50	27	8	140	62
65-250		F1	80	65	100	470	570	200	250	160	120	360	280	200	19	110	14	340	32	80	35	10	140	82
65-315		F1	80	65	125	470	595	225	280	160	120	400	315	240	19	110	14	340	32	80	35	10	140	97
	65-400	F1	100	65	125	470	595	260	355	160	120	435	355	275	19	110	14	340	32	80	35	10	140	118

Pump Type		Form	Outside Dimensions							Supporting Foot Dimensions							Shaft Dimensions					Spacing	W. kg	
EN 733	Other		DN _e	DN _b	a	f	L	h ₁	h ₂	m ₁	m ₂	n ₁	n ₂	n ₃	s ₁	p	s ₂	w	d	I ₁	t			u
80-160		F1	100	80	125	360	485	180	225	125	95	320	250	190	14	110	14	260	24	50	27	8	140	51
80-200		F1	100	80	125	470	595	180	250	125	95	345	280	215	14	110	14	340	32	80	35	10	140	73
80-250		F1	100	80	125	470	595	200	280	160	120	400	315	240	19	110	14	340	32	80	35	10	140	90
80-315		F1	100	80	125	470	595	250	315	160	120	400	315	240	19	110	14	340	32	80	35	10	140	103
	80-400	F2	100	80	125	530	655	280	355	160	120	440	355	270	19	110	19	370	42	110	45	12	140	156
	80-400 EFF	F2	100	80	125	535	650	280	355	160	120	440	355	270	19	110	14	370	42	110	45	12	140	152
	100-160	F1	125	100	125	370	495	200	280	160	120	360	280	200	19	110	14	275	24	50	37	8	140	67
100-200		F1	125	100	125	470	595	200	280	160	120	360	280	200	19	110	14	340	32	80	35	10	140	82
100-250		F1	125	100	140	470	610	225	280	160	120	400	315	240	19	110	14	340	32	80	35	10	140	90
100-315		F1	125	100	140	470	610	250	315	160	120	400	315	240	19	110	14	340	32	80	35	10	140	110
100-400		F2	125	100	140	530	670	280	355	200	150	500	400	300	23	110	14	370	42	110	45	12	140	170
100-400 EFF		F2	125	100	140	530	670	280	355	200	150	500	400	300	23	110	14	370	42	110	45	12	140	175
	125-200	F1	150	125	140	470	610	250	315	160	120	400	315	240	19	110	14	340	32	80	35	10	140	100
125-250		F1	150	125	140	470	610	250	355	160	120	400	315	240	19	110	14	340	32	80	35	10	140	112
125-315		F2	150	125	140	530	670	280	355	200	150	500	400	300	23	110	14	370	42	110	45	12	140	167
125-400		F2	150	125	140	530	670	315	400	200	150	500	400	300	23	110	14	370	42	110	45	12	140	202
125-400 EFF		F2	150	125	140	530	670	315	400	200	150	500	400	300	23	110	14	370	42	110	45	12	140	195
	150-200	F1	200	150	160	470	630	280	355	200	150	505	400	300	23	110	14	340	32	80	35	10	190	135
	150-250	F1	200	150	160	470	630	280	380	200	150	510	400	300	23	110	14	340	32	80	35	10	170	148
150-315		F2	200	150	160	530	690	280	400	200	150	550	450	350	23	110	14	370	42	110	45	12	140	182
150-400		F2	200	150	160	530	690	315	450	200	150	550	450	350	23	110	14	370	42	110	45	12	140	210
150-400 EFF		F2	200	150	160	530	690	315	450	200	150	550	450	350	23	110	14	370	42	110	45	12	140	207
	150-500	F2	200	150	200	730	930	400	525	250	200	720	600	435	27	140	20	530	55	110	58	16	170	400
	200-270	F2	250	200	195	565	760	355	450	250	210	600	500	350	25	140	20	365	42	110	45	12	230	230
	200-315	F2	250	200	200	550	750	355	450	250	200	600	500	360	23	110	14	360	42	110	45	12	190	240
	200-400	F2	250	200	180	725	910	400	500	250	200	600	500	360	27	140	20	510	55	110	58	16	205	360
	200-500	F3	250	200	210	925	1135	400	525	300	240	725	600	430	27	140	20	645	70	140	73	20	255	560
	250-350	F3	300	250	258	960	1215	450	550	300	260	650	515	375	27	160	20	675	70	140	73	20	275	470
	250-400	F2	300	250	230	750	980	400	525	300	265	720	600	430	27	140	20	535	55	110	58	16	205	420
	250-500	F3	300	250	225	940	1165	450	630	300	240	725	600	400	27	160	20	655	70	140	73	20	255	670

*x (Spacing): Minimum distance between motor and pump shafts to remove rotor from rear.

Pump Type	Suction & Discharge (PN16)			
	Df	k	s	n*
32	140	100	19	4
40	150	110	19	4
50	165	125	19	4
65	185	145	19	4
80	200	160	19	8
100	220	180	19	8
125	250	210	19	8
150	285	140	23	8
200	340	195	23	12
250	405	355	28	12
300	460	410	28	12



*n: Number of holes

SEAL SOLUTIONS

Packing Type	Packing Specifications	
	Temperature	Pressure
MG1	t= -20°C... +85°C t= +85°C... +100°C (*)	p1= 16 bar (230 PSI) p1= 16 bar (230 PSI) (*)
H12N	t= +100°C... +140°C	p1= 25 bar (363 PSI)
M7N	t= -20°C... +220°C	p1= 25 bar (363 PSI)
Soft Packing	t= -20°C... +100°C	p1= 10 bar (145 PSI)
	t= -20°C... +140°C (*)	p1= 25 bar (230 PSI) (*)
CARTEX-DN	t= -20°C... +220°C	p1= 25 bar (363 PSI)

(*): Optional

* Note: Above datas mentioned according to TORACO Brand. Packing can be changed according to customer request.

* Different seal application can be used according to liquid specification.

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