

TAKI-PUMP

**SPM-N
CENTRIFUGAL PUMP**



BACK PULL OUT PUMP

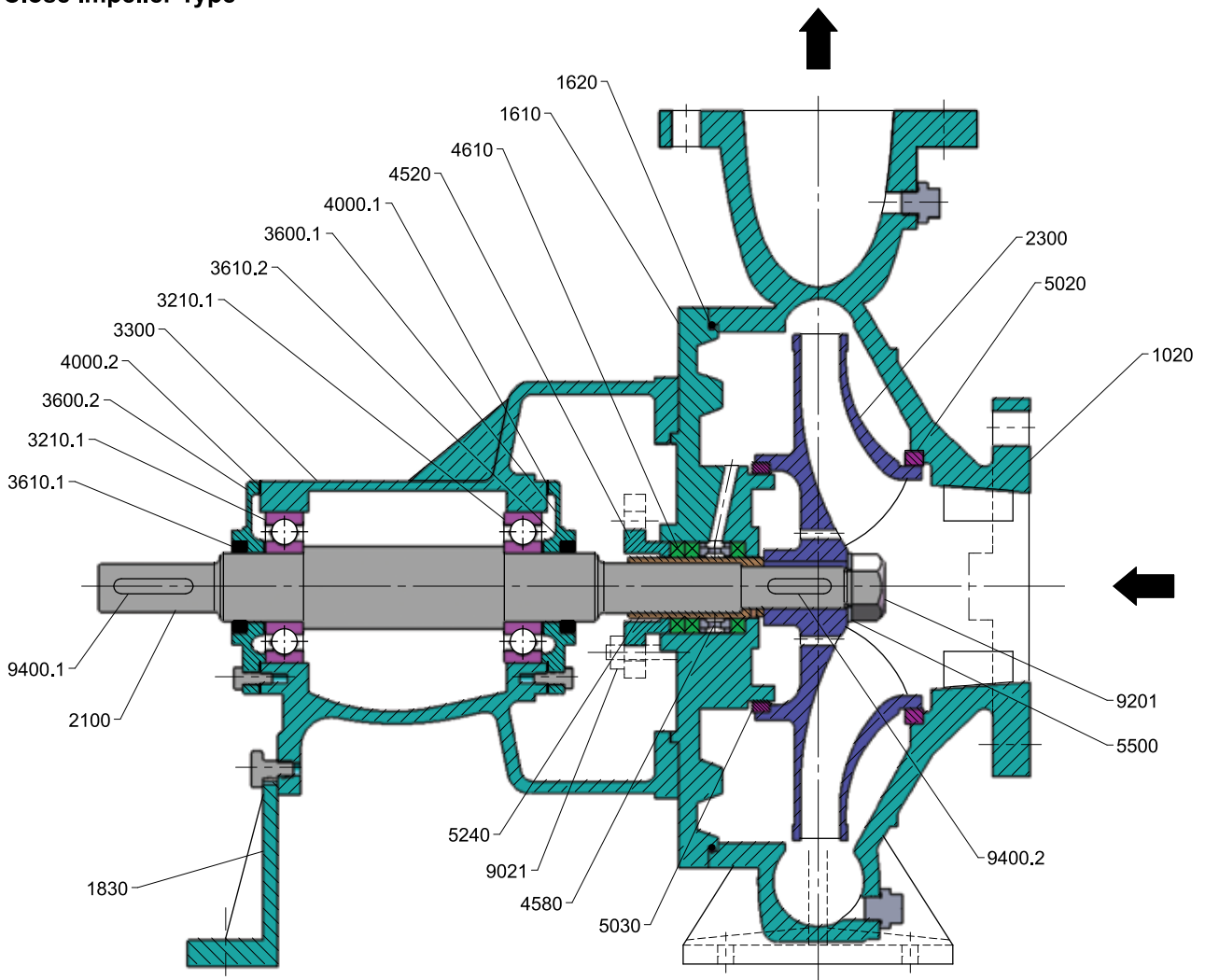


TAKI[®] ISO 9001



<http://www.takipump.com>

Sectional Drawings and List of Components For Close Impeller Type



acc. to JIS B 8313	50 Hz
Capacity	Q up to 170 l/s (620 m ³ /hr)
Total head	H up to 100m
Product temperature	t - 30 up to 140°C
Pump discharge pressure	Pd up to 16 bar
Pump sizes	DN 32 to 150 mm

Applications

General water supply, irrigation and drainage applications; used to handle seawater, brine, alkali and condensate; used to circulate hot water, cold water and oil; used as blending and loading pumps etc.

Product Pumped

Clear liquids not causing corrosion and/or erosion to the used materials.

Design

End suction, vertical centerline discharge nozzle. Back pull-out design allows the removal of the rotor and bearing bracket without removing the pump casing or motor. The casing wear ring is renewable. The shaft is protected in the sealing area by a renewablesleeve.

Impeller

Closed, radial flow impeller fitted with renewable protective wear ring at the neck; hydraulically balanced by balancing holes. Pump sizes 50x32-125, 50x40-125 and 65x50-125 have unbalanced impeller without balancing holes.

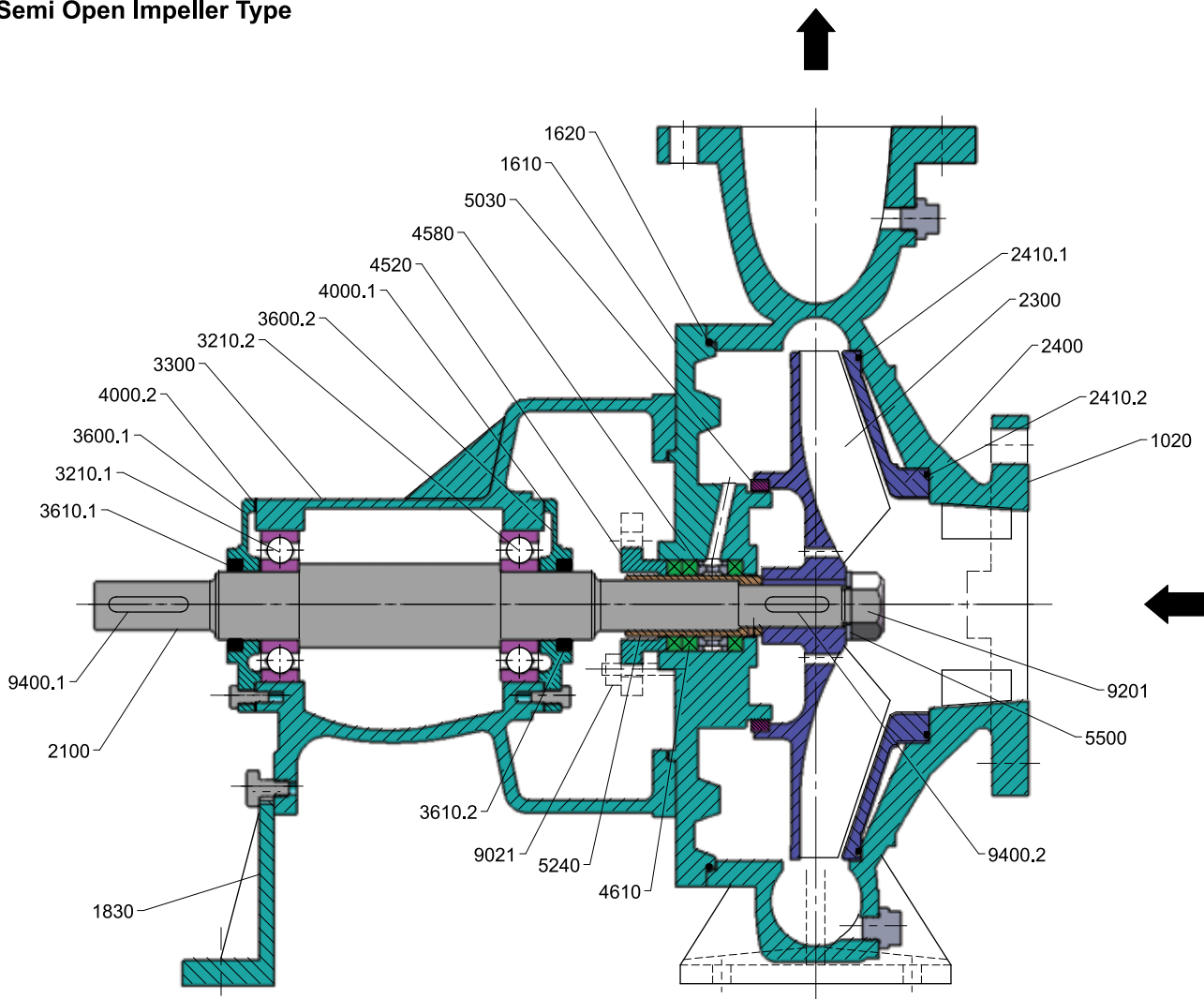
Bearings

Oil-bath lubricated deep groove ball bearings.

Shaft Seals

Soft-packed stuffing boxes or single and double acting mechanical seals are available

Sectional Drawings and List of Components For Semi Open Impeller Type



Materials

Part No.	Part designation	Materials
1020	Volute casing	Cast iron, Bronze, Stainless-steel
1610	Casing cover	
2300	Impeller	
5020	Casing wear ring	
5030	Impeller wear ring	
2100	Shaft	Carbon steel, Stainless-steel
5240	Shaft protecting sleeve	Stainless-steel

Materials mentioned above are standard; other materials are also available on request.

Flanges

JIS 10 kgf/cm² F.F.

Drive

Electric motors are used as standard, Engines are also available on request.

Direction of rotation

Clockwise viewed from the drive end.

Part Designation

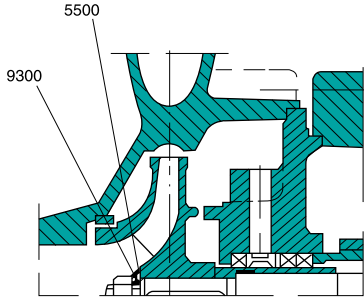
Part No.	Part Designation	Part No.	Part Designation
1020	Volute casing	5240	Shaft protecting sleeve
1610	Casing cover	5500	Washer
1620	O-ring Casing cover	9021	Gland bolt
1830	Support foot	9201	Hexagonal nut
2100	Shaft	9400.1	Key
2300	Impeller	9400.2	Key
2400	Wear plate		
2410.1	O-ring		
2410.2	O-ring		
3210.1	Ball Bearing		
3210.2	Ball Bearing		
3300	Bearing housing		
3600.1	Bearing cover		
3600.2	Bearing cover		
3610.1	Seal Bearing cover		
3610.2	Seal Bearing cover		
4000.1	Flat gasket		
4000.2	Flat gasket		
4520	Gland		
4580	Lantern ring		
4610	Gland packing		
5020	Casing wear ring		
5030	Impeller wear ring		

Mechanical Seal

Part No. Part Designation

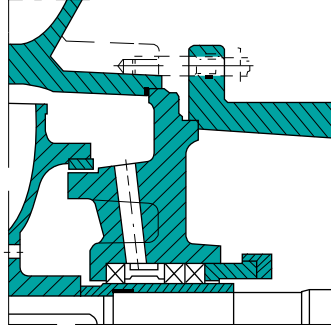
4100	Cover
4120.1	Stationary seal
4120.2	Cover seal
4120.3	Rotary seal
4720	Washer
4740.1	Stationary ring
4740.2	Rotary ring
4770	Spring
4850	Rotary ring casing
5040	Setting Ring

Impeller unbalanced

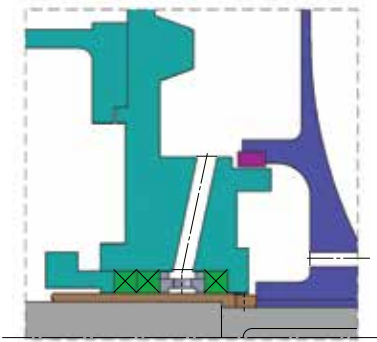


50X 32 - 125
50X 40 - 125
65X 50 - 125

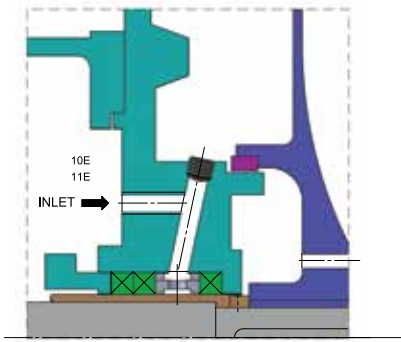
"Push-in" discharge cover



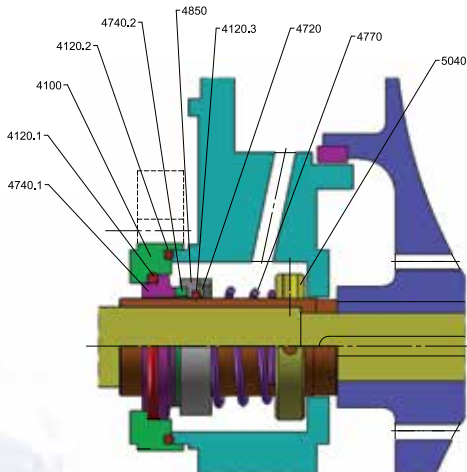
NB (standard)



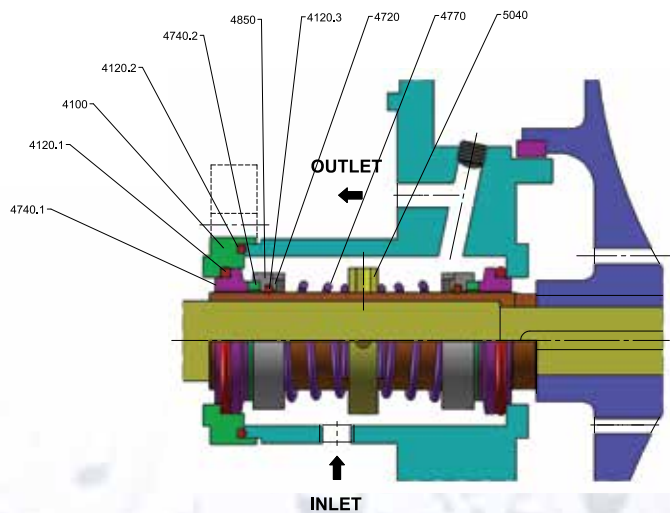
NC



Single Mechanical Seal



Double Mechanical Seal

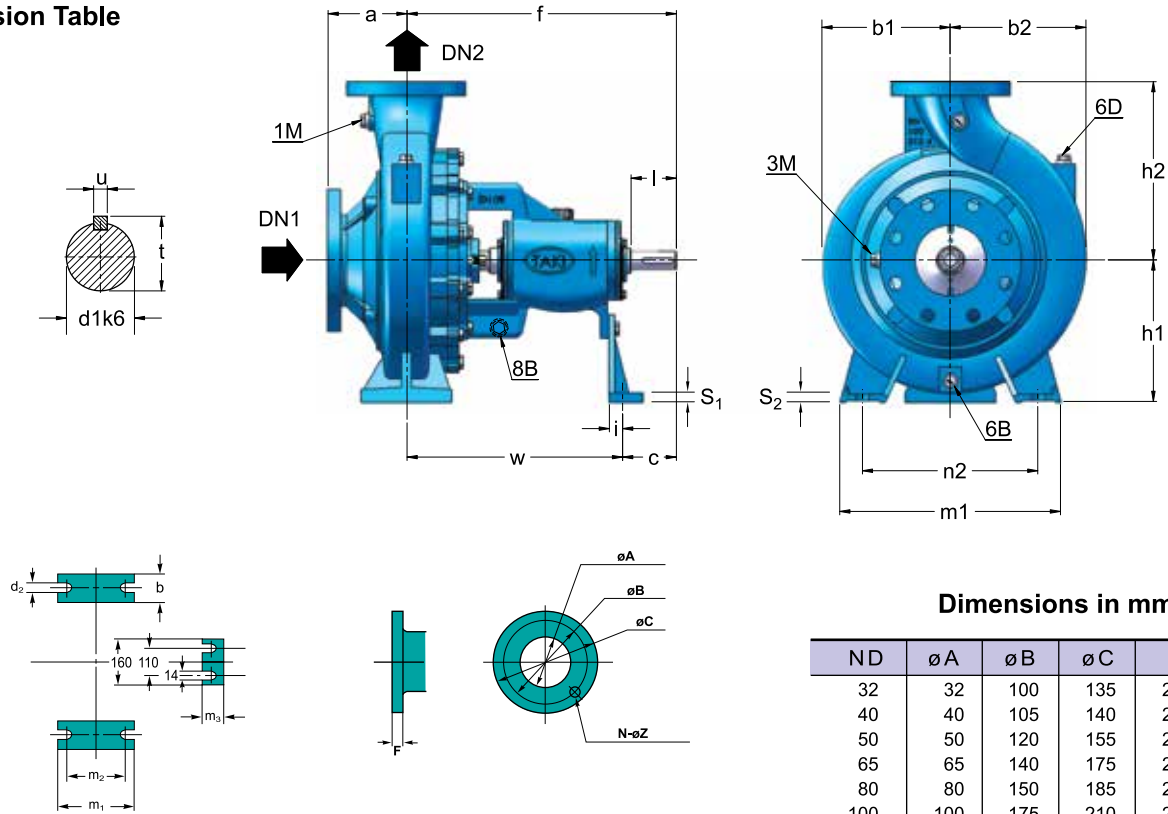


Auxiliary connection

Symbol	Name
1M	Pressure measuring instrument
3M	Pressure measuring instrument
6B	Casing drain
6D	Priming and venting
8B	Leakage drain
10E	Sealing liquid inlet
11E	Flushing liquid inlet

Pump sizes		1M	6B	8B
		3M	6D	
Dimensions				
EN 25	50X 32-125	PS $\frac{3}{8}$ "	PS $\frac{3}{8}$ "	PS $\frac{3}{8}$ "
	50X 32-160			
	50X 32-200			
	50X 32-250			
	50X 40-125			
	50X 40-160			
	50X 40-200			
	65X 50-125			
	65X 50-160			
	65X 50-200			
EN 35 A	80X 65-125	PS $\frac{3}{8}$ "	PS $\frac{3}{8}$ "	PS $\frac{3}{8}$ "
	80X 65-160			
	100X 80-125			
	100X 80-160			
	100X 80-200			
	125X100-160.1			
	125X100-200			
EN 35-45 A	50X 40-315.1	PS $\frac{3}{8}$ "	PS $\frac{3}{8}$ "	PS $\frac{3}{8}$ "
	65X 50-315.1			
	80X 65-315.1			
	100X 80-250			
	100X 80-315.1			
	125X100-160			
	125X100-200			
	125X100-200.1			
	125X100-250			
	125X100-250.1			
	125X100-315			
	150X125-200			
	150X125-250			
	200X150-200			
EN 55	100X 80-400.1	PS $\frac{3}{4}$ "	PS $\frac{3}{4}$ "	PS $\frac{3}{4}$ "
	150X125-315			
	200X150-250			
EN 65 A	125X100-400	PS $\frac{3}{4}$ "	PS $\frac{3}{4}$ "	PS $\frac{3}{4}$ "
	150X125-400			
	200X150-315			
	200X150-400			

Dimension Table



Pump flange dimensions (acc. to JIS 10kgf/cm² F.F.)

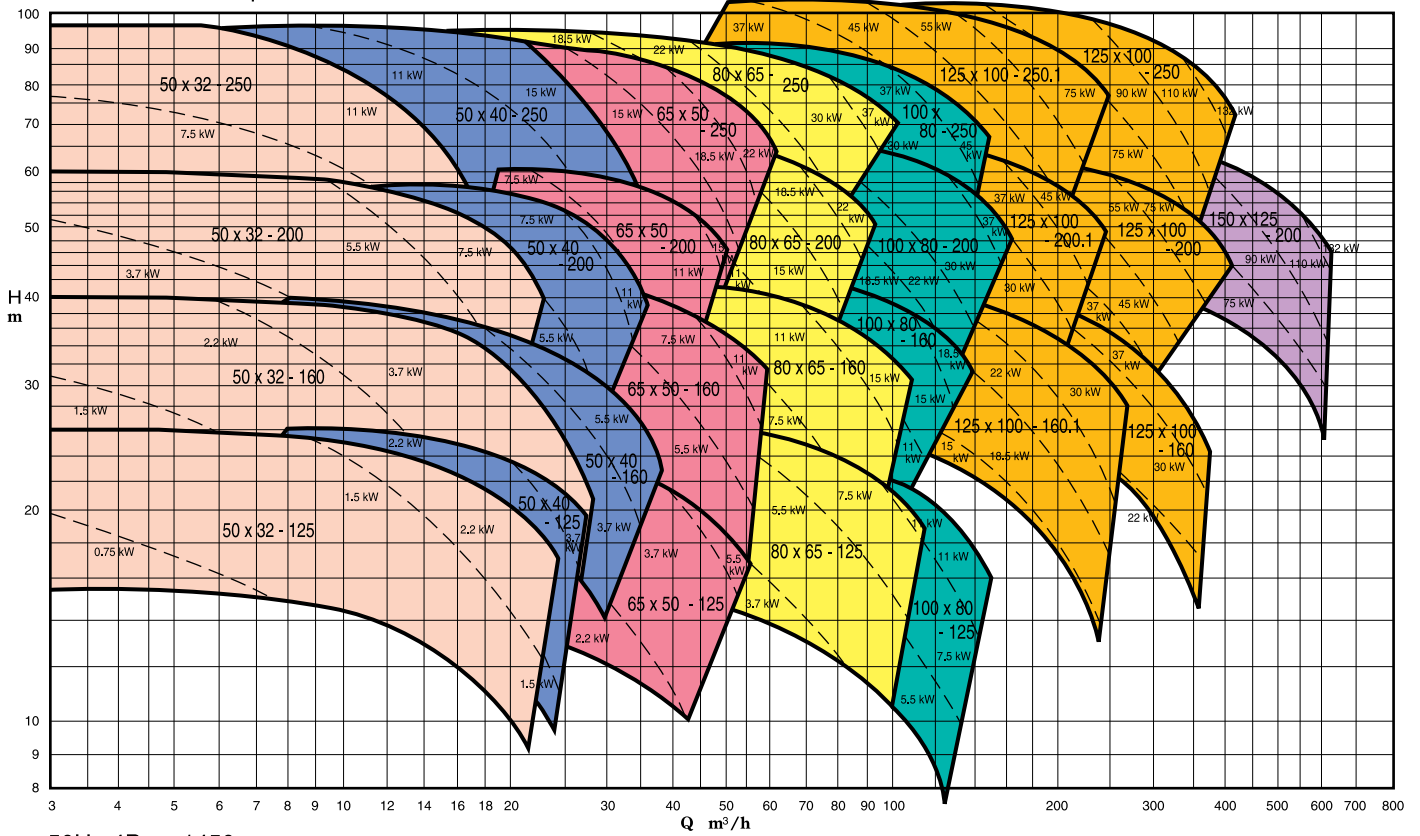
Dimensions in mm

ND	øA	øB	øC	F	N-øZ
32	32	100	135	20	4-19
40	40	105	140	20	4-19
50	50	120	155	20	4-19
65	65	140	175	22	4-19
80	80	150	185	22	8-19
100	100	175	210	24	8-19
125	125	210	250	24	8-23
150	150	240	280	26	8-23
200	200	290	330	26	12-23

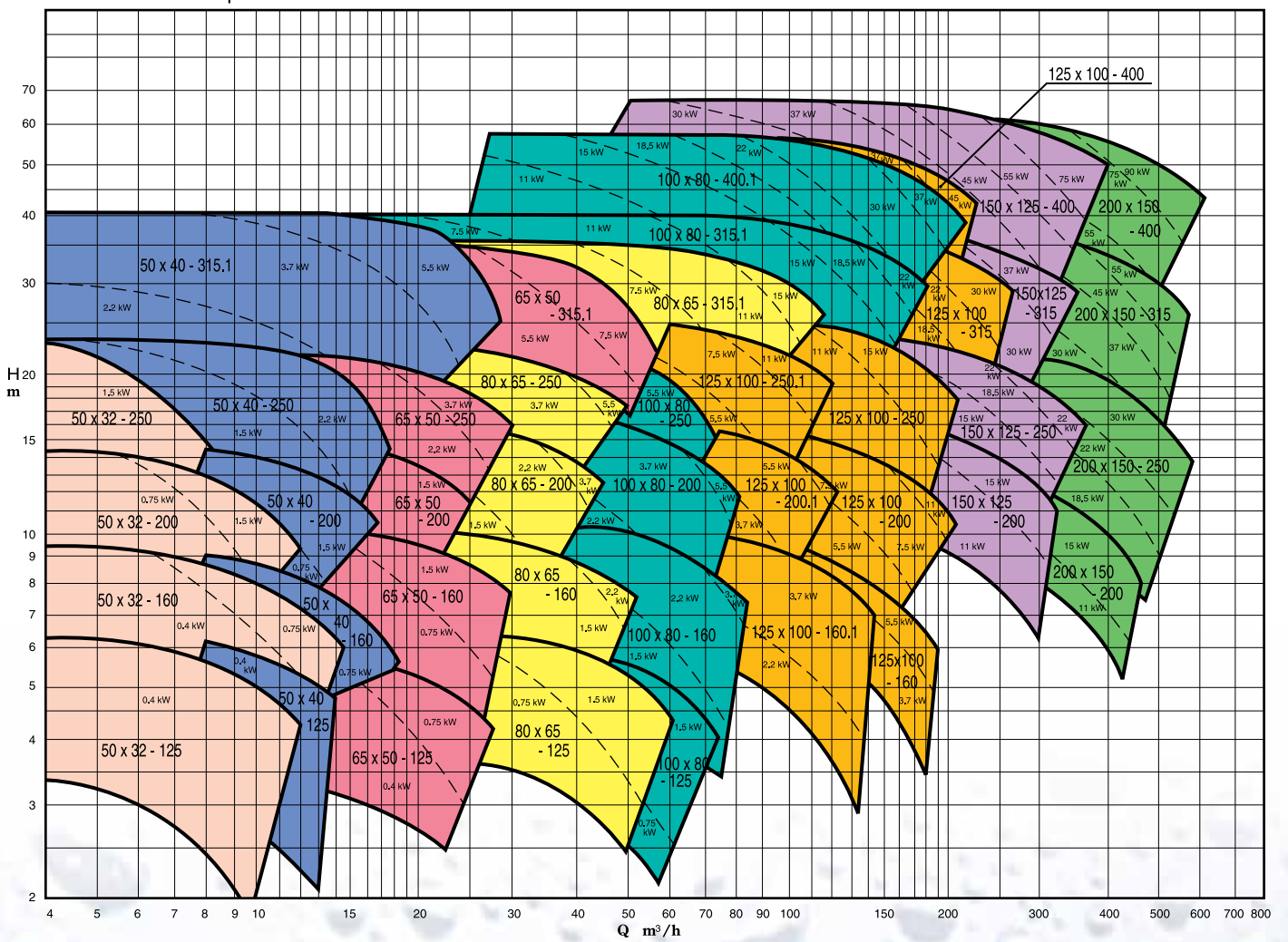
Pump sizes	Pump dimensions								Foot dimensions										Shaft end						
	DN ₁	DN ₂	a	b ₁	b ₂	f	h ₁	h ₂	b	c	d ₂	i	m ₁	m ₂	m ₃	n ₁	n ₂	s ₁	s ₂	w	d _{1k6}	l	t	u	x
50X 32-125	50	32	80	113	113	360	112	140	50	64	14	25	100	70	50	190	140	8	15	296	24	50	27	8	100
50X 32-160	50	32	80	116	125	360	132	160	50	64	14	25	100	70	50	240	190	8	15	296	24	50	27	8	100
50X 32-200	50	32	80	128	137	360	160	180	50	64	14	25	100	70	50	240	190	8	18	296	24	50	27	8	100
50X 32-250	50	32	100	164	171	360	180	225	65	64	14	25	125	95	50	320	250	8	18	296	24	50	27	8	100
50X 40-125	50	40	80	113	113	360	112	140	50	64	14	25	100	70	50	190	140	8	15	296	24	50	27	8	100
50X 40-160	50	40	80	113	125	360	132	160	50	64	14	25	100	70	50	240	190	8	15	296	24	50	27	8	100
50X 40-200	50	40	80	132	141	360	160	180	50	64	14	25	100	70	50	240	190	8	18	296	24	50	27	8	100
50X 40-250	50	40	100	170	176	360	180	225	65	65	14	25	125	95	50	320	250	8	18	295	24	50	27	8	100
50X 40-315.1	50	40	125	194	203	476	225	250	65	93	14	25	125	95	50	345	280	12	18	383	32	80	35	10	100
65X 50-125	65	50	80	113	113	360	112	140	50	64	14	25	100	70	50	210	160	8	15	296	24	50	27	8	100
65X 50-160	65	50	80	115	131	360	132	160	50	64	14	25	100	70	50	240	190	8	15	296	24	50	27	8	100
65X 50-200	65	50	100	133	147	360	160	180	50	64	14	25	100	70	50	265	212	8	15	296	24	50	27	8	100
65X 50-250	65	50	100	165	178	360	180	225	65	65	14	25	125	95	50	320	250	8	18	295	24	50	27	8	100
65X 50-315.1	65	50	125	200	216	476	225	280	65	93	14	25	125	95	50	345	280	12	18	383	32	80	35	10	100
80X 65-125	80	65	100	113	128	360	132	160	50	64	14	25	100	70	50	240	190	8	18	296	24	50	27	8	100
80X 65-160	80	65	100	126	147	360	160	180	50	64	14	25	100	70	50	265	212	8	15	296	24	50	27	8	100
80X 65-200	80	65	100	145	165	360	160	200	50	65	14	25	100	70	50	265	212	8	15	295	24	50	27	8	100
80X 65-250	80	65	100	168	184	360	180	225	65	65	14	25	125	95	50	320	250	8	18	295	24	50	27	8	100
80X 65-315.1	80	65	125	208	229	476	225	280	80	93	19	25	160	120	50	400	315	12	20	383	32	80	35	10	140
100X 80-125	100	80	100	120	148	360	160	180	65	65	14	25	125	95	50	280	212	8	18	295	24	50	27	8	100
100X 80-160	100	80	100	130	158	360	160	200	65	65	14	25	125	95	50	280	212	8	18	295	24	50	27	8	100
100X 80-200	100	80	100	164	177	360	180	225	65	65	14	25	125	95	50	320	250	8	18	295	24	50	27	8	140
100X 80-250	100	80	100	180	200	476	200	250	80	93	19	25	160	120	50	360	280	8	20	383	32	80	35	10	140
100X 80-315.1	100	80	125	220	244	476	250	315	80	93	19	25	160	120	50	400	315	12	20	383	32	80	35	10	140
100X 80-400.1 *	100	80	125	253	276	541	280	355	80	141	19	30	160	120	52	435	355	12	20	400	42	115	43	12	140
125X100-160.1	125	100	125	153	192	360	180	225	65	65	14	25	125	95	50	320	250	8	18	295	24	50	27	8	140
125X100-200.1	125	100	125	161	189	476	180	250	65	93	14	25	125	95	50	345	280	8	18	383	32	80	35	10	140
125X100-250.1	125	100	125	184	210	476	225	280	80	93	19	25	160	120	50	400	315	12	18	383	32	80	35	10	140
125X100-160	125	100	125	178	225	476	200	250	80	93	19	25	160	120	50	360	280	8	18	383	32	80	35	10	140
125X100-200	125	100	125	173	213	476	200	280	80	93	19	25	160	120	50	360	280	8	18	383	32	80	35	10	140
125X100-250	125	100	140	190	220	476	225	280	80	93	19	25	160	120	50	400	315	12	20	383	32	80	35	10	140
125X100-315	125	100	140	225	255	476	250	315	80	93	19	25	160	120	50	400	315	12	18	383	32	80	35	10	140
125X100-400 *	125	100	140	253	280	540	280	355	100	130	24	30	200	150	52	500	400	12	20	410	42	115	45	12	140
150X125-200	150	125	140	195	244	476	250	315	80	93	19	25	160	120	50	400	315	12	20	383	32	80	35	10	140
150X125-250	150	125	140	226	275	476	250	355	80	93	19	25	160	120	50	400	315	12	18	383	32	80	35	10	140
150X125-315 *	150	125	140	238	278	541	280	355	100	141	24	30	200	150	52	500	400	12	20	400	42	115	45	12	140
150X125-400 *	150	125	140	275	305	540	315	400	100	130	24	30	200	150	52	500	400	12	20	410	42	115	45	12	140
200X150-200	200	150	160	238	315	476	280	400	100	93	24	25	200	150	50	550	450	12	20	383	32	80	35	10	140
200X150-250 *	200	150	160	228	298	541	280	375	100	141	24	30	200	150	52	500	400	12	20	400	32	115	45	12	140
200X150-315 *	200	150	160	255	303	540	315	400	100	130	24	30	200	150	52	550	450	12	20	410	42	115	45	12	140
200X150-400 *	200	150	160	285	325	540	315	450	100	130	24	30	200	150	52	550	450	12	20	410	42	115	45	12	140

Selection Charts

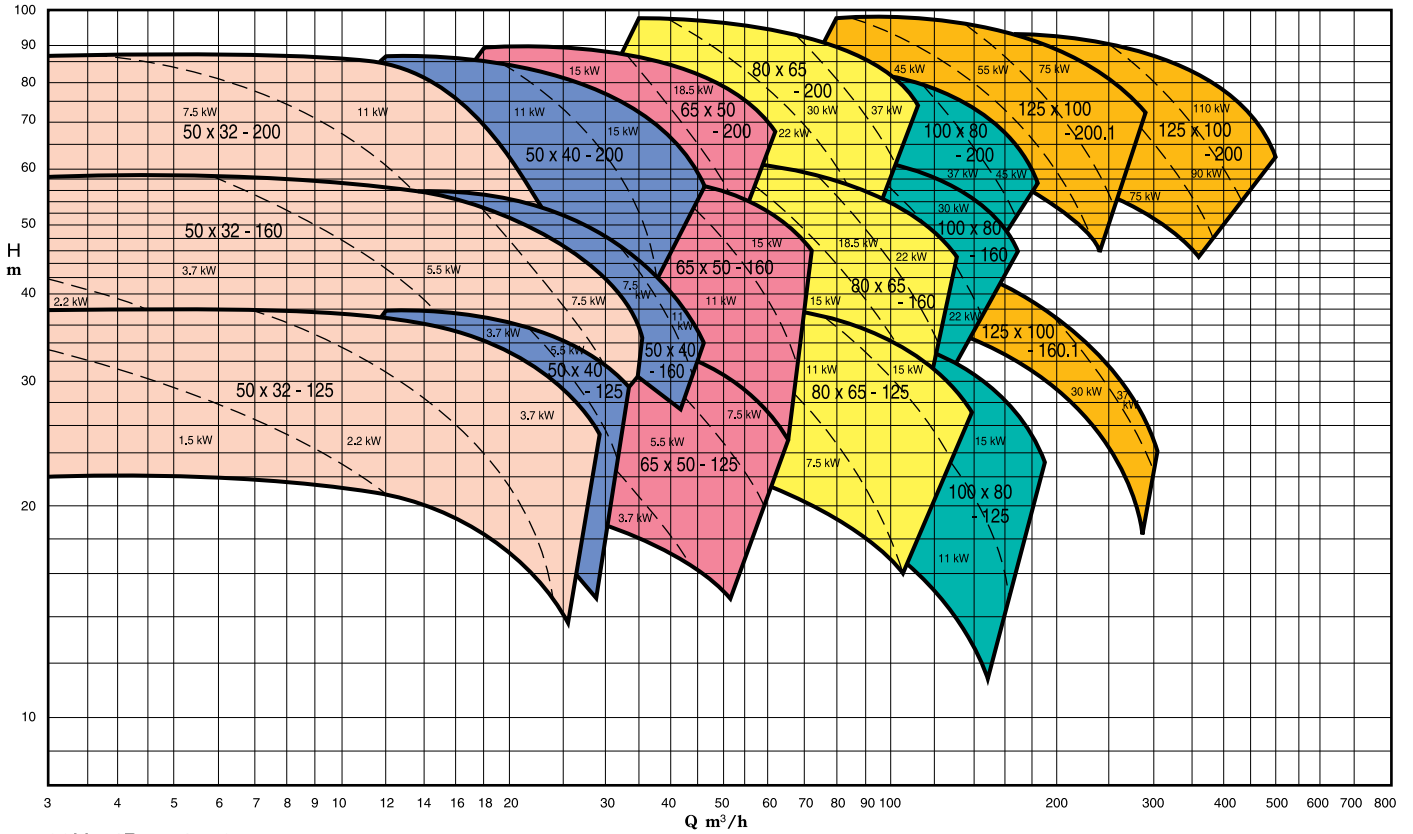
50Hz-2P n=2900 rpm



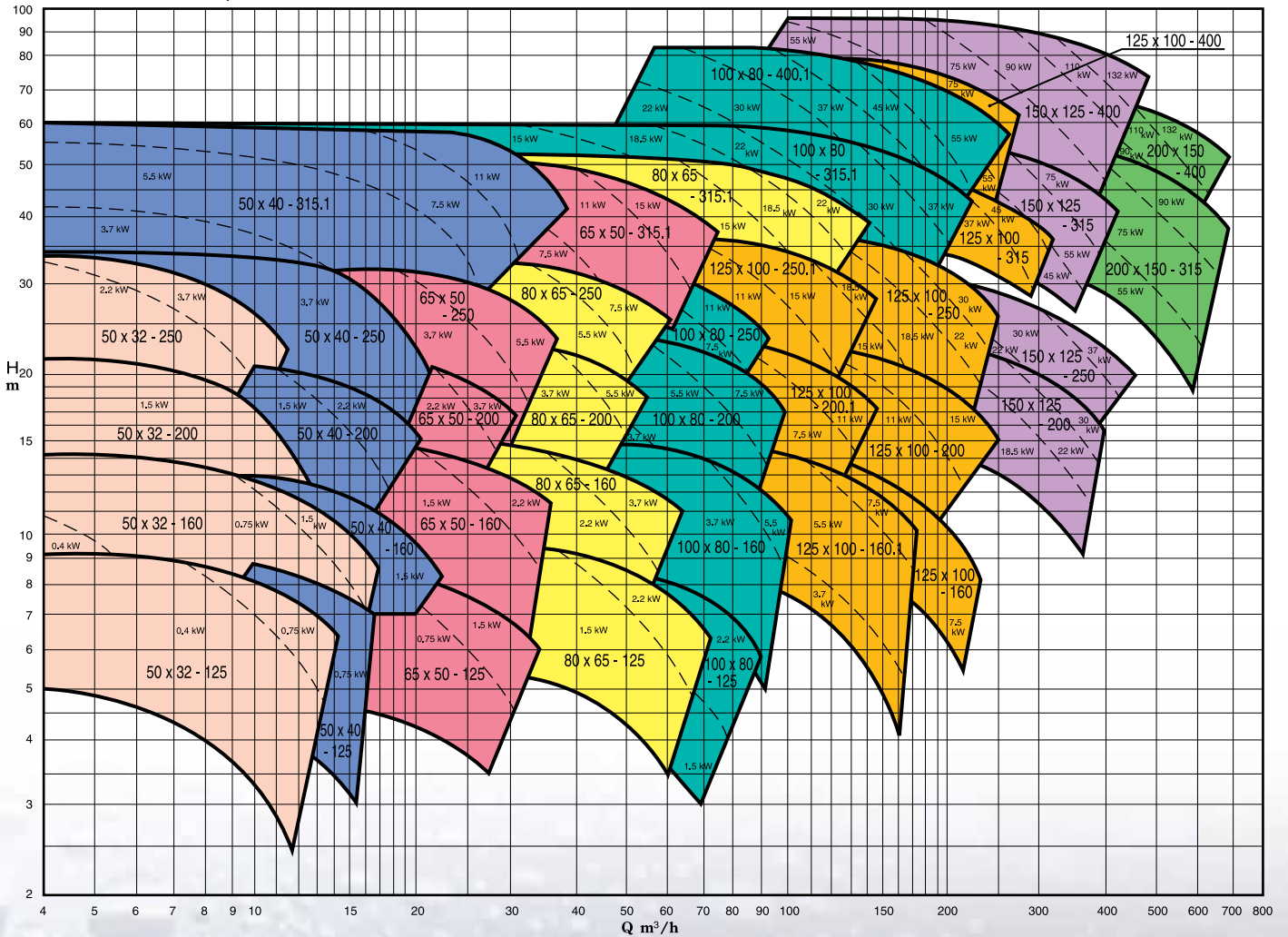
50Hz-4P n=1450 rpm



60Hz-2P n=3500 rpm



60Hz-4P n=1750 rpm





MACHINE SHOP



CNC BORING MACHINE



CNC MACHINING CENTER



BALANCING MACHINE



VACUUM PUMP



VACUUM-PUMP



MULTI STAGES CENTRIFUGAL PUMP



END SUCTION PUMP



BOILER FEED PUMP



INTERNAL GEAR PUMP



DOUBLE SUCTION PUMP



TORQUE FLOW PUMP



LOBE PUMP



NON-CLOG CENTRIFUGAL PUMP



ENGINE DRIVE PUMP