



Close-Coupled End Suction Centrifugal Pumps



SHINDO HAS CONSTANTLY DEVELOP THE CREDIBILITY TO SERVE THE INDUSTRY EFFICIENTLY.

SHINDO IS COMMITTED TO PROVIDE HIGH VALUE-ADDED PRODUCTS IN MINIMUM LEAD-TIME AND AT COST EFFECTIVE PRICING, TO HELP CUSTOMERS ACHIEVE ZERO DOWNTIME, PRODUCTION TARGET AND HELP ENHANCE A SAFER ENVIRONMENT.

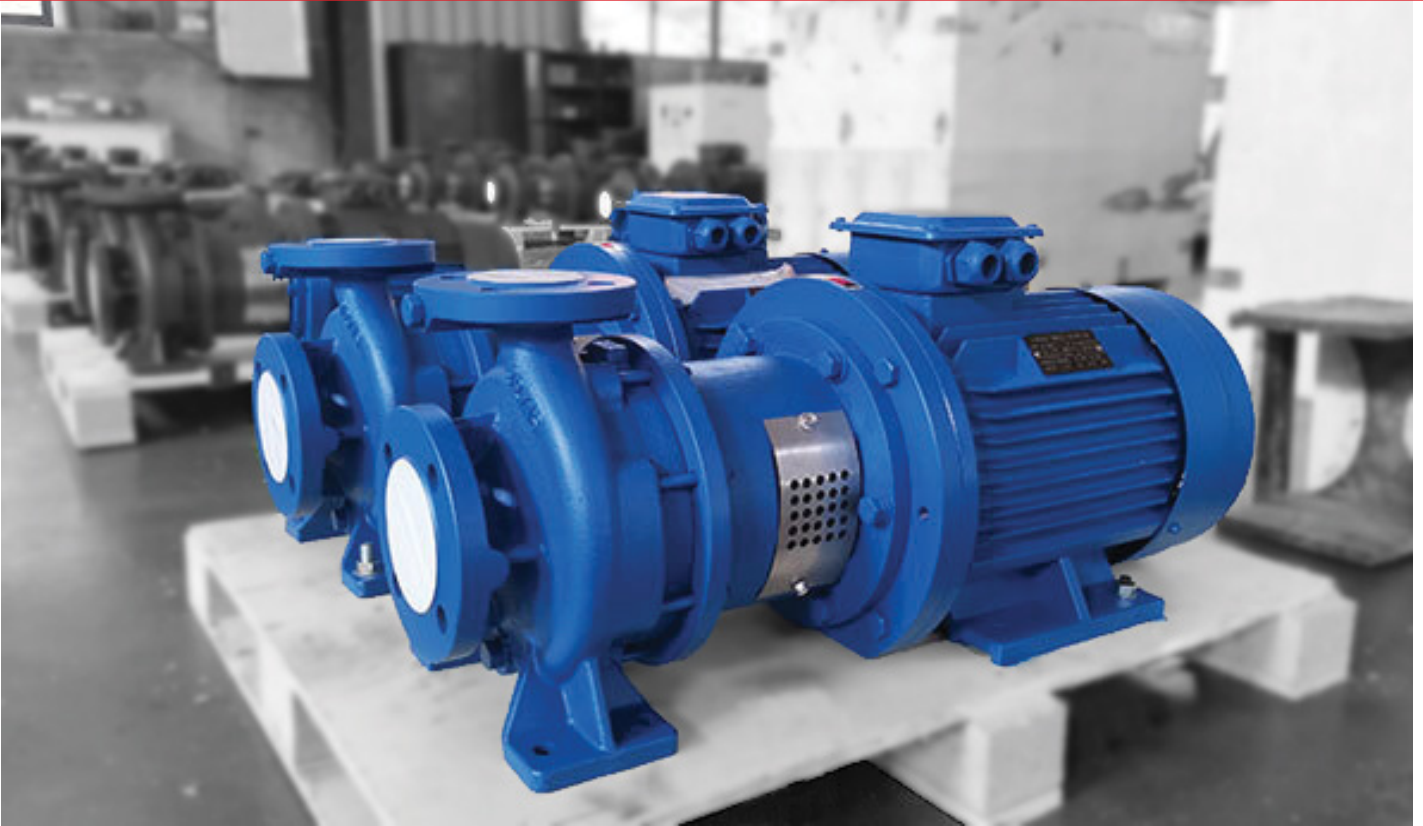


CLOSE-COUPLED END SUCTION CENTRIFUGAL PUMPS

PAGE CONTENTS

01	INTRODUCTION APPLICATION
02	PERFORMANCE MODEL CODE
03	CONSTRUCTION DESIGN
04	GENERAL ARRANGEMENT DRAWING
05	SELECTION CHART
06	DIMENSIONAL DRAWING (2900RPM)
07	DIMENSIONAL DRAWING (1450RPM)
08	FLANGE DIMENSION

INTRODUCTION.



Shindo SC series pump are derived from S series in which their standard is according to the European standard DIN24255/EN733 of performance. The main different between SC and S series is SC series is direct coupled with motor which brings SC series to be much shorter in length compare to S series.

This shorter length of SC series helps in space savings as it takes less space for installation. In terms of the performance, SC series is same as S series where the performance can be adjusted through the impeller trimming.

APPLICATION.

Below are the common applications that are suitable to use Shindo SC series:

- **Water Supply System**
- **Fire Fighting System**
- **Heating System for Commercial District Heating**
- **Cooling Plants for Industrial Processing and Air-Conditioning Units**
- **General Liquid Transfer for Industrial Process**
- **Pressure Boosting**

For the type of liquid, any type of non-corrosive neither clear or turbid liquids that do not have any solid particles can be handled without any problem. Example of liquids that can be handled by SC series are such as fire-fighting water, brackish water, drinking water, hot water, service water, non-corrosive cleaning agents, condensate and oils.

PERFORMANCE.

Performance range for SC series:

- Capacity (Q): Up to 1100m³/hr
- Head (H): Up to 160m
- Max. Operating Pressure: 16 bar (PN 16)
- Max. Liquid Temperature: 105°C

MODEL CODE.

SC 65 - 16



Close-Coupled
End Suction
Centrifugal
Pump (50Hz)



Discharge
Size (mm)



Impeller
Nominal
Size (cm)

CONSTRUCTION DESIGN.

DESIGN.

Shindo SC series is a single-stage pumping units of compact design with nominal performances and flange connection size according to DIN 24255/EN 733 with pressure rating of PN16. Volute pumps of the SC series have been designed as a floor space saving and easy-to-install pumping units. The position of the branches are suction branch axial and the discharge branch pointing radially upwards.

Pump shaft and motor shaft are close-coupled. This way of coupling ensures the alignment of pump and motor stay aligned and helps the pump impeller runs in good balance. There is no common shaft for motor and pump. With this design, it is possible to withdraw the whole insert assembly without removing the casing of the pump from the piping system. The individual shaft of the unit connected by a plug-in coupling facilitate the process of dismantling or replacement of the motor without affecting the pump.

BEARING.

Two grease-lubricated anti-friction bearings according to DIN 625 in the motor, one anti-friction bearing grease-lubricated for service life according to DIN 625 arranged in the adapter.

MATERIAL.

Types of material that are available for SC series are cast iron, stainless steel 304/316, Duplex stainless steel. More material info provided on below table.

SHAFT SEALING.

The shaft sealing is a single standard mechanical seal, flushed from internal source, uncooled and unbalanced.

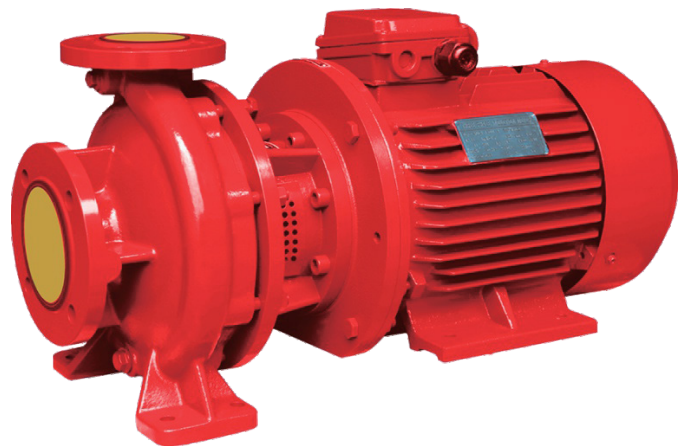
ROTATION.

The rotation of the pump is clockwise when looking at the pump from the drive end.

DRIVE MOTOR.

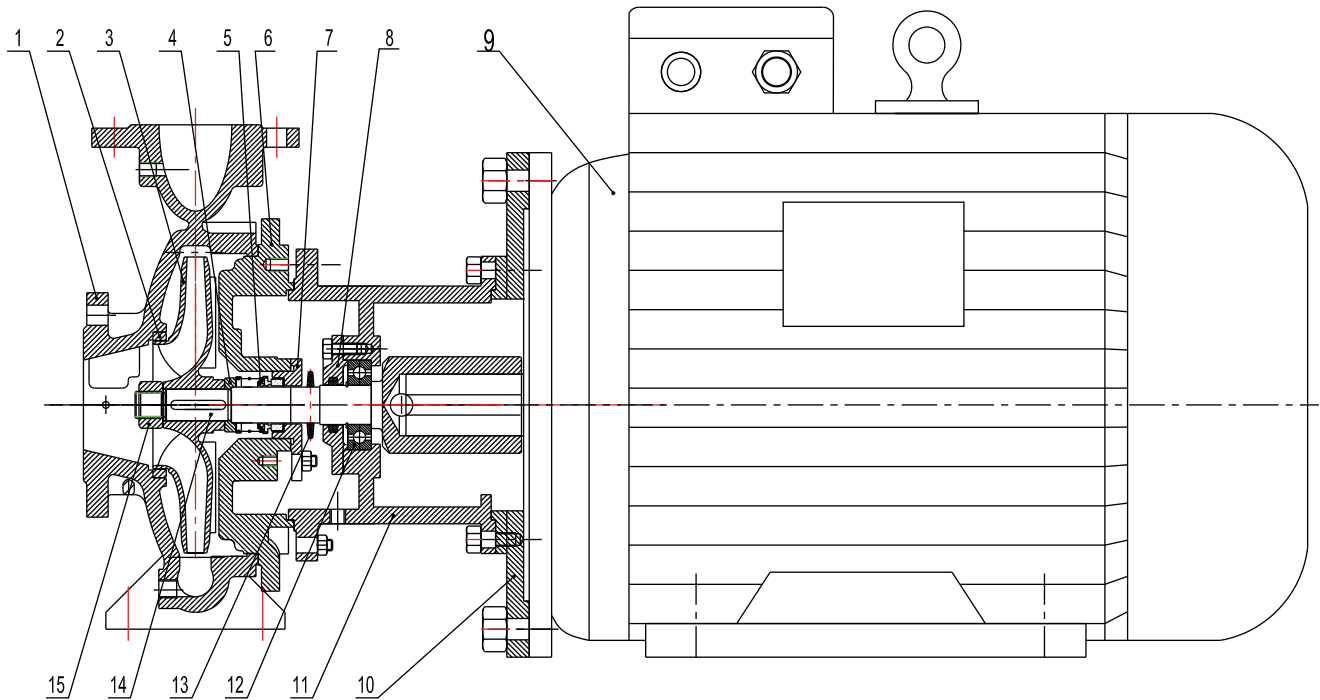
The type of motors that are suitable to be coupled with SC series are IEC standard motor with B35 frame. For the determination of the drive power, the following additional power is recommended:

- Up to 4 kW : 25%
- 4kW up to 7.5 kW : 20%
- 7.5kW up to 37 kW : 15%
- Above 37kw : 10%



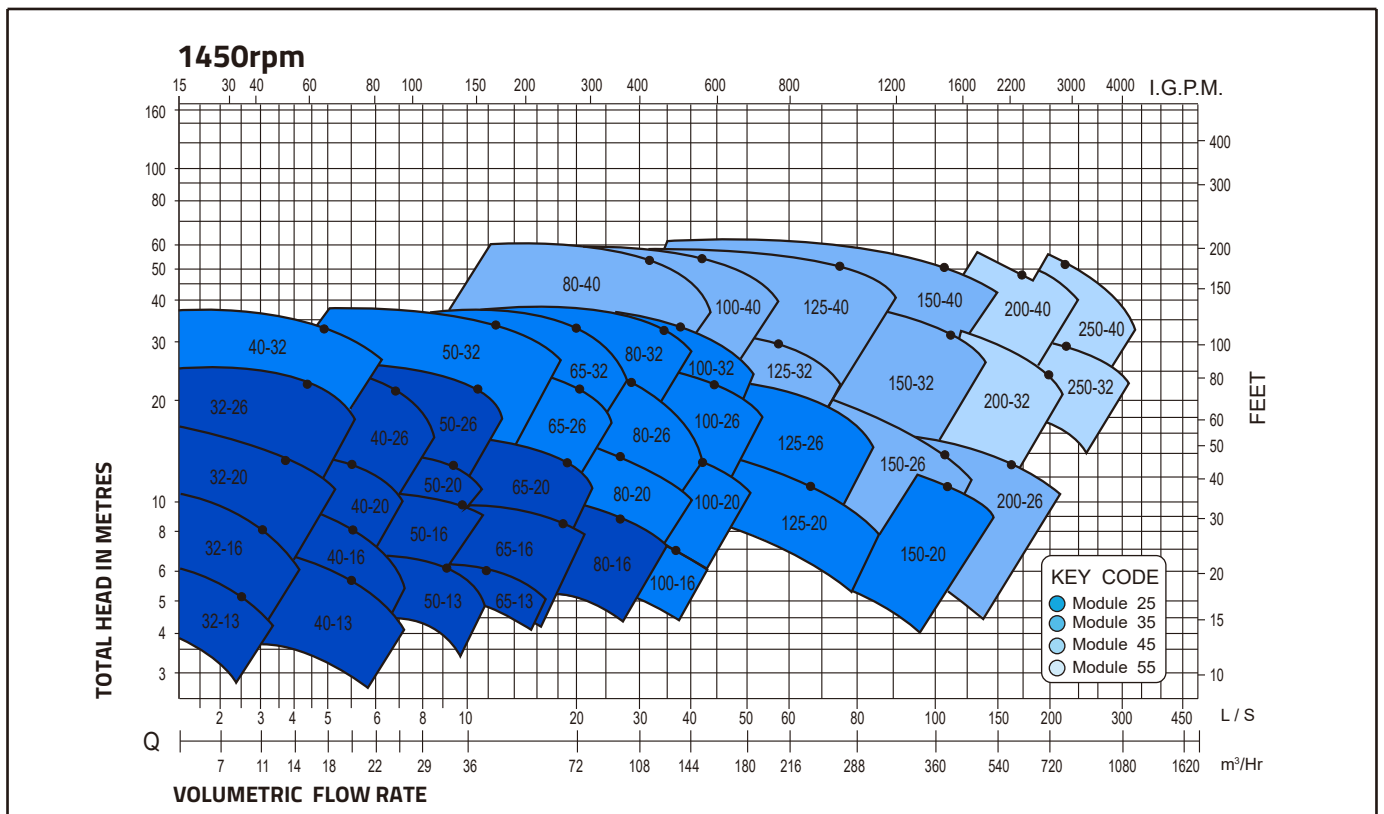
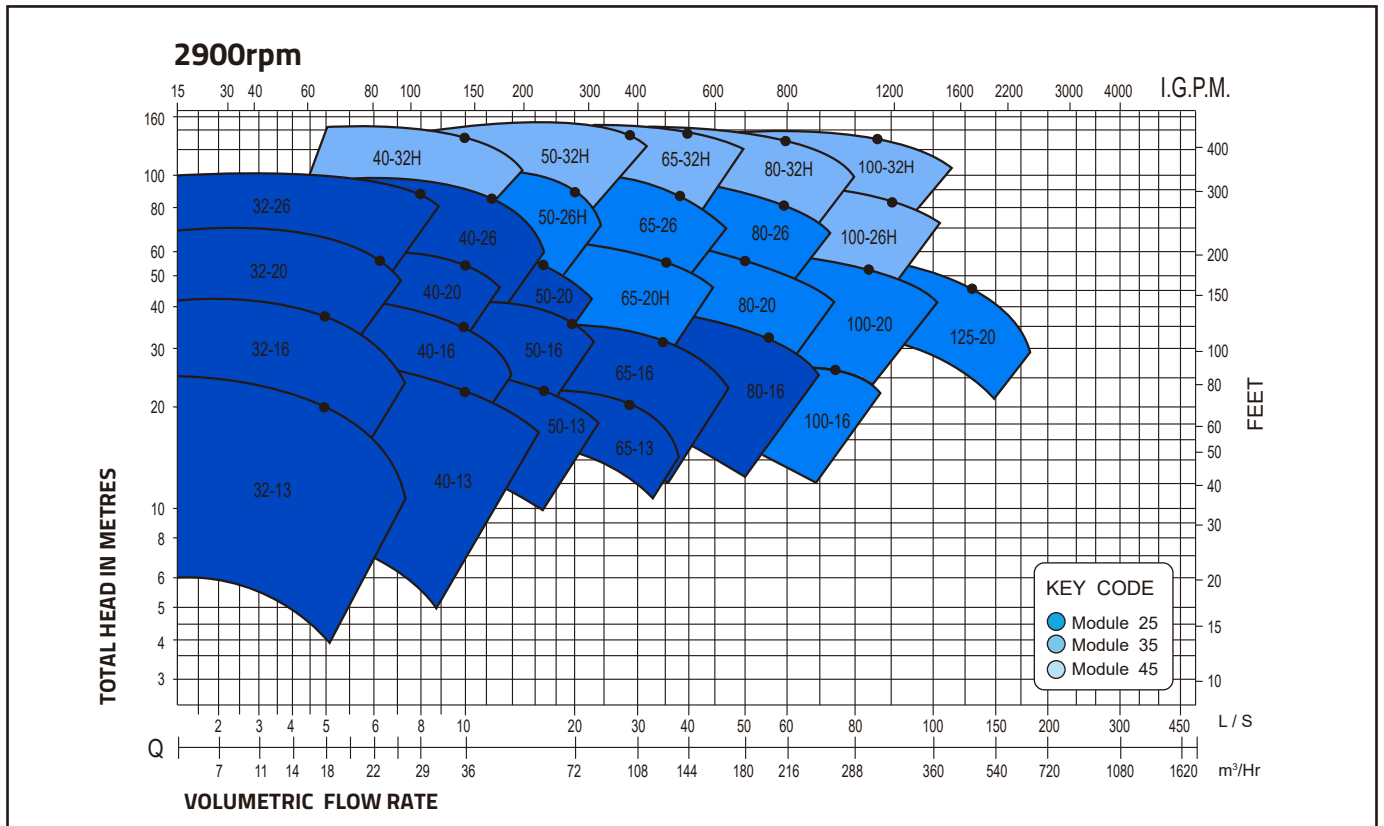
Part Name	Fitted Pump Standard Material			
	G1	G2	Stainless Steel 304/316	Duplex SS 2205/D2507
Pump Casing	Cast Iron	Cast Iron	Stainless Steel 304/316	Duplex SS 2205/D2507
Impeller	Cast Iron	Stainless Steel 304	Stainless Steel 304/316	Duplex SS 2205/D2507
Mechanical Seal	Carbon/Ceramic-Viton		SIC/Carbon-Viton	
Casing Cover	Cast Iron	Cast Iron	Stainless Steel 304/316	Duplex SS 2205/D2507
Adapter	Cast Iron	Cast Iron	Cast Iron GG20	Cast Iron GG20
Shaft	Stainless Steel 420	Stainless Steel 420	Stainless Steel 304/316	Duplex SS 2205/D2507

GENERAL ARRANGEMENT DRAWING.



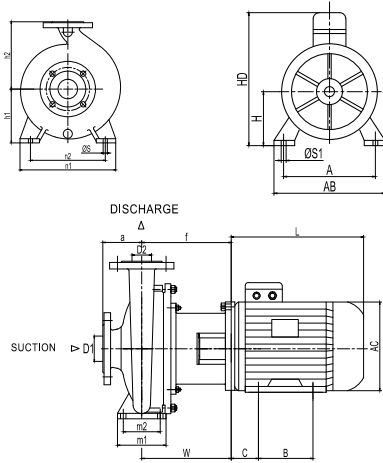
No.	Part Name
1	Pump Casing
2	WearRing
3	Impeller
4	Shaft Sleeve
5	Mechanical Seal
6	Casing Cover
7	MS Seal Cover
8	Bearing Cover
9	IEC Standard Motor
10	Adapter Flange
11	Adapter
12	Bearing
13	Shaft
14	Pump Shaft
15	Impeller Nut

SELECTION CHART.



DIMENSIONAL DRAWING.

50Hz - 2900RPM



Motor Dimension

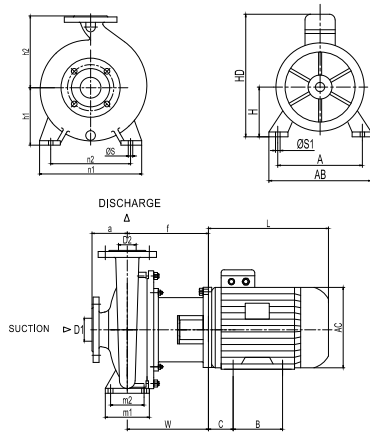
Motor Frame	kW/2P	H	A	B	C	ØS	AB	AC	HD	L
80	1.1	80	125	100	50	12	165	175	220	255
90S	1.5	90	140	100	56	12	180	195	250	265
90L	2.2	90	140	100	56	12	180	195	250	290
100L	3	100	160	140	63	15	205	215	270	325
112M	4	112	190	140	70	15	230	240	300	360
132S	5.5	132	216	140	89	15	270	275	345	390
132S	7.5	132	216	140	89	15	270	275	345	390
160M	11	160	254	210	108	19	320	330	420	505
160M	15	160	254	210	108	19	320	330	420	505
160L	18.5	160	254	254	108	19	320	330	420	560
180M	22	180	279	241	121	19	355	380	455	590
200L	30	200	318	305	133	19	375	420	545	660
200L	37	200	318	305	133	19	375	420	545	660
225M	45	225	356	311	149	19	435	470	555	705
250M	55	250	406	349	168	19	490	510	615	770
280S	75	280	457	368	190	19	550	580	680	845
280M	90	280	457	410	190	19	550	580	680	895
315S	110	315	508	406	216	24	635	645	845	1100
315M	132	315	508	457	216	24	635	645	845	1130

Pump Dimension

Pump Model	Motor Power (kW)				D2	D1	a	f	h1	h2	m1	m2	n1	n2	ØS	W
32-13	1.1	1.5	2.2		32	50	80	227	112	140	100	70	190	140	14	227
	2.2	3	4					227								
32-16	5.5				32	50	80	247	132	160	100	70	240	190	14	247
	7.5							247								
32-20	11				32	50	80	277	160	180	100	70	240	190	14	277
	18.5							277								
32/26	11	15	18.5		32	50	100	277	180	225	125	95	320	250	14	277
40/13	1.5	2.2	3	4	40	65	80	227	112	140	100	70	210	160	14	227
	3	4						227								
40/16	5.5	7.5			40	65	80	247	132	160	100	70	240	190	14	247
	7.5							247								
40/20	11				40	65	100	277	160	180	100	70	265	212	14	277
	18.5							277								
40/26	15	18.5	22		40	65	100	277	180	225	125	95	320	250	14	277
40/32	30	37	45		40	65	125	298	200	250	125	95	345	280	14	298
50-13	3	4			50	65	100	227	132	160	100	70	240	190	14	227
	5.5	7.5						247								
50-16	5.5	7.5			50	65	100	247	160	180	100	70	265	212	14	247
	11							277								
50-20	11	15	18.5		50	65	100	277	160	200	100	70	265	212	14	277
50-26	22				50	65	100	277	180	225	125	95	320	250	14	277
50-26G	30	37			50	65	100	298	180	225	125	95	320	250	14	298
50-32	37	45			50	65	125	298	225	280	125	95	345	280	14	268
	55	75						328								
65-13	4				65	80	100	227	160	180	125	95	280	212	14	227
	5.5	7.5						247								
65-16	7.5				65	80	100	247	160	200	125	95	280	212	14	247
	11	15						277								
65-20	15	18.5	22		65	80	105	277	180	225	125	95	320	250	14	277
65-20G	30				65	80	105	293	180	225	125	95	320	250	14	293
65-26	30	37	45		65	80	100	298	200	250	160	120	360	280	18	298
	55							328								
65-32	45				65	80	125	298	225	280	160	120	400	315	18	298
	55	75						328								
65-32G	90				65	80	125	340	225	280	160	120	400	315	18	340
80-16	11	15	18.5	22	80	100	125	277	180	225	125	95	320	250	14	277
80-20	30	37	45		80	100	125	298	180	250	125	95	345	280	14	298
	45							298								
80-26	55	75			80	100	125	328	200	280	160	120	400	315	18	328
	90							340								
80-32G	90	110	132		80	100	125	340	200	280	160	120	400	315	18	340
100-16	15	18.5	22	30	100	125	125	298	200	250	160	120	360	280	18	298
	37	45						298								
100-20	55	75			100	125	125	328	200	280	160	120	360	280	18	328
	90							340								
100-26	75				100	125	140	328	225	280	160	120	400	315	18	328
100-26G	90	110	132		100	125	140	340	225	280	160	120	400	315	18	340
125-20	55	75			125	150	145	328	250	315	160	120	400	315	18	328

DIMENSIONAL DRAWING.

50Hz - 1450RPM



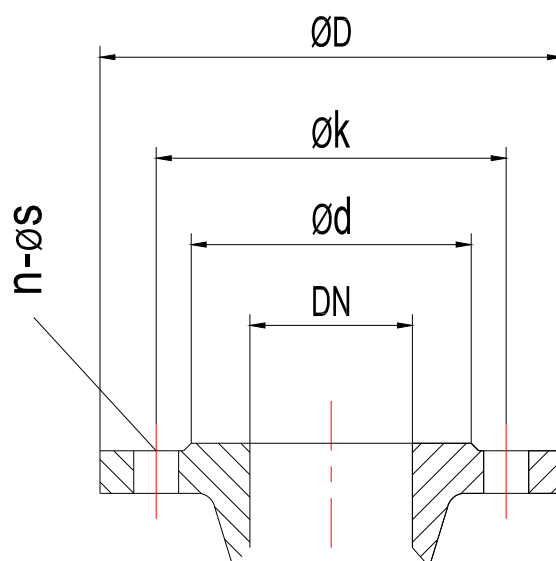
Motor Dimension

Motor Frame	kW/4P	H	A	B	C	S1	AB	AC	HD	L
80	0.75	80	125	100	50	12	165	175	220	255
90S	1.1	90	140	100	56	12	180	195	250	265
90L	1.5	90	140	100	56	12	180	195	250	290
100L	2.2	100	160	140	63	15	205	215	270	325
100L	3	100	160	140	63	15	205	215	270	325
112M	4	112	190	140	70	15	230	240	300	360
132S	5.5	132	216	140	89	15	270	275	345	390
132M	7.5	132	216	178	89	15	270	275	345	430
160M	11	160	254	210	108	19	320	330	420	505
160L	15	160	254	254	108	19	320	330	420	560
180M	18.5	180	279	241	121	19	355	380	455	590
180L	22	180	279	279	121	19	355	380	455	630
200L	30	200	318	305	133	19	375	420	545	660
225S	37	225	356	286	149	19	435	470	555	675
225M	45	225	356	311	149	19	435	470	555	705
250M	55	250	406	349	168	19	490	510	615	770
280S	75	280	457	368	190	19	550	580	680	845
280M	90	280	457	410	190	19	550	580	680	895
315S	110	315	508	406	216	24	635	645	845	1100
315M	132	315	508	457	216	24	635	645	845	1130

Pump Dimension

Pump Model	Motor Power (kW)				D2	D1	a	f	h1	h2	m1	m2	n1	n2	ØS	W
32-13	0.55				32	50	80	227	112	140	100	70	190	140	14	227
32-16	0.55				32	50	80	227	132	160	100	70	240	190	14	227
32-20	0.75	1.1			32	50	80	227	160	180	100	70	240	190	14	227
32/26	2.2	3			32	50	100	227	180	225	125	95	320	250	14	227
40-13	0.55				40	65	80	227	112	140	100	70	210	160	14	227
40-16	0.55	0.75	1.1		40	65	80	227	132	160	100	70	240	190	14	227
40-20	0.75	1.1	1.5		40	65	100	227	160	180	100	70	265	212	14	227
40-26	1.5	2.2	3		40	65	100	227	180	225	125	95	320	250	14	227
40-32	4	5.5	7.5		40	65	125	268	200	250	125	95	345	280	14	268
50-13	0.55	0.75	1.1		50	65	100	227	132	160	100	70	240	190	14	227
50-16	0.75	1.1	1.5		50	65	100	227	160	180	100	70	265	212	14	227
50-20	1.1	1.5	2.2		50	65	100	227	160	200	100	70	265	212	14	227
50-26	3	4			50	65	100	227	180	225	125	95	320	250	14	227
	5.5				50	65	100	247	180	225	125	95	320	250	14	247
50-32	5.5	7.5			50	65	125	268	225	280	125	95	345	280	14	268
	11				50	65	125	298	225	280	125	95	345	280	14	298
65-13	0.75	1.1			65	80	100	227	160	180	125	95	280	212	14	227
65-16	1.1	1.5	2.2		65	80	100	227	160	200	125	95	280	212	14	227
65-20	2.2	3	4		65	80	105	227	180	225	125	95	320	250	14	227
65-26	3	4	5.5	7.5	65	80	100	268	200	250	160	120	360	280	18	268
65-32	7.5				65	80	125	268	225	280	160	120	400	315	18	268
	11	15			65	80	125	298	225	280	160	120	400	315	18	298
80-16	1.5	2.2	3		80	100	125	227	180	225	125	95	320	250	14	227
80-20	3	4	5.5		80	100	125	268	180	250	125	95	345	280	14	268
80-26	7.5	11			80	100	125	298	200	280	160	120	400	315	18	298
80-32	11	15			80	100	125	298	250	315	160	120	400	315	18	298
80-40	18.5	22	30		80	100	125	319	280	355	160	120	440	340	18	314
100-16	2.2	3			100	125	125	268	200	250	160	120	360	280	18	268
100-20	5.5	7.5			100	125	125	268	200	280	160	120	360	280	18	268
100-26	11	15			100	125	140	298	225	280	160	120	400	315	18	298
100-32	15	18.5	22	30	100	125	140	298	250	315	160	120	400	315	18	298
100-40	22	30			100	125	140	314	280	355	200	150	500	400	23	314
	37				100	125	140	344	280	355	200	150	500	400	23	344
125-20	7.5	11			125	150	145	298	250	315	160	120	400	315	18	298
125-26	15	18.5	22	30	125	150	140	298	250	355	160	120	400	315	18	298
125-32	18.5	22	30		125	150	140	314	280	355	200	150	500	400	23	314
125-40	37	45	55	75	125	150	160	344	315	400	200	150	500	400	23	344
150-20	11	15	18.5		150	200	160	325	280	400	200	150	400	315	23	325
150-26	18.5	22	30		150	200	160	314	280	400	200	150	450	350	23	314
150-32	30				150	200	160	314	280	400	200	150	550	450	23	314
	37	45	55		150	200	160	344	315	400	200	150	550	450	23	344
150-40	45	55	75	90	150	200	160	344	315	450	200	150	550	450	23	344
200-26	22	30			200	250	180	339	315	450	200	150	550	450	28	339
200-32	37	45	55	75	200	250	180	379	315	480	220	170	600	480	28	379
200-40	55	75	90		200	250	180	379	335	480	220	170	600	480	28	379
	110				200	250	180	409	335	480	220	170	600	480	28	409
250-32	55	75	90		250	300	220	400	355	520	250	200	660	510	28	400
250-40	75	90			250	300	220	391	400	560	250	200	660	510	28	391
	110	132			250	300	220	421	400	560	250	200	660	510	28	421

FLANGE DIMENSION.



Standard: ISO2084; Pressure Rating: PN16

DN	$\varnothing d$	$\varnothing k$	$\varnothing D$	n	$\varnothing S$
32	73	100	140	4	18
40	83	110	150	4	18
50	98	125	165	4	18
65	118	145	185	4	18
80	133	160	200	8	18
100	153	180	220	8	18
125	183	210	250	8	18
150	209	240	285	8	22
200	264	295	340	12	22
250	320	355	405	12	26
300	375	410	460	12	26

