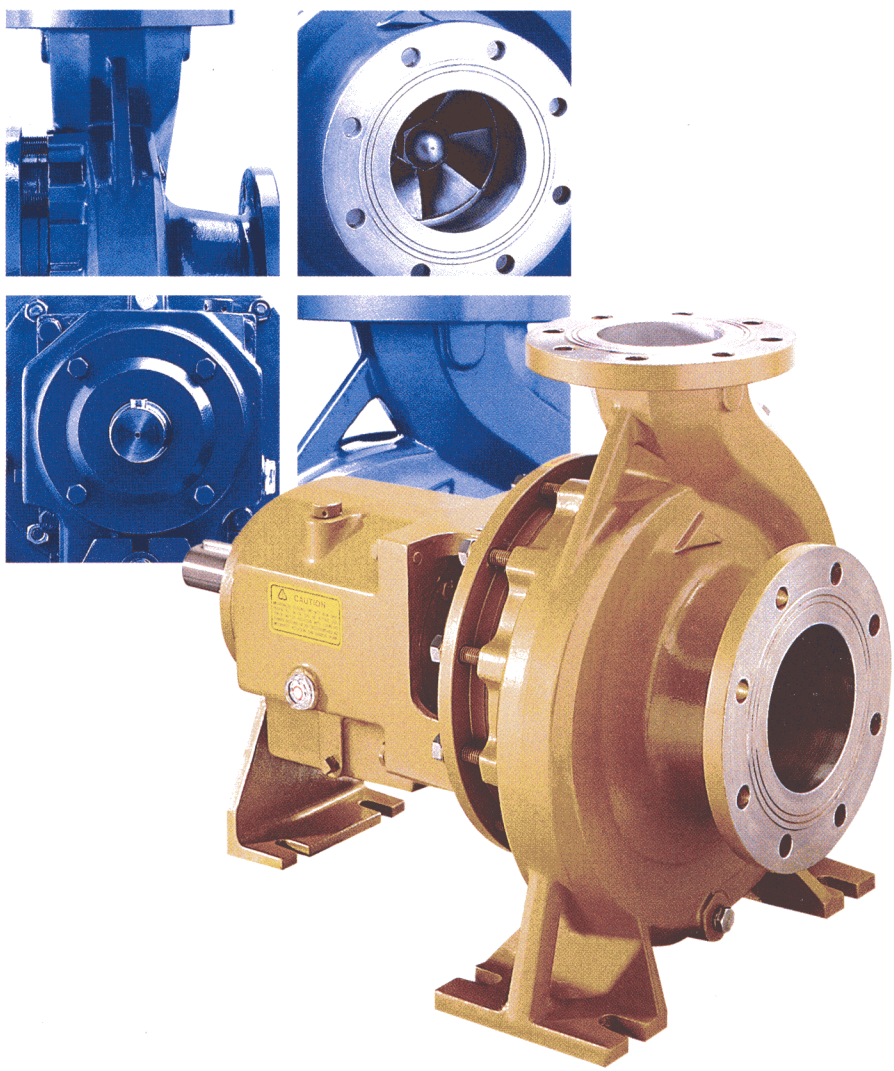
KEWPUMP®



KS-SG2

CHEMICAL PROCESS PUMP

COMPLIES WITH ISO 2858 & 5199 STANDARDS

TÜV CERT
ISO 9001 : 2000
Certificate: 04100 21779

QUALITY MANAGEMENT SYSTEM

Fully Compliance with International Standards

Dimensions and Performances - ISO 2858:1975
Design and Construction - ISO 5199:2002
Flanges Dimensions - ISO 7005-1:1992 - PN16
Mechanical Seals - DIN 24960
Baseplates Dimensions - ISO 3661:1977

Materials of Construction

All standard pump components in contact with the fluid are made of Stainless Steel 316 (CF-8M). Other materials are also available upon request.

Optional connections for inlet and outlet pressure measuring instruments.

Cast-on direction of rotation arrow.

Enclosed type impeller with twisted vane design for low NPSH3% values and high efficiencies. Open impellers are also available upon request.

Axial force compensation by means of back-vanes (above) or impeller running rings on both sides and balance holes (below).

Highly efficient one-piece volute type casing with integrally cast feel. Corrosion allowance in excess of 3mm. Casing with heating chamber are also available upon request.

Standard stuffing box cover with heating chamber. Cast in one-piece with large bore seal chamber on all pumps furnish with mechanical seal. Standard bore stuffing box cover can be fitted with a packed gland as an alternative.

Back pull-out design allows for removal of rotation elements without disturbing the casing and pipework, to simplify routine maintenance.

Teflon gasket between impeller nut and impeller, and between impeller and shaft sleeve, to prevent the pumped fluid for coming into contact with the shaft.

Available executions of mechanical seals : single acting (internal [standard], external), double acting (back-to-back, tandem), cartridge. Gland packing also available upon request.

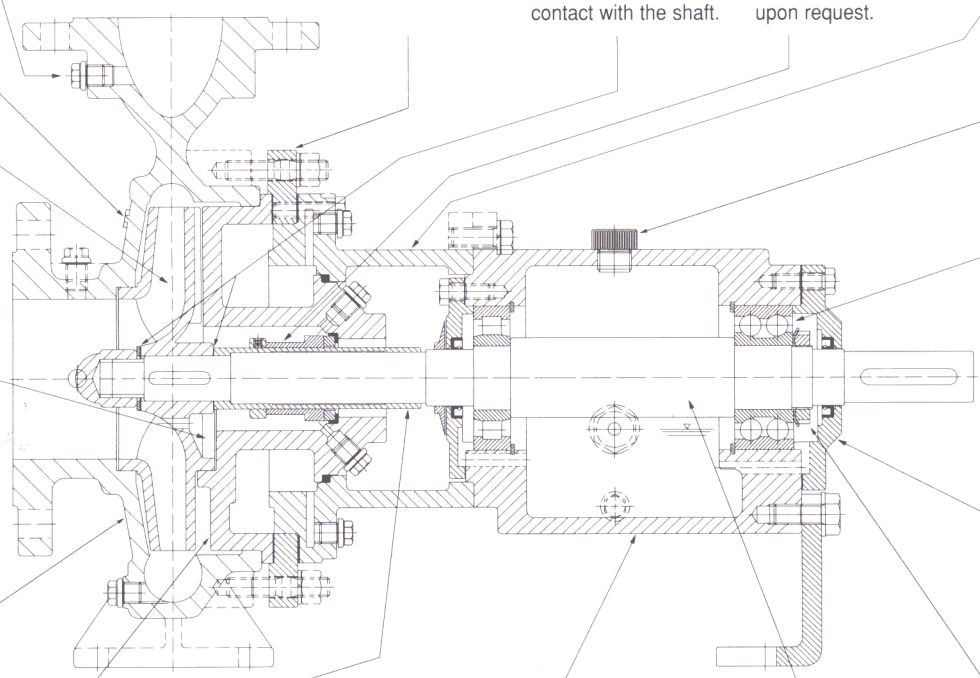
Ample space and accessibility for fitting a complete range of mechanical seals and auxiliary system to suit every application.

Vent for pressure compensation in the bearing frame.

Heavy duty, over sized pump and drive end bearings are selected to handle both radial and axial loads with life expectancy over 17500 hours of operation.

Each bearing is protected by a cast iron cover with inbuilt oil seal. When open impeller is required, an adjustable bearing box for the axial shaft adjustment will be used to enable impeller close running clearance to be preset to optimise performance.

Drive end bearing positively secured by a self-locking nut to improve reliability.



Hook type renewable shaft sleeve with a free end extends beyond the outer face of the stuffing box cover, seal cover or gland, for expansion under varying temperatures.

Rigid single-piece cast iron construction bearing frame and in connection with the support foot. Designed with large oil reservoir for better dissipation of heat, and standard oil level bulls-eye sight glass for easy monitoring. Frame predrilled for optional constant -level-oiler.

Shaft with greatest possible diameters, resistant to bending, to achieve low shaft deflection by operational radial forces.

MODEL DESIGNATION

SGN 65-200R DB OBC

Model Range
SGN: *Normal volute casing*
SGK: *Volute casing with heating chamber*

Model Size

Impeller Type
Blank: *Closed (Std.)*
S: *Semi-Open*
R: *Fully-Open*

Bearing Frame Type
Blank: *Without oil bath cooling (Std.)*
OBC: *With oil bath cooling*

Shaft Sealing Type
Blank: *Single internal (Std.)*
RQ: *Single internal with rear quenching*
ES: *Single external*
DB: *Double back-to-back*
DT: *Double tandem*
CT: *Cartridge*
G: *Gland Packing*

PART NO. NOTATIONS

XXX . X . X

Item Code *Material Code* *Type Code*

- Part No. with standard material and type are shown in the parts list.

Example Part No. : 120.1.C (Item = Impeller Material = SS304 Type = Closed)

Item Code

- For parts which have no variation in material and type, Part No. contains of Item Code only.

Example Part No. : 440 (Item = Deflector)

Material Code

For Item Codes 100, 104, 120, 133, 134, 206, 212, 213, 214, 215, 218, 401, 402, 409 and 463 only :

1 = SS304	4 = Ni-Hard	7 = Alloy 20
2 = SS316	5 = Cast Iron	8 = Mild Steel
3 = CA40	6 = Ductile Iron	9 = CD 4MCu

For Item Codes 200, 204 and 205 only :
Material codes according to DIN 24960 Standard.
Example : BVVGG = Carbon vs. Ceramic with Viton elastomers

- Available materials for the above items are depended on the product specifications.
- For parts which have no variation in type, Part No. contains of Item Code and Material Code only.

Example Part No. : 213.5 (Item = Gland Material = Cast Iron)

Type Code

For Item Code 100 only : J = With Heating Chamber

For Item Code 300 only : OBC = With Oil Bath Cooling

For Item Code 100, 120 and 300 only :

C = Closed	S = Semi-Open	R = Fully-Open

For Item Code 212 only :

IS = Single Internal	RQ = Single Internal with Rear Quenching
ES = Single External	DB = Double Back-to-Back
DT = Double Tandem	G = Gland Packing

For Item Code 214 only :

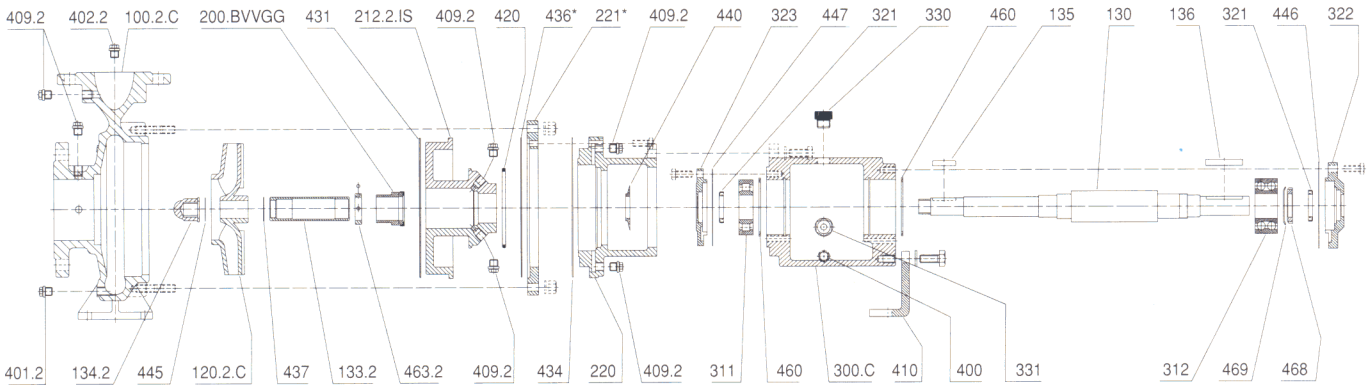
M = Mechanical Sealing	G = Gland Packing

- Available types for the above items are depended on the product specifications.

Example Part No. : 212.2.DB (Item = Stuffing Box Cover Material = SS316 Type = Double Back-to-Back)

Kewpump (M) Sdn. Bhd. reserves the right to change the materials and types to keep pace with technological progress.

STANDARD ARRANGEMENT

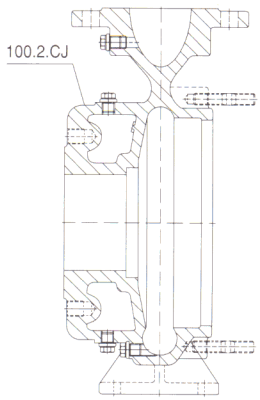


Part No.	Description	Standard Material
100.2.C	Casing for Closed Impeller	Stainless Steel 316
100.2.CJ	Casing for Closed Impeller with Heating Chamber	Stainless Steel 316
100.2.S/R	Casing for Open Type Impeller	Stainless Steel 316
100.2.S/RJ	Casing for Open Type Impeller with Heating Chamber	Stainless Steel 316
104.2	Casing Wear Plate	Stainless Steel 316
120.2.C	Closed Impeller	Stainless Steel 316
120.2.S	Semi-Open Impeller	Stainless Steel 316
120.2.R	Fully-Open Impeller	Stainless Steel 316
130	Shaft	Stainless Steel 304
133.2	Shaft Sleeve	Stainless Steel 316
134.2	Impeller Nut	Stainless Steel 316
135	Key for Impeller	Stainless Steel 304
136	Shaft End Key	Stainless Steel 304
200.BVVGG	Mechanical Seal	Carbon vs. Ceramic
201	Packing	P.T.F.E.
202	V-Seal	Synthetic Rubber
204.BVVGG	Pump End Mechanical Seal	Carbon vs. Ceramic
205.BVVGG	Atmospheric End Mechanical Seal	Carbon vs. Ceramic
206.2	Lantern Ring	Stainless Steel 316
212.2.IS	Stuffing Box Cover for Single Internal	Stainless Steel 316
212.2.RQ	Stuffing Box Cover for Single Internal with Rear Quenching	Stainless Steel 316
212.2.ES	Stuffing Box Cover for Single External	Stainless Steel 316
212.2.DB	Stuffing Box Cover for Double Back-to-Back	Stainless Steel 316
212.2.DT	Stuffing Box Cover for Double Tandem	Stainless Steel 316
212.2.G	Stuffing Box Cover for Gland Packing	Stainless Steel 316
213.2	Gland	Stainless Steel 316
214.2.M	End Ring for Mechanical Sealing	Stainless Steel 316
214.2.G	End Ring for Gland Packing	Stainless Steel 316
215.2	Seal Cover	Stainless Steel 316
218.2	Seal Cover Extension	Stainless Steel 316
220	Frame Adaptor	Cast Iron
221 *	Adaptor Extension Ring	Cast Iron

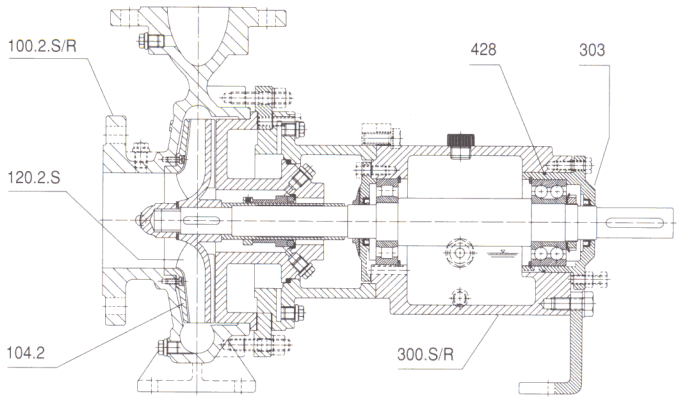
Part No.	Description	Standard Material
300.C	Bearing Frame for Closed Impeller	Cast Iron
300.COBC	Bearing Frame for Closed Impeller with Oil Bath Cooling	Cast Iron
300.S/R	Bearing Frame for Open Type Impeller	Cast Iron
300.S/ROBC	Bearing Frame for Open Type Impeller with Oil Bath Cooling	Cast Iron
303	Adjustable Bearing Box	Cast Iron
311	Pump End Bearing	Steel
312	Drive End Bearing	Steel
321	Oil Seal	Synthetic Rubber
322	Drive End Bearing Cover	Cast Iron
323	Pump End Bearing Cover	Cast Iron
330	Oil Cover	Aluminium Alloy
331	Oil Gauge	Plastic Threaded
340	Bearing Frame Cooling Coil	Copper
400	Bearing Frame Drain Plug	Galvanise Steel
401.2	Casing Drain Plug	Stainless Steel 316
402.2	Venting Plug	Stainless Steel 316
409.2	Connection Plug	Stainless Steel 316
410	Support Foot	Cast Iron
420	Stuffing Box Cover "O" Ring	Synthetic Rubber
428	Bearing Box "O" Ring	Synthetic Rubber
429	Seal Cover Extension "O" Ring	Synthetic Rubber
431	Stuffing Box Cover Gasket	P.T.F.E.
434	Frame Adaptor Gasket	Asbestos Sheet
436 *	Adaptor Extension Ring Gasket	Asbestos Sheet
437	Shaft Sleeve Gasket	P.T.F.E.
438	Seal Cover Gasket	Asbestos Sheet
440	Deflector	Synthetic Rubber
445	Impeller Nut Gasket	P.T.F.E.
446	Drive End Bearing Cover Gasket	Asbestos Sheet
447	Pump End Bearing Cover Gasket	Asbestos Sheet
448	End Ring Gasket	P.T.F.E.
449	Seal Cover Extension Gasket	Asbestos Sheet
460	Cir Clip	Steel
463.2	Abutment Ring	Stainless Steel 316
468	Bearing Nut	Steel
469	Bearing Washer	Steel
481	Cooling Coil Adaptor	Stainless Steel 304
491	Cooling Coil "O" Ring	Synthetic Rubber

* For all models except 32-130, 40-130, 50-130, 65-130, 65-160, 80-160, 100-260, 125-260, 125-320, 125-400,150-200, 150-260 and 150-320.

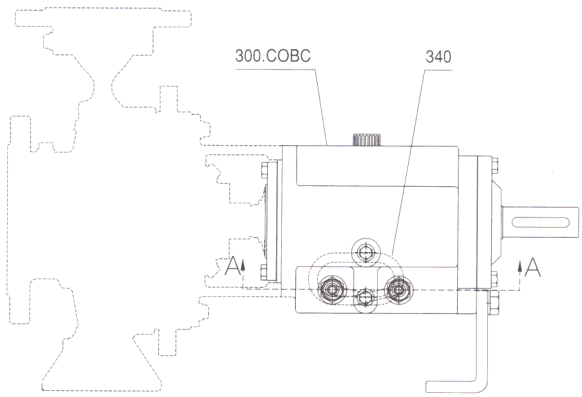
DESIGN VARIANTS

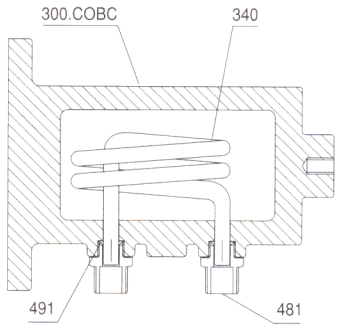


Casing with Heating Chamber



Open Type Impeller with Casing Wear Plate and Axial Adjustment

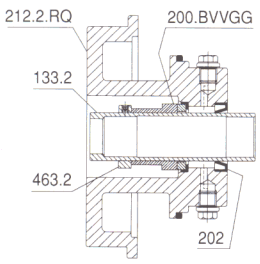




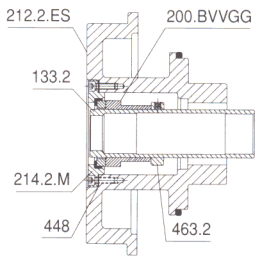
Section A - A

Bearing Frame with Oil Bath Cooling

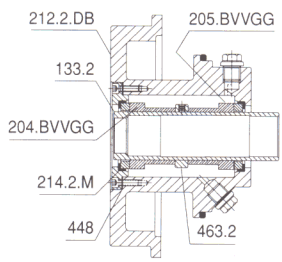
SHAFT SEAL OPTIONS



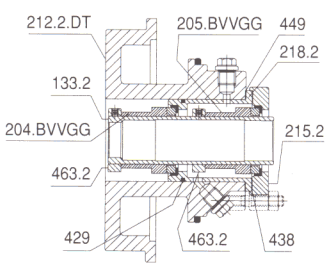
Single Internal with Rear Quenching



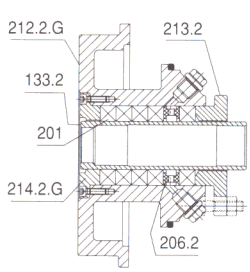
Single External



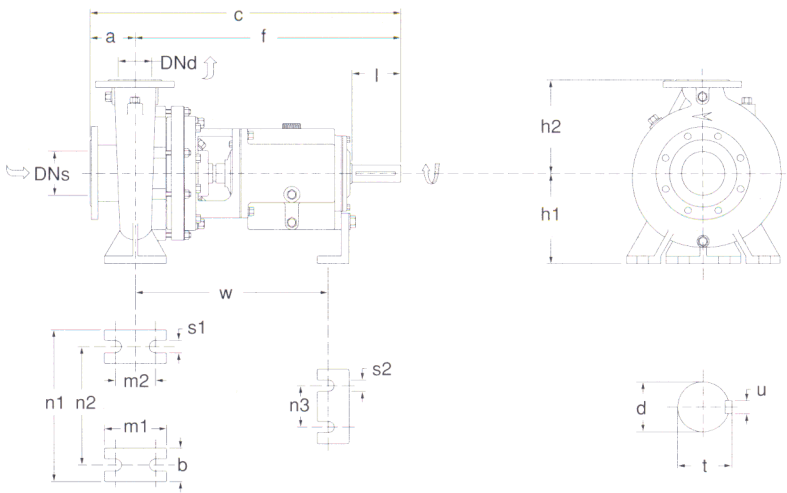
Double Back-to-Back



Double Tandem



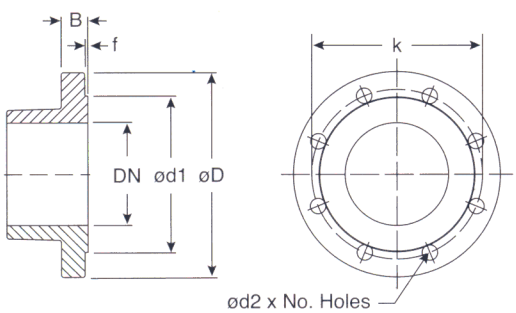
Gland Packing



Dimensions in mm

PUMP MODEL	Flanges		Pump Dimensions					Foot Dimensions									Shaft End			
	DNd	DNs	a	f	c	h1	h2	b	m1	m2	n1	n2	n3	s1	s2	w	d	l	t	u
32-130	32	50	80	385	465	112	140	50	100	70	190	140	110	14	14	285	24	50	27.9	8
32-160						132	160				240	190								
32-200						160	180													
32-260			100	500	600	180	225	65	125	95	320	250				370	32	80	35.3	10
40-130	40	65	80	385	465	112	140	50	100	70	210	160	110	14	14	285	24	50	27.9	8
40-160						132	160				240	190								
40-200			100		485	160	180				265	212								
40-260				500	600	180	225	65	125	95	320	250				370	32	80	35.3	10
40-320			125		625	200	250				345	280								
50-130	50	80	100	385	485	132	160	50	100	70	240	190	110	14	14	285	24	50	27.9	8
50-160						160	180				265	212								
50-200							200													
50-260			125	500	625	180	225	65	125	95	320	250				370	32	80	35.3	10
50-320						225	280				345	280								
65-130	65	100	100	385	485	160	180	65	125	95	280	212	110	14	14	285	24	50	27.9	8
65-160				500	600		200									370	32	80	35.3	10
65-200						180	225				320	250								
65-260			125	625		200	250	80	160	120	360	280		18						
65-320 [1]				530	655	225	280				400	315					42	95	45.1	12
80-160	80	125	125	500	625	180	225	65	125	95	320	250	110	14	14	370	32	80	35.3	10
80-200							250				345	280								
80-260						225	280	80	160	120	400	315		18			42	95	45.1	12
80-320 [1]				530	655	250	315													
80-400 [1]						280	355				435	355								
100-160	100	125	125	500	625	200	280	80	160	120	340	260	110	18	14	370	32	80	35.3	10
100-200											360	280								
100-260 [1]			140	530	670	225					400	315					42	95	45.1	12
100-320 [1]						250	315													
100-400 [1]						280	355	100	200	150	500	400		23						
125-200	125	150	140	500	640	250	315	80	160	120	400	315	110	18	14	370	32	80	35.3	10
125-260 [1]				530	670		355										42	95	45.1	12
125-320 [1]						280		100	200	150	500	400		23						
125-400 [1]						315	400													
150-200	150	200	160	500	660	280	375	100	200	150	500	400	110	23	14	370	32	80	35.3	10
150-260 [1]				530	690												42	95	45.1	12
150-320				670	830	315	400				550	450	140		18	500	48	110	51.5	14
150-400							450													

[1] In these models the dimension "l" is 15mm shorter than the specified in ISO 2858. The dimension "f" is according to ISO 2858



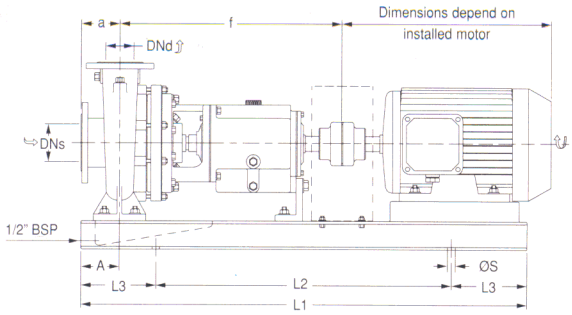
Dimensions in mm

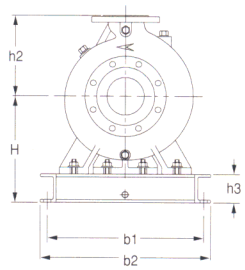
Nominal Dia.	Flange		Raised Face		Drilling*			Bolting
DN	D	B	d1	f	No.	d2	k	
32	140	18	76	2	4	18	100	M16
40	150	18	84	2	4	18	110	M16
50	165	20	99	2	4	18	125	M16
65	185	20	118	2	4**	18	145	M16
80	200	20	132	2	8	18	160	M16
100	220	22	156	2	8	18	180	M16
125	250	22	184	2	8	18	210	M16
150	285	24	211	2	8	22	240	M20
200	340	24	266	2	12	22	295	M20

Flange dimensions and drilling according to ISO 7005-1:1992 - PN16
* Holes equally spaced straddling pump centreline
** Number of holes drilled less than the specified in ISO 7005-1:1992 - PN16

Product specifications subject to change without prior notice.

PUMP SET DIMENSIONS WITH BASEPLATE





Baseplate Dimensions According to ISO 3661

Baseplate Number	Dimensions in mm							For Bolt
	b1	b2	h3	L1	L2	L3	S	
3661.2	320	360	100	800	540	130	18	M16
3661.3	350	390	100	900	600	150	18	M16
3661.4	400	450	100	1000	660	170	22	M20
3661.5	440	490	100	1120	740	190	22	M20
3661.6	490	540	100	1250	840	205	22	M20
3661.7	550	610	125	1400	940	230	26	M24
3661.8	600	660	125	1600	1060	270	26	M24
3661.9	670	730	150	1800	1200	300	26	M24

Dimensions in mm

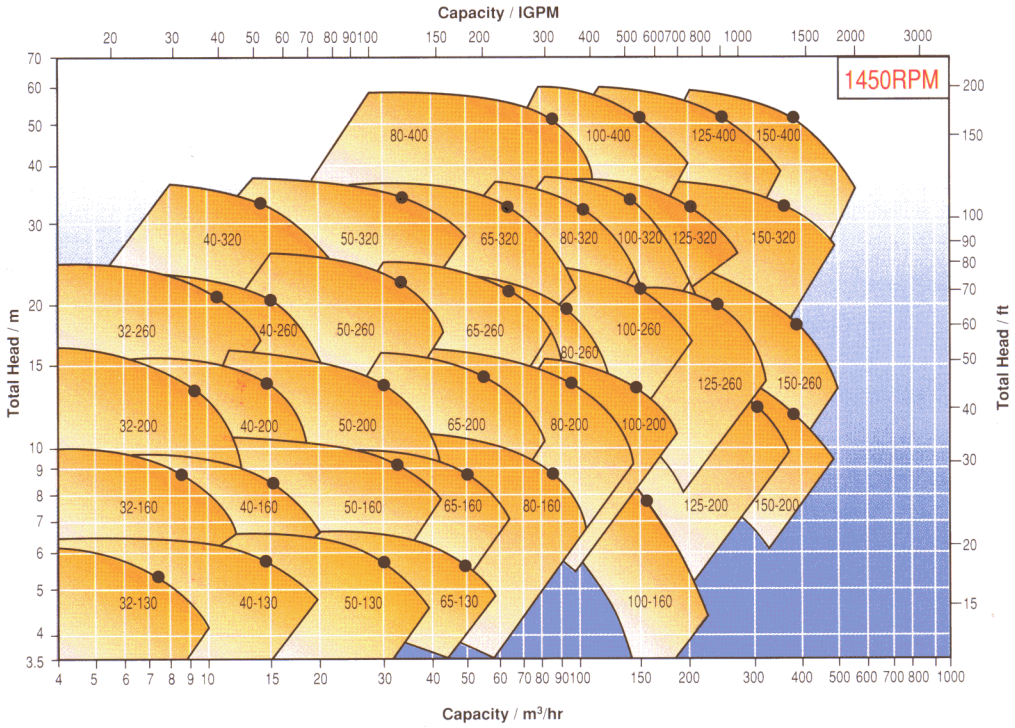
PUMP MODEL	Flanges		Set Dimensions				H and the Standardized Baseplate Number, in Terms of Motor Size (I.E.C.)															
	DNd	DNs	a	f	A	h2	71M	80M	90S	90L	100L	112M	132S	132M	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
32-130	32	50	80	385	60	140			212 *3661.2*															
32-160						160			*3661.2*	232		*3661.3*	*3661.4*											
32-200						180			*3661.2*	260		*3661.3*	*3661.4*		260 *3661.4*									
32-260			100	500	75	225			*3661.4*	280					*3661.5*	280 *3661.6*								
40-130	40	65	80	385	60	140			*3661.2*	212		*3661.3*	232 *3661.4*											
40-160						160			*3661.2*	232		*3661.3*	*3661.4*		260 *3661.4*									
40-200			100			180			*3661.3*	260			260 *3661.4*		260 *3661.4*									
40-260				500	75	225				*3661.4*	280				*3661.5*	280 *3661.6*			325 *3661.7*					
40-320			125			250					300 *3661.5*													
50-130	50	80	100	385	60	160				232 *3661.2*		*3661.3*	*3661.4*		260 *3661.4*									
50-160						180				*3661.3*	260		*3661.4*		260 *3661.4*									
50-200						200				*3661.3*	260		*3661.4*		260 *3661.4*	280 *3661.5*			325 *3661.7*					
50-260			125	500	75	225					*3661.4*	280			*3661.5*	*3661.6*			325 *3661.7*		350 *3661.7*	375 *3661.8*		
50-320						280						*3661.5*	325			*3661.6*								
65-130	65	100	100	385	75	180					260 *3661.4*				260 *3661.4* *3661.5*									
65-160						200					260 *3661.4*				260 *3661.5*	280 *3661.6*								
65-200				500		225						280 *3661.4*			*3661.5*	*3661.6*			325 *3661.7*		350 *3661.7*			
65-260			125		90	250							300 *3661.5*				300 *3661.6*		325 *3661.7*		350 *3661.7*	375 *3661.8*	430 *3661.9*	
65-320				530		280									325 *3661.6*									
80-160	80	125	125	500	75	225						280 *3661.4*			*3661.5*	280 *3661.6*			325 *3661.7*					
80-200						250							280 *3661.5*			*3661.6*			325 *3661.7*		350 *3661.7*	375 *3661.8*		
80-260					90	280								325 *3661.6*					350 *3661.7*		350 *3661.7*	375 *3661.8*	430 *3661.9*	
80-320				530		315									350 *3661.6*				375 *3661.7*					
80-400						355												405 *3661.7*						
100-160	100	125	125	500	90	280							300 *3661.5*			300 *3661.6*			325 *3661.7*					
100-200														300 *3661.5*		*3661.6*			325 *3661.7*		350 *3661.7*	375 *3661.8*	430 *3661.9*	
100-260			140	530											325 *3661.6*				350 *3661.7*		350 *3661.7*	375 *3661.8*	430 *3661.9*	
100-320						315										350 *3661.6*			375 *3661.7*					
100-400					110	355													405 *3661.8*					
125-200	125	150	140	500	90	315									350 *3661.6*							375 *3661.8*	430 *3661.9*	
125-260						355										350 *3661.6*			375 *3661.7*					
125-320				530	110													405 *3661.8*						
125-400						400													440 *3661.8*				465 *3661.9*	
150-200	150	200	160	500	110	375											405 *3661.8*							
150-260				530														405 *3661.8*						
150-320				670		400													465 *3661.9*					
150-400						450																465 *3661.9*		

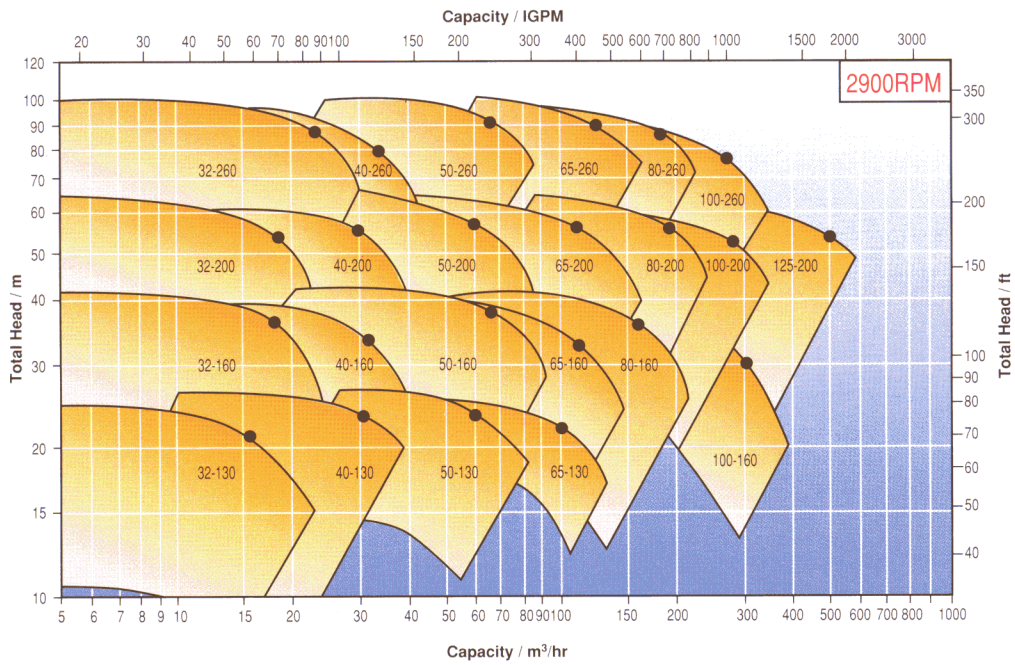
Baseplate selection based on standard couplings used

Motor Size and Power IP-55, Standardized to I.E.C.

Power hp at 50 Hz	0.5	0.75	1.0	1.5	2.0	3.0	4.0	5.5	7.5	10	15	20	25	30	40	50	60	75	100	125
Motor Size of 4 Pole	71M	80M		90S	90L	100L		112M	132S	132M	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
Motor Size of 2 Pole	71M	80M			90S	90L	100L	112M	132S		160M		160L	180M	200L		225M	250M	280S	280M

Product specifications subject to change without prior notice.





Curve for reference only. For final selection refer to individual pump curve.
Black dots on curves show best efficiency points.

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