

## END SUCTION VOLUTE PUMPS



### APPLICATIONS

- Industrial use
- Water supply
- Hot and cold water circulation
- For swimming pool
- Sprinkling
- Air-conditioning
- Fire-fighting application

### FEATURES

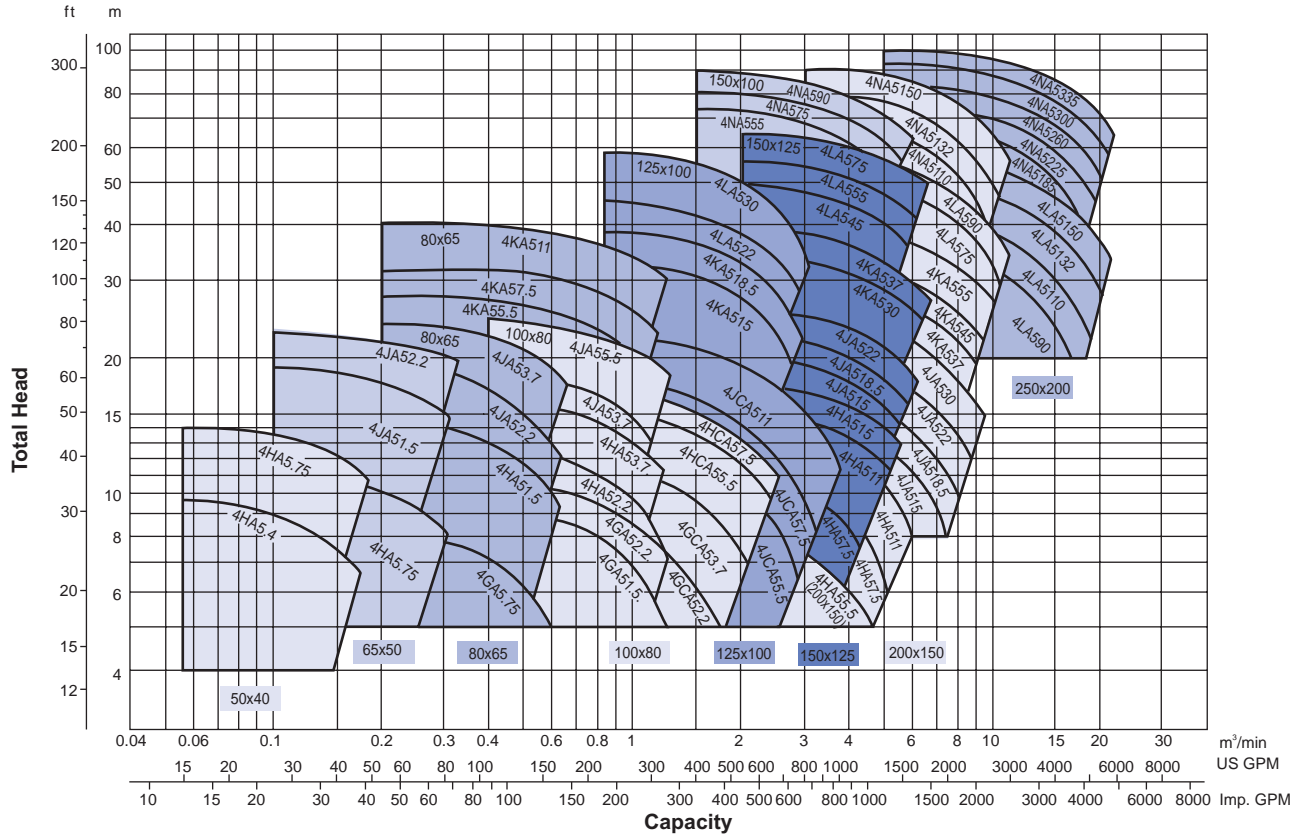
- Easy removal and maintenance, BPO (Back Pull Out) system allows all rotating element to be removed without disconnecting suction and discharge pipe work
- Top centreline discharge, foot support under casing for maximum resistance to misalignment and distortion from pipe loads
- Non-overload design to ensure stable performance for all applications
- Wide range application with flow capacity up to 22 m<sup>3</sup>/min
- Higher working pressure up to 16 bar

### SPECIFICATIONS

Description		Standard		Optional	
		2 poles model	4 poles model	2 poles model	4 poles model
Liquid	Name	Clean water			
	Temperature	0 to 80°C (32 to 176°F)			
Max. Working Pressure		10 bar (10.2kgf/cm <sup>2</sup> ) for standard flange JIS 10K RF		16 bar (16.3 kgfcm <sup>2</sup> )	
		16 bar (16.3kgf/cm <sup>2</sup> ) for standard flange JIS 16K RF			
Synchronous Speed		3000 min <sup>-1</sup>	1500 min <sup>-1</sup>		
Installation		Indoors		Outdoors	
Construction	Impeller	Enclosed			
	Shaft seal	Mechanical seal			
	Sealing	Self flushing			
	Bearing	Sealed ball bearing		Oil bath (some models only)	
Flange	Suction & Discharge	Suction < Ø 150mm, except 100X65 FSKA	: JIS 10K RF	16 bar : JIS 16K RF ; DIN PN-16	
		100X65 FSKA	: JIS 16K RF	DIN PN-16	
		Suction = Ø 150mm, except below models	: JIS 10K RF	16 bar : JIS 16K RF ; DIN PN-16	
		150X100 FSKA; 150X100 FSNA	: JIS 16K RF	DIN PN-16	
		Suction = Ø 200mm, except below models	: JIS 10K RF	16 bar : JIS 16K RF ; DIN PN-16	
		200X150 FSLA; 200X150 FSNA	: JIS 16K RF	DIN PN-16	
Material	Casing	Cast Iron		Ductile Cast Iron (FCD)	
	Impeller	BronzeCasting (CAC406/BC6)		Cast Iron; Ductile Cast Iron (FCD)	
	Shaft	403 Stainless steel		304; 316 Stainless steel	
	Seal	Mechanical Seal: Ceramic/Carbon/NBR		Gland Packing : Teflon (PTFE) impregnated Mechanical seal : SiC/SiC	
Accessories	Bare shaft			Priming funnel; valve; Companion Flange	
	With motor	Common base, Coupling guard		Priming funnel; valve; Companion Flange	

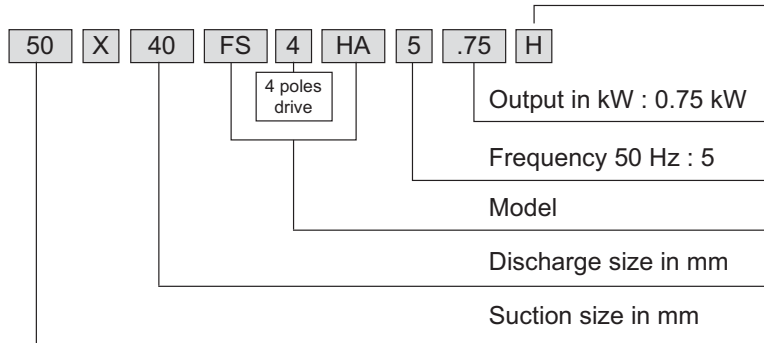
# SELECTION CHART 1500 min<sup>-1</sup>

**50Hz (Synchronous Speed 1500 min<sup>-1</sup>)**



## MODEL CODE - 4 POLES - 50Hz

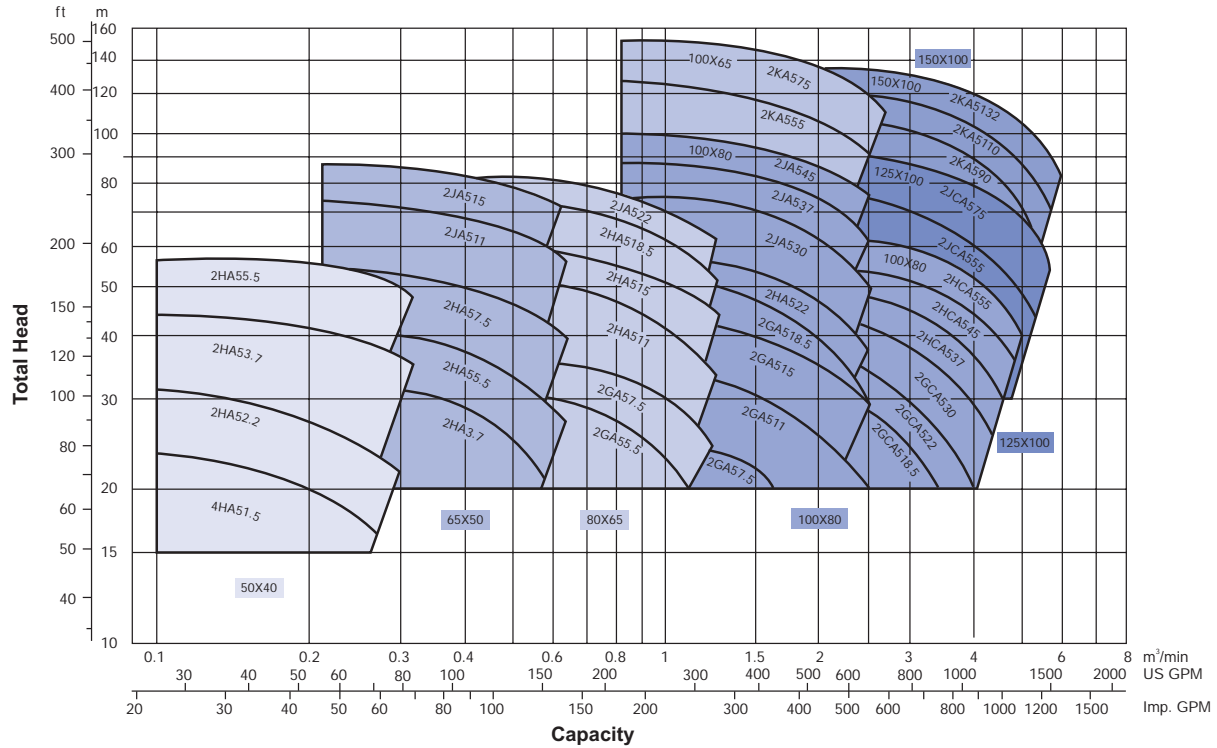
16 bar version : H  
 10 bar version : -



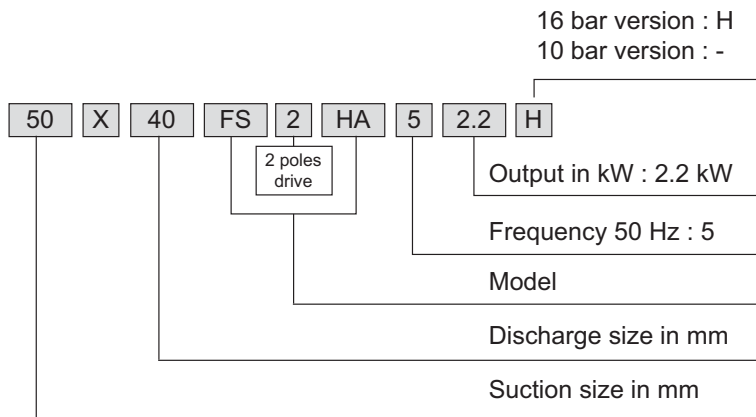
# SELECTION CHART

# 3000 min<sup>-1</sup>

50Hz (Synchronous Speed 3000 min<sup>-1</sup>)



## MODEL CODE - 2 POLES - 50Hz



## TECHNICAL DATA - IMPELLER AND COUPLING

**4 POLES - 50 Hz 1500 rpm**

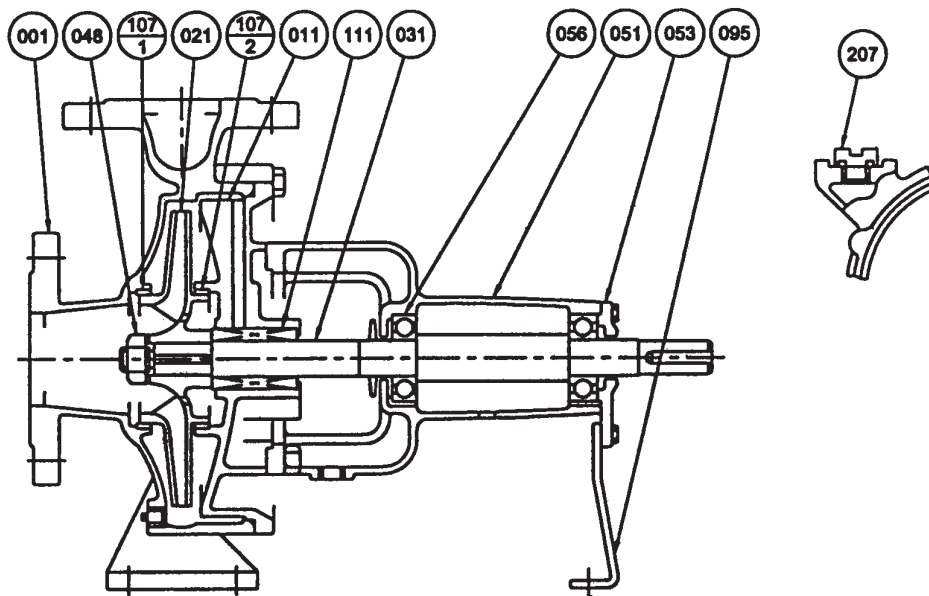
MODEL	MOTOR		IMPELLER		COUPLING CLA	SHAFT DIAMETER		
	POWER kW	FRAME No.	DIA	mm		PUMP dP(mm)	MOTOR dM(mm)	
50X40 FSHA	0.4	71	182		112	24	14	
	0.75	80	209				19	
65X50 FSHA	0.75	80	199		112	24	19	
65X50 FSJA	1.5	90L	240		112	24	24	
	2.2	100L	261		125		28	
80X65 FSGA	0.75	80	164		112	24	19	
80X65 FSHA	1.5	90L	207		112	24	24	
80X65 FSJA	2.2	100L	237		140	32	28	
	3.7	112M	261					
80X65 FSKA	5.5	132S	279		160	32	38	
	7.5	132M	300				42	
	11	160M	333				24	
100X80 FSGA	1.5	90L	169		112	24	24	
	2.2	100L	183		125		28	
100X80 FSHA	2.2	100L	199		140	32	28	
	3.7	112M	223					
100X80 FSJA	3.7	112M	236		140	32	48	
	5.5	132S	265		160			
100X80 FSGCA	2.2	100L	166		140	32	28	
	3.7	112M	190		140			
100X80 FSHCA	3.7	112M	187		140	32	28	
	5.5	132S	205		160		38	
	7.5	132M	223		160		38	
125X100 FSJCA	5.5	132S	232		160	38	38	
	7.5	132M	251				38	
	11	160M	273				42	
125X100 FSKA	7.5	132M	250		160	32	38	
	11	160M	283				42	
	15	160L	315				48	
	18.5	180M	333				180	
125X100 FSLA	22	180L	368		180	32	48	
	30	200L	407		200		55	
150X125 FSHA	7.5	132M	190		160	32	38	
	11	160M	212				42	
	15	160L	224				24	
150X125 FSJA	15	160L	246		160	32	42	
	18.5	180M	260		180		48	
	22	180L	274		200			
150X125 FSKA	30	200L	316		200	42	55	
	37	225SC	334		224		60	
150X125 FSLA	45	225MC	378		224	42	60	
	55	250SC	400		250		70	
	75	250MC	424					
150X100 FSNA	55	250SC	409		250	55	70	
	75	250MC	460				80	
	90	280SC	499				280	
200X150 FSHA	5.5	132S	186		160	32	38	
	7.5	132M	200				42	
	11	160M	222				42	
200X150 FSJA	15	160L	220		160	42	42	
	18.5	180M	234		180		48	
	22	180L	248				200	
	30	200L	268		55			
	37	225SC	274		224			60
200X150 FSKA	37	225SC	294		224	48	60	
	45	225MC	310				70	
	55	250SC	334				250	
200X150 FSLA	75	250MC	385		250	48	70	
	90	280SC	411		280		80	
200X150 FSNA	110	280MC	445		280	60	80	
	132	315SC	480				315	85
	150	315MC	495					
250X200 FSLA	90	280SC	362		280	60	80	
	110	280MC	380				315	85
	132	315SC	392					
	150	315MC	408					
250X200 FSNA	185	315MB	445		355	74	85	
	225	315CB-95R	473				95	
	260	355AB-95R	492					
	300	355CB-95R	520					
	335	355CB-95R	530					

## TECHNICAL DATA - IMPELLER AND COUPLING

**2 POLES - 50 Hz 3000 rpm**

MODEL	MOTOR		IMPELLER		COUPLING CLA	SHAFT DIAMETER		
	POWER kW	FRAME No.	DIA	mm		PUMP dP(mm)	MOTOR dM(mm)	
50X40 FSHA	1.5	90S	143		112	24	24	
	2.2	90L	160				28	
	3.7	112M	188		125		38	
	5.5	132S	208		160		28	
65X50 FSHA	3.7	112M	166		125	24	28	
	5.5	132S	185				38	
	7.5	132S	207		160			
65X50 FSJA	11	160M	232		160	24	42	
	15	160M	250					
80X65 FSGA	5.5	132S	157		160	24	38	
	7.5	132S	173					
80X65 FSHA	11	160M	199		160	24	42	
	15	160M	215					
80X65 FSJA	18.5	160L	240		160	32	42	
	22	180MA	246		180		48	
	7.5	132S	147				38	
100X80 FSGA	11	160M	167		160	24	42	
	15	160M	180					
	18.5	160L	201				160	42
100X80 FSHA	22	180MA	211		180	32	48	
	30	200LA	235					
100X80 FSJA	37	200LA	254		200	32	55	
	45	225MA	269					
	55	250SA	286					
100X65 FSKA	75	250MA	328		224	38	60	
	18.5	160L	166					
100X80 FSGCA	22	180MA	178		160	32	42	
	30	200LA	193		180		48	
	37	200LA	197					
100X80 FSHCA	45	225MA	205		200	32	55	
	55	250SA	223					
	55	250SA	236				200	38
125X100 FSJCA	75	250MA	273		224	60		
	75	250MA	278		224	42	60	
150X100 FSKA	90	280SA	291		250		65	
	110	280MA	310					
	132	315SA	323					

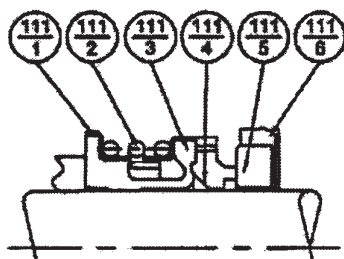
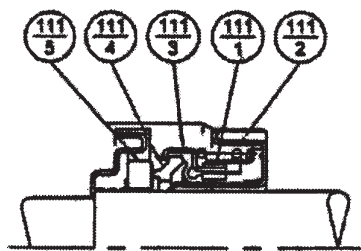
## SECTIONAL VIEW - Mechanical Seal (Standard)


**Model FH**

50x40 FSHA; 60x50 FSHA, FSJA;  
80x65 FSGA, FSHA, FSJA, FSKA;  
100x80 FSGA, FSHA, FSJA;  
125x100 FSKA

**Model EA**

100x65 FSKA; 100x80 FSGCA, FSHCA;  
125x100 FSJCA, FSLA;  
150x100 FSKA, FSNA;  
150x125 FSHA, FSJA, FSKA, FSLA;  
200x150 FSHA, FSJA, FSKA, FSLA, FSNA;  
250x200 FSLA, FSNA

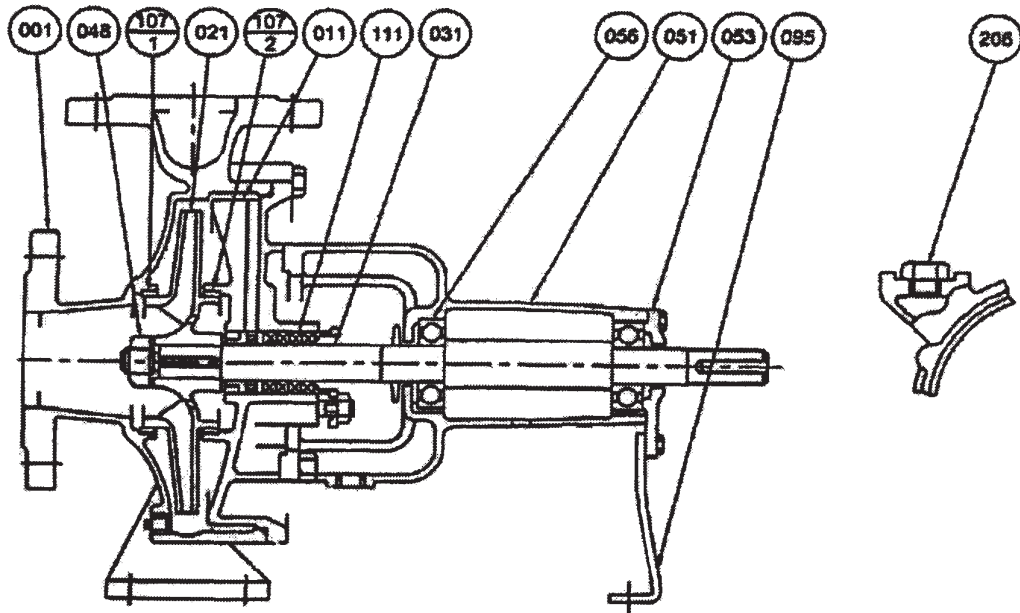


No.	Part Name	Material	Qty
111-1	Spring Holder	Stainless	1
111-2	Coil Spring	Steel	
111-3	Friction Ring	NBR	
111-4	Seal Ring	Carbon	
111-5	Mating Ring	Ceramic	

No.	Part Name	Material	Qty
111-1	Spring Holder	Stainless	1
111-2	Coil Spring	Steel	
111-3	Bellows	NBR	
111-4	Seal Ring	Carbon	
111-5	Mating Ring	Ceramic	
111-6	Cup Gasket	NBR	

No.	Part Name	Material	Qty
001	Casing	Cast Iron	1
011	Casing Cover		
021	Impeller	Bronze	
031	Shaft	Stainless Steel	
048	Impeller Nut	Brass	
051	Bearing Housing	Cast Iron	
053	Bearing Cover		
056	Ball Bearing	-	2
095	Stay	Steel	1
107-1	Casing Ring	Bronze	1
107-2	Casing Ring		
111	Mechanical Seal	-	
207	Plug	Steel	

## SECTIONAL VIEW - Gland Packing (Option)

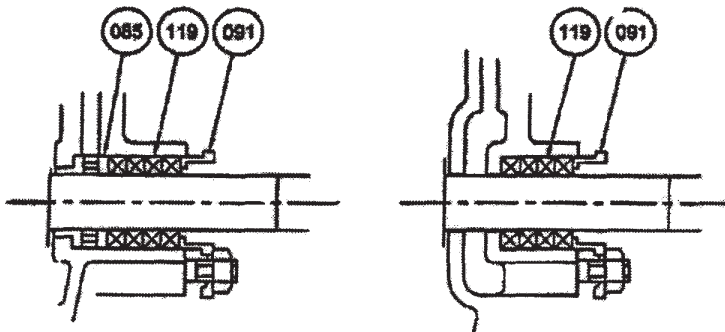


With Lantern Ring

50x40 FSHA; 65x50 FSHA, FSJA;  
 80x65 FSGA, FSHA;  
 100x80 FSGA, 125x100 FSLA;  
 150x100 FSKA, FSNA;  
 150x125 FSKA, FSLA;  
 200x150 FSJA, FSLA, FSNA;  
 250x200 FSLA, FSNA

Without Lantern Ring

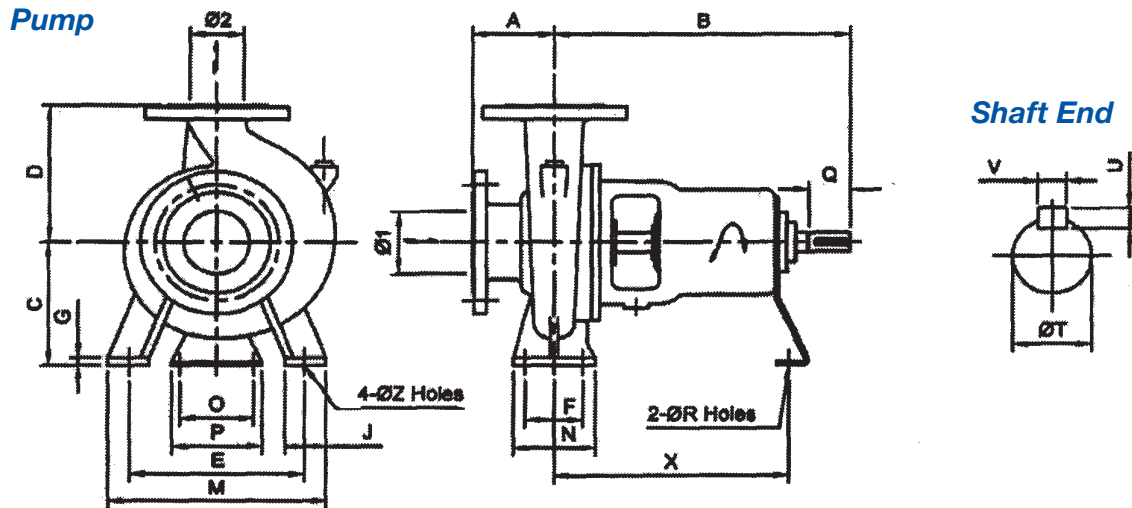
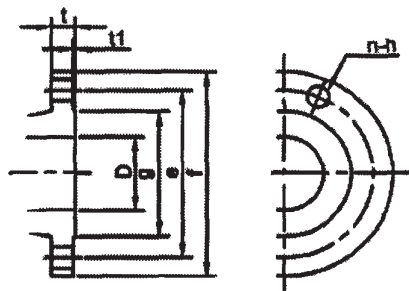
80x65 FSJA; FSKA;  
 100x65 FSKA;  
 100x80 FSHA, FSJA, FSGCA, FSHCA;  
 125x100 FSJCA, FSKA;  
 150x125 FSHA, FSJA;  
 200x150 FSHA, FSKA;



No.	Part Name	Material	Qty
085	Lantern Ring	Bronze	1
091	Gland		
119	Gland Packing	Non-Asbestos	4 or 5

No.	Part Name	Material	Qty
091	Gland	Bronze	1
119	Gland Packing	Non-Asbestos	4 or 5

No.	Part Name	Material	Qty
001	Casing	Cast Iron	1
011	Casing Cover		
021	Impeller	Bronze	
031	Shaft	Stainless Steel	
048	Impeller Nut	Brass	
051	Bearing Housing	Cast Iron	1
053	Bearing Cover		
056	Ball Bearing	-	2
095	Stay	Steel	1
107-1	Casing Ring	Bronze	1
107-2	Casing Ring		
111	Gland Packing	Non-Asbestos	4 or 5
207	Plug	Steel	1

**DIMENSION - Bare Shaft Pump (10 Bar Model)**
**50Hz**

**Flange**


Dimension – Flange (JIS 10K RF)

D	f	e	g	t1	t	n	h
mm	mm	mm	mm	mm	mm	mm	mm
40	140	105	81	2	20	4	19
50	155	120	96	2	20	4	19
65	175	140	116	2	22	4	19
80	185	150	126	2	22	8	19
100	210	175	151	2	24	8	19
125	250	210	182	2	24	8	23
150	280	240	212	2	26	8	23
200	330	290	262	2	26	12	23

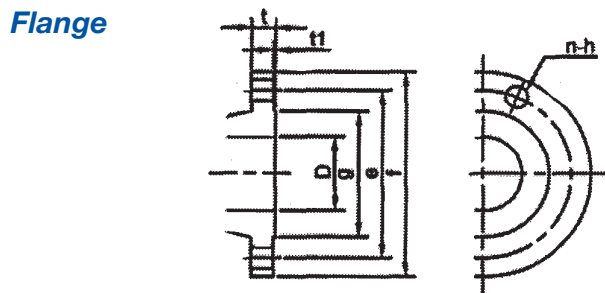
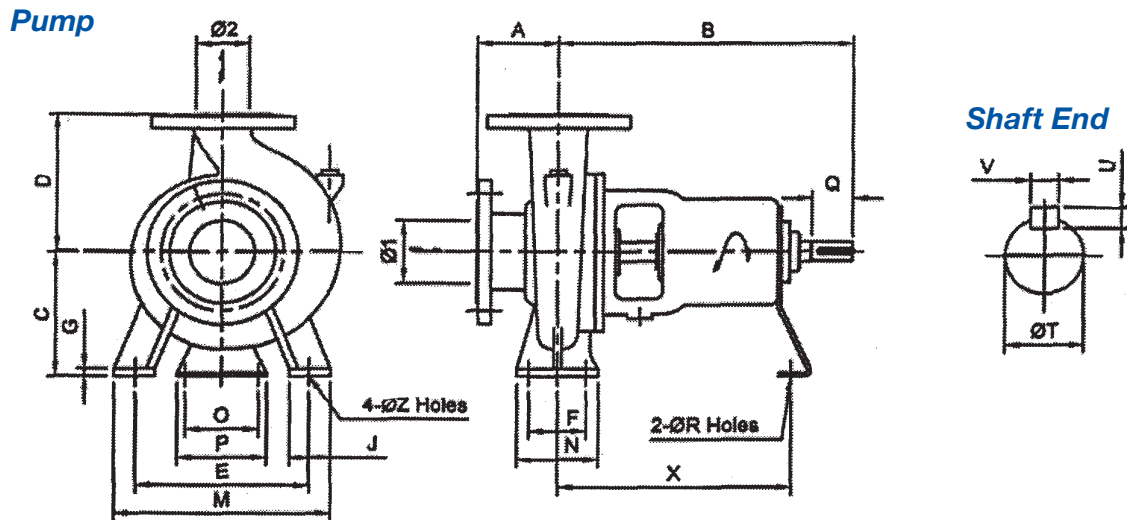
Dimension – Pump (50/60 Hz)

Model	Size		Pump														Shaft					wt Kg												
	Ø1	Ø2	A	B	C	D	E	F	G	J	M	N	O	P	R	X	Z	T	Q	U	V													
50X40	FSHA	50	40	80	360	160	180	190	70	12	50	240	100	110	150	17	285	15	24	50	7	8	37											
65X50	FSHA	65	50	100	360	160	180	190	70	12	50	265	100	110	150	17	285	15	24	50	7	8	42											
65X50	FSJA					180	225	250	95	14	65	320	125											150	17	285	15	24	50	7	8	49		
80X65	FSGA	80	65	100	360	160	180	212	70	12	50	265	100	110	150	17	285	15	24	50	7	8	39											
80X65	FSHA					200	225	250	95	14	65	320	125											150	17	285	15	24	50	7	8	48		
80X65	FSJA					180	225	250	95	14	65	320	125											150	17	285	15	24	50	7	8	60		
80X65	FSKA					125	470	225	280	315	120	16	80											400	160	160	150	17	370	19	32	80	8	10
100X80	FSGA	100	80	100	360	160	200	212	95	14	65	280	125	110	150	17	285	15	24	50	7	8	49											
100X80	FSHA					180	225	250	95	14	65	320	125											150	17	285	15	24	50	7	8	62		
100X80	FSJA					200	250	280	120	15	80	360	160											150	17	285	15	24	50	7	8	70		
100X80	FSGCA					125	360	180	225	250	95	14	65											320	125	150	17	285	15	24	50	7	8	62
100X80	FSHCA					250	280	315	120	16	80	400	160											160	150	17	370	19	32	80	8	10	65	
125X100	FSJCA					125	100	140	470	250	315	315	120											16	80	400	160	110	150	17	285	19	38	80
125X100	FSKA	140	470	250	315	315	120	16	80	400	160	110	150	17	370	19	32	80	8	10	128													
125X100	FSLA	530	280	355	400	150	20	100	500	200	110	150	17	370	19	32	80	8	10	128														
150X125	FSHA	150	125	140	470	250	315	315	120	15	80	400	160	110	150	17	370	19	32	80	8	10	120											
150X125	FSJA					355	315	120	16	80	400	160	110	150	17	370	19	32	80	8	10	128												
200X150	FSHA	200	150	160	470	280	355	400	150	18	100	500	200	110	150	17	370	24	32	80	8	10	137											

Unit : mm, unless otherwise stated



## DIMENSION - Bare Shaft Pump (10 Bar Model)



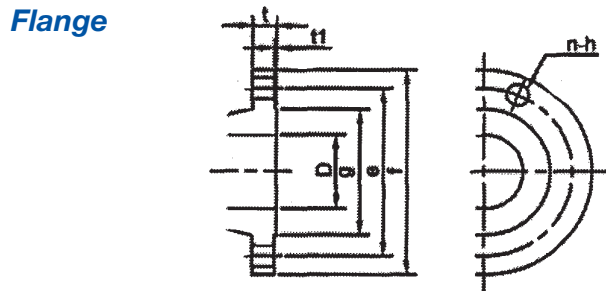
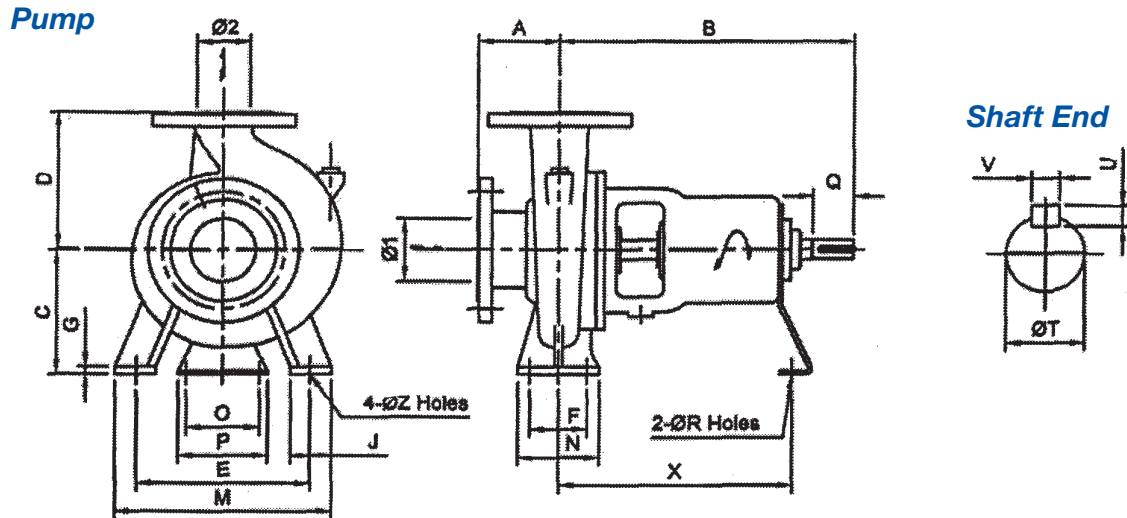
Dimension – Flange (JIS 10K RF)

D	f	e	g	t1	t	n	h
mm	mm	mm	mm	mm	mm	mm	mm
125	250	210	182	2	24	8	23
150	280	240	212	2	26	8	23
200	330	290	262	2	26	12	23

Dimension – Pump

Model	Size		Pump															Shaft				wt Kg
	Ø1	Ø2	A	B	C	D	E	F	G	J	M	N	O	P	R	X	Z	T	Q	U	V	
150X125 FSKA	150	125	140	530	280	355	400	150	16	100	500	200	110	150	17	370	24	42	110	8	12	170
150X125 FSLA					315	400			20													205
200X150 FSJA	200	150	160	530	280	375	400	150	18	100	500	200	110	150	17	370	24	42	110	8	12	183
200X150 FSKA					315	400			20		550											140

Unit : mm, unless otherwise stated

**DIMENSION - Bare Shaft Pump (16 Bar Model)**
**50Hz**


Dimension – Flange (JIS 16K RF)

D	f	e	g	t1	t	n	h
mm	mm	mm	mm	mm	mm	mm	mm
65	175	140	116	2	22	8	19
100	225	185	160	2	26	8	23
150	305	260	230	2	28	12	25
200	350	305	275	2	30	12	25
250	430	380	345	2	34	12	27

Dimension – Pump (50/60 Hz)

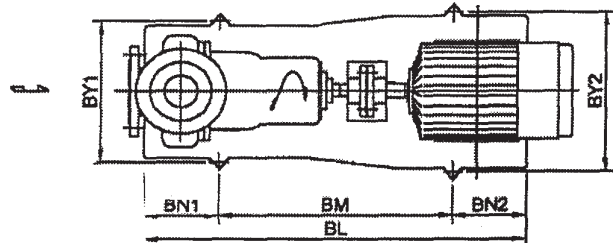
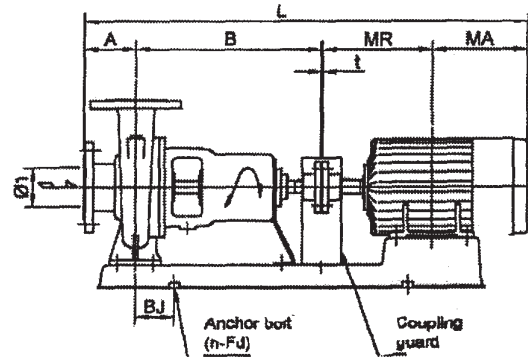
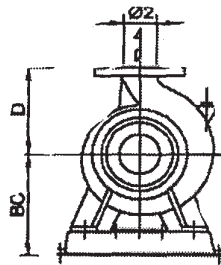
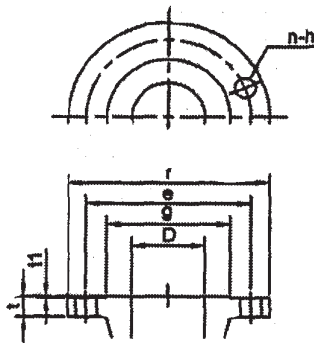
Model	Size		Pump														Shaft				wt Kg	
	Ø1	Ø2	A	B	C	D	E	F	G	J	M	N	O	P	R	X	Z	T	Q	U		V
100X65 FSKA	100	65	125	360	225	280	315	120	16	80	400	160	110	150	17	257	19	38	80	8	10	106
150X100 FSKA	150	100	140	530	250	315	315	120	16	80	400	160	90	120	15	373	19	42	95	8	12	146
150X100 FSNA			180	670	375	450	450	150	20	100	550	200	140	180	19	500	24	48	110	9	14	365
200X150 FSLA	200	150	162	670	315	450	450	150	20	100	550	200	140	180	19	500	24	48	110	9	14	336
200X150 FSNA			182		375	560												60				
250X200 FSLA	250	200	180	670	385	560	560	250	25	100	660	315	140	180	19	500	24	60	110	11	18	505
250X200 FSNA			200		820	435												630				

Unit : mm, unless otherwise stated

**DIMENSION - Bare Shaft Pump (10 Bar Model)**
**50Hz**

Dimension – Flange (JIS 10K RF)

D mm	f mm	e mm	g mm	t1 mm	t mm	n	h mm
40	140	105	81	2	20	4	19
50	155	120	96	2	20	4	19
65	175	140	116	2	22	4	19
80	185	150	126	2	22	8	19
100	210	175	151	2	24	8	19

**Pump**

**Flange**


Dimension – Pump

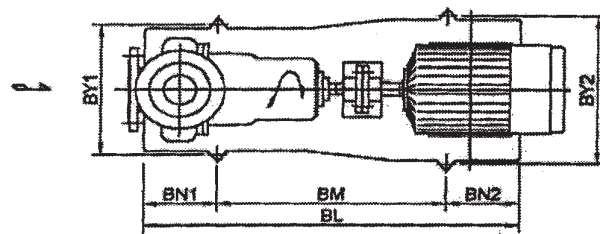
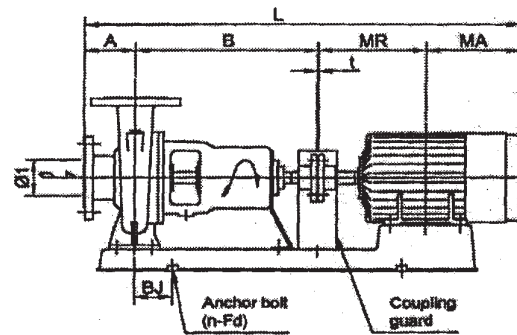
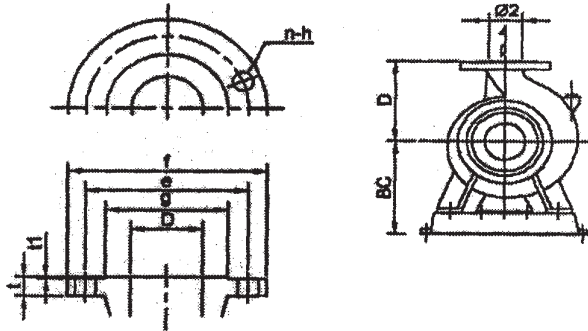
Model	Motor		Pump					Motor				Common Base								Total				
	kW	Ø1	Ø2	A	B	D	wt kg	Frame	MR	MA	wt kg	BC	BJ	BL	BM	BN1	BN2	BY1	BY2	n-Fd	wt kg	t	L	wt kg
50X40 FS4HA	0.4	50	40	80	360	180	37	71	120	130.5	12	215	45	640	420	105	115	320	230	4-M12	19	3	693.5	71
	0.75							80	140	142.5	17										20		725.5	77
65X50 FS4HA	0.75	65	50	100	360	180	42	80	140	142.5	17	215	45	640	420	105	115	320	230	4-M12	20	3	745.5	82
65X50 FS4JA	1.5	65	50	100	360	225	49	90L	168.5	164	23.5	230	40	740	480	115	145	400	260	4-M12	24.5	3	795.5	99.5
	2.2							100L	193	181.5	32										26		837.5	110.5
80X65 FS4GA	0.75	80	65	100	360	180	39	80	140	142.5	17	215	45	640	420	105	115	320	230	4-M12	20	3	745.5	79
80X65 FS4HA	1.5	80	65	100	360	200	48	90L	168.5	164	23.5	230	40	740	550	115	75	360	290	4-M12	26	3	795.5	101
	2.2							100L	193	181.5	32										26		837.5	123
80X65 FS4JA	3.7	80	65	100	360	225	60	112M	200	191.5	43	230	40	740	480	115	145	400	260	4-M12	26	3	837.5	123
	5.5							132S	239	215	62										25		854.5	133
80X65 FS4KA	7.5	80	65	125	470	280	108	132M	258	234	77	295	80	960	660	180	120	490	400	4-M16	56	3	1025	233
	11							160M	323	285	115										57		1090	249
100X80 FS4GA	1.5	100	80	100	360	200	49	90L	168.5	164	23.5	230	40	740	550	115	75	360	290	4-M12	24	3	795.5	100
	2.2							100L	193	181.5	32										26		837.5	109
100X80 FS4HA	2.2	100	80	100	360	225	62	100L	193	181.5	32	230	40	740	480	115	145	400	260	4-M12	26	3	837.5	125
	3.7							112M	200	191.5	43										25		854.5	135
100X80 FS4JA	3.7	100	80	100	360	250	70	112M	200	191.5	43	265	55	765	540	155	70	440	320	4-M16	33.5	3	854.5	151.5
	5.5							132S	239	215	62										270		855	630

Unit : mm, unless otherwise stated

**DIMENSION - Pump with Motor (10 Bar Model)**
**4 Poles 50Hz**

Dimension – Flange (JIS 10K RF)

D	f	e	g	t1	t	n	h
mm	mm	mm	mm	mm	mm	mm	mm
80	185	150	126	2	22	8	19
100	210	175	151	2	24	8	19
125	250	210	182	2	24	8	23
150	280	240	212	2	26	8	23
200	330	290	262	2	26	12	23

**Pump**

**Flange**


Dimension – Pump

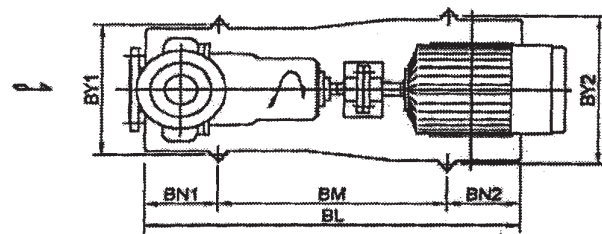
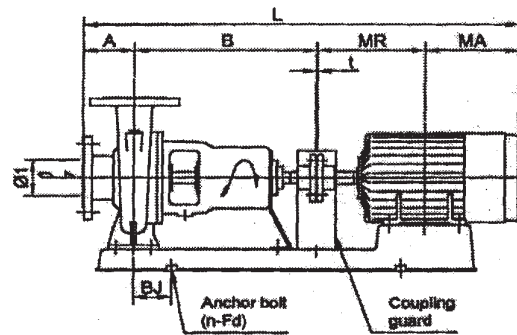
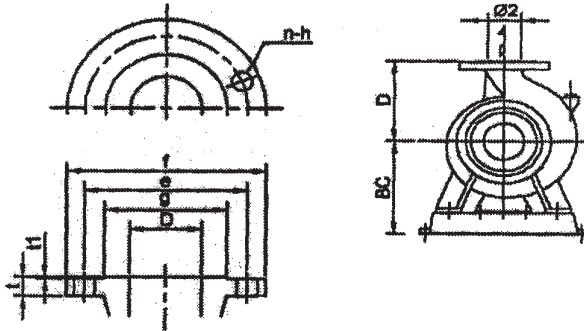
Model	Motor		Pump				Motor				Common Base								Total													
	kW	Ø1	Ø2	A	B	D	wt kg	Frame	MR	MA	wt kg	BC	BJ	BL	BM	BN1	BN2	BY1	BY2	n-Fd	wt kg	t	L	wt kg								
100X80 FS4GCA	2.2	100	80	125	360	225	62	100L	193	170	30	230	40	740	480	115	145	400	260	4-M12	24.5	3	851	124.5								
	3.7							290	25	880	137																					
100X80 FS4HCA	5.5	100	80	125	360	250	65	132S	239	207	65	250	55	855	630	155	70	440	350	4-M12	38	3	934	179								
	7.5							270	77	980	193																					
125X100 FS4JCA	5.5	125	100	140	360	280	108	132S	239	207	65	321	45	825	525	150	70	440	350	4-M12	55	3	949	233								
	7.5							132M	258	234	77								987		255											
125X100 FS4KA	15	125	100	140	470	315	128	160M	323	281	120	330	100	1075	740	190	145	490	400	4-M16	60	3	1265	331.5								
	18.5							180MC	351.5	320.5	172								1285		393											
125X100 FS4LA	22	125	100	140	530	355	168	180LC	370.5	339.5	205	390	95	1230	840	205	185	600	440	4-M20	774	3	1383	459.5								
	30							200LC	395.5	374.5	278								120		1280			940	230	110	490	724	4	1444	532.5	
150X125 FS4HA	7.5	150	125	140	470	315	120	132M	258	234	77	320	80	960	660	180	120	490	400	4-M16	57	3	1105	261								
	11							160M	323	285	115								330		1075			90	145	44.7	1221	286.5				
150X125 FS4JA	15	150	125	140	470	355	128	160L	345	307	132	320	100	1090	740	200	150	490	400	4-M16	62	3	1265	329								
	18.5							180MC	351.5	320.5	172								330		1075			190	145	83	1285	392				
150X125 FS4KA	30	150	125	140	530	355	170	200LC	395.5	374.5	278	390	120	1280	940	230	110	600	490	4-M20	72.4	4	1444	534.5								
	37							225SC	432	384	327								385		110			1425	960	235	670	600	141.6	1490	657	
150X125 FS4LA	45	150	125	140	530	400	205	225MC	444.5	396.5	351	395	110	1425	960	230	235	670	600	4-M20	108	4	1515	682.5								
	55							250SC	463.5	419	475								410		110			1425	960	230	235	670	600	110	1556.5	817
	75							250MC	482.5	438	550								410		110			1425	960	230	235	670	600	109	1594.5	891

Unit : mm, unless otherwise stated

**DIMENSION - Pump with Motor (10 Bar Model)**
**4 Poles 50Hz**

Dimension – Flange (JIS 10K RF)

D	f	e	g	t1	t	n	h
mm	mm	mm	mm	mm	mm		mm
150	280	240	212	2	26	8	23
200	330	290	262	2	26	12	23

**Pump**

**Flange**


Dimension – Pump

Model	Motor	Size	Pump					wt kg	Motor				Common Base								Total													
			Ø1	Ø2	A	B	D		Frame	MR	MA	wt kg	BC	BJ	BL	BM	BN1	BN2	BY1	BY2	n-Fd	wt kg	t	L	wt kg									
200X150 FS4HA	5.5	200	150	160	470	355	137	132S	239	215	62	390	80	980	660	200	120	600	400	4-M16	78	3	1087	284										
	7.5							132M	258	234	77												1125	299										
	11							160M	323	285	115												360	1190	840	150	85	1241	344					
200X150 FS4JA	15	200	150	160	530	375	183	160L	345	307	132	390	80	1190	840	200	150	600	400	4-M16	104	3	1345	426										
	18.5							180MC	351.5	320.5	172												95	1230	840	205	185	600	400	4-M20	77.4	1365	441.5	
	22							180LC	370.5	339.5	205												390	120	1280	940	230	110	600	490	4-M20	72.4	1403	474.5
	30							200LC	395.5	374.5	278												385	110	1425	960	230	235	670	600	4-M20	141.6	1464	547.5
	37							225SC	432	384	327												385	110	1425	960	230	235	670	600	4-M20	141.6	1510	669.7
200X150 FS4KA	37	200	150	160	670	400	222	225SC	432	384	327	425	110	1460	1000	230	230	670	550	4-M20	141	4	1650	708.5										
	45							225MC	444.5	396.5	351												125	1520	1040	245	235	600	136	1675	732.5			
	55							250SC	463.5	419	475												430	125	1520	1040	245	235	600	136	1716.5	860		

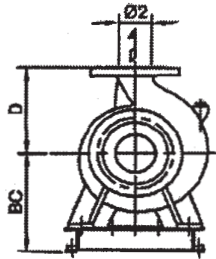
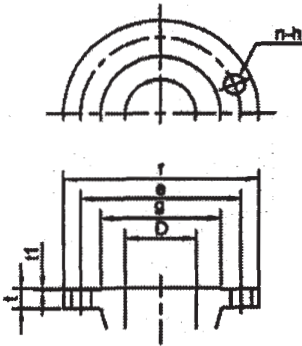
Unit : mm, unless otherwise stated

**DIMENSION - Pump with Motor (16 Bar Model)**
**4 Poles 50Hz**

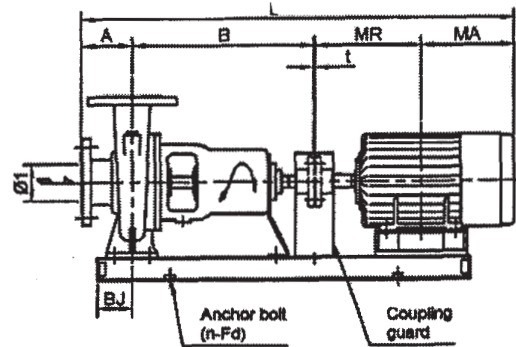
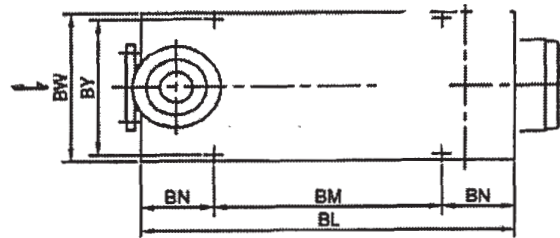
Dimension – Flange (JIS 16K RF)

D	f	e	g	t1	t	n	h
mm	mm	mm	mm	mm	mm		mm
100	225	185	160	2	26	8	23
150	305	260	230	2	28	12	25
200	350	305	275	2	30	12	25
250	430	380	345	2	34	12	27

Flange



Pump



Dimension – Pump

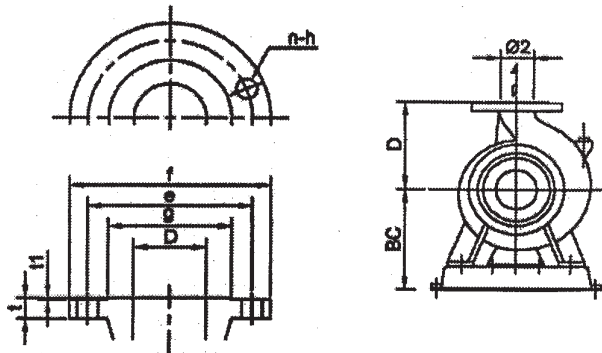
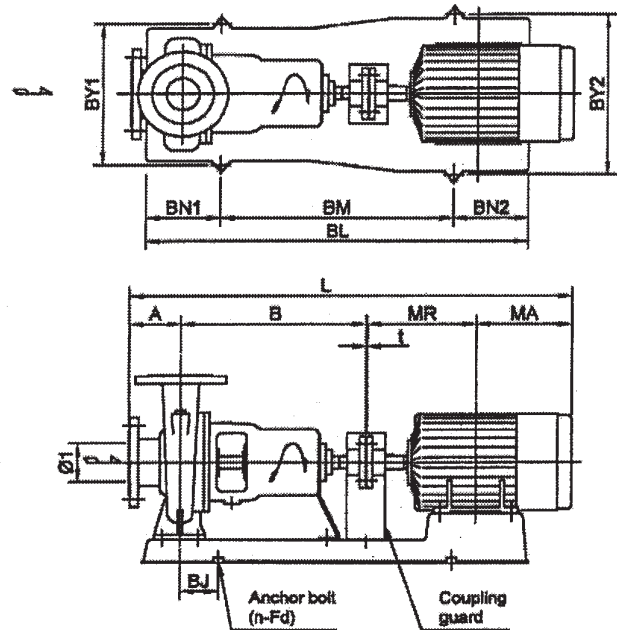
Model	Motor	Size		Pump			wt kg	Motor				Common Base								Total					
	kW	Ø1	Ø2	A	B	D		Frame	MR	MA	wt kg	BC	BJ	BL	BM	BN1	BN2	BY1	BY2	n-Fd	wt kg	t	L	wt kg	
150X100 FS4NA	55	150	100	180	670	450	365	250SC	463.5	409	520	525	130	1500	2x600	150	150	580	640	6-M20	156	4	1736.5	1030	
	250MC							482.5	428	580	525	130	1530	2x615	150	150	580	640	6-M20	170	1774.5		1120		
	280SC							544.0	478	660	525	130	1600	2x650	150	150	580	640	6-M20	175	1876		1250		
200X150 FS4LA	75	200	150	162	670	450	336	250MC	482.5	428	580	465	130	1530	2x615	150	150	580	640	6-M20	150	4	1756.5	1070	
	280SC							544.0	478	660	465	130	1600	2x650	150	150	580	640	6-M20	145	1858		1191		
	280MC							569.5	502.5	720	525	130	1670	2x685	150	150	580	640	6-M20	176	1928		1434		
200X150 FS4NA	110	200	150	182	670	560	488	315SC	589	527	920	550	130	1680	2x690	150	150	650	720	6-M22	200	4	1972	1677	
	315MC							614.5	552.5	1030	550	130	1730	2x715	150	150	650	720	6-M22	220	2023		1804		
	280SC							544.0	478	660	560	185	1680	2x675	165	165	690	760	6-M22	250	1876		1462		
250X200 FS4LA	110	250	200	180	670	560	505	280MC	569.5	502.5	720	560	185	1730	2x700	165	165	690	760	6-M22	255	4	1926	1528	
	315SC							589	527	920	560	185	1740	2x705	165	165	690	760	6-M22	235	1970		1725		
	315MC							614.5	552.5	1030	560	185	1790	2x730	165	165	690	760	6-M22	240	2021		1841		
250X200 FS4NA	185	250	200	200	200	820	630	315MB	614.5	552.5	1070	610	185	1950	2x800	175	175	690	760	6-M22	290	4	2191	2067	
	225							315CB	741.0	1116	1800	610	185	2240	2x945	175	175	690	760	6-M22	340		2881	2850	
	260							355AB	779.0	1200	2400	610	185	2300	2x975	175	175	770	840	6-M22	330		3004	3467	
	300							355CB	874.0	1295	2700	610	185	2490	2x1070	175	175	770	840	6-M22	365		5	3194	3802
	335																							3250	4202

Unit : mm, unless otherwise stated

**DIMENSION - Pump with Motor (10 Bar Model)**
**2 Poles 50Hz**

Dimension – Flange (JIS 10K RF)

D	f	e	g	t1	t	n	h
mm	mm	mm	mm	mm	mm	mm	mm
40	140	105	81	2	20	4	19
50	155	120	96	2	20	4	19
65	175	140	116	2	22	4	19
80	185	150	126	2	22	8	19

**Flange**

**Pump**


Dimension – Pump

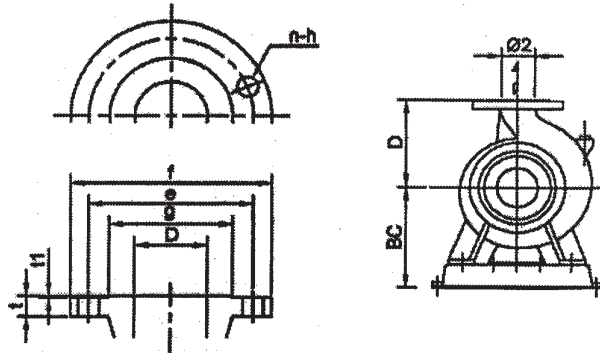
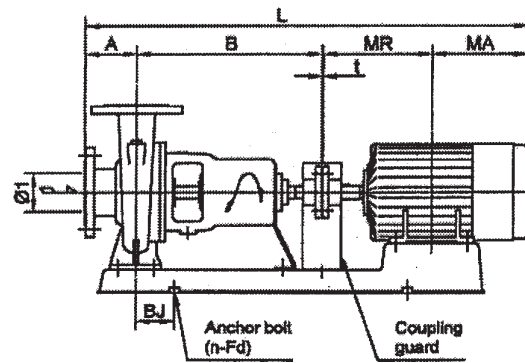
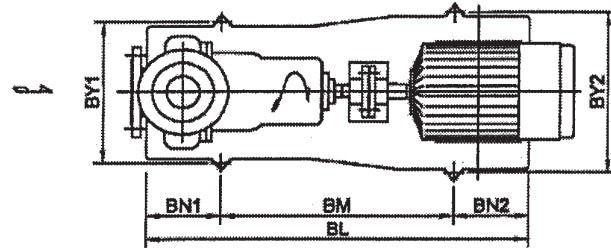
Model	Motor	Size	Pump					wt kg	Motor				Common Base								Total			
	kW		Ø1	Ø2	A	B	D		Frame	MR	MA	wt kg	BC	BJ	BL	BM	BN1	BN2	BY1	BY2	n-Fd	wt kg	t	L
50X40 FS2HA	1.5	50	40	80	360	180	37	90S	156	151.5	21.5	220	40	740	550	115	75	360	290	4-M12	26	3	750.5	87.5
	2.2							90L	168.5	164	26.5				540	130	70	350	290		29		775.5	95.5
	3.7							112M	200	191.5	44	215	55		540	130	150	350	350		23		834.5	108
	5.5							132S	239	215	65	230	820		540	130	150	350	350		31.6		897	140.5
65X50 FS2HA	3.7	65	50	100	360	180	42	112M	200	191.5	44	215	55	740	540	130	70	350	290	4-M12	24	3	851.5	114
	5.5							132S	239	215	65	230			820	540	130	150	350		350		32	917
	7.5							132S	239	215	70	230	820	540	130	150	350	350	34		917		151	
65X50 FS2JA	11	65	50	100	360	225	49	160M	323	285	107	270	98	920	600	160	160	400	400	4-M16	69	3	1071	232
	15							160M	323	285	122				600	160	160	400	400		247			
80X65 FS2GA	5.5	80	65	100	360	180	39	132S	239	215	65	230	55	820	540	130	150	350	350	4-M12	33	3	917	144
	7.5							132S	239	215	70				540	130	150	350	350		149			
80X65 FS2HA	11	80	65	100	360	200	48	160M	323	285	107	250	98	920	600	160	160	400	400	4-M16	69	3	1071	231
	15							160M	323	285	122				600	160	160	400	400		246			
80X65 FS2JA	18.5	80	65	100	360	225	60	160L	345	307	138	270	98	920	600	160	160	400	400	4-M16	69	3	1115	274
	22							180M	351.5	320.5	180				600	160	160	400	400		1135		321	

Unit : mm, unless otherwise stated

**DIMENSION - Pump with Motor (10 Bar Model)**
**2 Poles 50Hz**

Dimension – Flange (JIS 10K RF)

D	f	e	g	t1	t	n	h
mm	mm	mm	mm	mm	mm	mm	mm
80	185	150	126	2	22	8	19
100	210	175	151	2	24	8	19
125	250	210	182	2	24	8	23

**Flange**

**Pump**


Dimension – Pump

Model	Motor	Size	Pump				Motor				Common Base								Total					
	kW		Ø1	Ø2	A	B	D	wt kg	Frame	MR	MA	wt kg	BC	BJ	BL	BM	BN1	BN2	BY1	BY2	n-Fd	wt kg	t	L
100X80 FS2GA	7.5	100	80	100	360	200	49	132S	239	207	65	230	55	820	540	130	150	350	350	4-M12	30	3	909	144
	11							160M	323	281	120	250	98	920	600	160	160	400	400	4-M16	47		1067	216
	15							160M	323	281	120	250	98	920	600	160	160	400	400	4-M16	47		1111	267
100X80 FS2HA	18.5	100	80	100	360	225	62	160L	345	303	158	270	98	920	600	160	160	400	400	4-M16	47	3	1130	289
	22							170M	351.5	315.5	180	270	98	920	600	160	160	400	400	4-M16	47		1130	289
100X80 FS2JA	30	100	80	100	360	250	70	200L	395.5	372.5	290	275	95	1040	660	185	195	440	440	4-M16	65	4	1232	425
	37							200L	395.5	372.5	290												1270	490
	45							225MA	414.5	391.5	355												1270	490
100X80 FS2GCA	18.5	100	80	125	360	225	62	160L	345	303	158	270	98	920	600	160	160	400	400	4-M16	47	4	1197	267
	22							180MA	351.5	320.5	185												1160	294
	30							200LA	395.5	374.5	270												1259	398
100X80 FS2HCA	37	100	80	125	360	250	65	200LA	395.5	372.5	290	275	95	1040	660	185	195	440	440	4-M16	65	4	1259	420
	45							225MA	414.5	396.5	343												1300	473
	55							250SA	463.5	419	452												1257	587
125X100 FS2JCA	55	125	100	140	360	280	108	250SA	463.5	419	452	275	95	1040	660	185	195	440	440	4-M20	65	4	1387	625
	75							250MA	482.5	438	525												1365	733

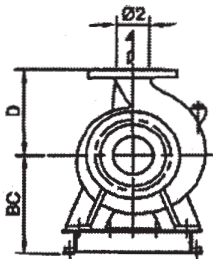
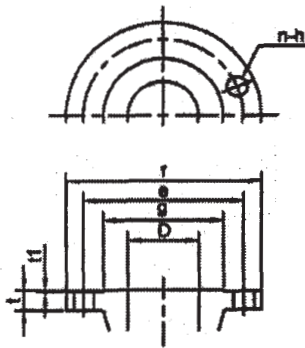
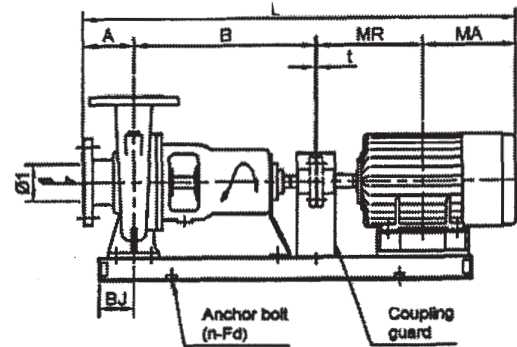
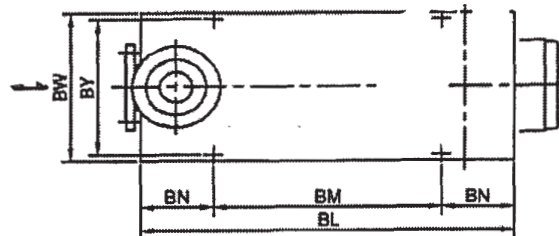
Unit : mm, unless otherwise stated



**DIMENSION - Pump with Motor (16 Bar Model)**
**2 Poles 50Hz**

Dimension – Flange (JIS 16K RF)

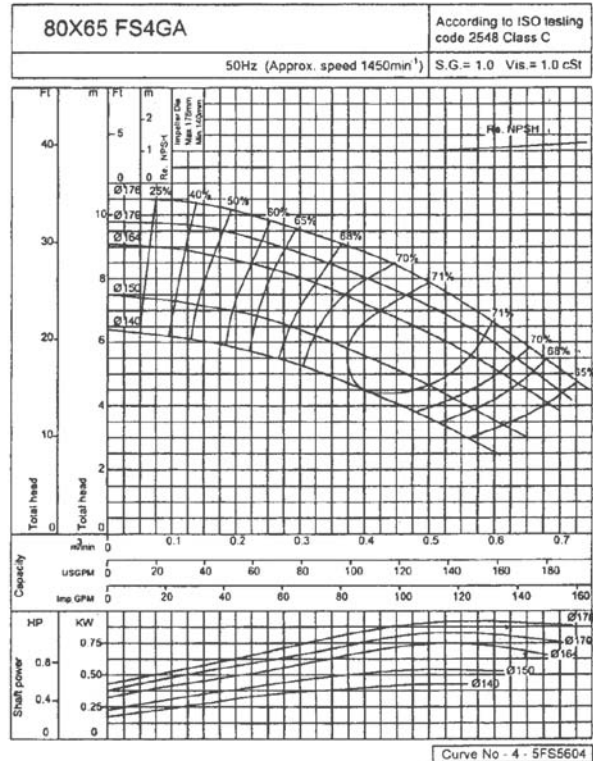
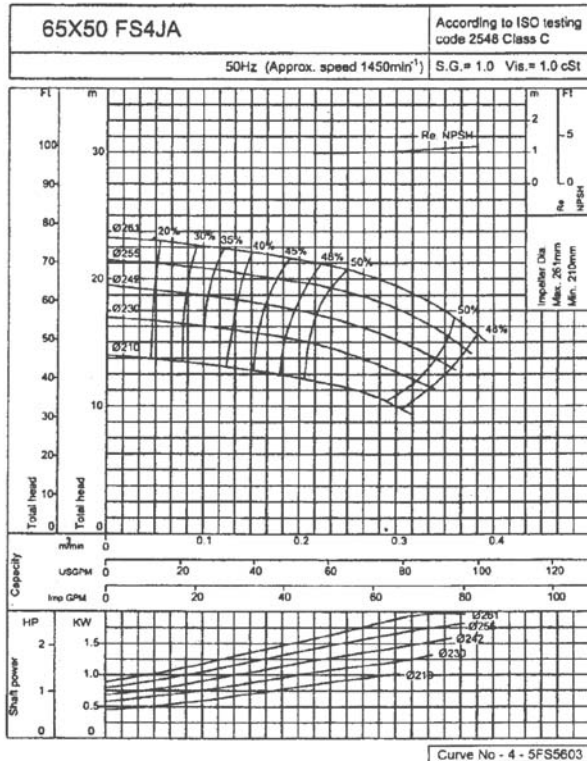
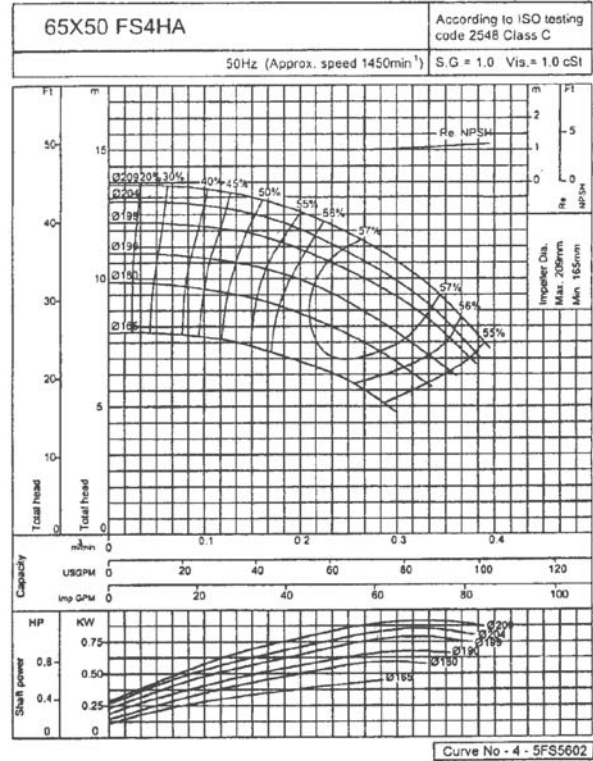
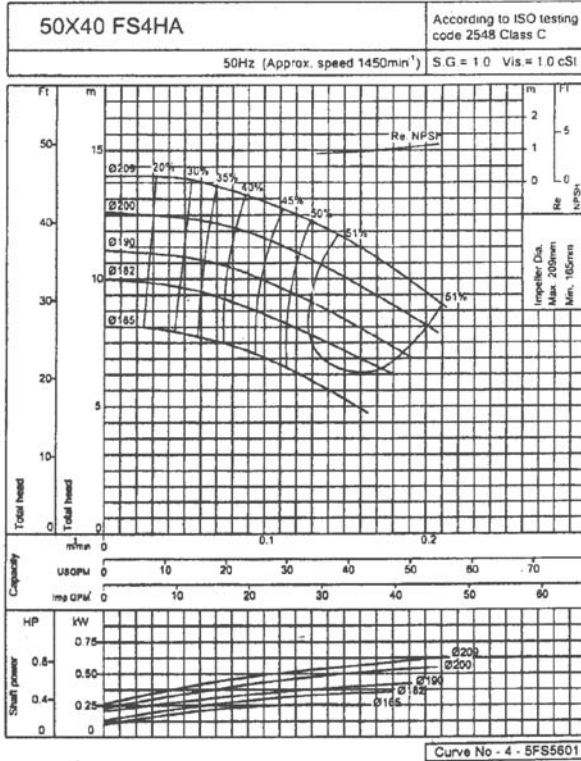
D	f	e	g	t1	t	n	h
mm	mm	mm	mm	mm	mm		mm
65	175	140	116	2	22	8	19
100	225	185	160	2	26	8	23
150	305	260	230	2	28	12	25

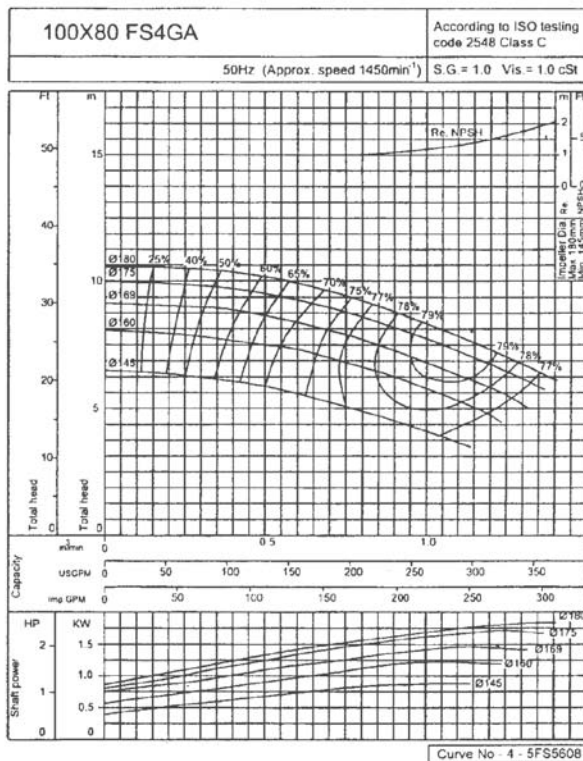
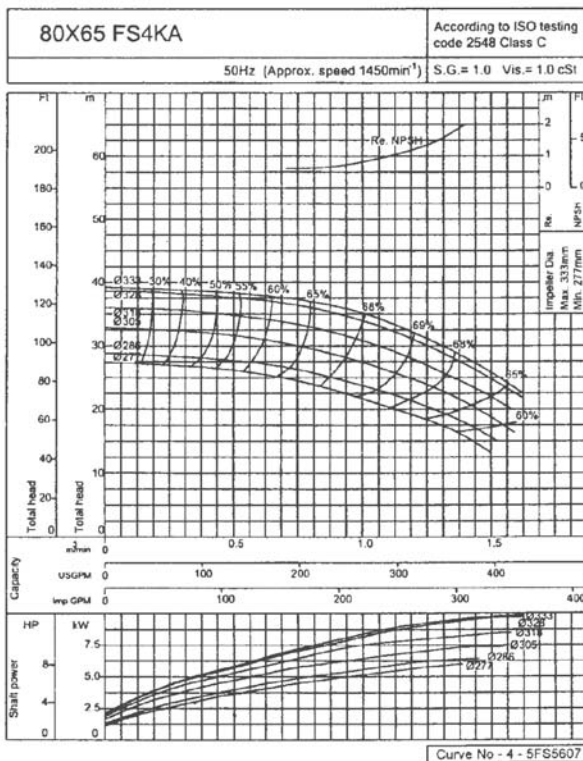
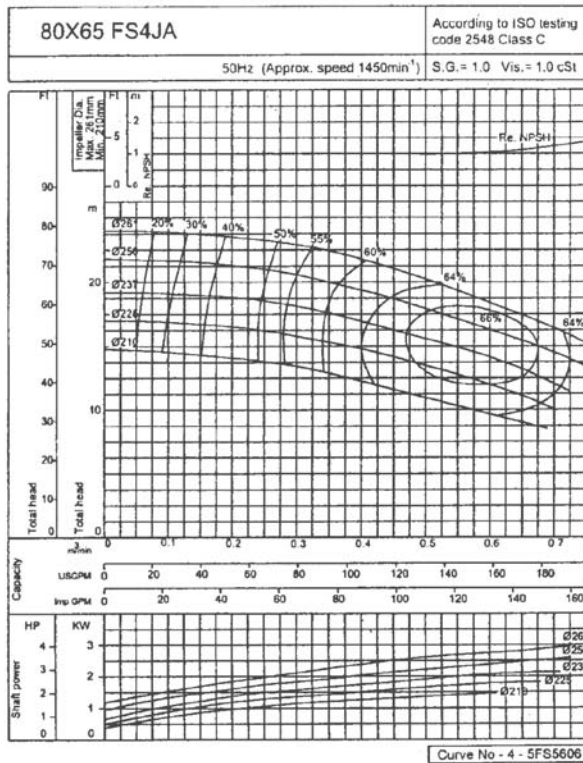
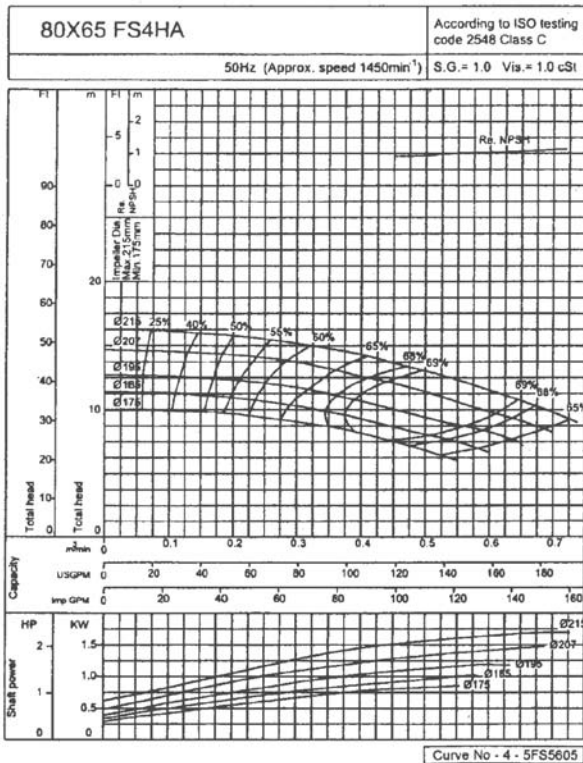
**Flange**

**Pump**


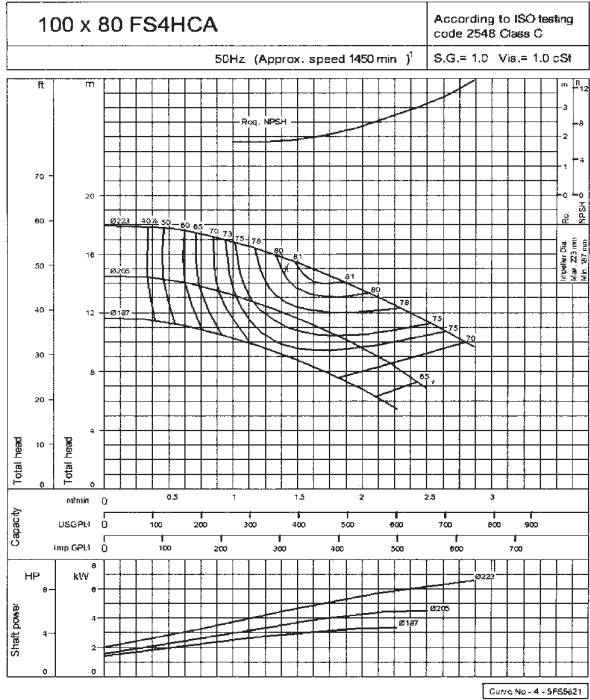
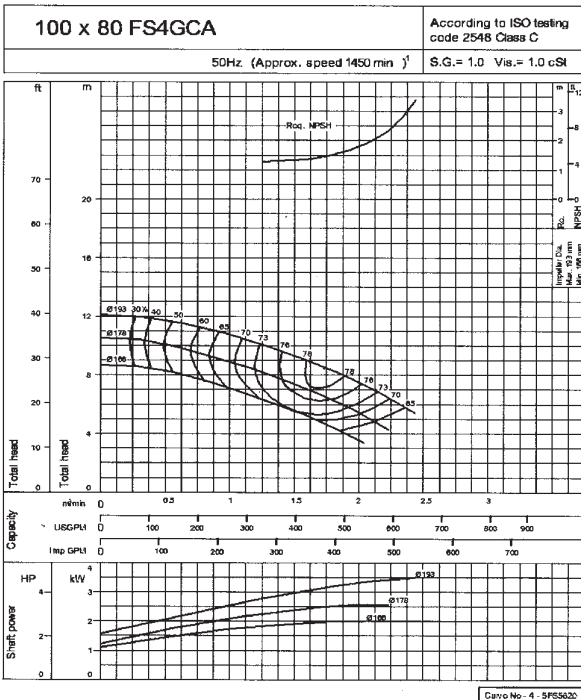
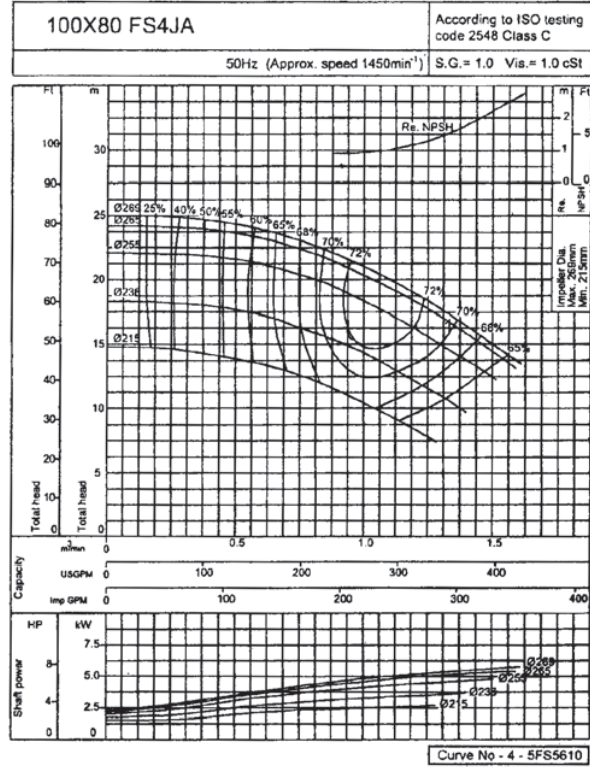
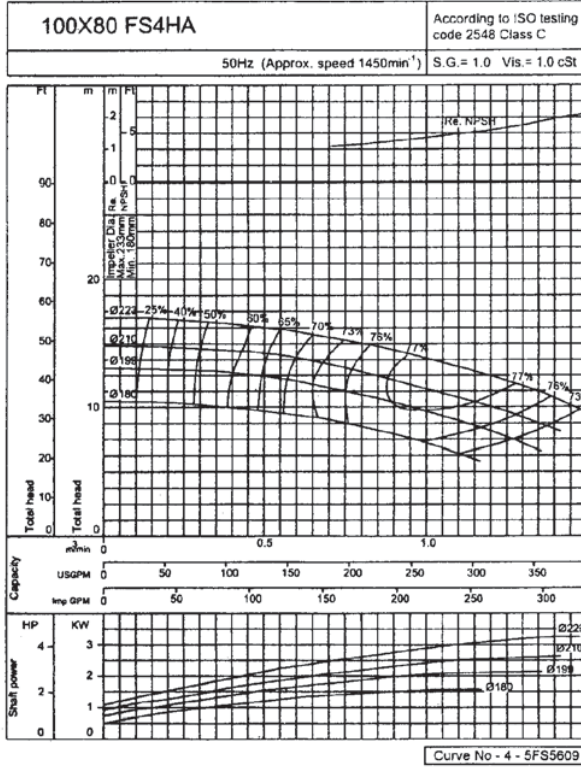
Dimension – Pump

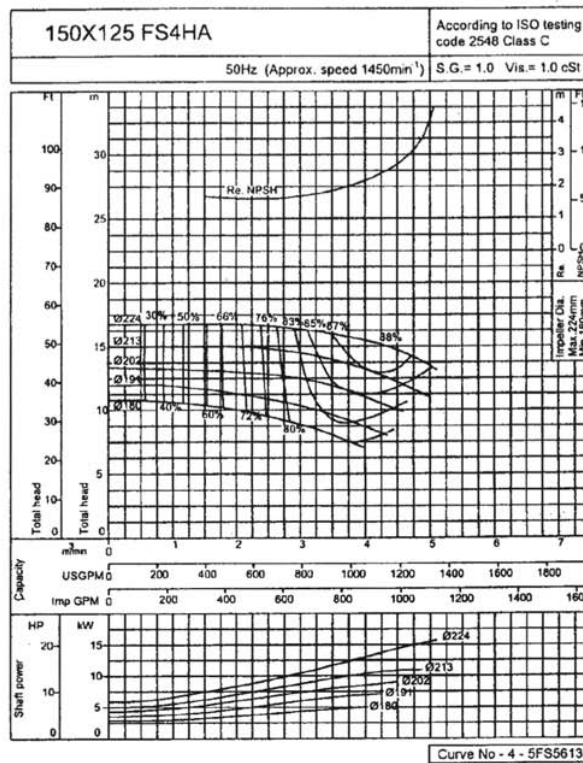
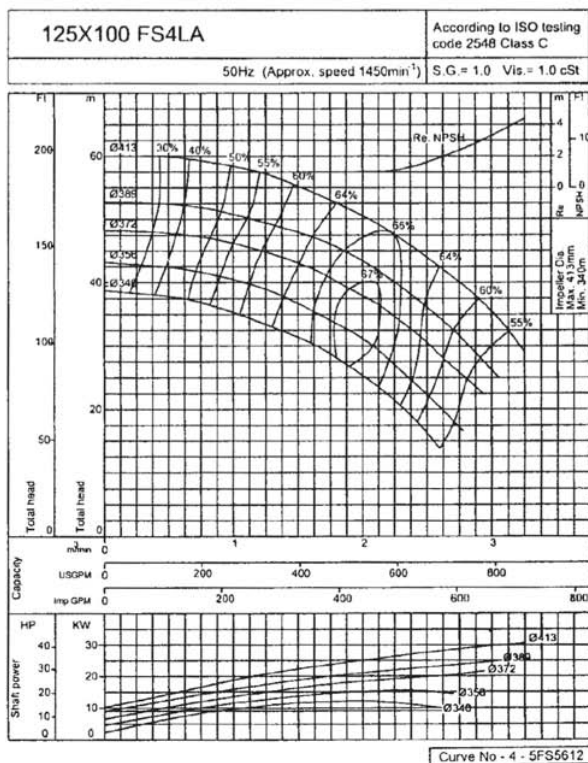
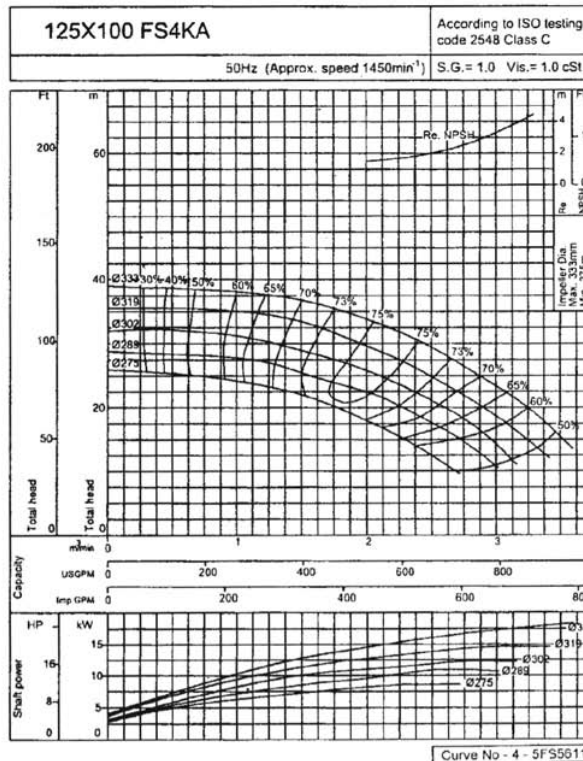
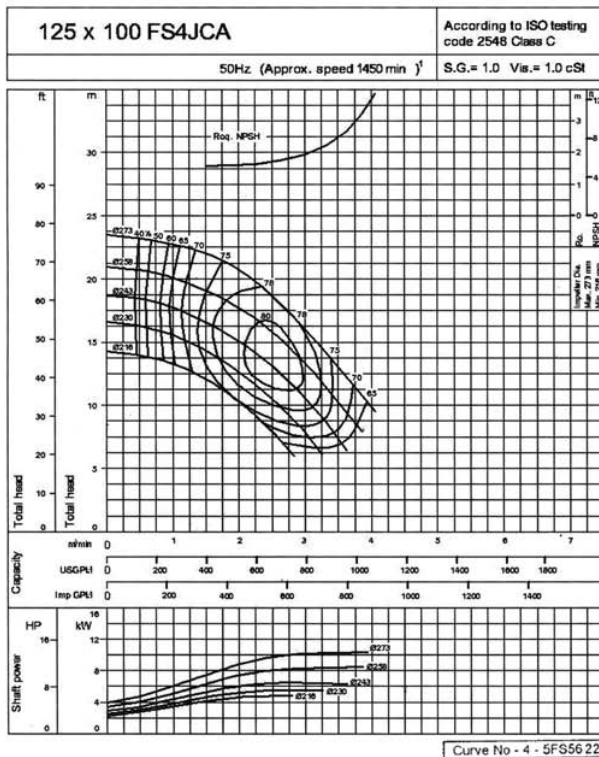
Model	Motor	Size		Pump				Motor				Common Base								Total				
	kW	Ø1	Ø2	A	B	D	wt kg	Frame	MR	MA	wt kg	BG	BJ	BL	BM	BN1	BN2	BY1	BY2	n-Fd	wt kg	t	L	wt kg
100X65 FS2KA	55	100	65	125	360	280	49	250SA	463.5	419	452	395	50	1190	770	175	245	540	600	4-M20	95	4	1371.5	614.5
	75							250MA	482.5	438	525		65	1220	850		195				100			1409.5
150X100 FS2KA	90	150	100	140	530	315	62	280SA	514	478	600	430	125	1430	960	235	235	650	640	4-M20	115	4	1666	827
	110							280MA	539.5	502.5	700		145	1480		260	260				130			1716
	132							315SA	559	527.0	920		490	155	1500	270	270		175	1760	1212			

Unit : mm, unless otherwise stated

**PERFORMANCE CURVE**
**1450 min<sup>-1</sup>**


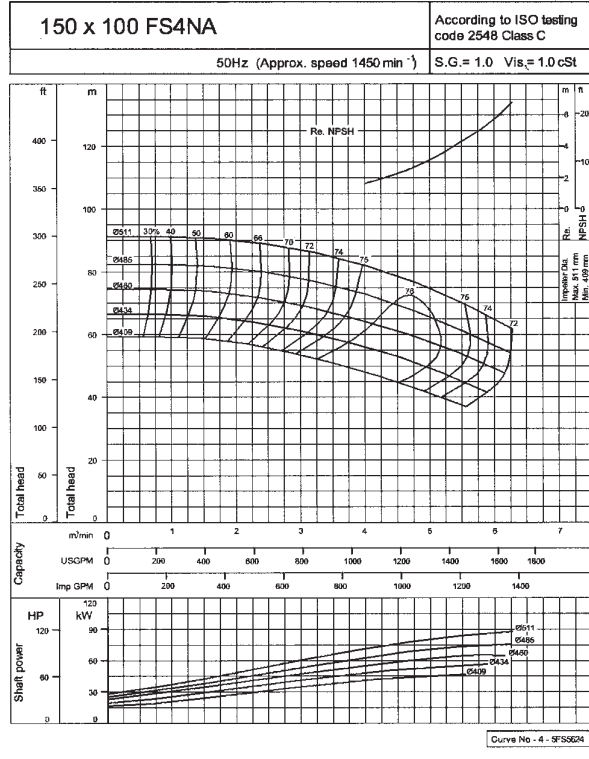
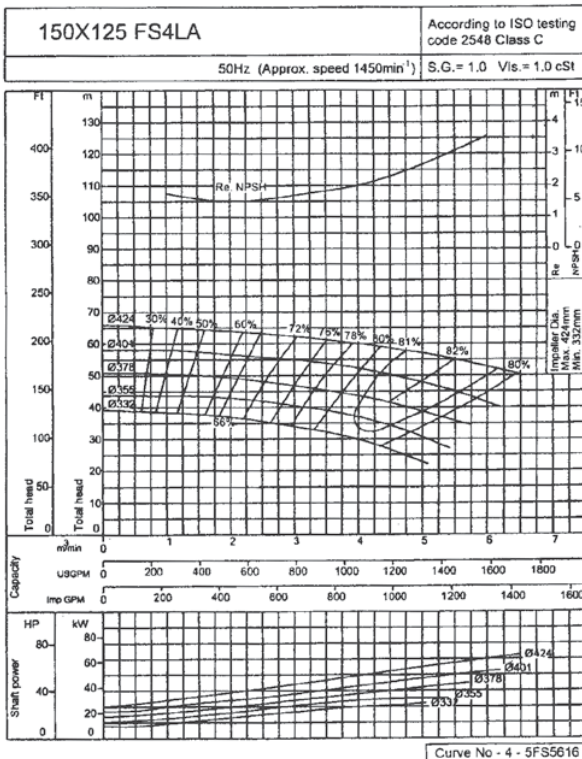
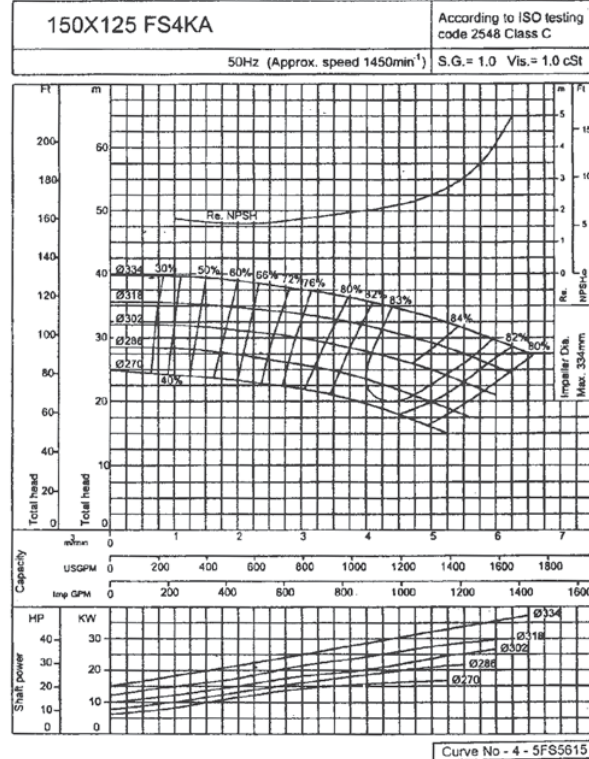
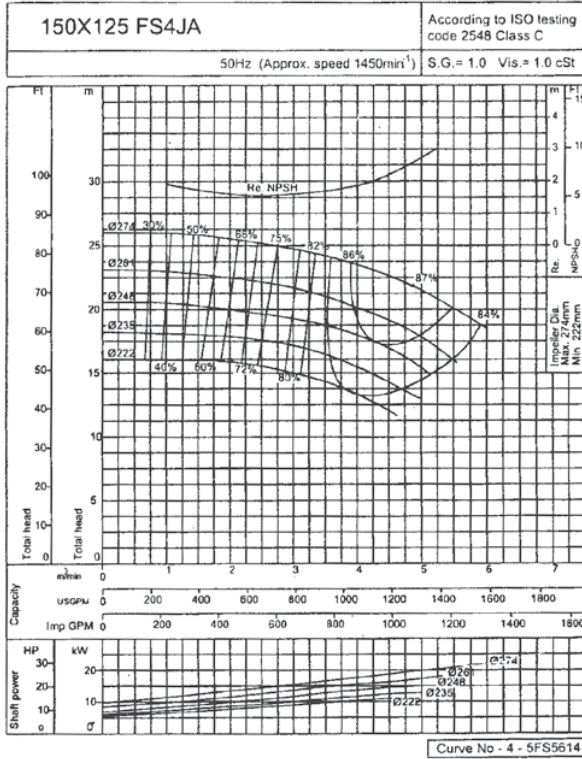
**PERFORMANCE CURVE**
**1450 min<sup>-1</sup>**


**PERFORMANCE CURVE**
**1450 min<sup>-1</sup>**


**PERFORMANCE CURVE**
**1450 min<sup>-1</sup>**


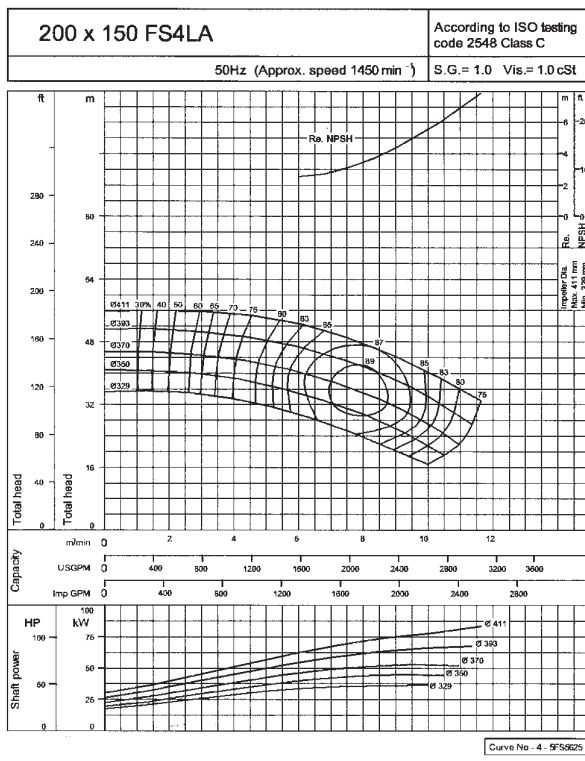
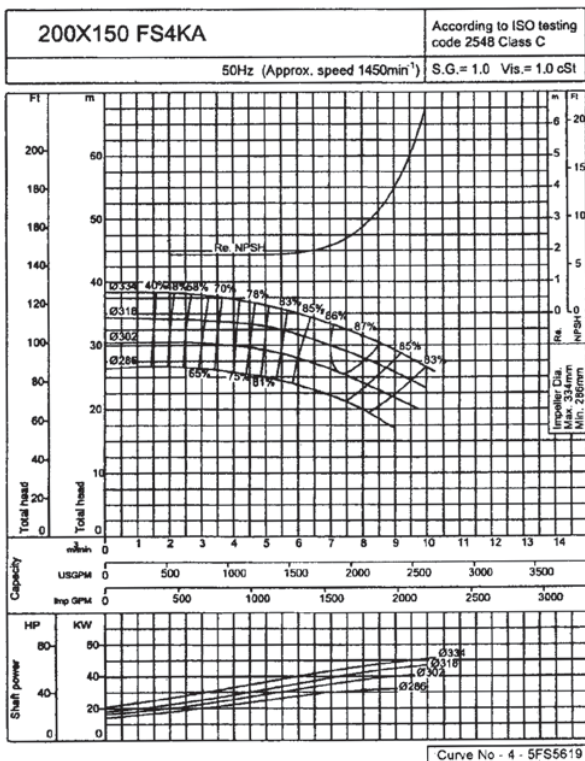
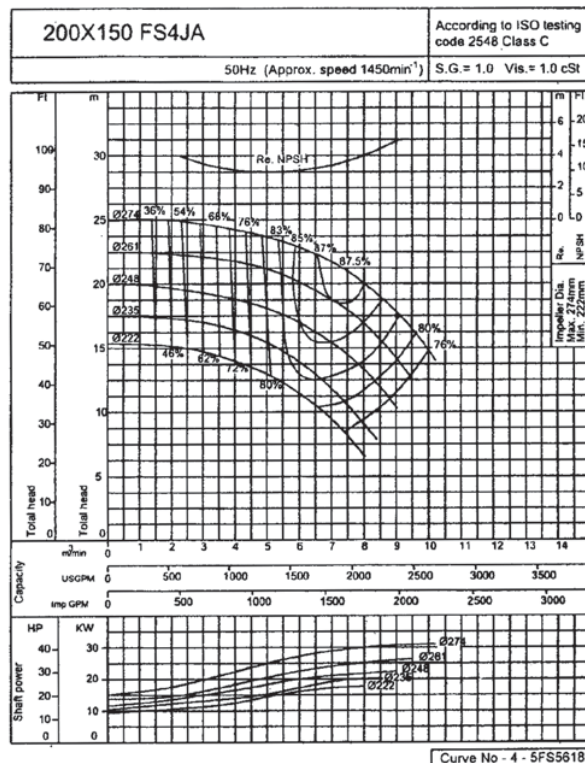
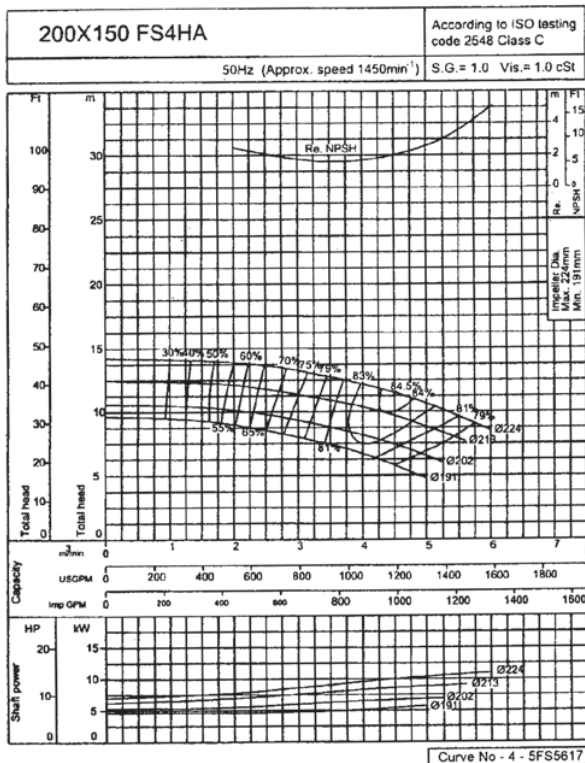
# PERFORMANCE CURVE

# 1450 min<sup>-1</sup>



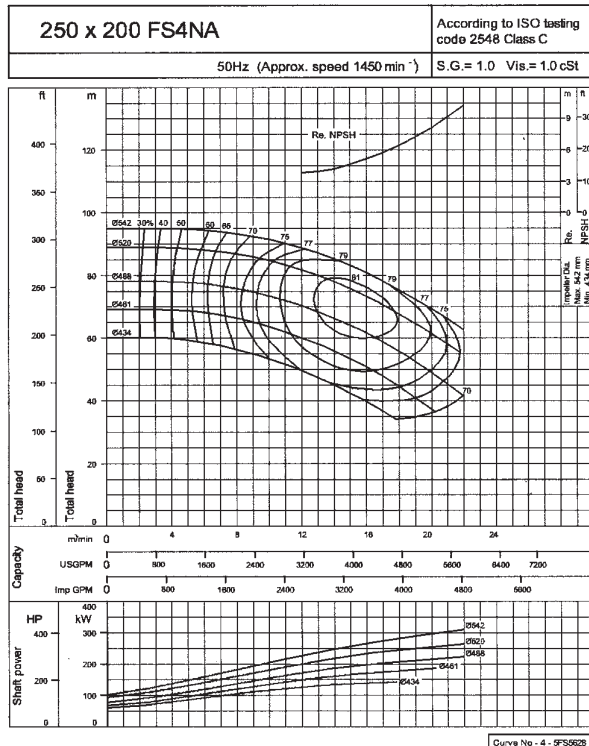
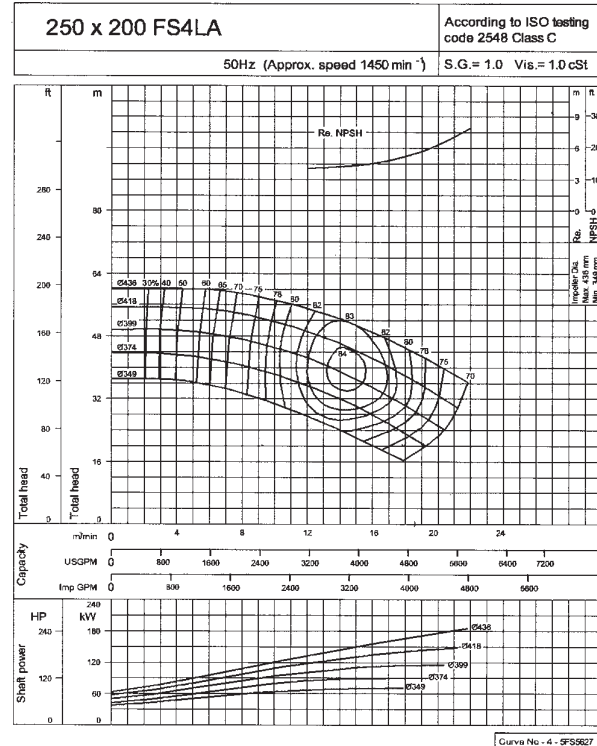
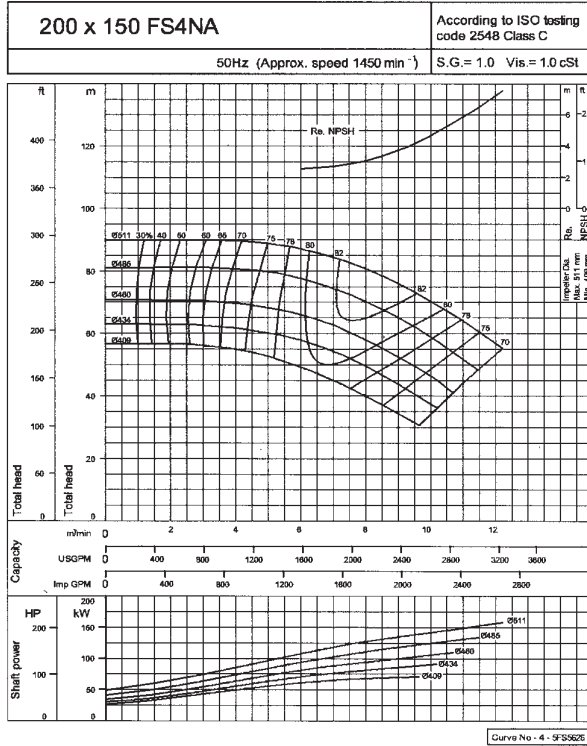
# PERFORMANCE CURVE

# 1450 min<sup>-1</sup>



# PERFORMANCE CURVE

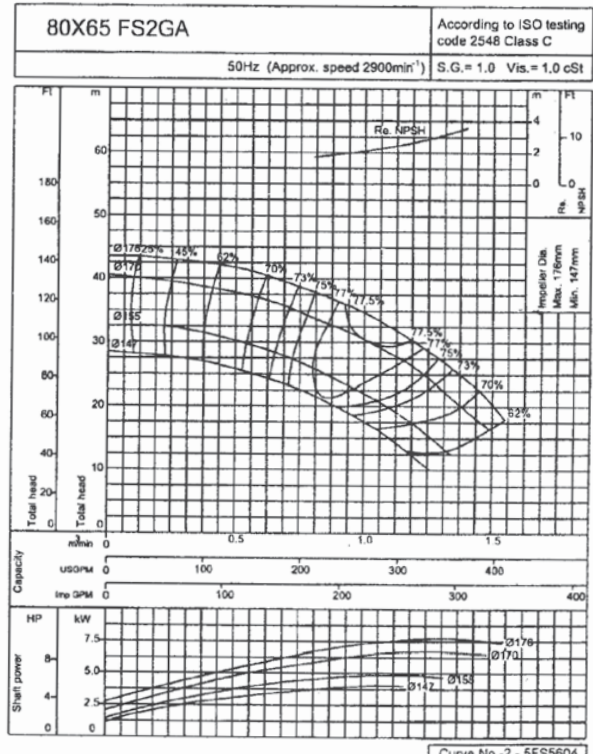
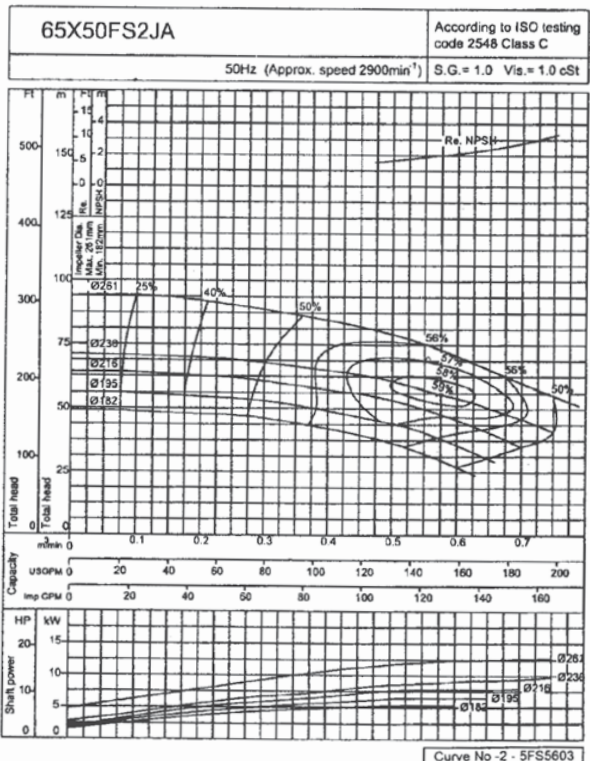
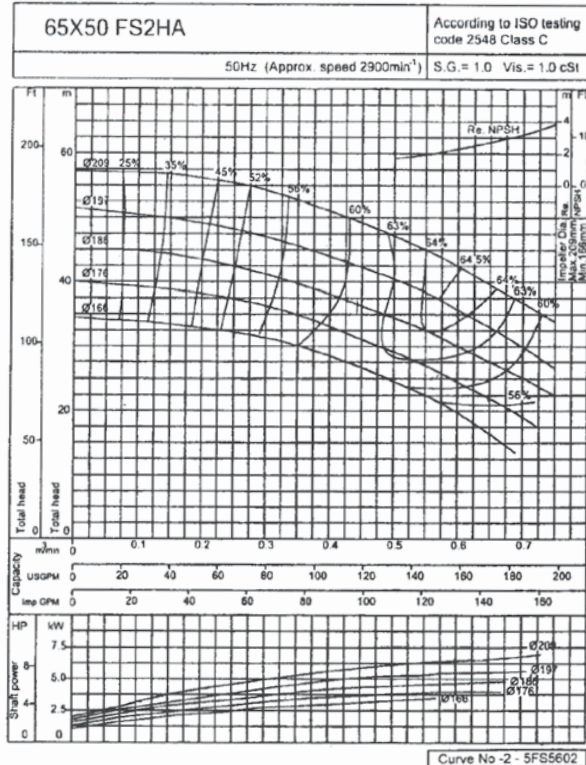
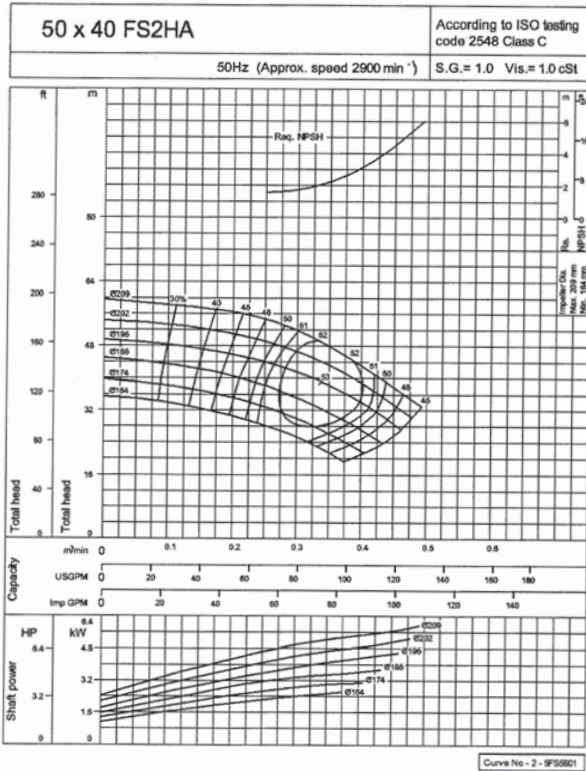
1450 min<sup>-1</sup>

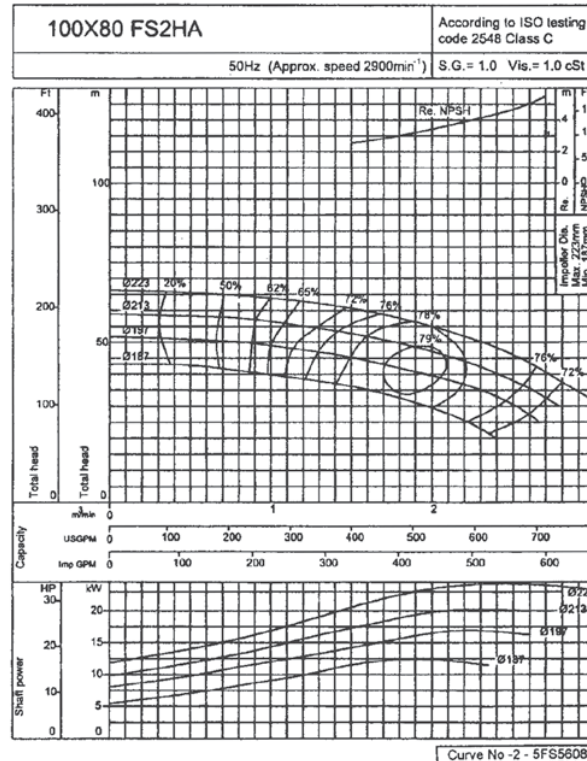
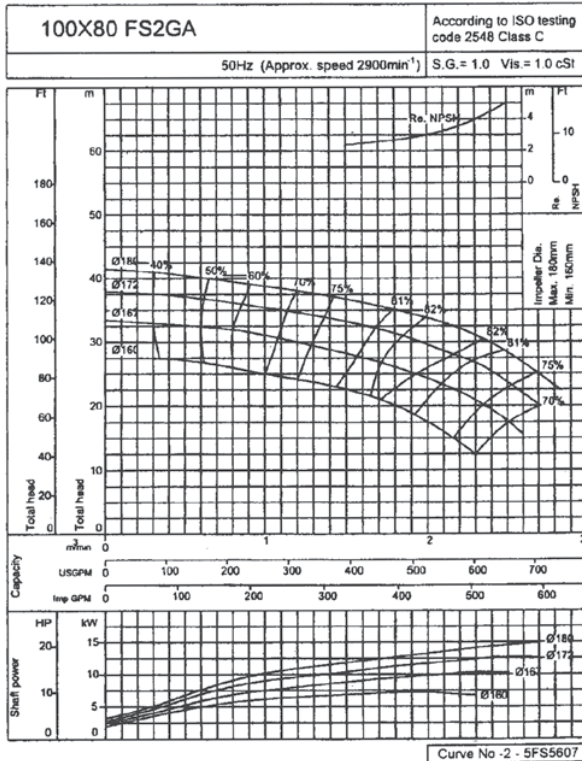
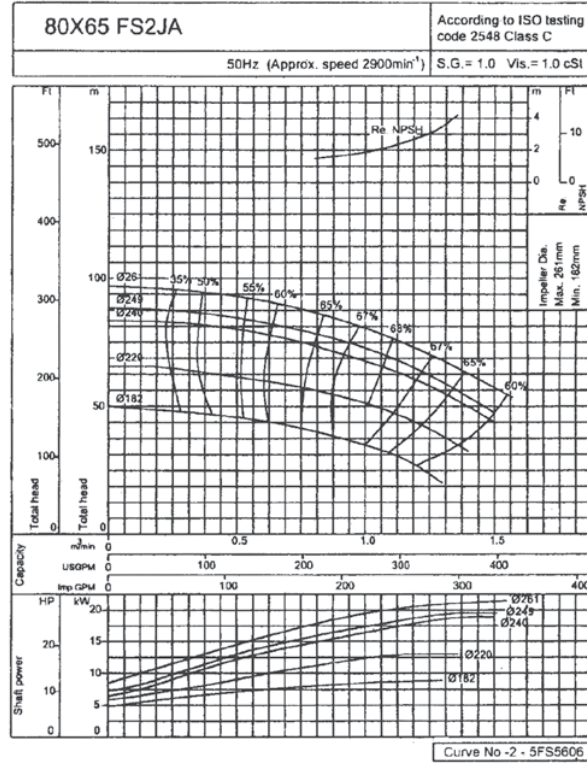
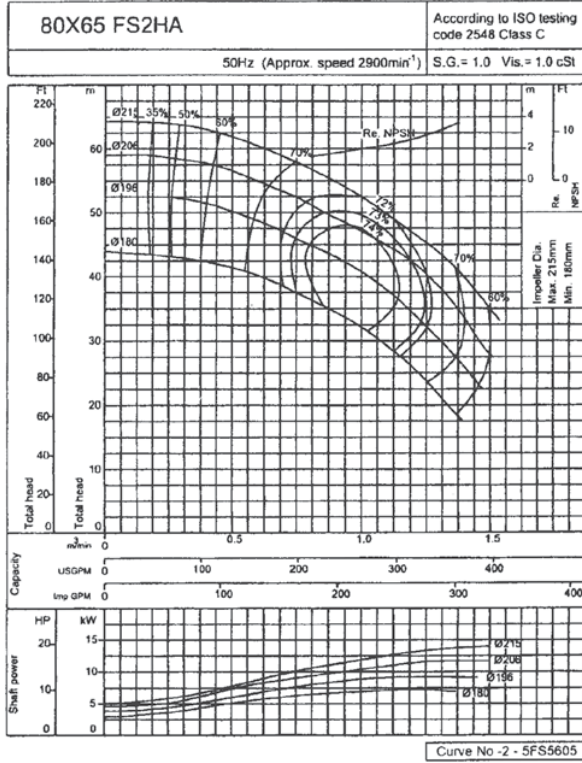




# PERFORMANCE CURVE

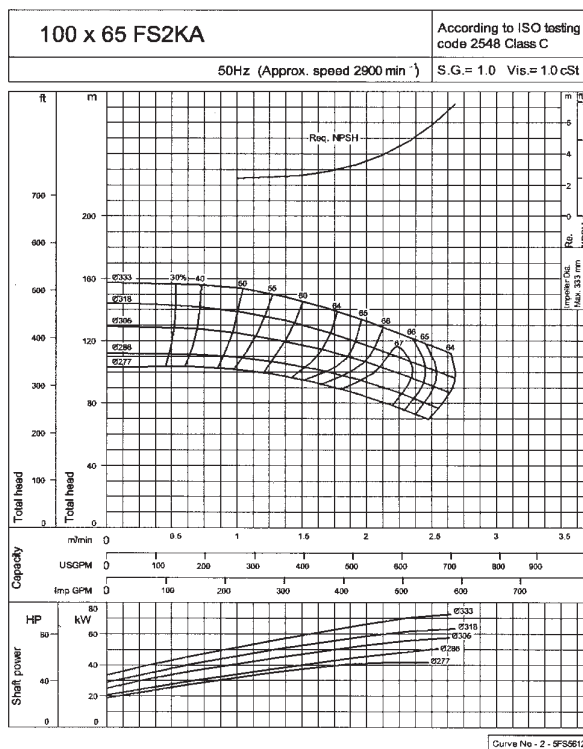
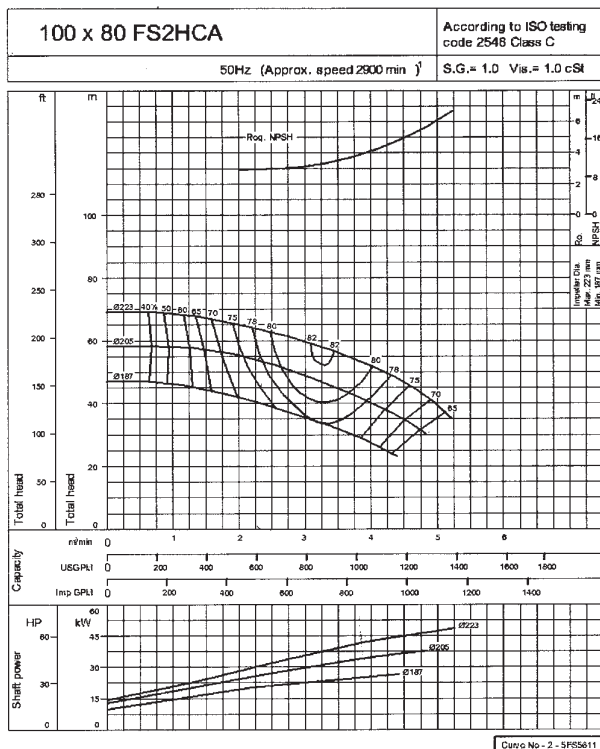
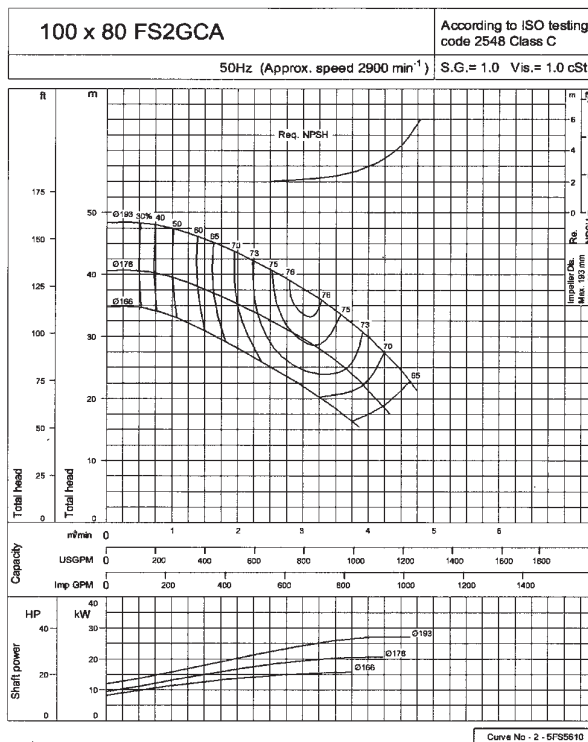
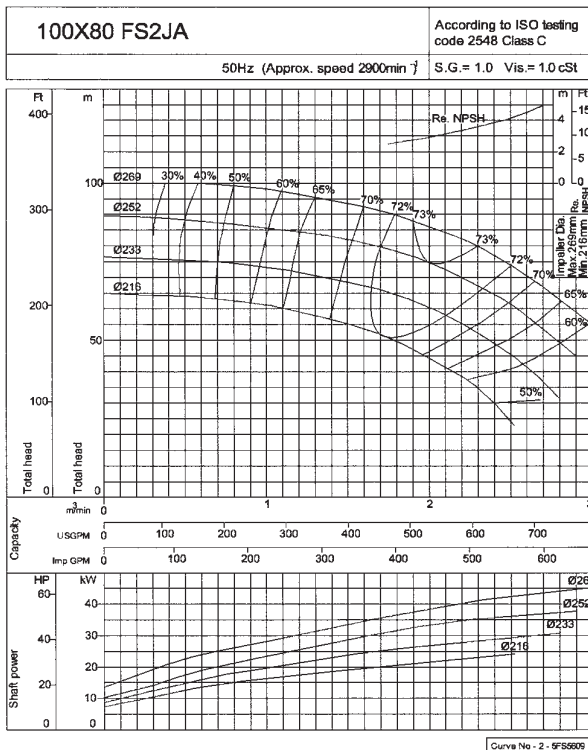
# 2900 min<sup>-1</sup>



**PERFORMANCE CURVE**
**2900 min<sup>-1</sup>**


# PERFORMANCE CURVE

# 2900 min<sup>-1</sup>



**PERFORMANCE CURVE**
**2900 min<sup>-1</sup>**
