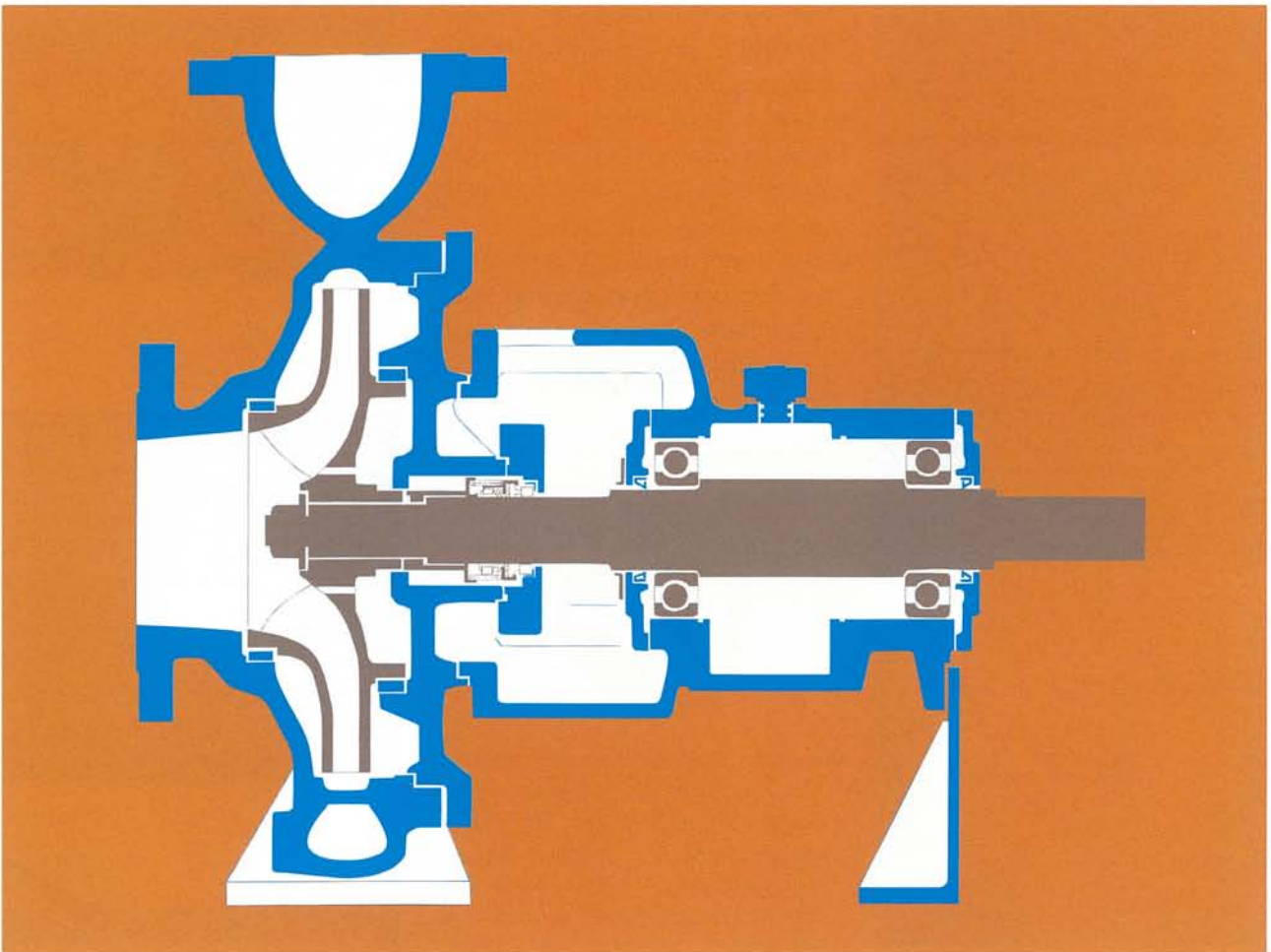


CPCN acc. to ISO2858

Single Suction Process Pumps

NEW



TORISHIMA PUMP

CPCN



TORISHIMA provide a new process pump type CPCN, single suction and single stage centrifugal pump with back pull-out design which complies to ISO Standards No. 2858.

This new pump can meet not only the grade of ISO 5199 Class II which are widely used for petrochemical industries and chemical industries, but also can satisfy very tough requirements we have from high rise building, district heating and cooling, and energy related industries through complete change of design concept for simple design, toughness and easy maintenance.



New Leader

Technical Feature

- High efficiency and very low NPSH req. of this pump save largely the initial costs for the plants and equipment as running costs. This design concept contributes to energy saving and resource saving requirements.
- This pump is designed for space saving installation and high suction pressure to meet needs from high rise building construction. Therefore the pump is compact, durable and reliable design.
- Back pull-out design, mechanical seal type as well as very simple construction give simple operation and very easy maintenance.
- High interchangeability of the parts by thorough standardization and quick delivery time through stock production system backed up by high quality assurance satisfy needs of low price and low maintenance cost.

Application

- Various combination of material and construction provides wide range of application to cover requirements from various industries and public sector such as: Petrochemical industries, chemical industries, general industries, desalination, heating and cooling equipment, energy related industries, cooling water circulation for very high rise building, district heating and cooling, general water transportation and water supply etc.



High Efficiency Impeller

Closed impeller with high efficiency and low NPSH req. to meet energy saving needs.

Furthermore by trimming impeller diameter optimum operation is possible for more energy saving.

Mechanical Seal

Standard pump is provided with mechanical seal which can be easily fitted by one touch and ensures very reliable seal characteristic.

for Process Pumps

Back Pullout Construction

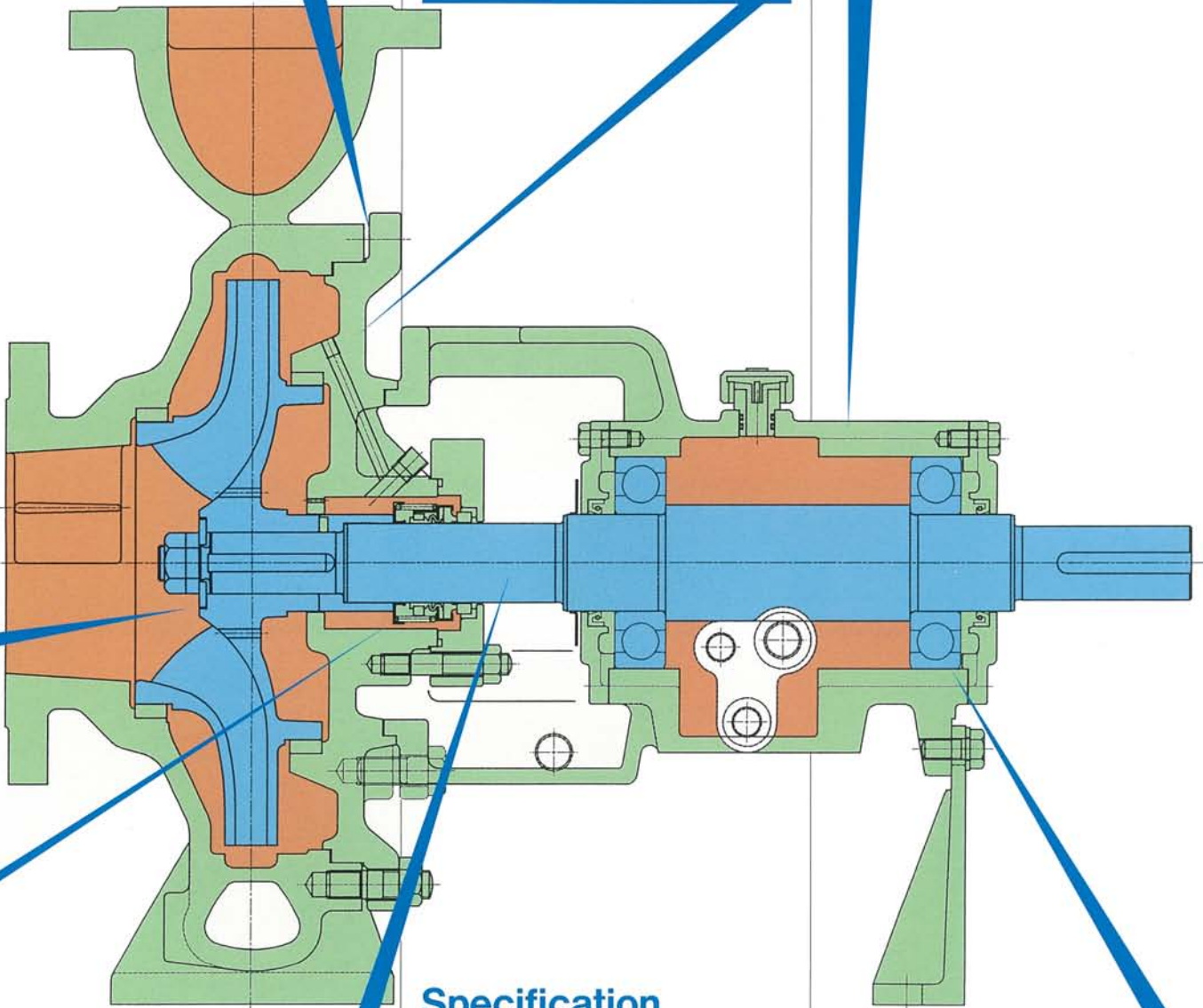
The rotor can be removed without disconnecting pump flanges from pipelines and inner inspection and replacement of the parts can be done easily.

Casing Cover

Two kinds of casing cover (non water cooling type and water cooling type) with combination of mechanical seals and/or gland packing can provide wide application depending on pumping liquids.

Bearing Case

Sturdy shaft and ball bearing ensure stable operation. In case bearing case has to be cooled, cooling jacket can be easily fitted by one touch.



Shaft

Durable and corrosion resistant material SUS 420J2 is standard execution, and ensures stable and reliable operation.

Specification

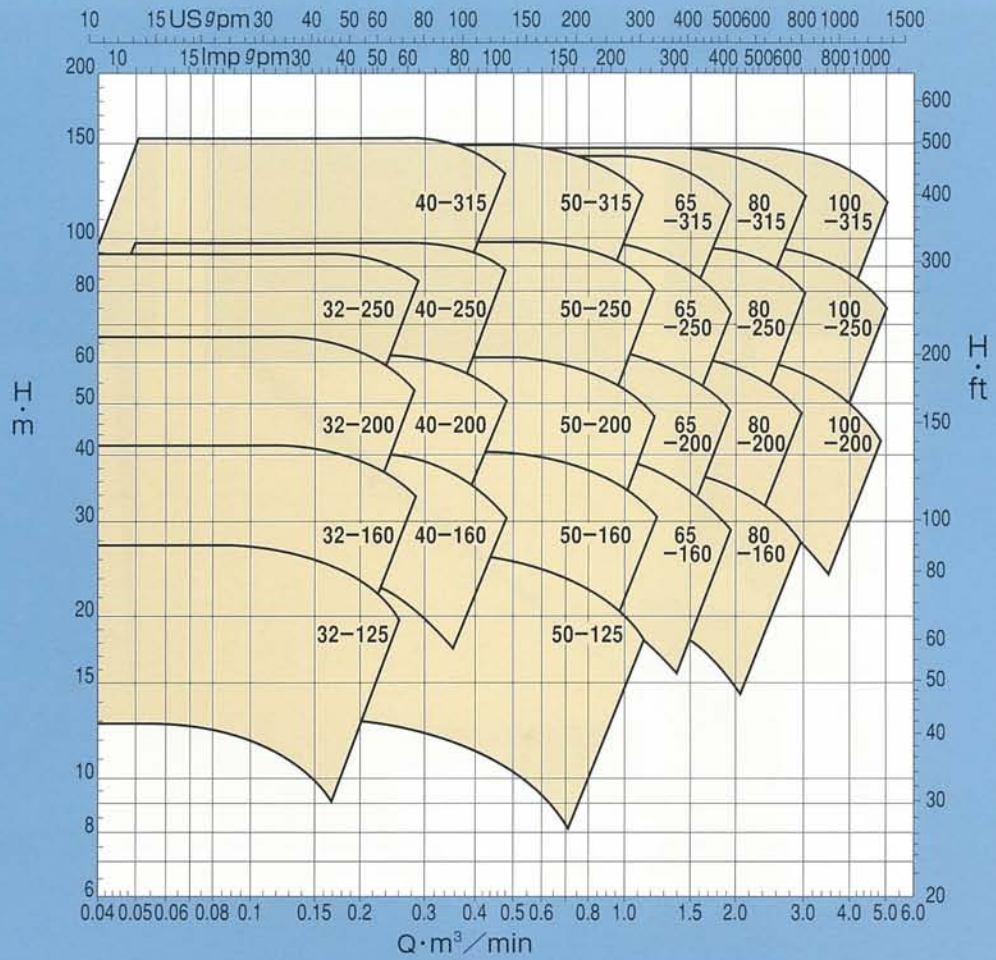
Total Head	: ~150m
Discharge pressure	: ~2.45MPaG
Capacity	: ~1500m ³ /hr (~25m ³ /min.)
Temperature	: -40°C ~ +200°C
Nozzle size	: 32~250mm
Flange	: JIS, ANSI
Materials	: Cast iron, cast steel and stainless steel

Bearing

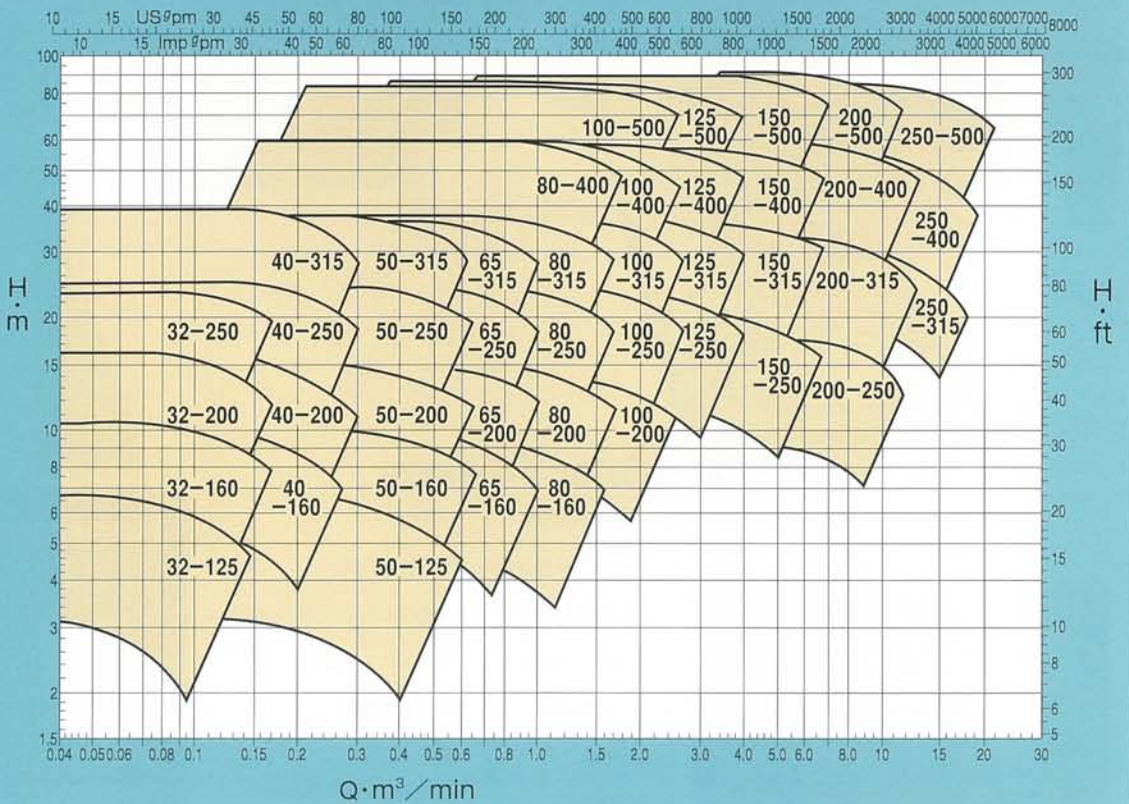
Standard pump is provided with oil deep groove ball bearings. In case of high suction pressure cylindrical roller bearings and angular ball bearing are provided. Grease lub. bearing are prepared as option.

Selection Charts

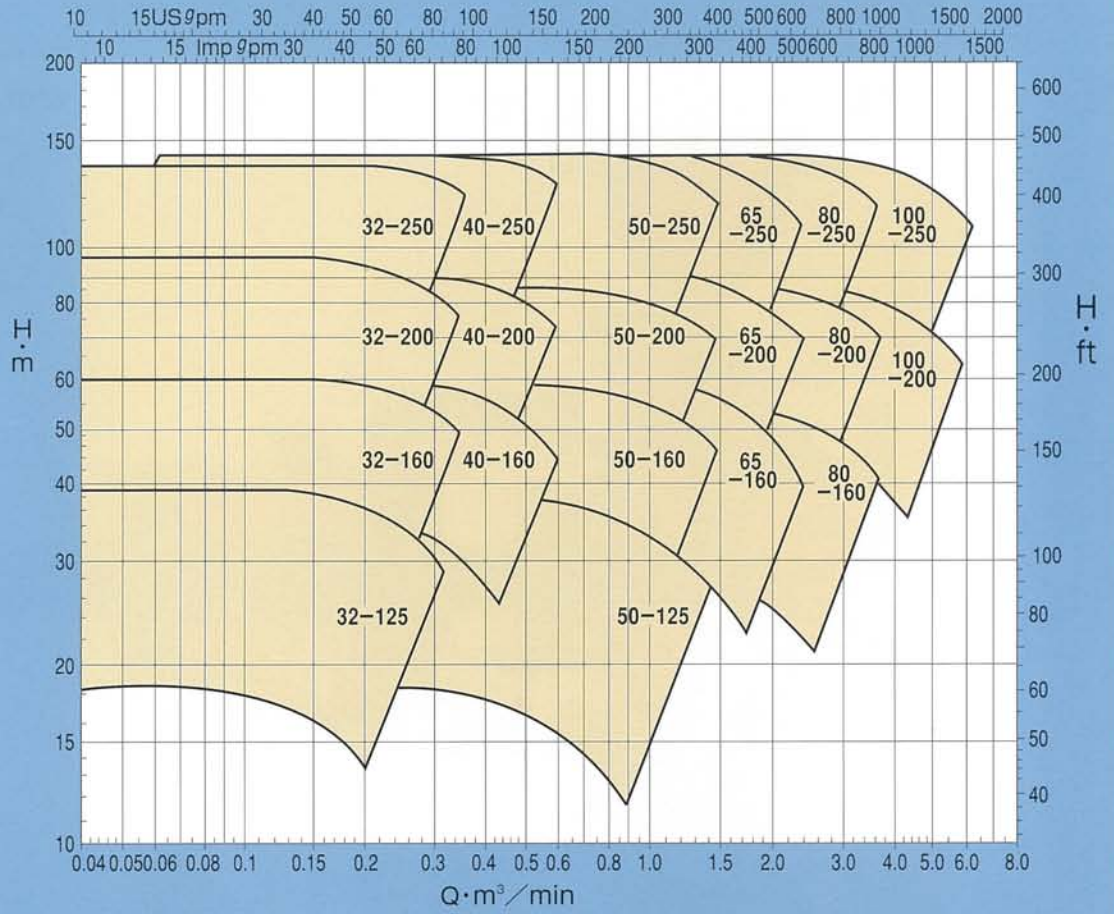
50Hz
-2P



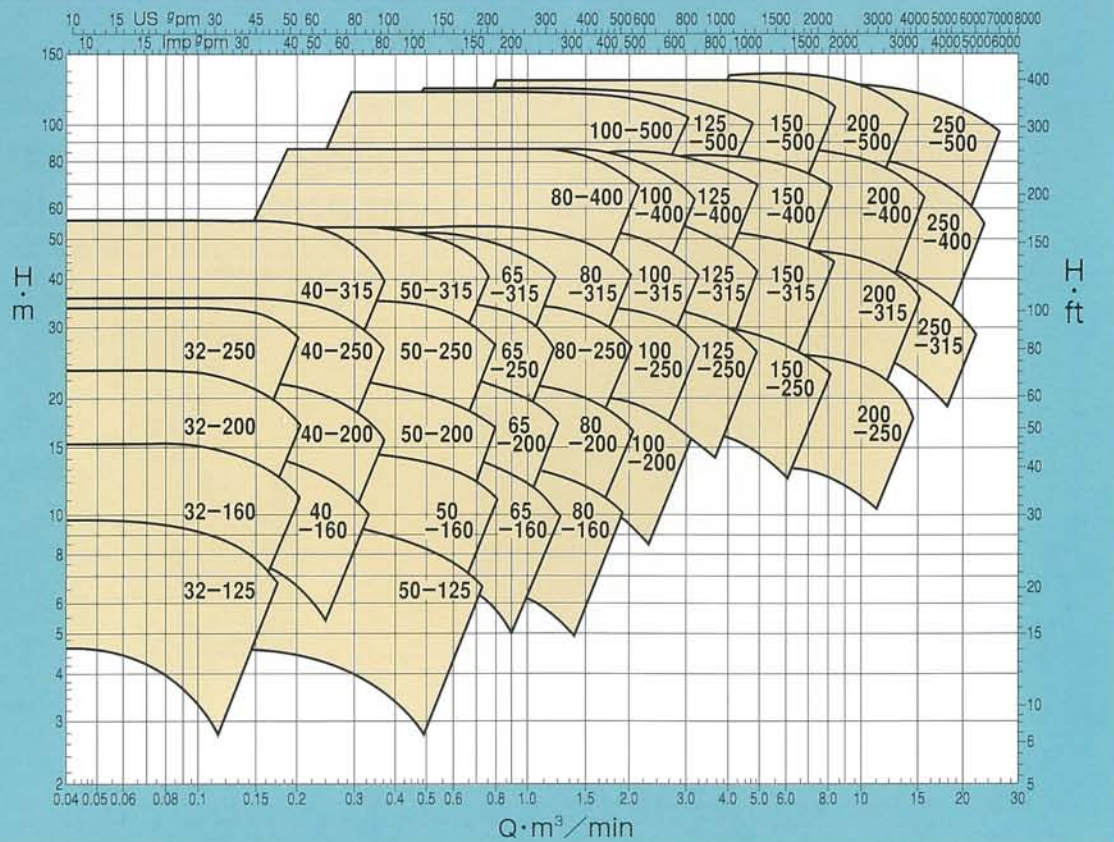
50Hz
-4P



60Hz
-2P



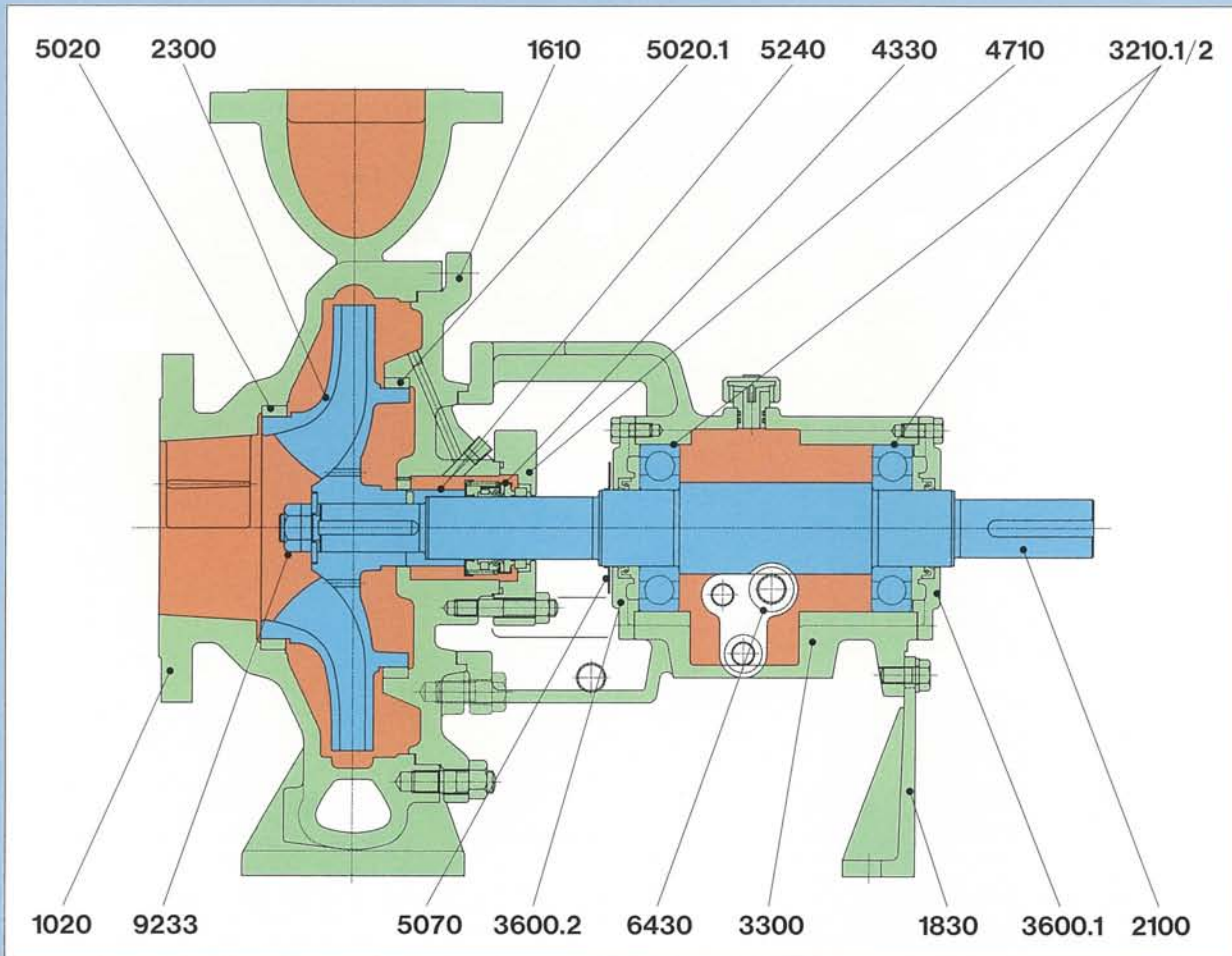
60Hz
-4P



Sectional Drawing

A wide variety in materials and constructions

Standard type

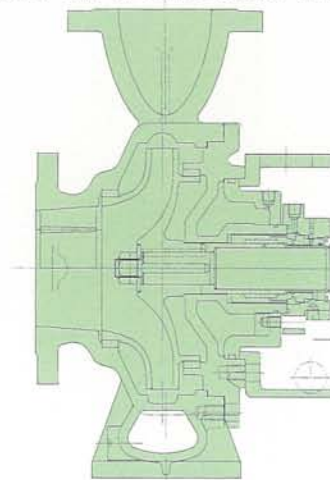


1020	Volute casing
1610	Casing cover
1830	Support foot
2100	Shaft
2300	Impeller
3210.1/2	Ball bearing
3300	Bearing case
3600.1/2	Bearing cover
4330	Mechanical seal
4710	Seal cover
5020	Wear ring
5020.1	Balance ring
5070	Splasher
5240	Distance sleeve
6430	Oil gauge
9233	Hard lock nut

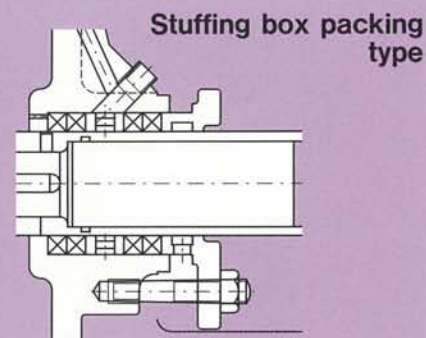
Cooling stuffing box for high temperature operation

With extended stuffing box housing to reduce heat losses within the pump system.

For heat transfer oils of temperatures up to 200°C

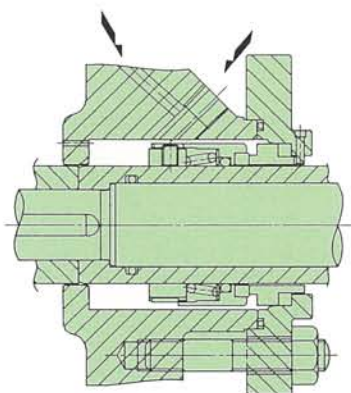


Optional Shaft Sealings



Optional mechanical seals

Fluid contacting side



Atmospheric air side

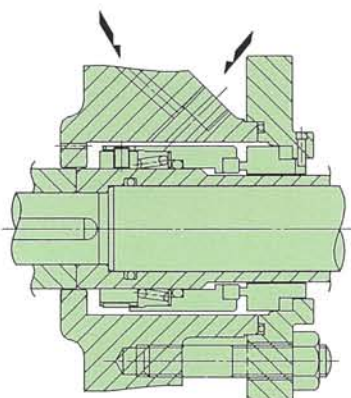
HU2120NN type

(Single acting unbalanced type)

Pressure	
P MPa	$0 < P \leq 0.98$

Temperature	
T °C	$-40 \leq T \leq 120$

Fluid contacting side



Atmospheric air side

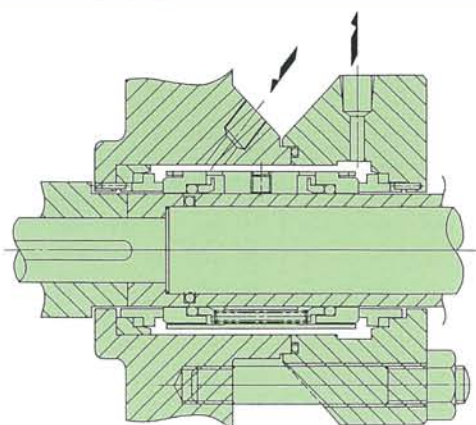
HB2120NN type

(Single acting balanced type)

Pressure	
P MPa	$0.98 < P \leq 2.45$

Temperature	
T °C	$-40 \leq T \leq 120$

Fluid contacting side



Atmospheric air side

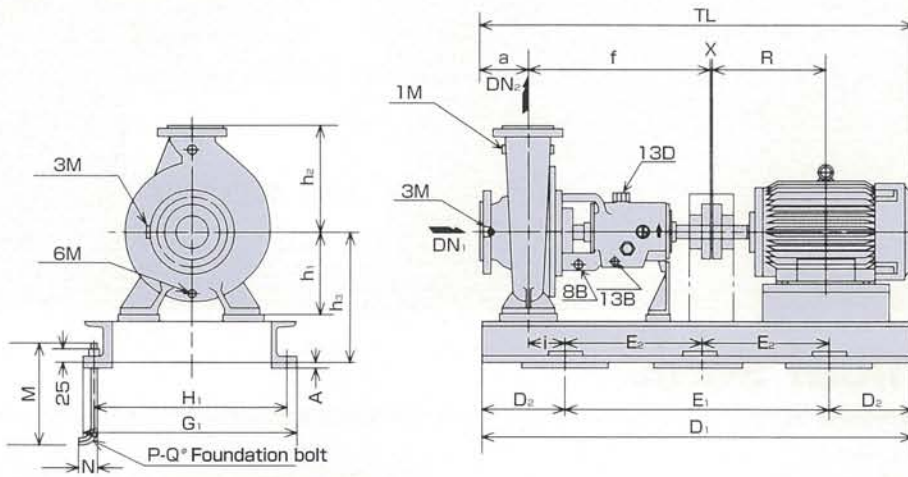
HU2120NN × HU2100NN type

(Double acting unbalanced type)

Pressure	
P MPa	$0 < P \leq 0.98$

Temperature	
T °C	$-40 \leq T \leq 120$

Dimensional Drawing



Note

1. Flanges, Standard : JIS 10 kgf /cm²
Optional : ANSI
2. Pump weights shown in parentheses are of pumps made of cast steel.
3. Motor weights are of standard motors.
4. Connections marked by * will be drilled upon request.
5. R, E₁ dimensions and baseplate weight in parentheses are shown in case of 4- pole motor.
6. TL dimensions are approximate.

(Unit : mm)

Shaft size	Sizes	Pump dimensions						Motor dimensions					Base plate Dimensions				Foundation Dimensions																					
		Bore DN ₁ DN ₂		a	f	h ₁	h ₂	Wt (kgf)	Frame No.	Out put(kW) 2P 4P		R	X	Wt (kgf)	G ₁	D ₁	A	Wt (kgf)	h ₃	H ₁	i	D ₂	E ₁	M	N	P	Q	TL										
35	32-125	50	32	80	385	112	140	39	80M	0.75	0.75	140	3	11	280	700	0	26	202	250	35	100	500	200	50	4	12	730										
									(42)	90L	1.5	2.2	1.5	168.5	3	20.5	280	750	0	26	202	250	35	100	550	200	50	4	12	780								
		32-160	50	32	80	385	132	160	44	112M	3.7		200	3	33	280	800	0	26	202	250	35	100	600	200	50	4	12	850									
										(48)	132S	5.5	7.5	5.5	239	3	55	330	850	0	31	222	300	30	100	650	200	50	4	12	920							
	40-160	65	40	80	385	132	165	45	80M	0.75	0.75	140	3	11	280	700	0	27	222	250	35	100	500	200	50	4	12	750										
									(48)	90L	1.5	2.2	1.5	168.5	3	20.5	280	750	0	28	222	250	35	100	550	200	50	4	12	800								
									50-125	80	50	100	385	132	165	48	100L		2.2	193	3	25	280	800	0	30	222	250	35	100	600	200	50	4	12	860		
																	(48)	112M	3.7		200	3	33	330	800	0	30	222	300	35	100	600	200	50	4	12	870	
	35	32-200	50	32	80	385	160	180	49	132S	5.5	7.5	239	3	55	330	850	0	30	222	300	35	100	650	200	50	4	12	940									
										(56)	160M	11	15	323	3	90	380	950	0	37	250	350	30	100	750	200	50	4	12	1070								
			40-200	65	40	100	385	160	180	51	80M	0.75	0.75	140	3	11	280	700	0	30	250	250	35	100	500	200	50	4	12	730								
											(57)	90L	1.5	2.2	1.5	168.5	3	20.5	280	750	0	31	250	250	35	100	550	200	50	4	12	780						
		50-160									80	50	100	385	160	180	49	100L		2.2	193	3	25	280	800	0	33	250	250	35	100	600	200	50	4	12	840	
																		(56)	112M	3.7	3.7	200	3	36	330	800	0	34	250	300	35	100	600	200	50	4	12	850
		45	32-250	50	32	100	500	180	225	80	132S	5.5	7.5	5.5	239	3	55	330	850	0	33	250	300	35	100	650	200	50	4	12	920							
											(85)	160M	11	15	323	3	90	380	950	0	34	250	350	35	100	750	200	50	4	12	1070							
				40-250	65	40	100	500	180	225	78	180L	18.5	15	345	3	115	380	1000	0	36	250	350	35	100	800	200	50	4	12	1110							
												(86)	180M	22		351.5	4	140	430	1000	0	42	270	400	30	100	800	200	50	4	12	1140						
			50-250									80	50	125	500	180	225	82	180L	18.5	15	345	3	115	380	1000	0	36	250	350	35	100	800	200	50	4	12	1110
																			(91)	180M	22		351.5	4	140	430	1000	0	42	270	400	30	100	800	200	50	4	12
			65-200	100	65	100	500	180	225	75	180L	18.5	15	345	3	115	380	1000	0	36	250	350	35	100	800	200	50	4	12	1110								
											(88)	180M	22		351.5	4	140	430	1000	0	42	270	400	30	100	800	200	50	4	12	1140							
											80-160	125	80	125	500	180	225	77	180L	18.5	15	345	3	115	380	1000	0	36	250	350	35	100	800	200	50	4	12	1110
																			(81)	200L	37	45	395.5	4	240	490	1200	10	68	320	450	15	100	1000	200	50	4	12
65-160			100	65	100	500	160	200	73	225S	55		402	4	275	540	1200	10	76	345	500	15	100	1000	200	50	4	12	1400									
										(78)	90L	1.5	2.2	1.5	168.5	3	20.5	330	900	0	37	250	300	20	100	700	200	50	4	12	920							



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