

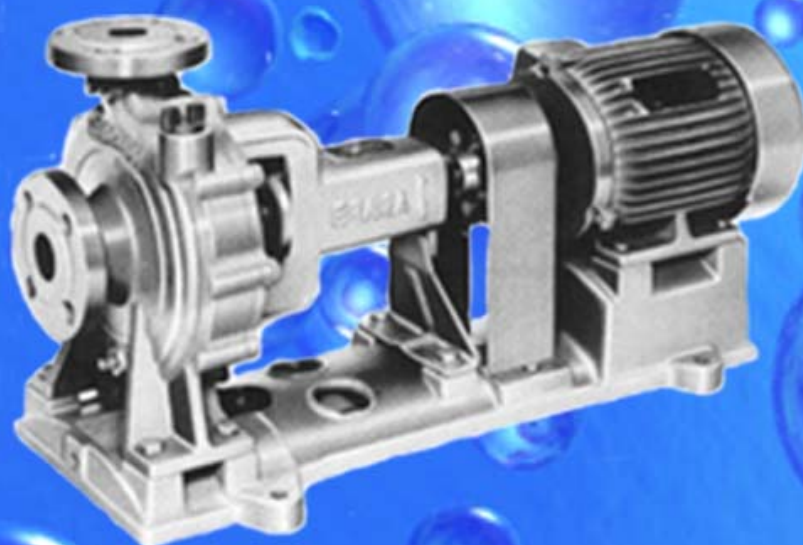
FS 8005-56 Rev. 3

TECHNICAL DATA BOOK

EBARA END SUCTION VOLUTE PUMP

MODEL FSA

SUCTION SIZE 50 ~ 250 MM



INDEX

ITEM	DISCRIPTION	PAGE
1	FEATURES AND APPLICATIONS	1
2	SELECTION CHART	2 ~ 3
3	SPECIFICATION	4
4	ALLOWABLE PRESSURE AND MATERIALS	5 ~ 6
5	DATA SHEET	7
6	SHAFT SEAL, GASKET AND BEARING	8
7	SECTIONAL VIEW OF MECHANICAL SEAL	9
8	IMPELLER AND COUPLING	10 ~ 12
9	RECOMMENDED SPARE PARTS	13
10	INSPECTIONS AND TEST	14
11	PAINT SPECIFICATIONS	15
12	SECTIONAL VIEW	16 ~ 17
13	DIMENSION - BARE SHAFT PUMP	18 ~ 20
14	DIMENSION - PUMP WITH MOTOR	21 ~ 27
15	PERFORMANCE CURVE	28 ~ 38

Note :

All specifications subject to change without prior notice

Features

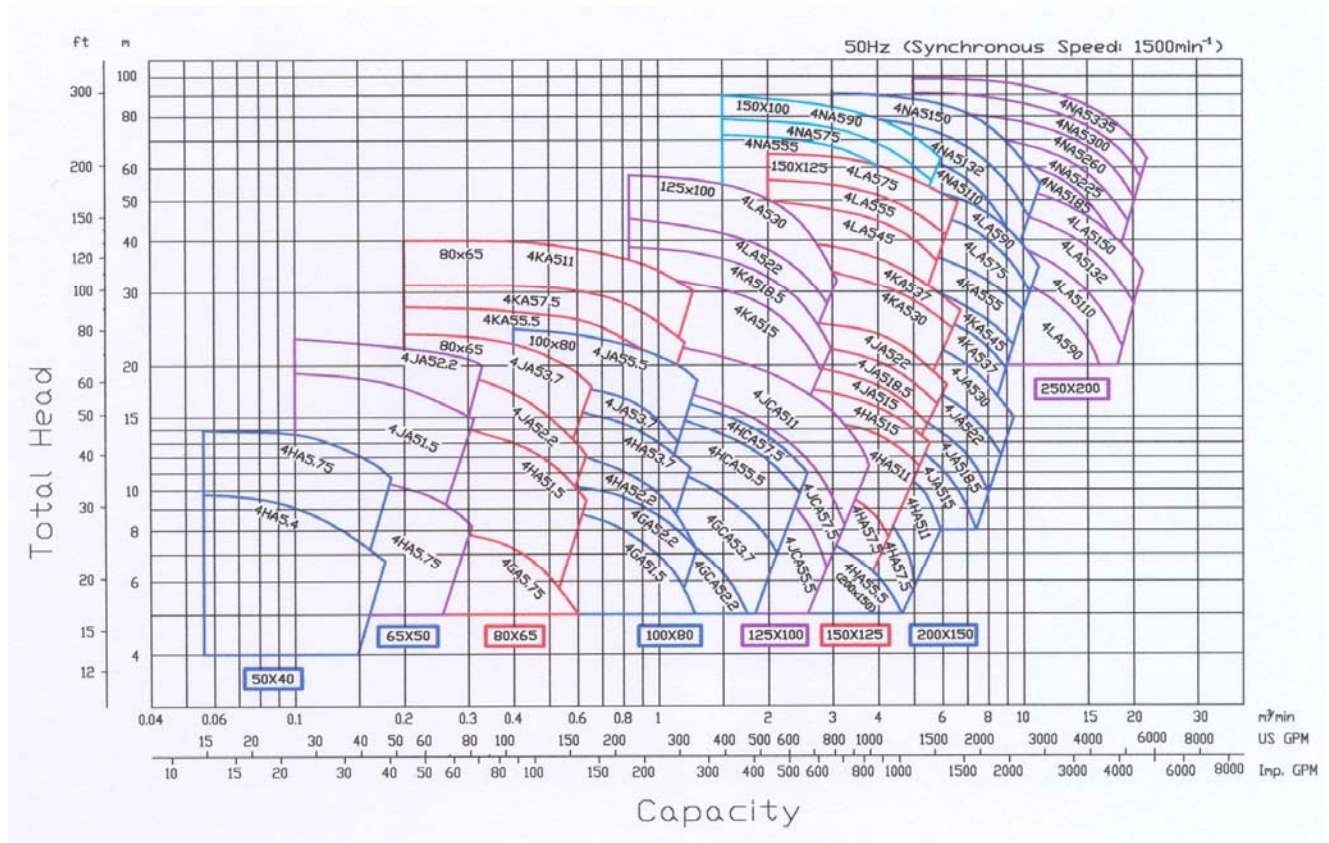
1. Easy removal and maintenance, BPO (Back Pull Out) system allows all rotating elements to be removed without disconnecting suction and discharge pipework.
2. Top centerline discharge, foot support under casing for maximum resistance to misalignment and distortion from pipe loads
3. Non-overload design to ensure stable performance for all applications
4. Wider range application with flow capacity up to 22 m³/min.
5. Higher working pressure up to 16 bar.

Applications

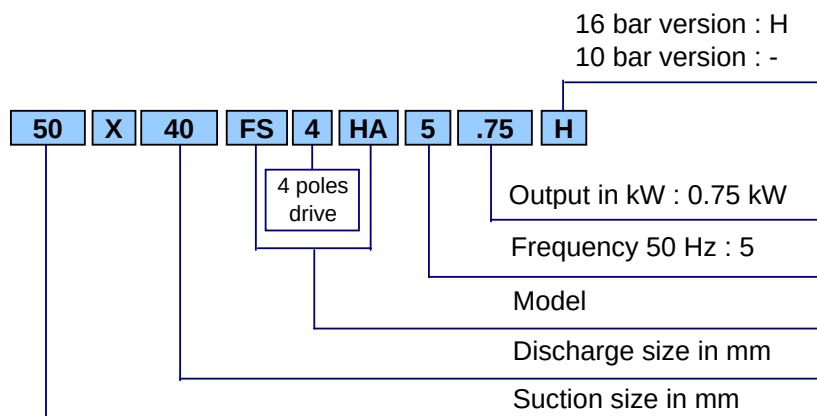
1. Industrial use
2. Water supply
3. Hot and cold water supply
4. For swimming pool
5. Sprinkling
6. Air conditioning
7. Fire-fighting application.

Performance Chart and Model Code

Performance Chart - 4 Poles - 50 Hz



Model Code - 4 Poles - 50 Hz



Performance Chart - 2 Poles - 50 Hz



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 (10.2 kgf/cm ²) for standard flange JIS 10K RF		16 bar (16.3 kgf/cm ²)	
		16 bar (16.3 kgf/cm ²) for standard flange JIS 16K RF			
Synchronous Speed		3000 min ⁻¹	1500 min ⁻¹		
Installation		Indoors		Outdoors	
Construction	Impeller	Enclosed			
	Shaft seal	Mechanical seal		Gland Packing	
	Sealing	Self flushing		External flushing	
	Bearing	Sealed ball bearing		Oil bath (some models only)	
Flange	Suction & Discharge	Suction < φ 150 mm, except 100x65 FSKA : JIS 10K RF		16 bar : JIS 16K RF; DIN PN-16	
		100x65 FSKA : JIS 16K RF		DIN PN-16	
		Suction = φ 150 mm, 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 = φ 200 mm, 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	Bronze Casting (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, Coupling guard		Priming funnel ; valve; Companion Flange	

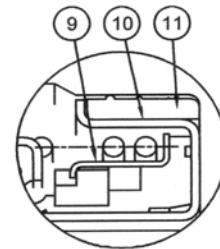
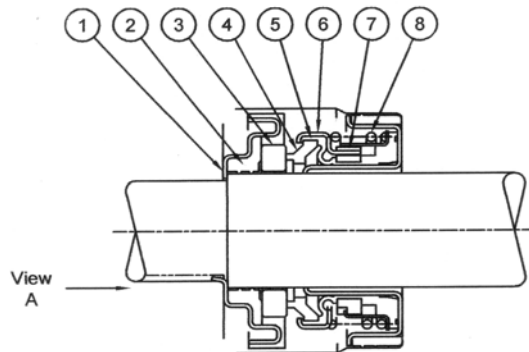
Model	10 Bar version						16 Bar version					
	Material					Hydro Test kg/cm ²	Material					Hydro Test kg/cm ²
	Casing	Impeller		Shaft			Casing	Impeller		Shaft		
		Standard	Option	Standard	Option			Standard	Option	Standard	Option	
50x40 FSHA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
65x50 FSHA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
65x50 FSJA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
80x65 FSGA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
80x65 FSHA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
80x65 FSJA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
80x65 FSKA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
100x80 FSGA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
100x80 FSHA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
100x80 FSJA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
100x65 FSKA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
100x80 FSGCA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
100x80 FSHCA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
125x100 FSJCA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
125x100 FSKA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
125x100 FSLA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5

Model	10 Bar version						16 Bar version					
	Material					Hydro Test	Material				Hydro Test	
	Casing	Impeller		Shaft			Casing	Impeller		Shaft		
		Standard	Option	Standard	Option			kg/cm ²	Standard	Option		Standard
150x100 FSKA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
150x100 FSNA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
150X125 FSHA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
150x125 FSJA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
150x125 FSKA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
150x125 FSLA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
200x150 FSHA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
200x150 FSJA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
200x150 FSKA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Ductile Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
200x150 FSLA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
200x150 FSNA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
250x200 FSLA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5
250x200 FSNA	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	15.3	Cast Iron	Bronze	Cast Iron	403 St. Steel	304; 316 St. Steel	24.5

1	Customer	:		36	Number of pump required	:	
2	User	:		37	Ebara Model	:	
3	Job No.	:		Performance			
4	Item No.	:		38	Pump Speed	:	rpm
5	Doc. No.	:		39	Driver Output	:	kW
Operating Conditions				40	Efficiency	:	%
6	Liquid	:	water	41	Shaft Power	:	kW
7	Liquid Temp.	:	max. 80°C	42	Req. NPSH (Aq)	:	m
8	Specific Gravity	:	1.0	Materials			
9	Viscosity	:	1 cp	43	Casing	:	Cast Iron
10	Capacity	:	☐ l/s ☐ m³/min ☐ m³/H ☐ USGPM	44	Impeller	:	Bronze
11	Total Head	:	☐ meter ☐ kg/cm² ☐ feet	45	Shaft	:	Stainless Steel
12	Corrosion / Eros.	:	non	46	C.W. Ring	:	Bronze
13	Solid	:	non	47	Base Plate	:	☐ Steel ☐ Cast Iron
14	Suction Press.	:		Accessories (Bare Shaft Pump)			
15	Discharge Press.	:		48	Priming cook and priming funnel		
16	Diff. Press.	:		Scope of Our Supply for Each Unit			
17	Vapor Press.	:		49	☐ bare shaft pump ☐ motor ☐ flexible coupling ☐ coupling guard ☐ pressure gauge ☐ compound gauge ☐ foundation bolts ☐ base plate ☐ companions flanges (include bolt and packing)		
18	NPSH Av (Aq)	:		Shop Test			
Constructions				50	Performance Test : ☐ yes ☐ No Casing Hydro Test : ☐ yes Witnessed Test : (performance) ☐ yes ☐ no		
19	Nozzles Position	:	end - suction top - discharge	Attachment			
20	Size (Suction)	:	mm	51	☐ outline dwg. ☐ Sectional dwg ☐ performance curve ☐ spare part list		
	(discharge)	:	mm	Remarks			
21	Pump type	:	end suction volute foot mounted				
22	No. of stage	:	one				
23	Type of Impeller	:	closed type, single suction				
24	Casing Test Pressure	:					
	Hydro test	:	kg/m²				
	Max. Positive Suction Press	:	kg/m²				
25	Bearing Type	:	grease lubricated ball bearing				
26	Shaft Seal	:	☐ carbonized fiber gland packing ☐ mechanical seal				
27	Flushing	:	☐ self ☐ external				
28	Rotation	:	CW viewed from coupling end				
29	Connection	:		Motor Driver			
30	Motor Power	:	kW; 4 poles; 3 phase	Voltage : ☐ 380 V ☐ 415 V ☐ 50 HZ ☐ 60 HZ			
		:	kW; 2 poles; 3 phase	RPM : ☐ 1500 min⁻¹ ☐ 1750 min⁻¹ ☐ 3000 min⁻¹ ☐ 3600 min⁻¹			
31	Type	:	Three phases, squirrel cage rotor, horizontal foot mounted	Protection - totally enclosed fan cooled (TEFC) ☐ IP-54, indoor inst. ☐ IP-55, outdoor inst.			
32	Insulation	:	☐ class F ☐ class B				
33	Starting Method	:	☐ star-delta ☐ direct on lone				
34	Maker	:	☐ Teco ☐ ABB ☐ Leroy Somer ☐				
35	Supplied by	:	☐ Customer ☐				
				Approved by Customer		Approved by	Made by

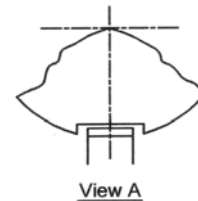
Model	Mechanical Seal	O-Ring/ Gasket	Gland Packing Size mm	Qty of Gland Packing	Ball Bearing
50x40 FSHA	FH-25	Gs-225	41x25x8	4	6305 ZZ
65x50 FSHA	FH-25	Gs-225	41x25x8	4	6305 ZZ
65x50 FSJA		Gs-275			
80x65 FSGA	FH-25	Gs-180	41x25x8	4	6305 ZZ
80x65 FSHA		Gs-225			
80x65 FSJA	FH-35	Gs-275	51x35x8		6307 ZZ
80x65 FSKA		Gs-335			
100x65 FSKA	EA-262-40	Gs-335	56x40x8	4	6208 ZZ
100x80 FSGA	FH-25	Gs-275	41X25X8	4	6305 ZZ
100x80 FSHA	FH-35	Gs-225	51X35X8		6307 ZZ
100x80 FSJA		Gs-275			
100x80 FSGCA	EA-262-35	Gs-185			
100x80 FSHCA		Gs-225			
125x100 FSJCA	EA-262-40	Gs-275	56x40x8	4	6208 ZZ
125x100 FSKA	FH-35	Gs-335	51x35x8		6307 ZZ
125x100 FSLA	EA-262-45	Gs-425	65x45x10	5	6309 ZZ
150x100 FSKA	EA-262-50	370x320x0.8T	70x50x10	4	6310 ZZ
150x100 FSNA	EA-262-55	560x515x0.8T	75x55x10	5	6312 ZZ
150x125 FSHA	EA-262-35	Gs-225	51x35x8	4	6307 ZZ
150x125 FSJA		Gs-275			
150x125 FSKA	EA-262-45	Gs-335	65x45x10	5	6309 ZZ
150x125 FSLA		Gs-425			
200x150 FSHA	EA-262-35	Gs-225	51x35x8	4	6307 ZZ
200x150 FSJA	EA-262-45	Gs-275	65x45x10	5	6309 ZZ
200x150 FSKA	EA-262-55	Gs-335	75x55x10		6312 ZZ
200x150 FSLA		450x415x0.8T			
200x150 FSNA	EA-262-65	560x515x0.8T	90x65x12.5		5
250x200 FSLA	EA-262-65	480x440x0.8T	90x65x12.5	6313 ZZ	
250x200 FSNA	EA-262-75	615x550x0.8T	104x75x14.5	6315 ZZ	

Model FH

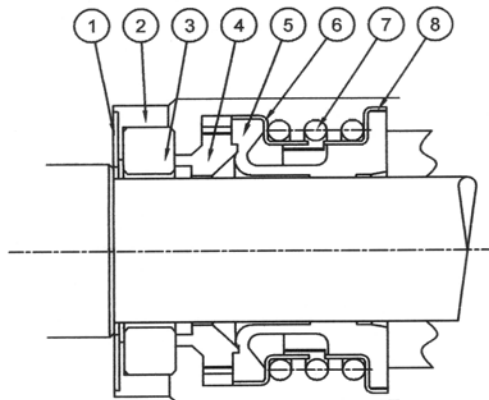


Detail of Cartridge,
Seat Ring

Part No.	Part Name	Material	Qty/Unit
1	Case	304 Stainless Steel	1
2	Cup Gasket	NBR	1
3	Mating Ring	Ceramic NT-32	1
4	Seal Ring	Carbon NC-11B1	1
5	Bellows	NBR	1
6	Case	304 Stainless Steel	1
7	Drive Ring	304 Stainless Steel	1
8	Coil Spring	304 Stainless Steel	1
9	Spring Holder	304 Stainless Steel	1
10	Cartridge	304 Stainless Steel	1
11	Seat Ring	NBR A834	1



Model EA



Part No.	Part Name	Material	Qty/Unit
1	Washer	316 Stainless Steel	1
2	Cup Gasket	NBR	1
3	Mating Ring	Ceramic	1
4	Seal Ring	Carbon	1
5	Bellows	NBR	1
6	Case	316 Stainless Steel	1
7	Coil Spring	316 Stainless Steel	1
8	Spring Holder	316 Stainless Steel	1

4 POLES - 1500 rpm

MODEL	MOTOR		IMPELLER DIAMETER mm	COUPLING CLA	SHAFT DIAMETER	
	POWER	FRAME			PUMP	MOTOR
	kW	No.			φ P (mm)	φ M (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			
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			
150x125 FSJA	15	160L	246	160	32	42
	18.5	180M	260	180		48
	22	180L	274			
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			
	90	280SC	499			280

4 POLES - 1500 rpm (Continued)

MODEL	MOTOR		IMPELLER DIAMETER mm	COUPLING CLA	SHAFT DIAMETER	
	POWER	FRAME			PUMP	MOTOR
	kW	No.			ϕ P (mm)	ϕ M (mm)
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		55
	30	200L	268	224		60
	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			85
250x200 FSLA	90	280SC	362	280	60	80
	110	280MC	380			85
	132	315SC	392	315		85
	150	315MC	408			85
250x200 FSNA	185	315MB	445	315	74	85
	225	315CB-95R	473	355		95
	260	355AB-95R	492			
	300	355CB-95R	520			
	335	355CB-95R	530			

2 POLES - 3000 rpm

MODEL	MOTOR		IMPELLER DIAMETER mm	COUPLING CLA	SHAFT DIAMETER	
	POWER	FRAME			PUMP	MOTOR
	kW	No.			φ P (mm)	φ M (mm)
50x40 FSHA	1.5	90S	143	112	24	24
	2.2	90L	160			28
	3.7	112M	188			38
	5.5	132S	208			28
65x50 FSHA	3.7	112M	166	125	24	38
	5.5	132S	185			42
	7.5	132S	207			48
65x50 FSJA	11	160M	232	160	24	55
	15	160M	250			60
80x65 FSGA	5.5	132S	157	160	24	38
	7.5	132S	173			42
80x65 FSHA	11	160M	199	160	24	48
	15	160M	215			55
80x65 FSJA	18.5	160L	240	180	32	60
	22	180MA	246			65
100X80 FSGA	7.5	132S	147	160	24	38
	11	160M	167			42
	15	160M	180			48
100X80 FSHA	18.5	160L	201	180	32	55
	22	180MA	211			60
100X80 FSJA	30	200LA	235	200	32	65
	37	200LA	254			70
	45	225MA	269			75
100x65 FSKA	55	250SA	286	224	38	60
	75	250MA	328			65
100X80 FSGCA	18.5	160L	166	160	32	42
	22	180MA	178			48
	30	200LA	193			55
100X80 FSHCA	37	200LA	197	200	32	60
	45	225MA	205			65
	55	250SA	223			70
125X100 FSJCA	55	250SA	236	200	38	55
	75	250MA	273			60
150x100 FSKA	75	250MA	278	250	42	60
	90	280SA	291			65
	110	280MA	310			70
	132	315SA	323			75

Part No.	Part Name	Standard Material	Q'ty/Unit
056	Ball Bearing	-	2
107	Liner Ring	Bronze	2
111	Mechanical Seal	Ceramic/Carbon/NBR	1
119	Gland Packing	Teflon (PTFE) Impregnated	3 or 4
	Coupling Rubber	NBR	1 set

Inspections and Test

50 Hz

Item Check		Standard		Option
Material Inspection	EI	Material chemical composition and mechanical Properties are checked periodically according to JIS.	CR/ES	Material certificat is to be submitted
Hydrostatic test *3	EN	Hydrostatic test is to be performed on casing using fresh water at normal temperature. Retention time of water pressure is 5 minutes for Cast Iron	EN	Hydrostatic test record is to be submitted
Balancing test *3	EN	Impeller is to be subject to balancing test	EN	
Assembly dimensional inspection *3	EN	Dimensions of the followings are to be subject to inspection * Position of foundation bolt hole * Position of suction & discharge flange * Relative positions of suction and discharge flange and foundation bolt hole.	CR	Outline dimensional inspection record is to be submitted.
Performance test General performance *1	ES	Capacity, total head, pump power input, and speed of rotation are to be measured and pump efficiency to be calculated. Measurement point are to be 5 points within the range from shutoff point 125% rated capacity. Judgement is to be based on JIS Testing Code B8301 9.1 (1)	CR	Judgement is to be based on following standards. * JIS Testing Code B8301 9.1 (2) * ISO 2548 Part 1 Class C (as requested by customer)
Bearing Vibration	EN	Vibration is to be measured on bearing housing at rated capacity. Judgement is to be based on JIS Testing Code B8301 9.4.1	CR	Measured record is to be submitted
Performance test Bearing Temperature	EN	Temperature is to be measured at saturated point of the temperature increase. Judgement is to be based on JIS Testing Code B8301 9.4.2	CR	Measurement record is to be submitted.
NPSH	NA		CR	Measurement record is to be performed for Req'd NPSH at above or below rated capacity
	EN	Internal Ebara Standard	CR	Noise level is to be measured at rated capacity. *2
Shipping Inspection	ES	Shipping Inspection is to be performed based on EBARA shipping inspection check sheet.	ES	

NOTE :

- CR** : Ebara Inspector Witness Point (Record shall be submitted)
- EI** : Ebara Inspector Witness Point (Record shall be not submitted)
- EN** : Ebara Inspector Witness Point (Not Recorded but stamp/markings/OK inspection label)
- ES** : Ebara Inspector Witness Point (Record shall be kept)
- NA** : Not Applied.

*1 Performance test based on JIS B8301 " Testing Methods for Centrifugal Pumps, Mixed Flow Pumps and Axial Flow Pump" and JIS B8302 "Measurement Methods of Pump Discharge".

*2 Measured Value on pump noise is considered as reference value because its include background noise effect of motor, discharge valve, etc.

*3 Judgement is based on Ebara Standard.

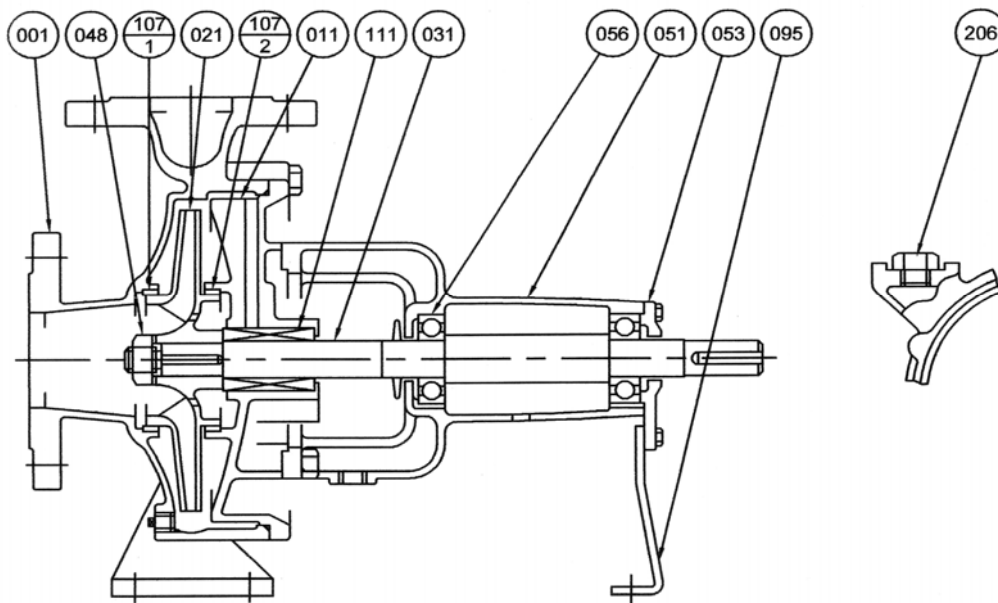
Part Name	Material (JIS Code)	Standard		Optional Inner Surface
		Inner Surface	Outer Surface	
Casing	Cast Iron (FC)	1 coat of Zinc chromate primer	Under coat	1 coat of Tar epoxy resin
Bearing Housing Bearing Cover	Cast Iron (FC)		- 1 coat of Zinc chromate primer Finish coat - 1 coat of Phthalic resin enamel	
Common Base	Cast Iron (FC)	Under coat - 1 coat of Zinc chromate primer Finish coat - 1 coat of Phthalic resin enamel		
	Steel			

Ebara End Suction Volute Pump

Model FSA

Sectional View - Mechanical Seal (Standard)

50 Hz

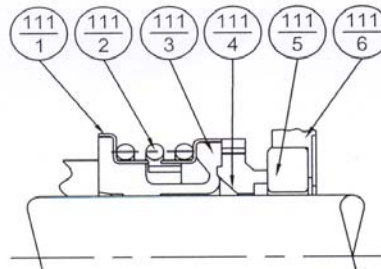
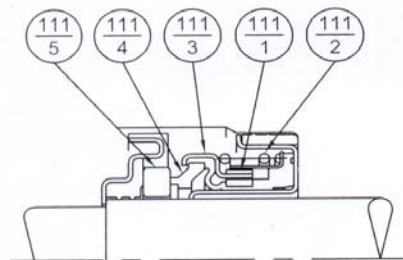


Model FH

50x40 FSHA; 65x50 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



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

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

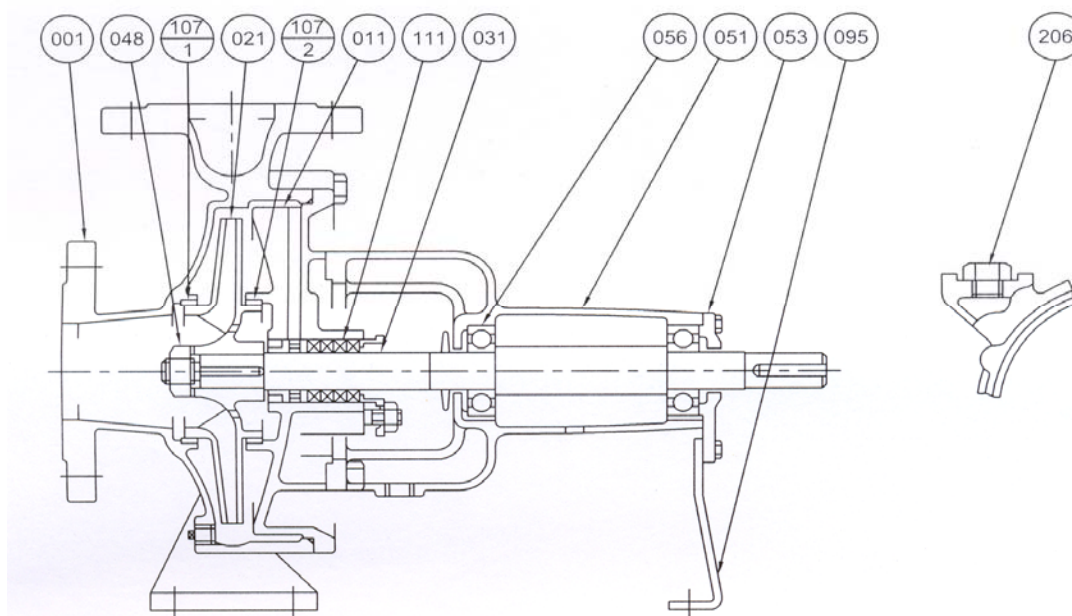
207	Plug	Steel	1
111	Mechanical Seal	-	
107-2	Casing Ring	Bronze	
107-1	Casing Ring		
095	Stay	Steel	1
056	Ball Bearing	-	2
053	Bearing Cover	Cast Iron	1
051	Bearing Housing		
048	Impeller Nut	Brass	
031	Shaft	Stainless Steel	
021	Impeller	Bronze	1
011	Casing Cover	Cast Iron	
001	Casing		
No.	Part Name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

Ebara End Suction Volute Pump

Model FSA

Sectional View - Gland Packing (Option)

50 Hz

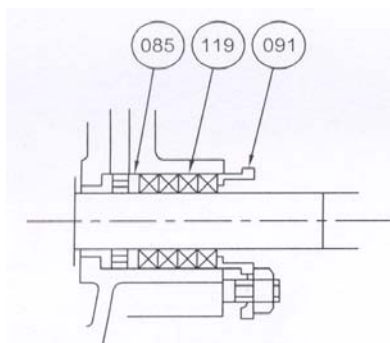


With Lantern Ring

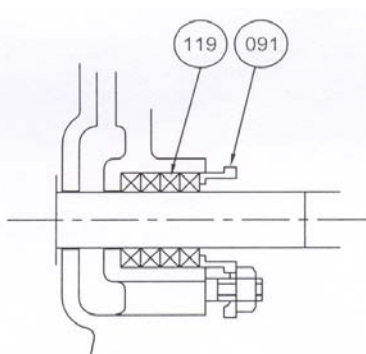
50x40 FSHA; 65x50 FSHA, FSJA;
80x65 FSGA, FSHA;
100x80 FSGA; 125x100 FSLA;
150x100 FSKA, FSNA;
150x125 FSKA, FSLA;
200x150 FSJA, FSLA, FSNA;
250x200 FSLA, FSNA

Without Lantern Ring

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



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



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

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

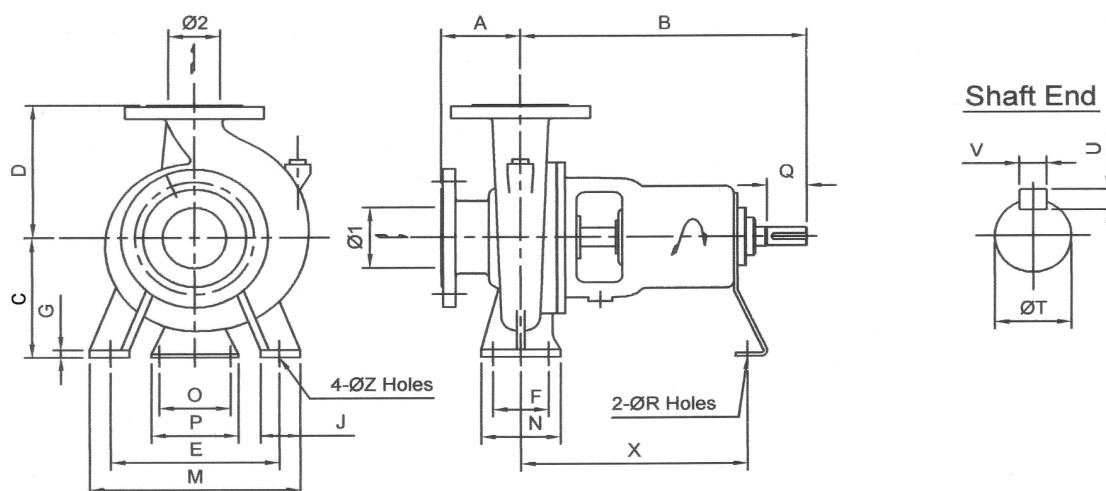
Ebara End Suction Volute Pump

Model FSA

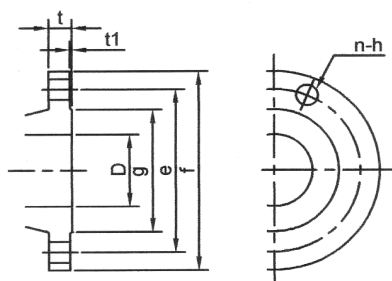
Dimension - Bare Shaft Pump (10 Bar Model) 1/2

50 Hz

Pump



Flange



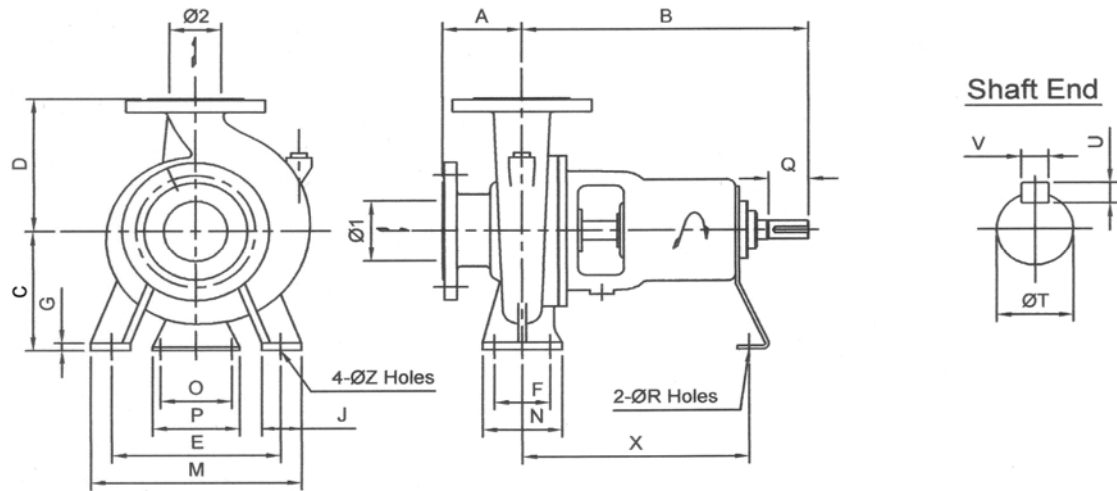
Dimension - Flange (JIS 10K RF)

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
125	250	210	182	2	24	8	23
150	280	240	212	2	26	8	23
200	330	290	262	2	26	12	23

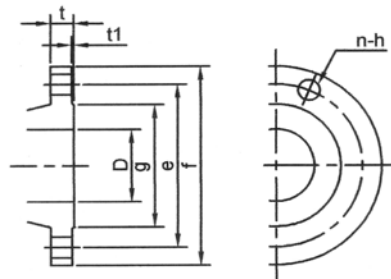
Dimension - Pump (50/60 Hz)

Model	Size		Pump															Shaft				wt
	φ1	φ2	A	B	C	D	E	F	G	J	M	N	O	P	R	X	Z	T	Q	U	V	kg
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	212	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										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					180	225	250	95	14	65	320	125										48
80x65 FSJA					180	225	250	95	14	65	320	125										60
80x65 FSKA					125	470	225	280	315	120	16	80	400	160		370	19	32	80	8	10	108
100x80 FSGA	100	80	100	360	160	200	212		14	65	280		110	150	17	285	15	24	50	7	8	49
100x80 FSHA					180	225	250	95		65	320	125										62
100x80 FSJA					200	250	280	120	15	80	360	160										70
100x80 FSGCA						225	250				320											62
100x80 FSHCA					125	360	180	250	95	14	65	345	125				15					65
125x100 FSJCA	125	100	140	360	225	280	315	120	16	80	400	160	110	150	17	285	19	32	80	8	10	108
125x100 FSKA				470	250	315																128
125x100 FSLA				530	280	355	400	150	20	100	500	200										168
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			16													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

Pump



Flange



Dimension - Flange (JIS 10K RF)

D mm	f mm	e mm	g mm	t1 mm	t mm	n	h 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)	
	φ1	φ2	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					670	315			400		450		20	550	140	180		19		500	48	9

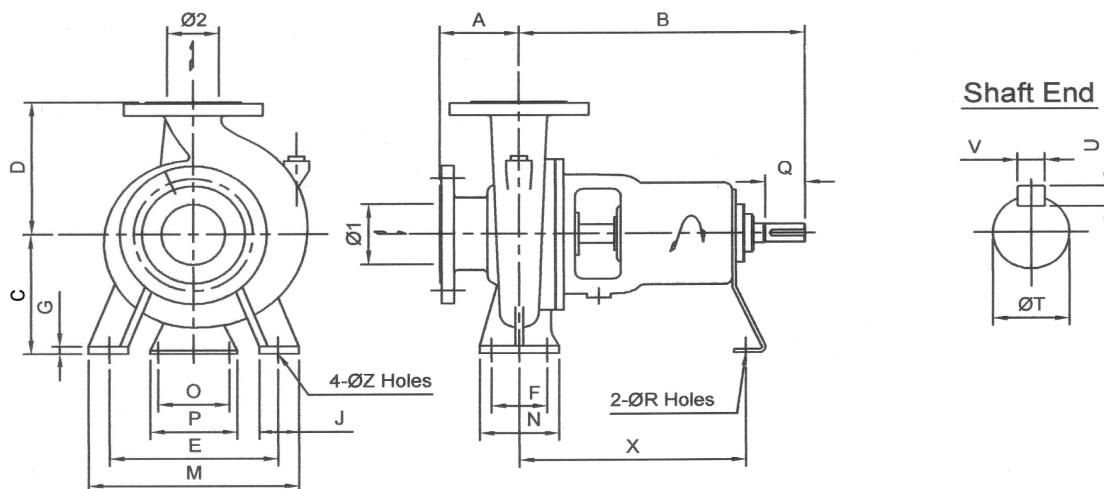
Ebara End Suction Volute Pump

Model FSA

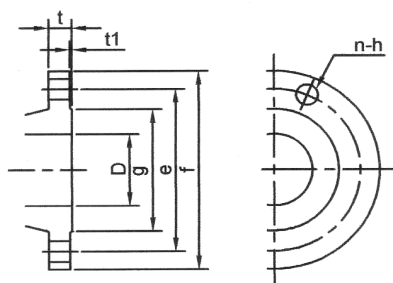
Dimension - Bare Shaft Pump (16 Bar Model)

50 Hz

Pump



Flange



Dimension - Flange (JIS 16K RF)

D mm	f mm	e mm	g mm	t1 mm	t mm	n	h 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

Model	Size		Pump															Shaft					wt
	φ1	φ2	A	B	C	D	E	F	G	J	M	N	O	P	R	X	Z	T	Q	U	V		kg
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	670	375	560	450	150	20	100	550	200	140	180	19	500	24	60	110	11	18		488
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	560	250	25	100	660	315	160	200	19	630	27	74	125	12	20		642

Unit:mm, unless otherwise stated

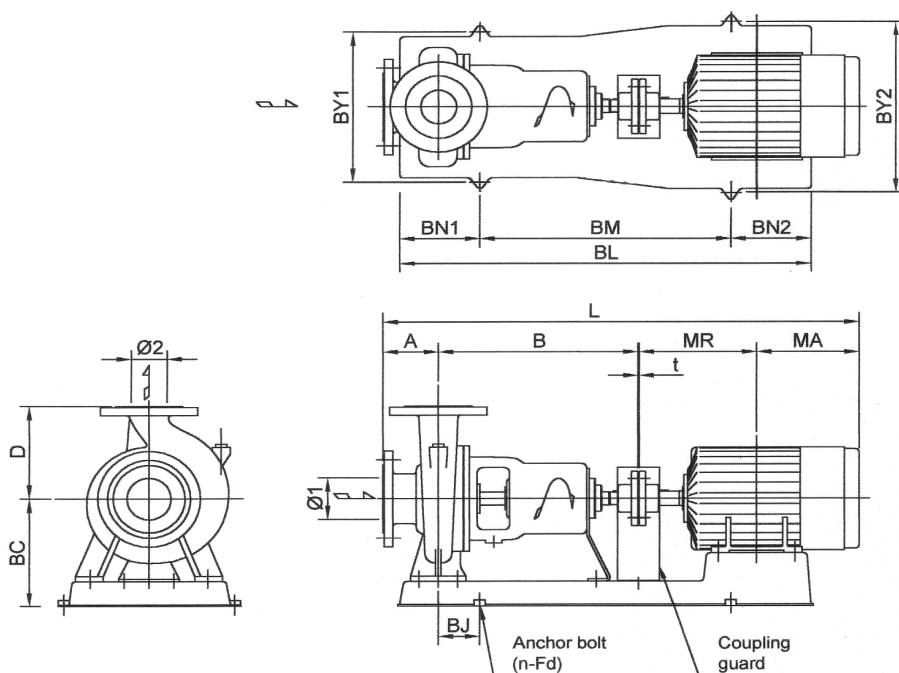
Ebara End Suction Volute Pump

Model FSA

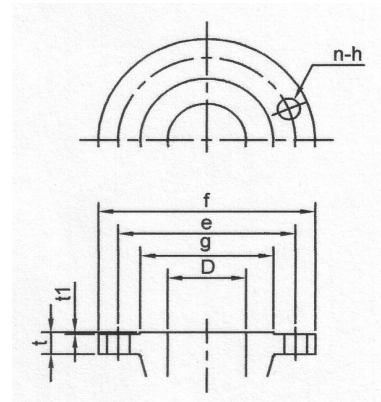
Dimension - Pump With Motor (10 Bar Model) 4 Poles Drive - 50 Hz (1/3)

50 Hz

Pump



Flange



Dimension - Flange (JIS 10K RF)

D	f	e	g	t1	t	n	h
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

Dimension - Pump

Model	Motor	Size		Pump				Motor				Common Base												Total		
	kW	φ1	φ2	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		
80x65 FS4JA	2.2	80	65	100	360	225	60	100L	193	181.5	32	230	40	740	480	115	145	400	260	4-M12	26	3	837.5	123		
	3.7							112M	200	191.5	43								25		854.5		133			
80x65 FS4KA	5.5	80	65	125	470	280	108	132S	239	215	62	295	80	960	660	180	120	490	400	4-M16	56	3	1025	233		
	7.5							132M	258	234	77										57		1090	249		
	11							160M	323	285	115										57		1206	289		
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									38		917	177		

Unit:mm, unless otherwise stated

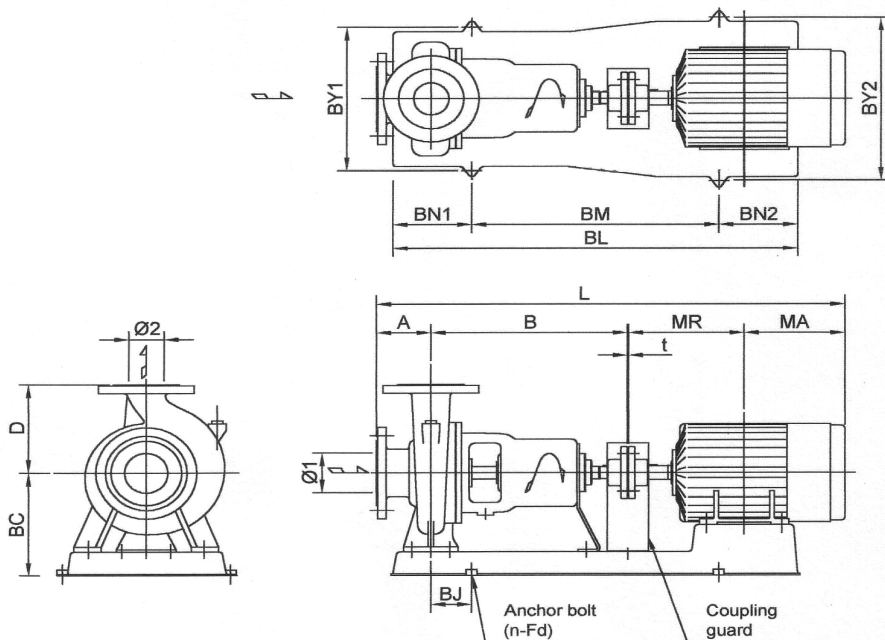
Ebara End Suction Volute Pump

Model FSA

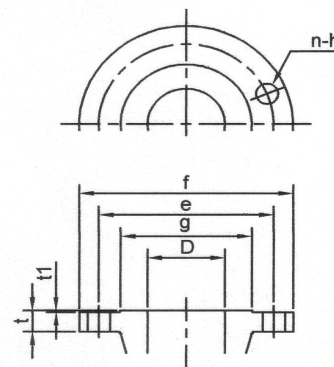
Dimension - Pump With Motor (10 Bar Model)
4 Poles Drive - 50 Hz (2/3)

50 Hz

Pump



Flange



Dimension-Flange (JIS 10K RF)

D	f	e	g	t1	t	n	h
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

Dimension - Pump

Model	Motor	Size		Pump				Motor				Common Base										Total						
	kW	φ1	φ2	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							112M	200	182	42								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							132M	258	234	77								270	4-M16	40		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	226	76												940	640	60	987	255	
	11							160M	323	281	120															1107	298	
125x100 FS4KA	15	125	100	140	470	315	128	160L	345	307	132	330	100	1075	740	190	145	490	400	4-M16	64.5	3	1265	331.5				
	18.5							180MC	351.5	320.5	172										84		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
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	190	145	44.7	1221	286.5
	15							160L	345	307	132										320		1090	200	150	62	1265	321
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
	22							180LC	370.5	339.5	205										340		60	1425	960	230	235	670
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
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		1556.5	817				
	75							250MC	482.5	438	550										410		1594.5	891				

Unit:mm, unless otherwise stated

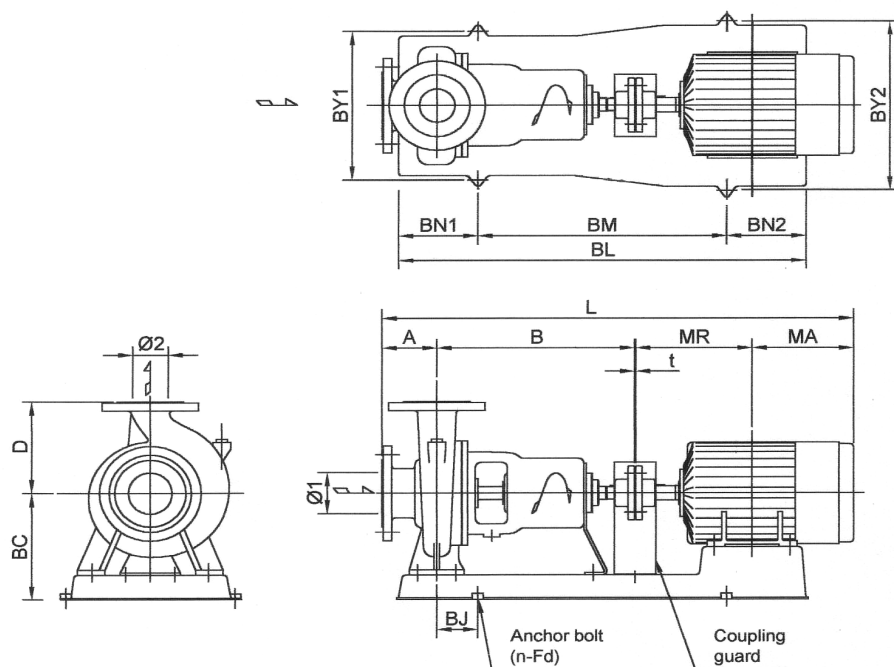
Ebara End Suction Volute Pump

Model FSA

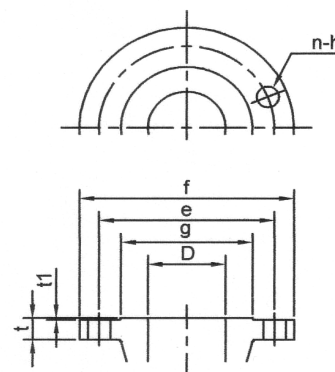
Dimension - Pump With Motor (10 Bar Model)
4 Poles Drive - 50 Hz (3/3)

50 Hz

Pump



Flange



Dimension - Flange (JIS 10K RF)

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

Dimension - Pump

Model	Motor	Size		Pump				Motor				Common Base										Total		
	kW	φ1	φ2	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
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
200x150 FS4JA	15	200	150	160	530	375	183	160L	345	307	132	390	95	1230	840	200	150	600	400	4-M16	104	3	1345	426
	18.5							180MC	351.5	320.5	172										77.4		1365	441.5
	22							180LC	370.5	339.5	205										72.4		1403	474.5
	30							200LC	395.5	374.5	278		120	1280	940	230	110	600	490	4-M20	72.4	4	1464	547.5
	37							225SC	432	384	327										385		110	1425
	200x150 FS4KA							37	200	150	160		670	400	222	225SC	432	384	327	425	110	1460	1000	230
45		225MC	444.5	396.5	351	1675	732.5																	
55		250SC	463.5	419	475	430	125	1520				1040				245	235	600	136					

Unit:mm, unless otherwise stated

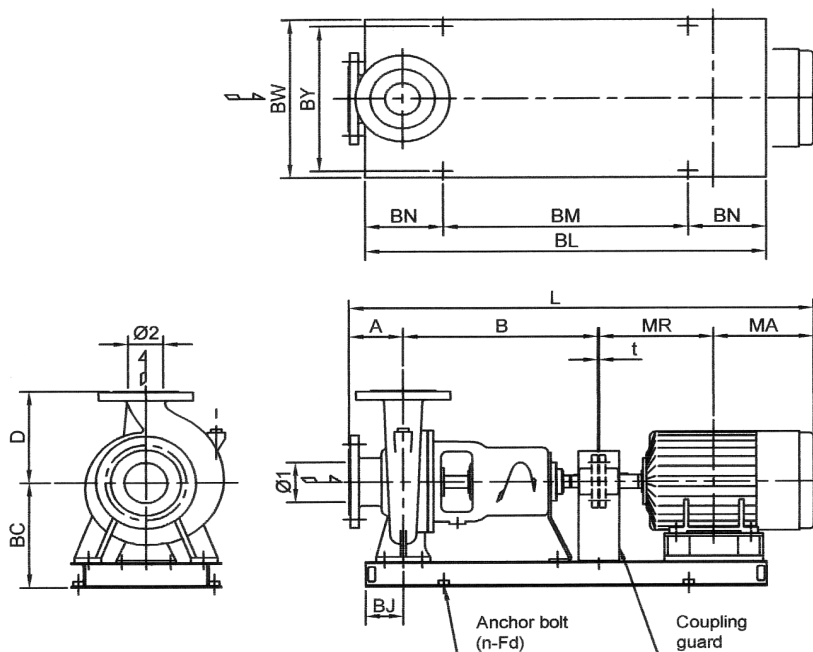
Ebara End Suction Volute Pump

Model FSA

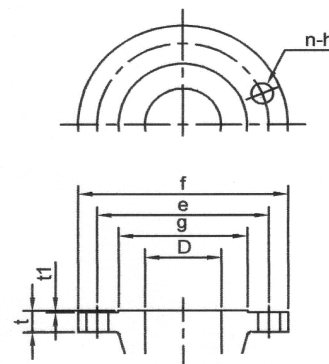
Dimension - Pump With Motor (16 Bar Model) 4 Poles Drive

50 Hz

Pump



Flange



Dimension - Flange (JIS 16K RF)

D	f	e	g	t1	t	n	h
mm	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

Dimension - Pump (Steel baseplate)

Model	Motor	Size		Pump				Motor				Common Base										Total			
	kW	φ1	φ2	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	
150x100 FSNA	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	
	75							250MC	482.5	428	580			1530	2x615						170		1774.5	1120	
	90							280SC	544.0	478	660			1600	2x650						175		1876	1250	
200x150 FSLA	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	
	90							280SC	544.0	478	660			1600	2x650						145		1858	1191	
200x150 FSNA	110	200	150	182	670	560	488	280MC	569.5	502.5	720	525	130	1670	2x685	150	150	580	640	6-M20	176	4	1928	1434	
	132							315SC	589	527	920			1680	2x690						200		1972	1677	
	150							315MC	614.5	552.5	1030			1730	2x715						220		2023	1804	
250x200 FSLA	90	250	200	180	670	560	505	280SC	544.0	478	660	560	185	1680	2x675	165	165	690	760	6-M22	250	4	1876	1462	
	110							280MC	569.5	502.5	720			1730	2x700						255		1926	1528	
	132							315SC	589	527	920			1740	2x705						235		1970	1725	
	150							315MC	614.5	552.5	1030			1790	2x730						240		2021	1841	
250x200 FSNA	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			2240	2x945						340		2881	2850	
	260							355AB	779.0	1200	2400			2300	2x975						330		3004	3467	
	300							355CB	874.0	1295	2700			2490	2x1070						365		3194	3802	
	335																						5	3250	4202

Unit:mm, unless otherwise stated

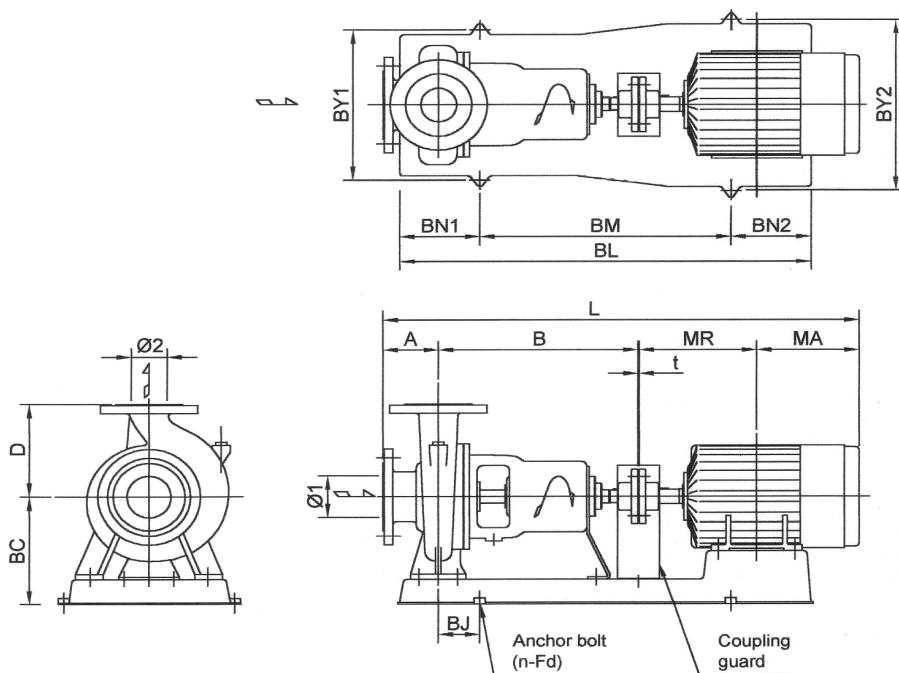
Ebara End Suction Volute Pump

Model FSA

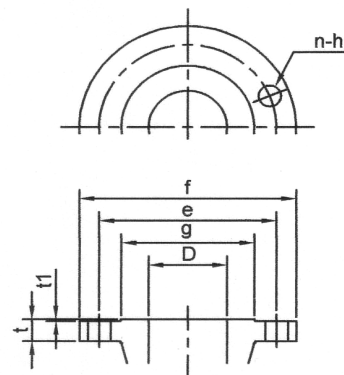
Dimension - Pump With Motor (10 Bar Model) 2 Poles Drive (1/2)

50 Hz

Pump



Flange



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

Dimension - Pump

Model	Motor	Size		Pump				Motor				Common Base										Total		
	kW	φ1	φ2	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 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										29		775.5	95.5
	3.7							112M	200	191.5	44										23		834.5	108
	5.5							132S	239	215	65										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										32		917	146
	7.5							132S	239	215	70										34		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												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												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												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												1135	321

Unit:mm, unless otherwise stated

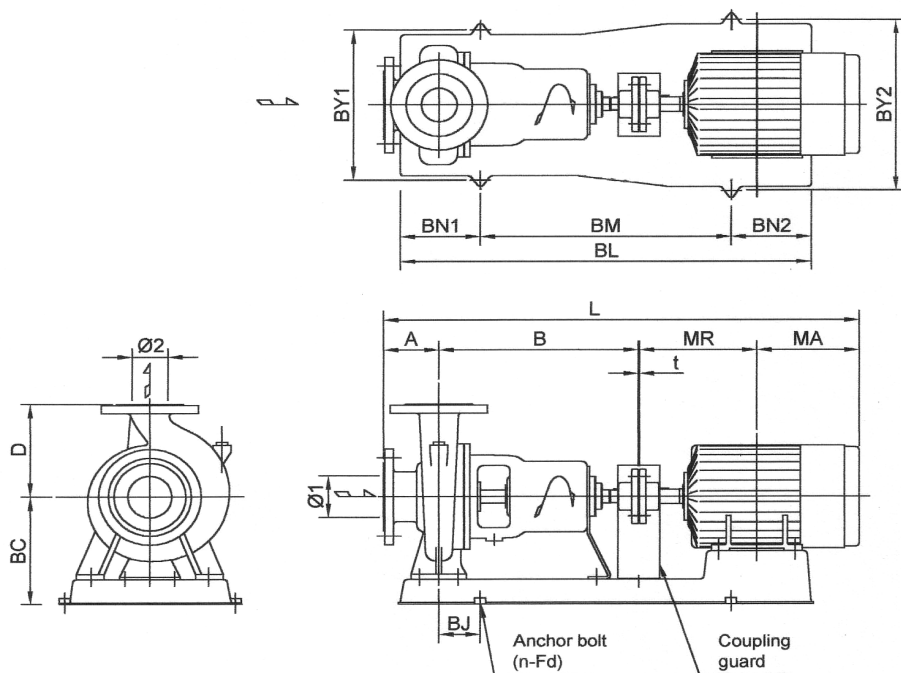
Ebara End Suction Volute Pump

Model FSA

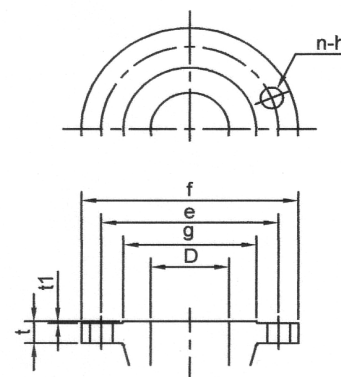
Dimension - Pump With Motor (10 Bar Model) 2 Poles Drive (2/2)

50 Hz

Pump



Flange



Dimension - Flange (JIS 10K RF)

D mm	f mm	e mm	g mm	t1 mm	t mm	n	h 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

Dimension - Pump

Model	Motor	Size		Pump				Motor				Common Base										Total		
	kW	φ1	φ2	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 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												1067	216
	15							160M	323	281	120	250	98	920	600	160	160	400	400	4-M16	47			
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	1111	267
	22							170M	351.5	315.5	180												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													
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	1137	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

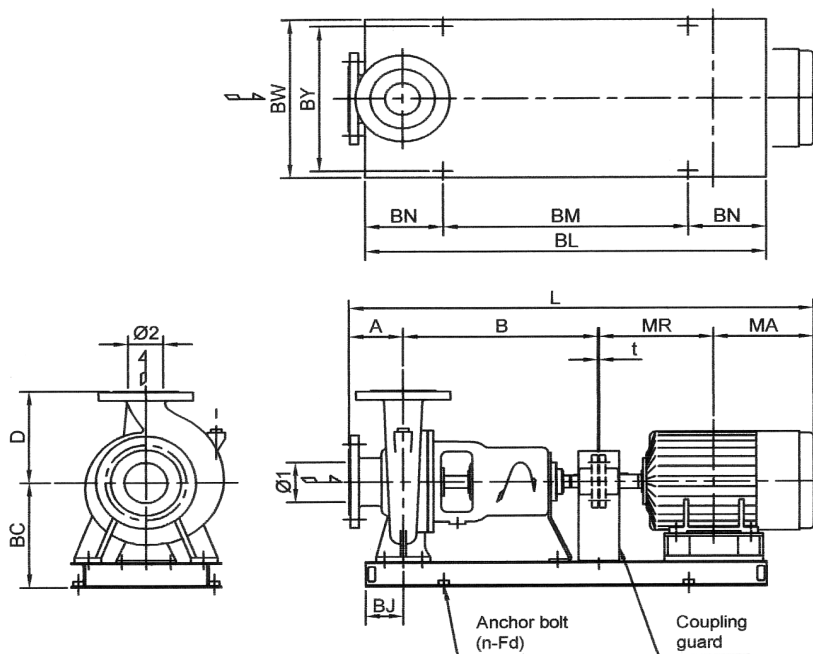
Ebara End Suction Volute Pump

Model FSA

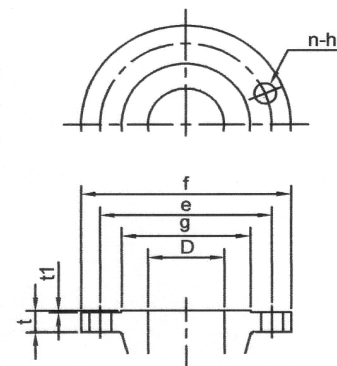
Dimension - Pump With Motor (16 Bar Model)
2 Poles Drive

50 Hz

Pump



Flange



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

Dimension - Pump (Steel baseplate)

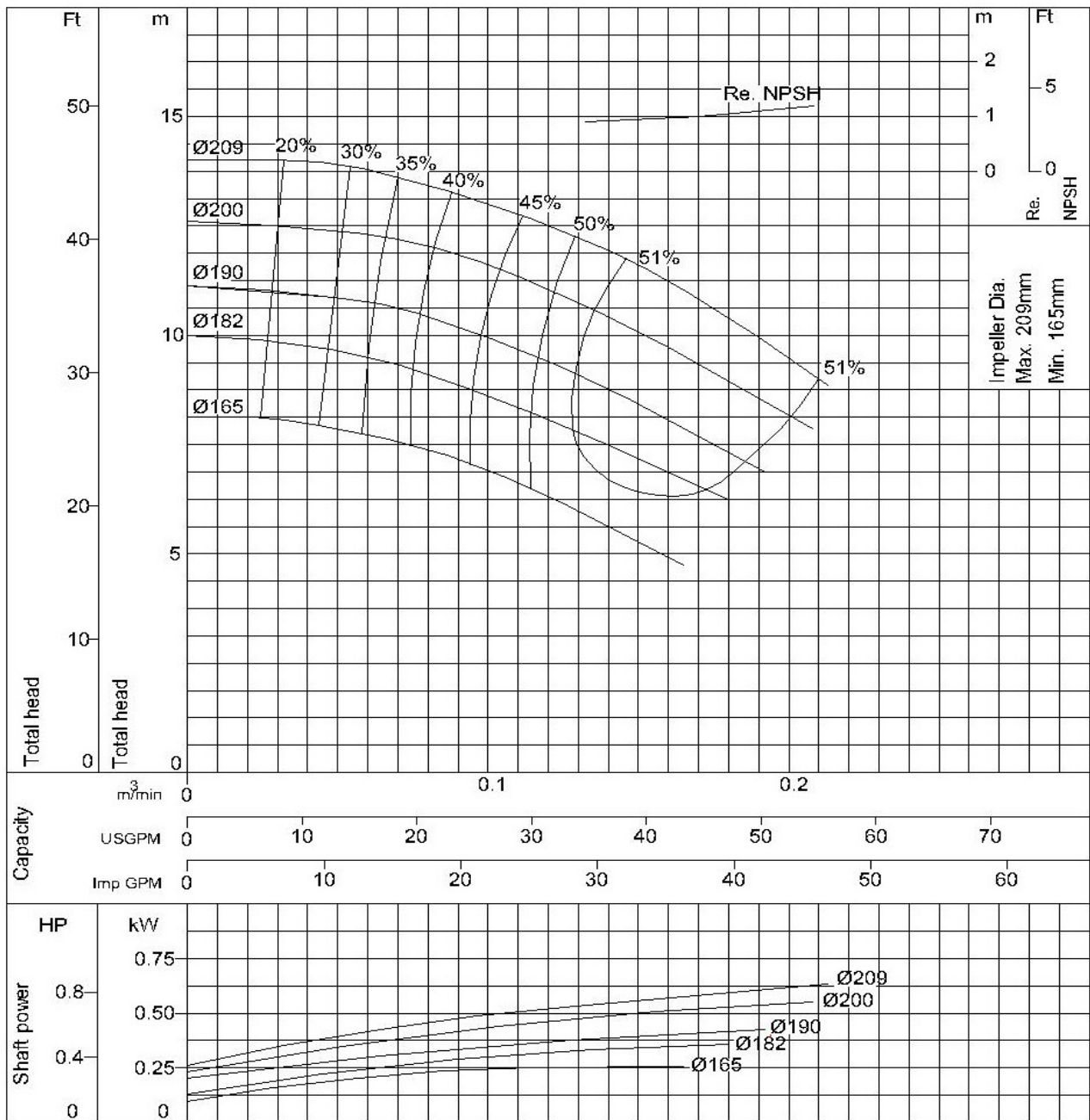
Model	Motor	Size		Pump				Motor				Common Base										Total						
	kW	φ1	φ2	A	B	D	wt kg	Frame	MR	MA	wt kg	BC	BJ	BL	BM	BN1	BN2	BY1	BY2	n-Fd	wt kg	t	L	wt kg				
100X65 FS2KA	55	100	65	125	360	280	49	250SA	463.5	419	452	395	50	1190	770	175	245	540	600	4-M20	95	4	1371.5	614.5				
	75							250MA	482.5	438	525		65	1220	850		195				100		1409.5	692.5				
150x100 FS2KA	90	150	100	140	530	315	62	280SA	514	478	600	430	125	1430	960	235	235		640	4-M20	115	4	1666	827				
	110							280MA	539.5	502.5	700			145		1480	260				260		130	1716	942			
	132							315SA	559	527.0	920		490	155		1500	270				270		650	720	4-M22	175	1760	1212

Unit:mm, unless otherwise stated

Performance Curve 4 Poles (1/27)

50 Hz

50X40 FS4HA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt

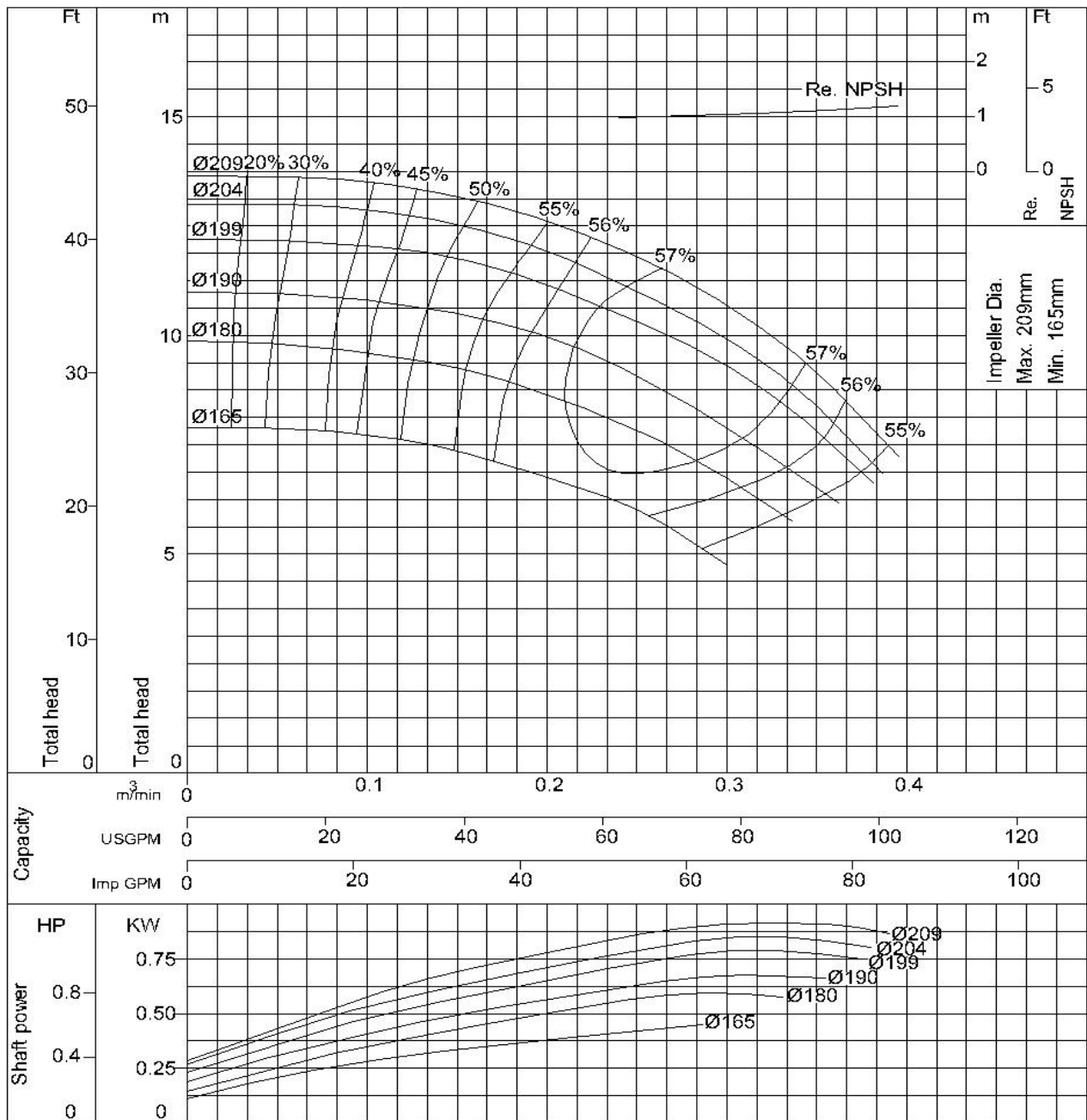


Curve No - 4 - 5FS5601

Performance Curve 4 Poles (2/27)

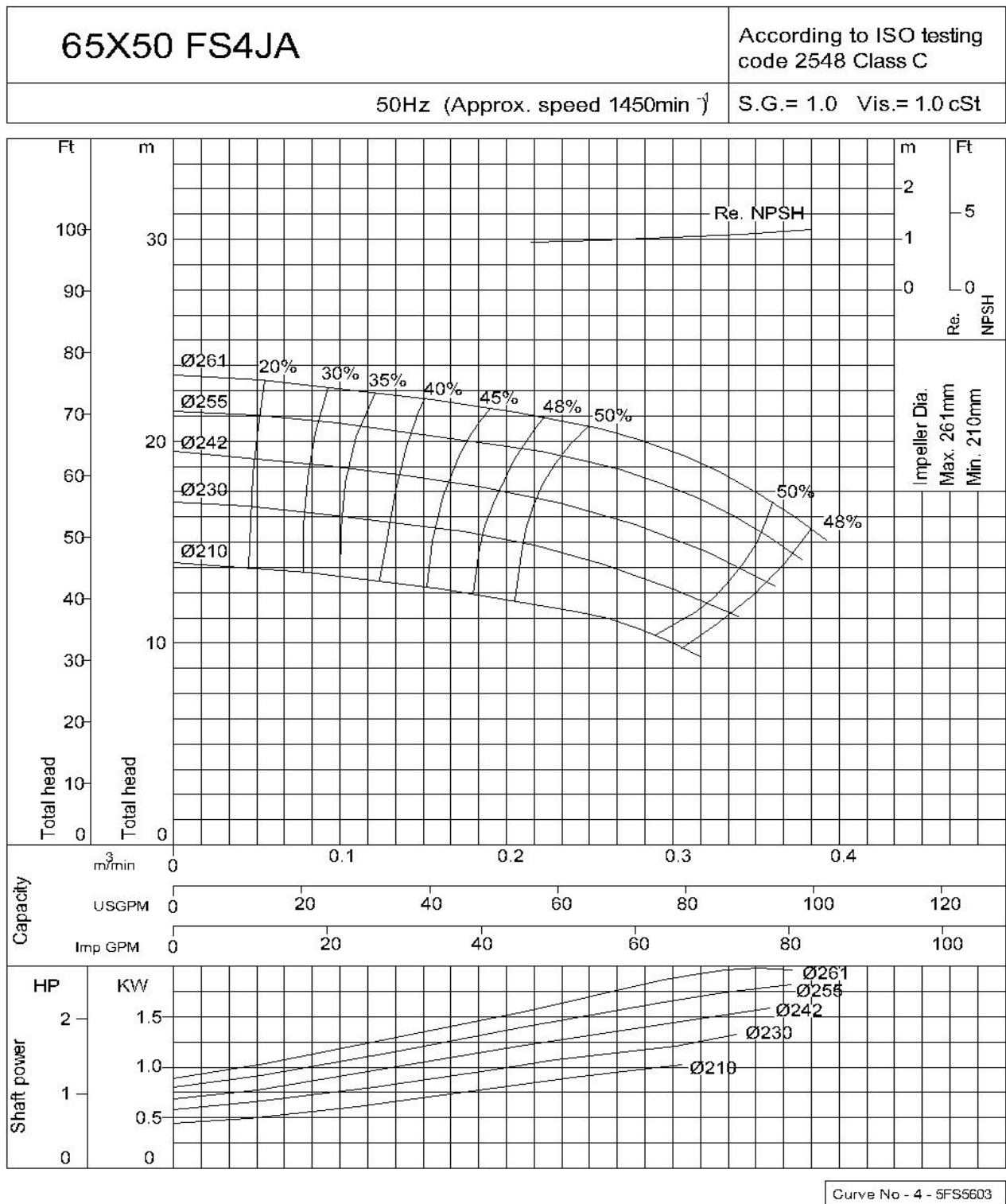
50 Hz

65X50 FS4HA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt

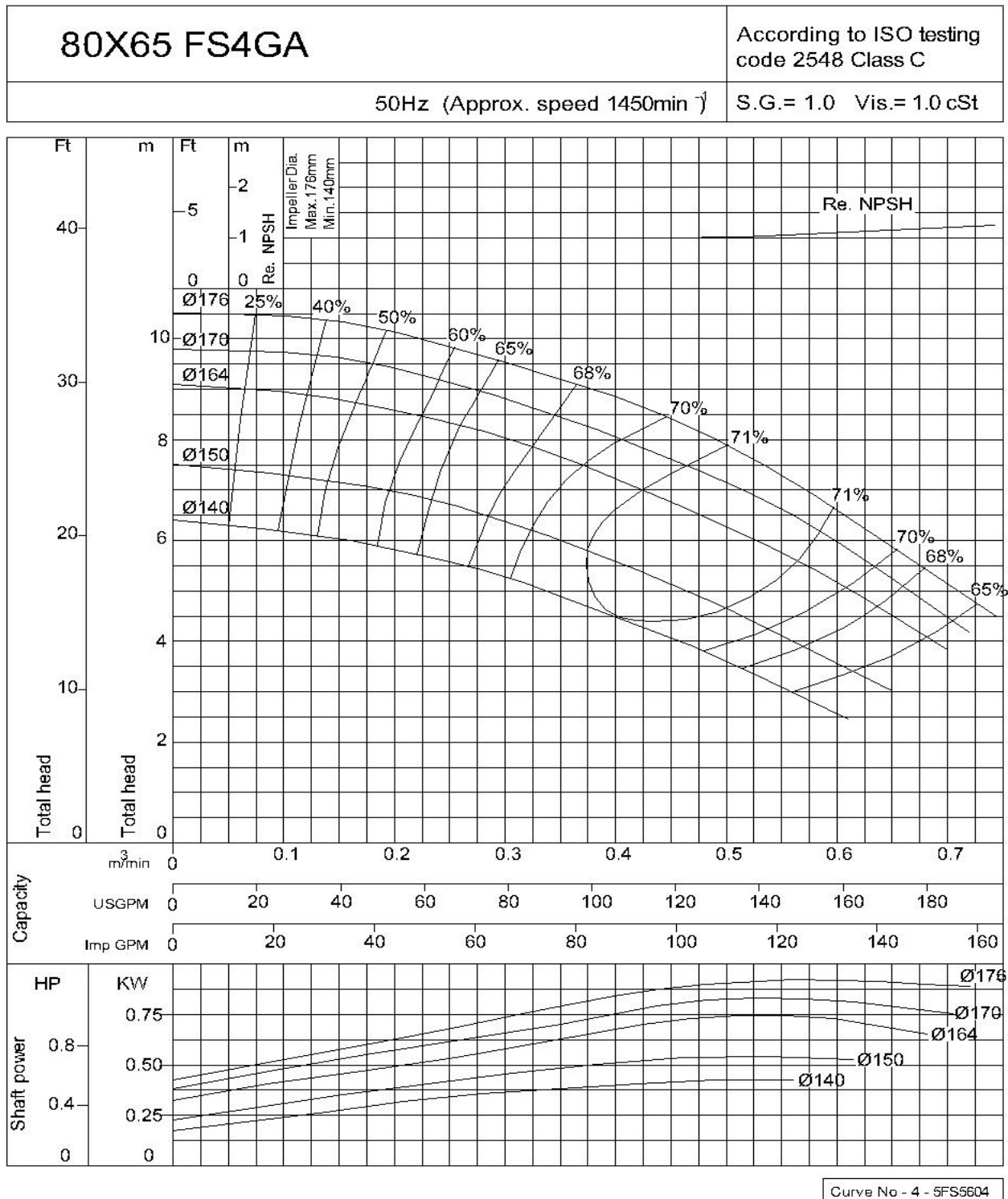


Curve No - 4 - 5FS5602

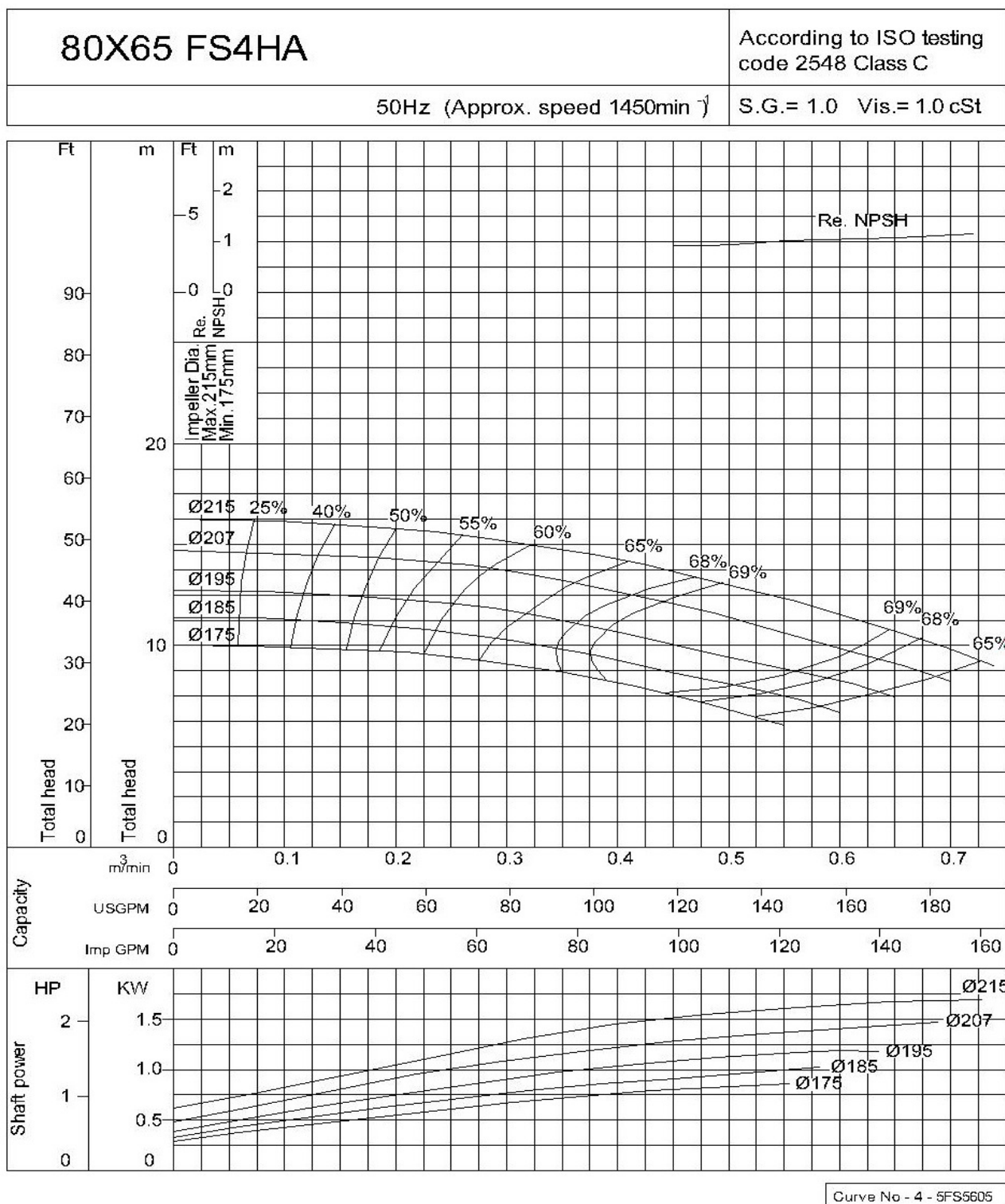
Performance Curve 4 Poles (3/27)



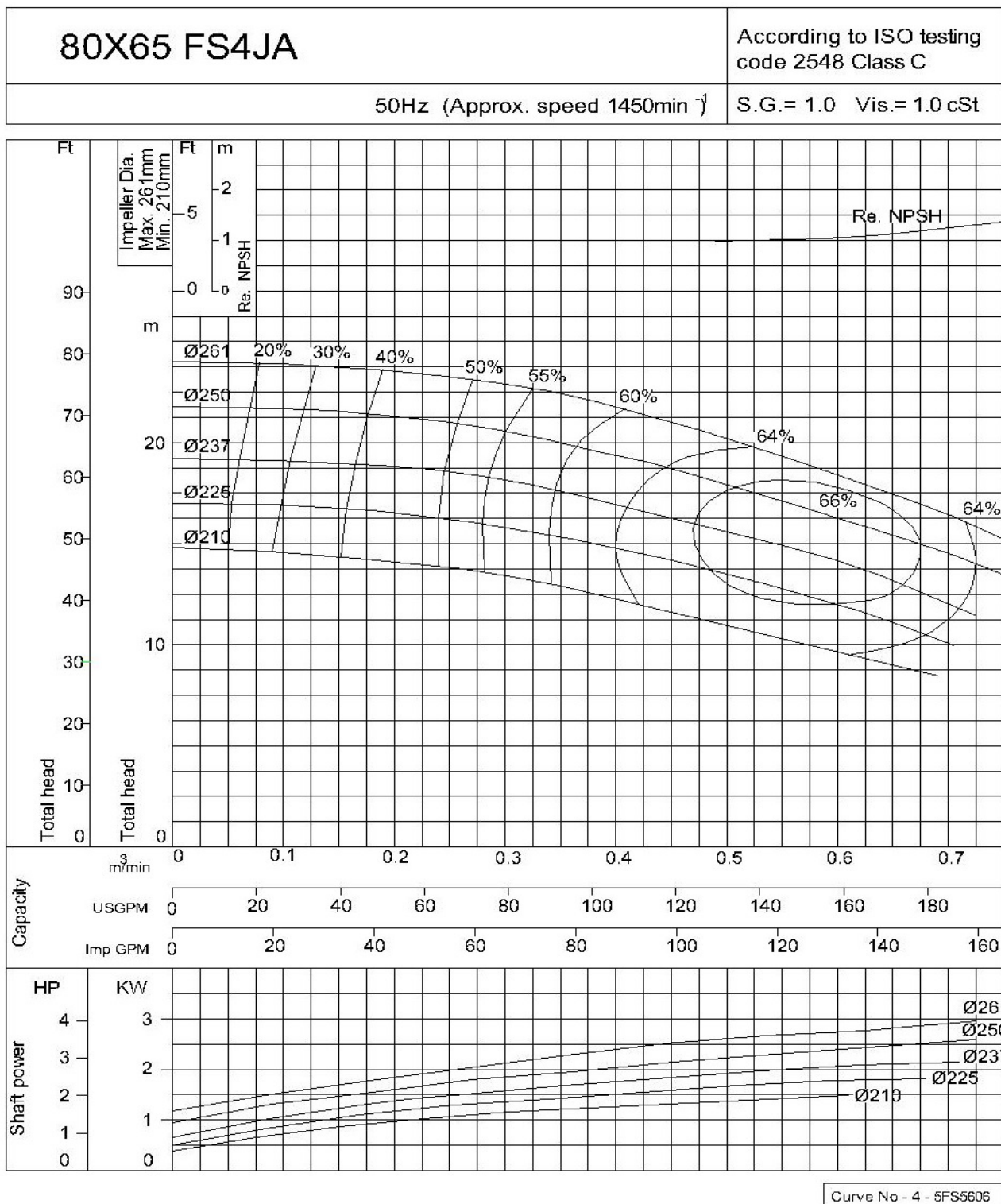
Performance Curve 4 Poles (4/27)



Performance Curve 4 Poles (5/27)

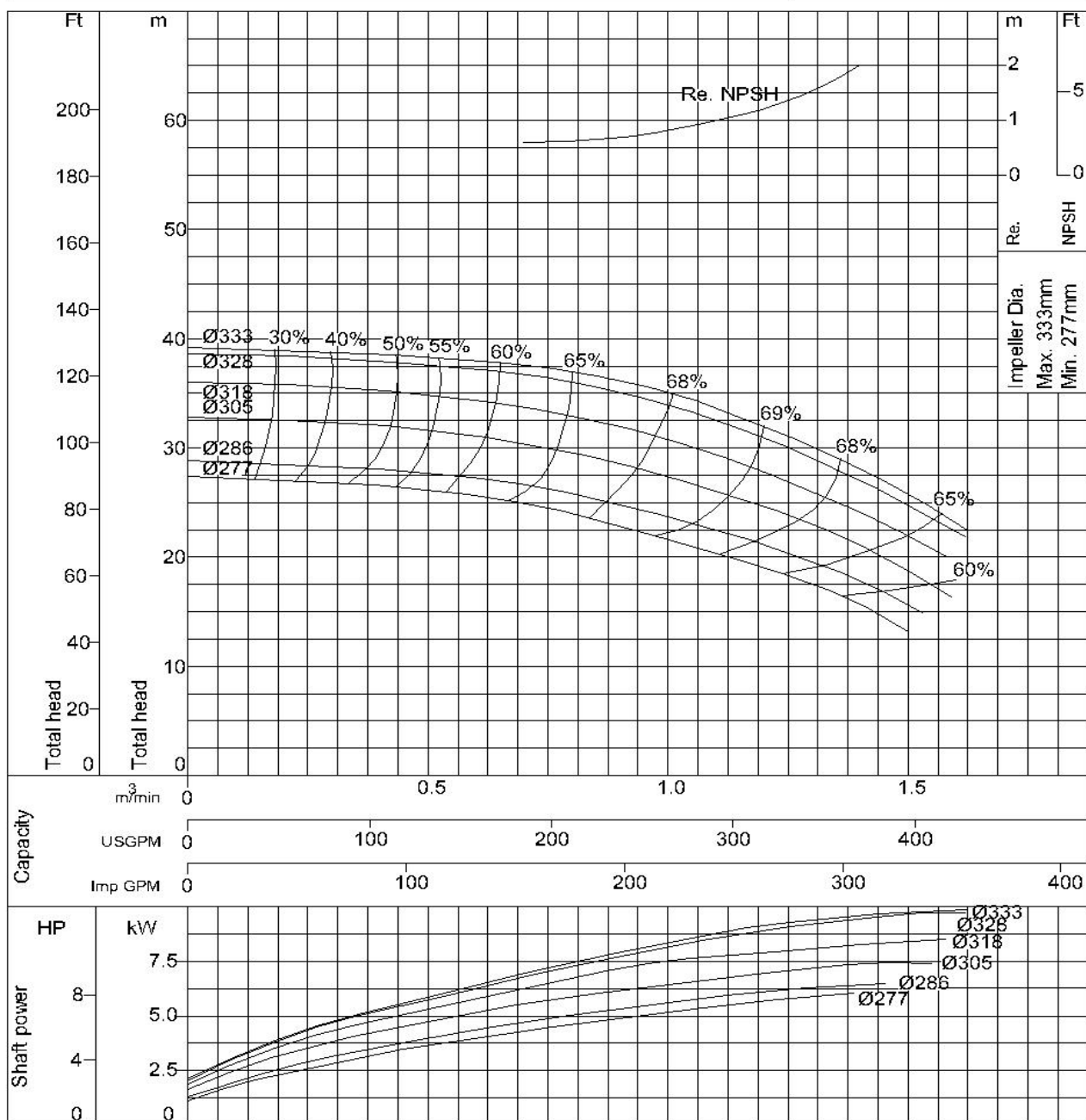


Performance Curve 4 Poles (6/27)



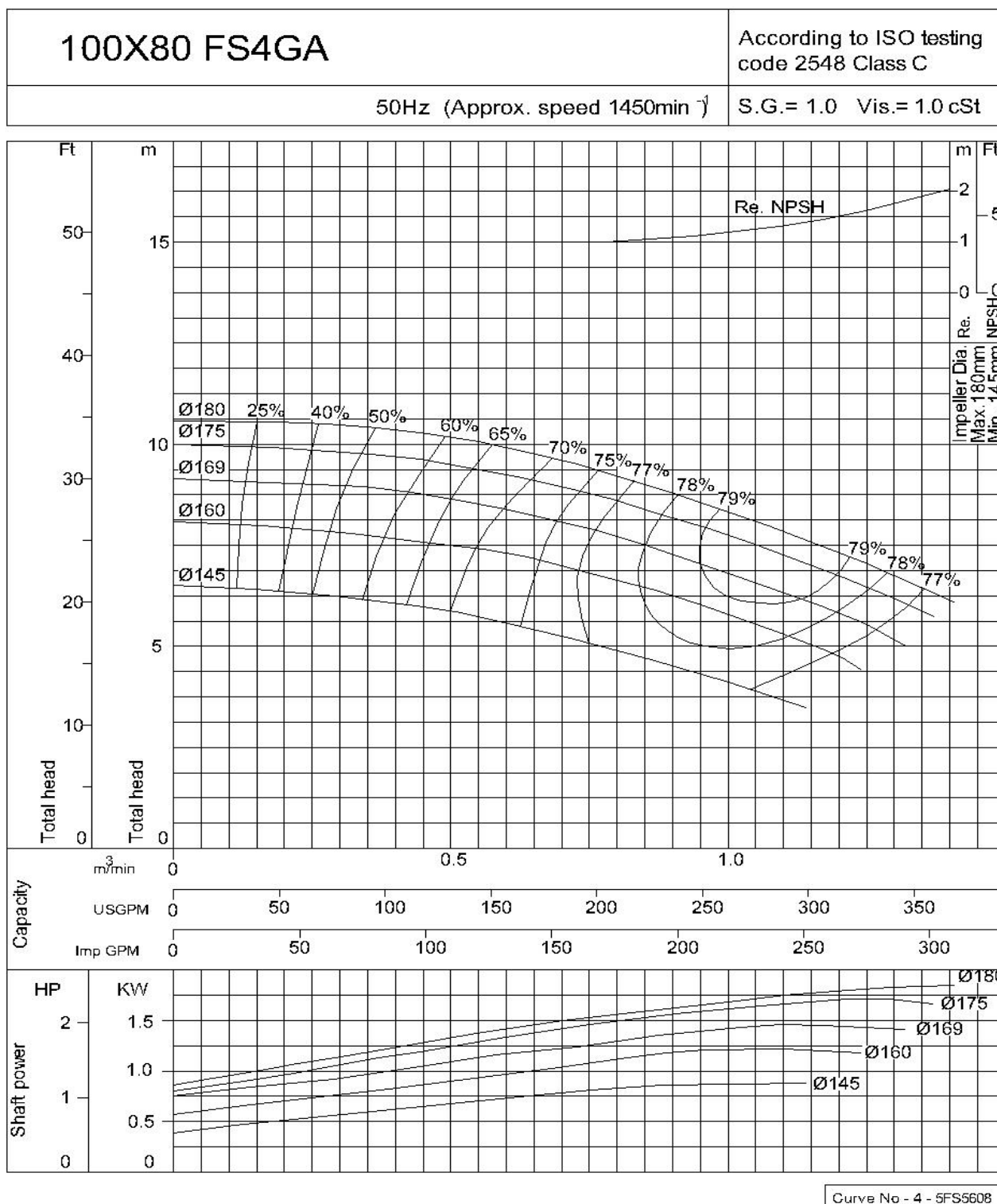
Performance Curve 4 Poles (7/27)

80X65 FS4KA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt

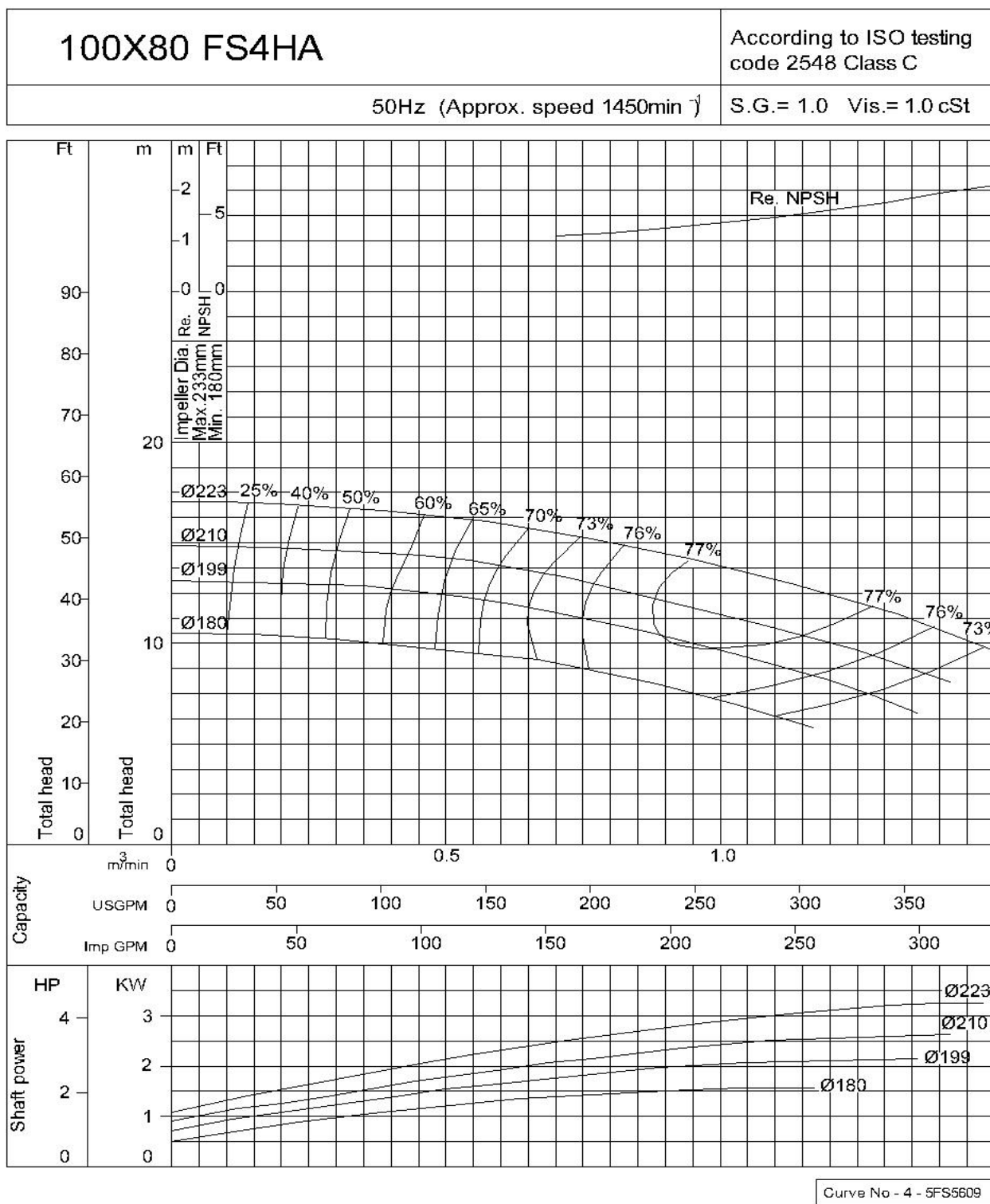


Curve No - 4 - 5FS5607

Performance Curve 4 Poles (8/27)

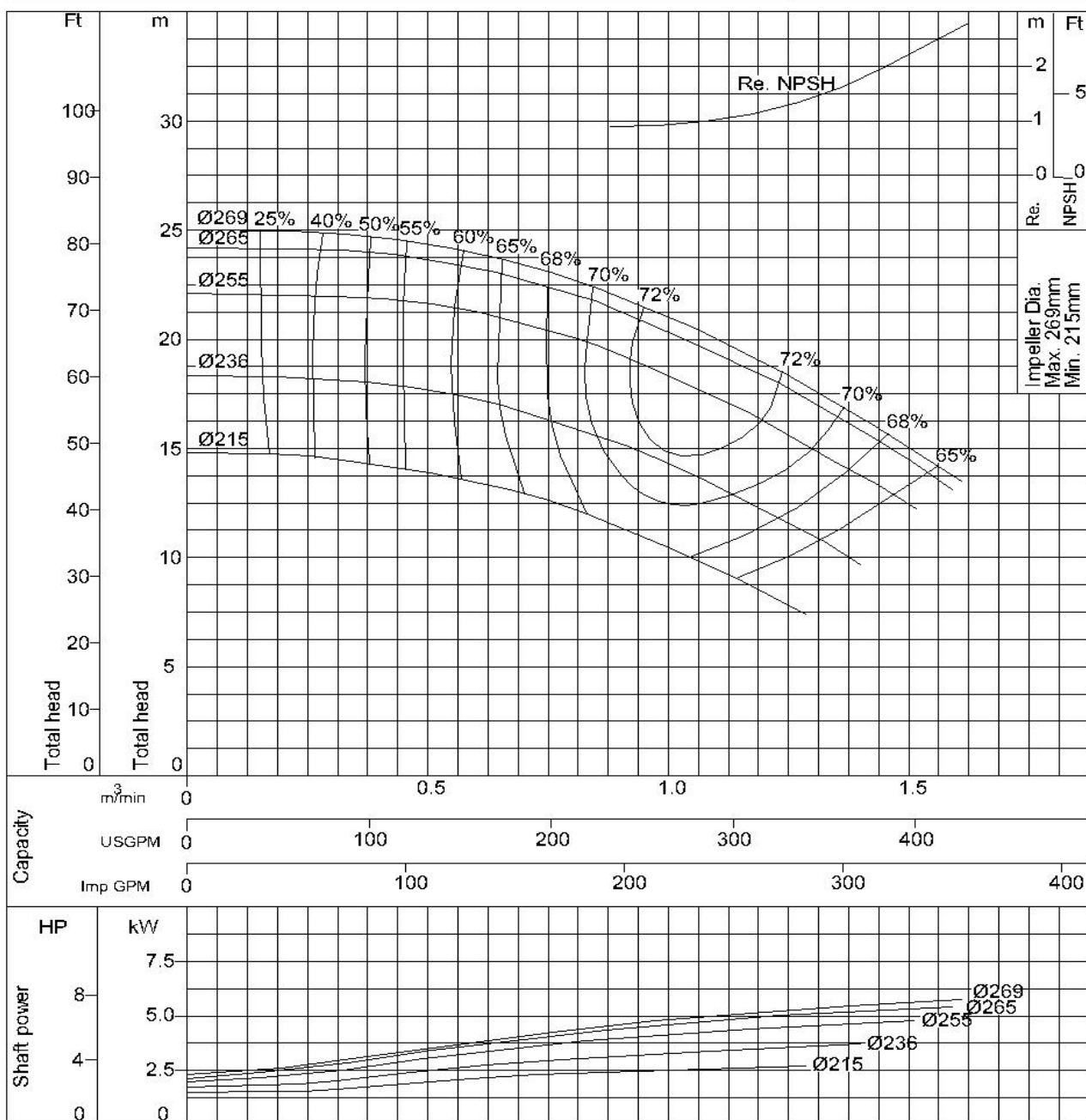


Performance Curve 4 Poles (9/27)



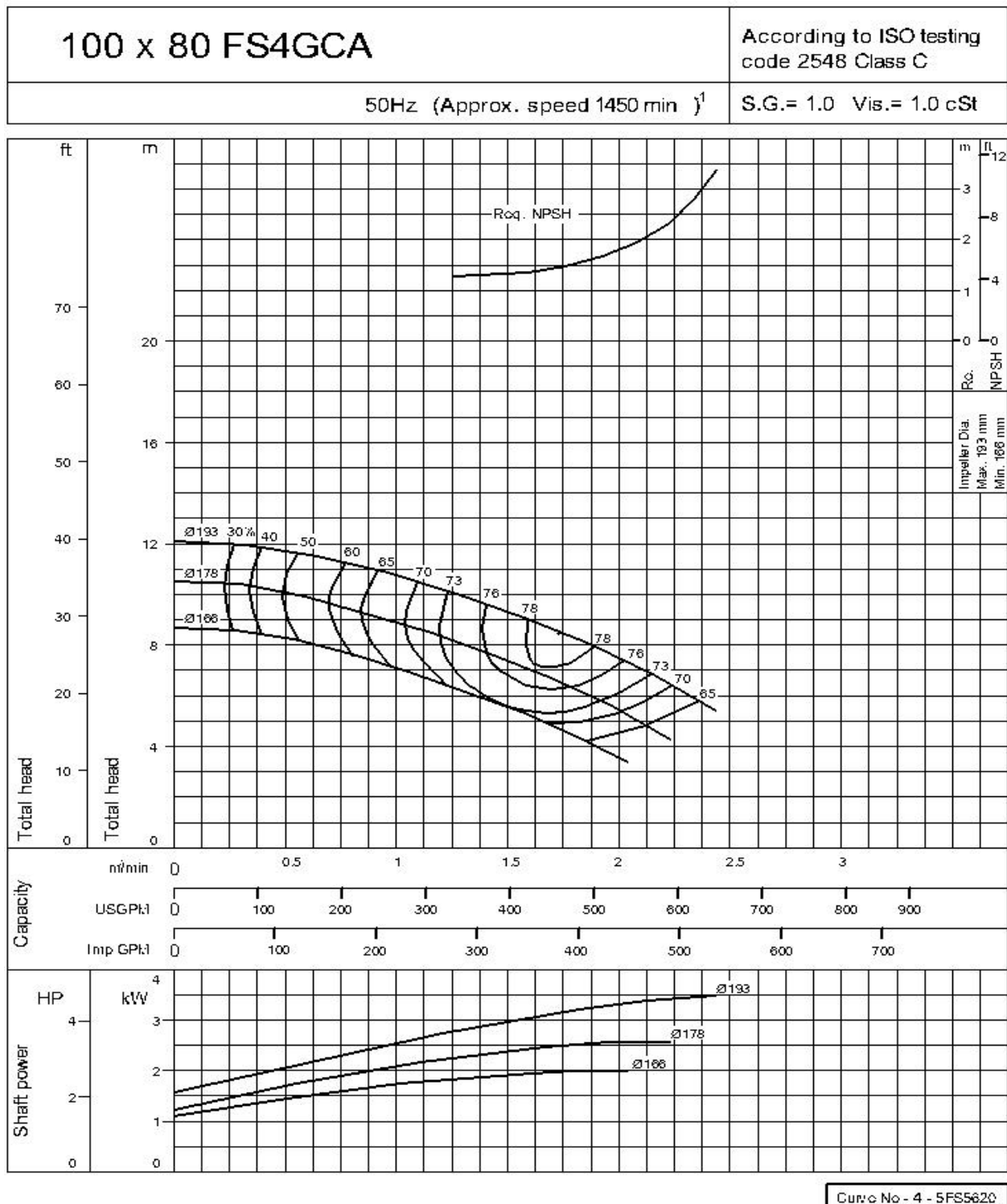
Performance Curve 4 Poles (10/27)

100X80 FS4JA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt



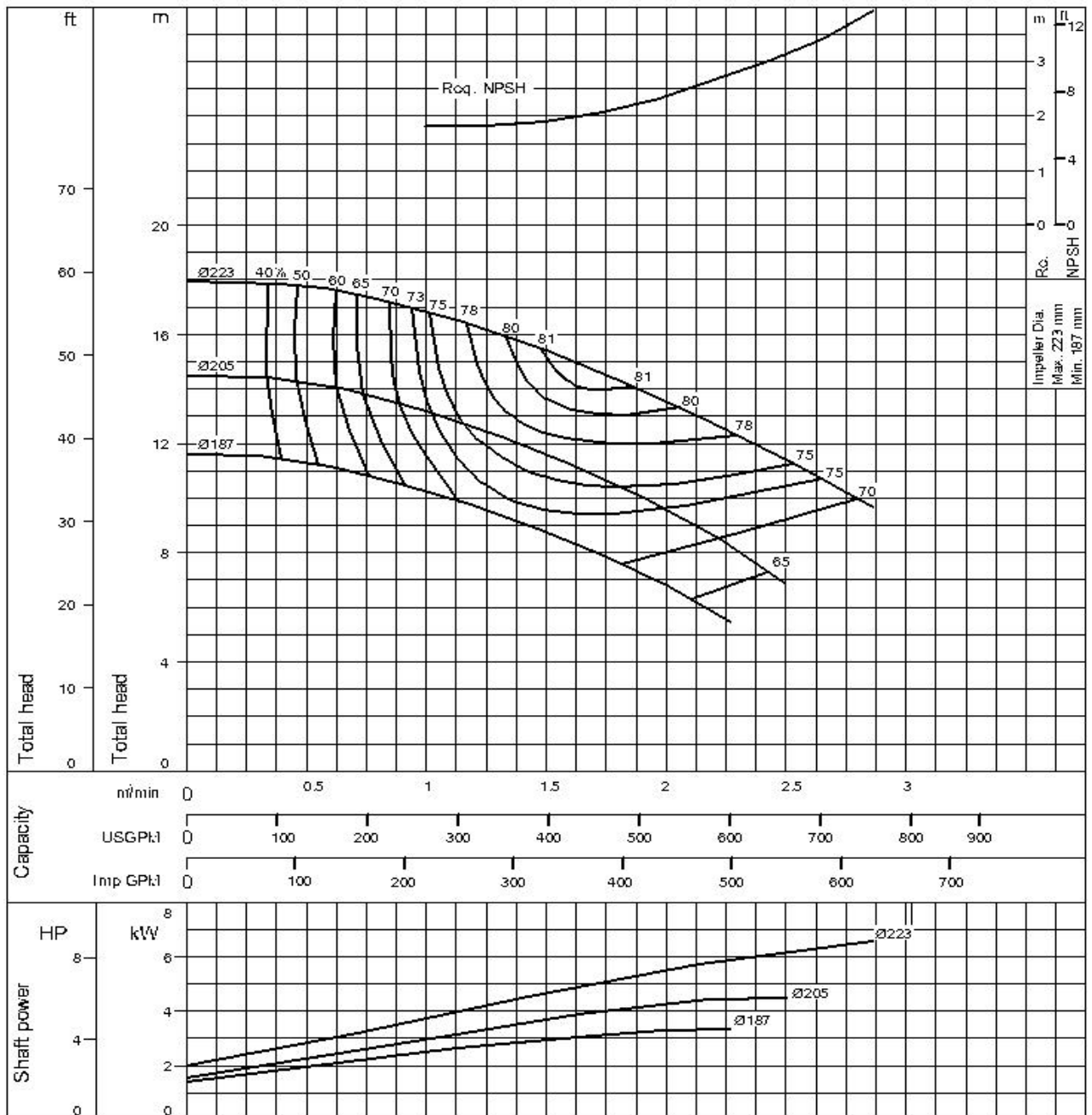
Curve No - 4 - 5FS5610

Performance Curve 4 Poles (11/27)



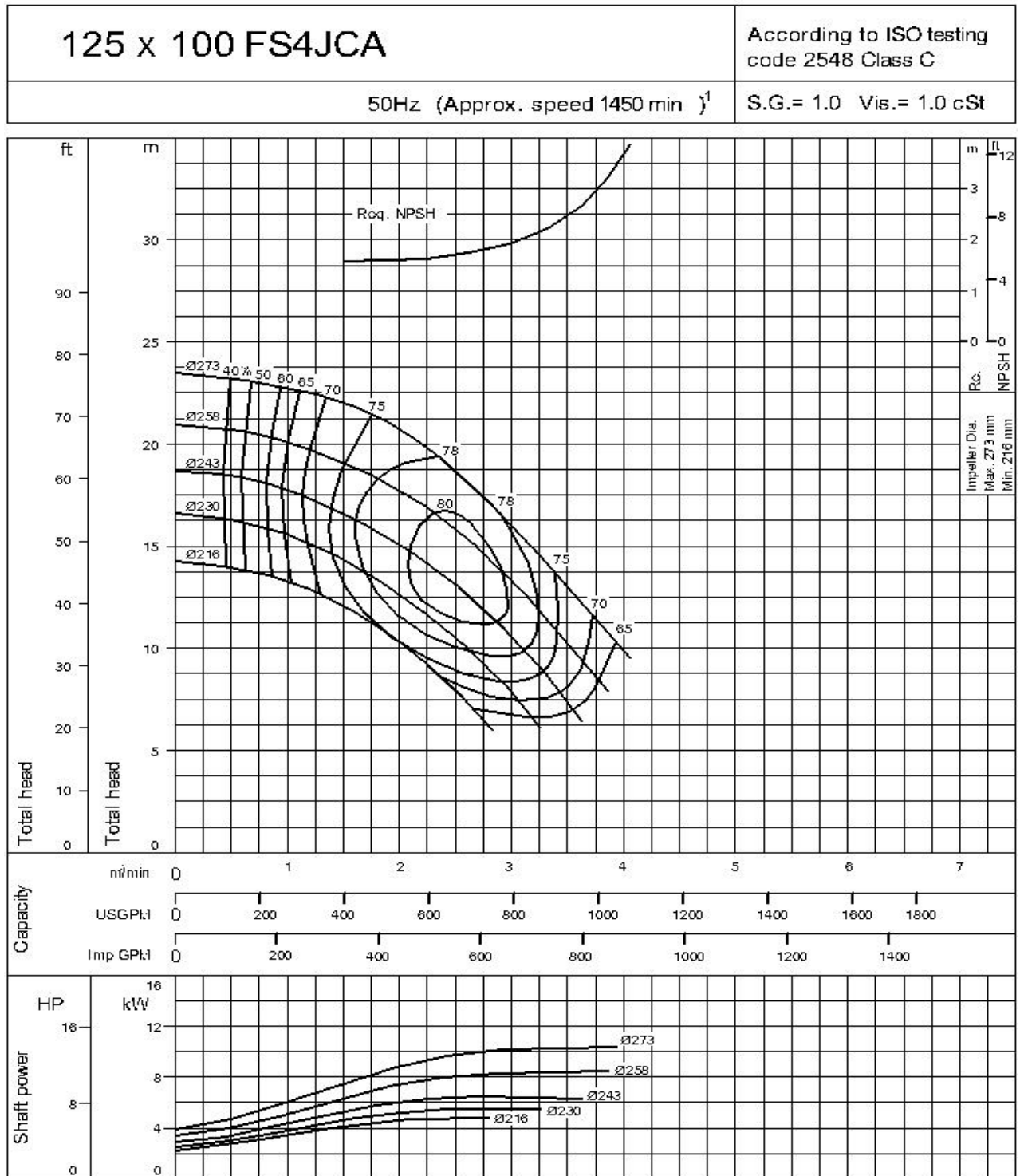
Performance Curve 4 Poles (12/27)

100 x 80 FS4HCA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450 min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FS5621

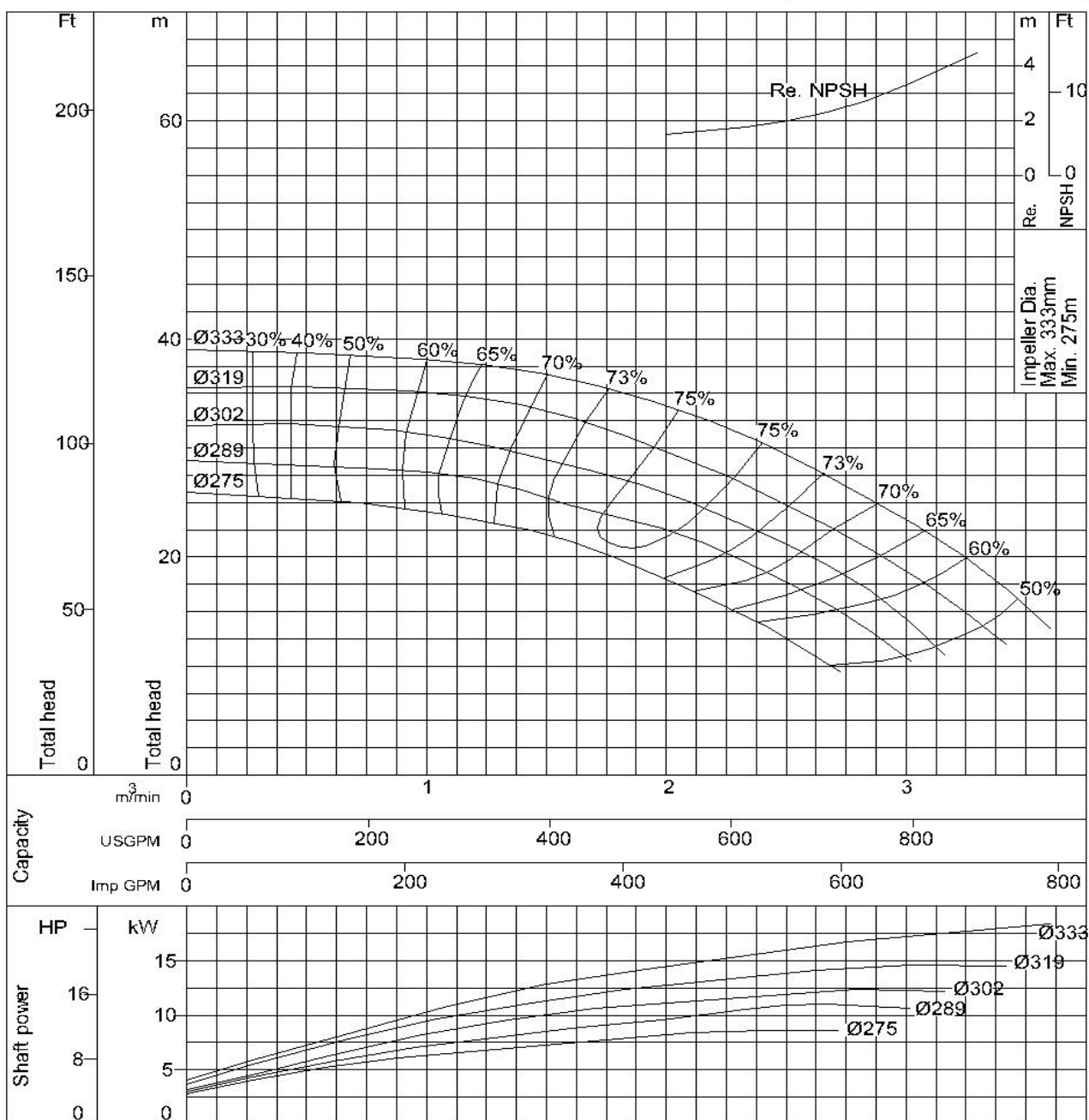
Performance Curve 4 Poles (13/27)



Curve No - 4 - SFS5622

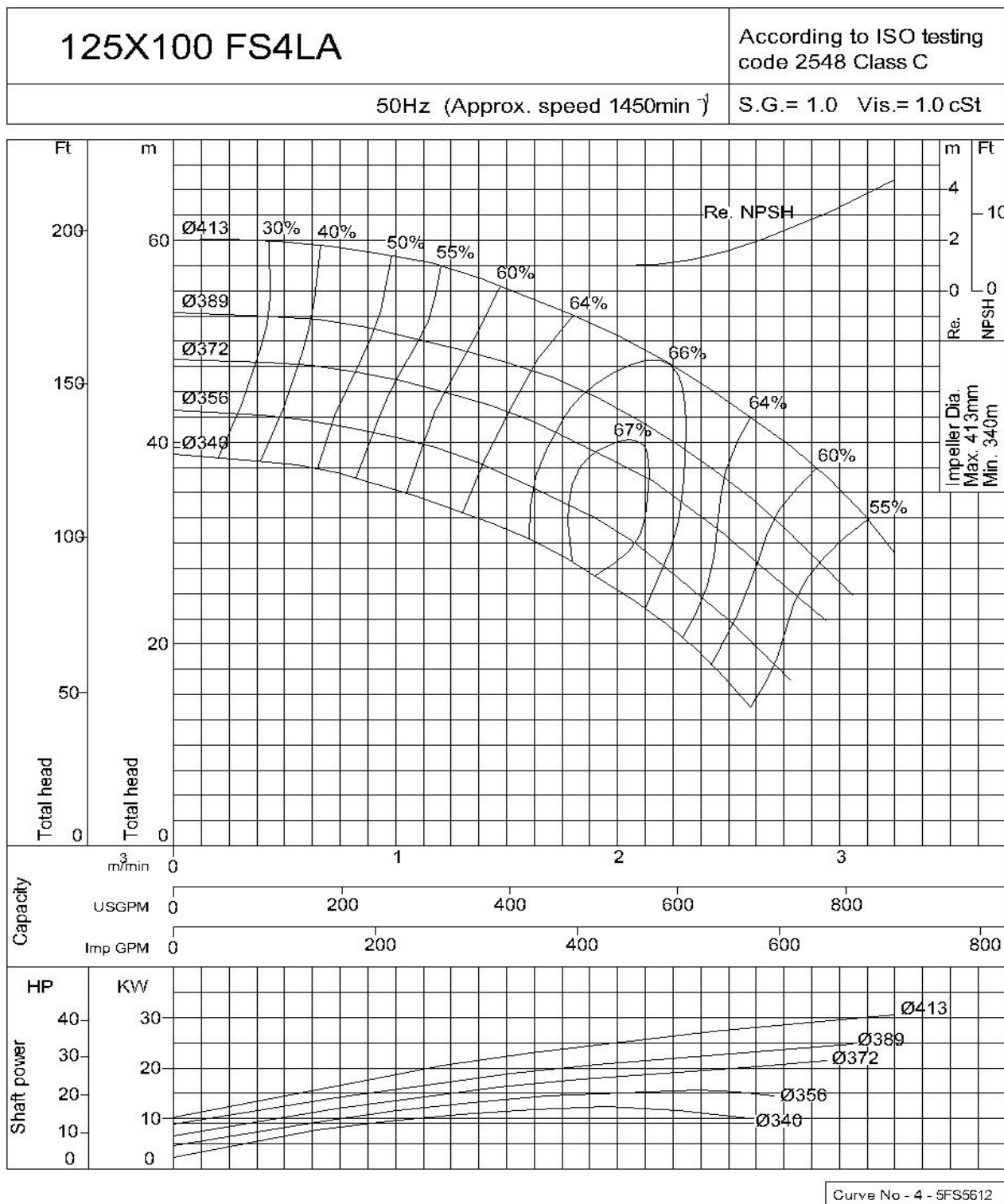
Performance Curve 4 Poles (14/27)

125X100 FS4KA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt

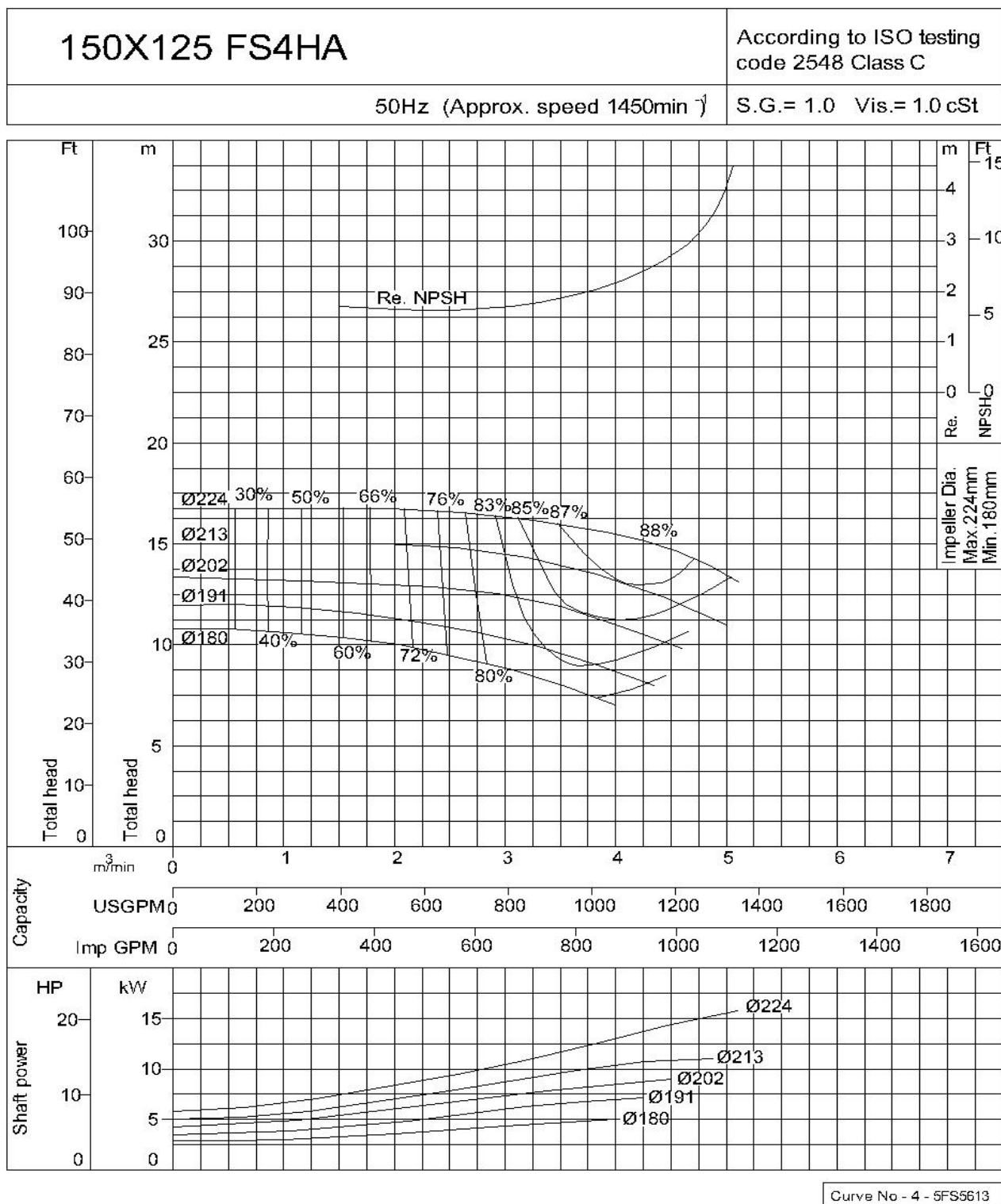


Curve No - 4 - 5FS5611

Performance Curve 4 Poles (15/27)

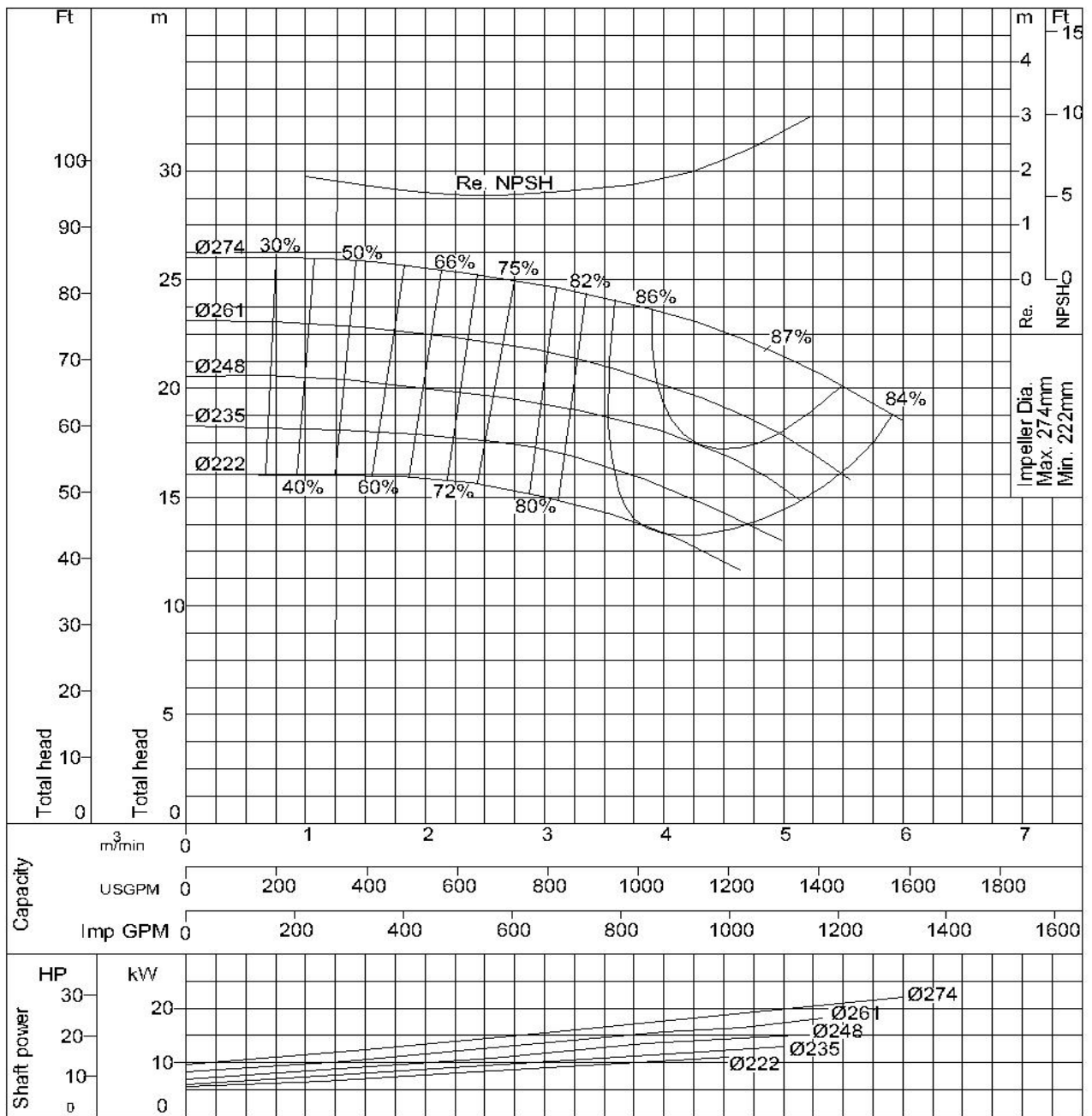


Performance Curve 4 Poles (16/27)



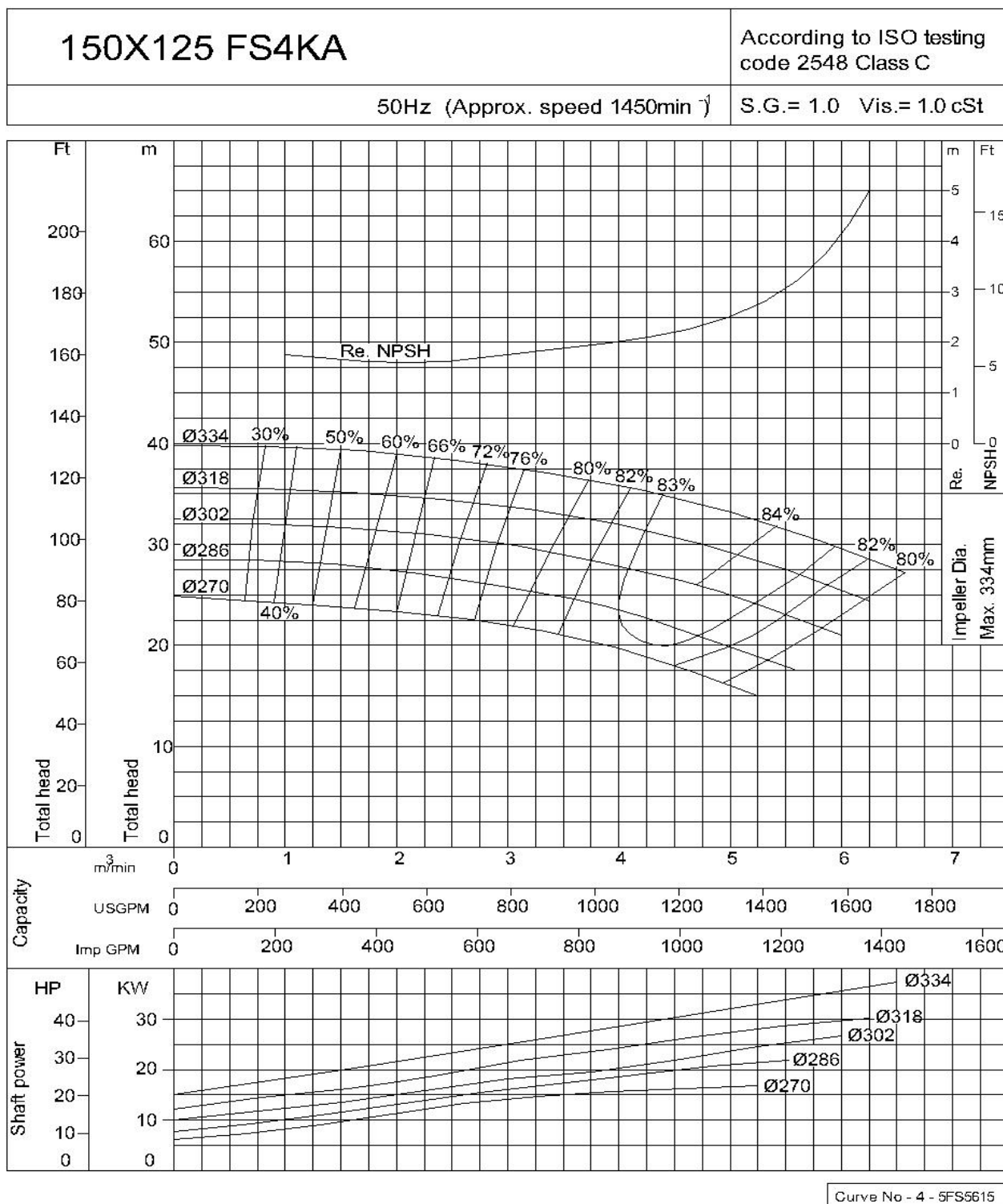
Performance Curve 4 Poles (17/27)

150X125 FS4JA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt

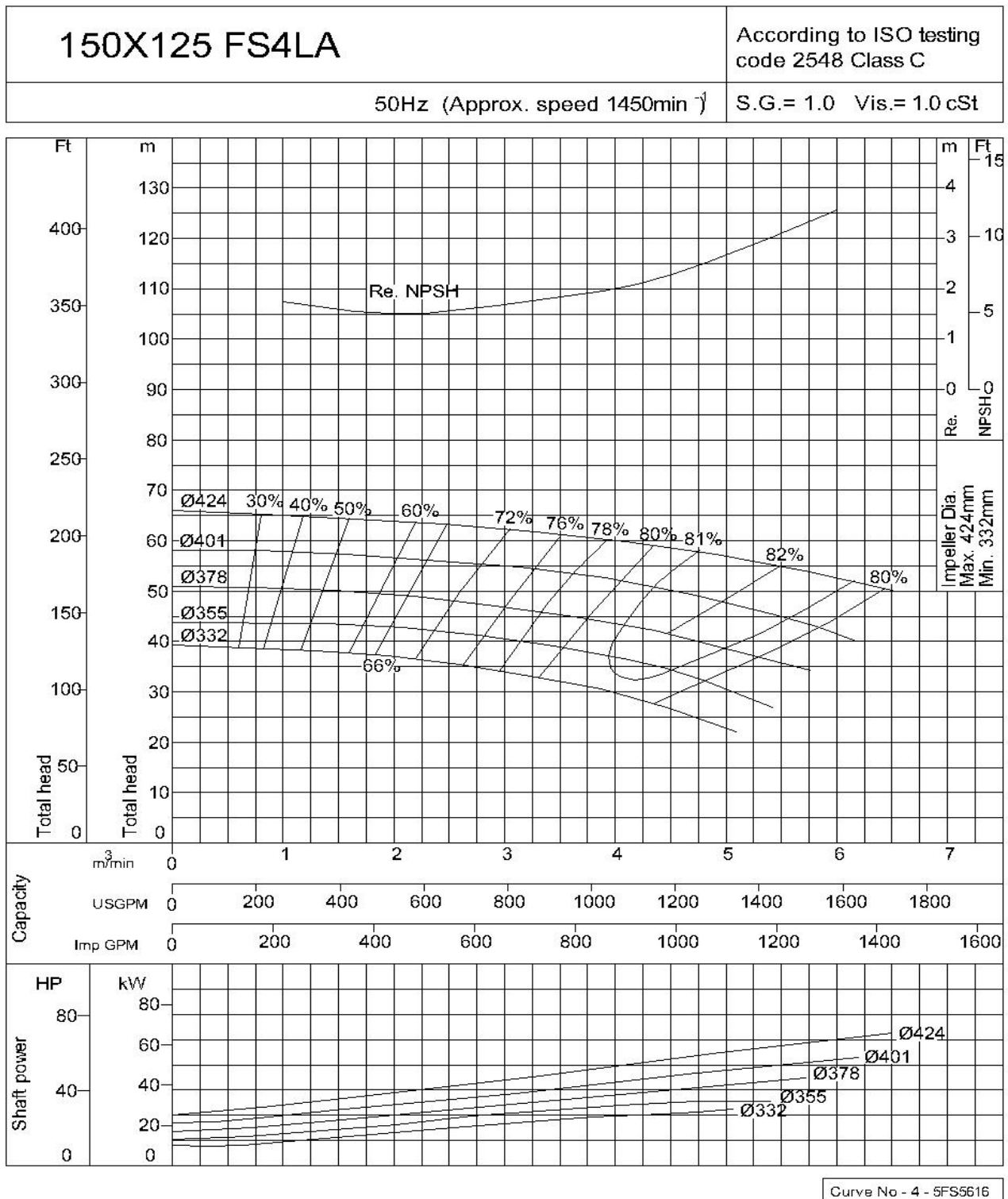


Curve No - 4 - 5FS5614

Performance Curve 4 Poles (18/27)

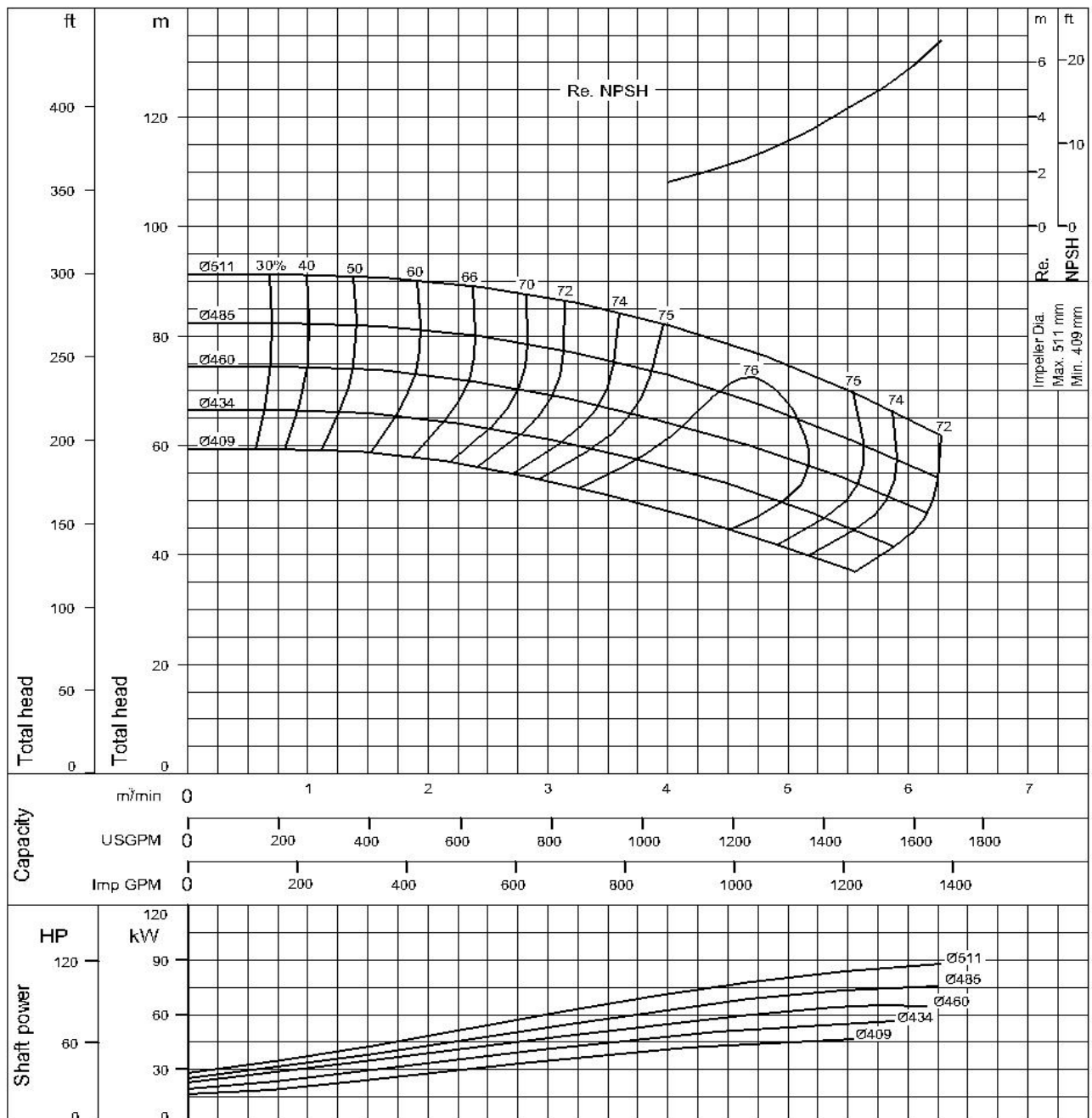


Performance Curve 4 Poles (19/27)



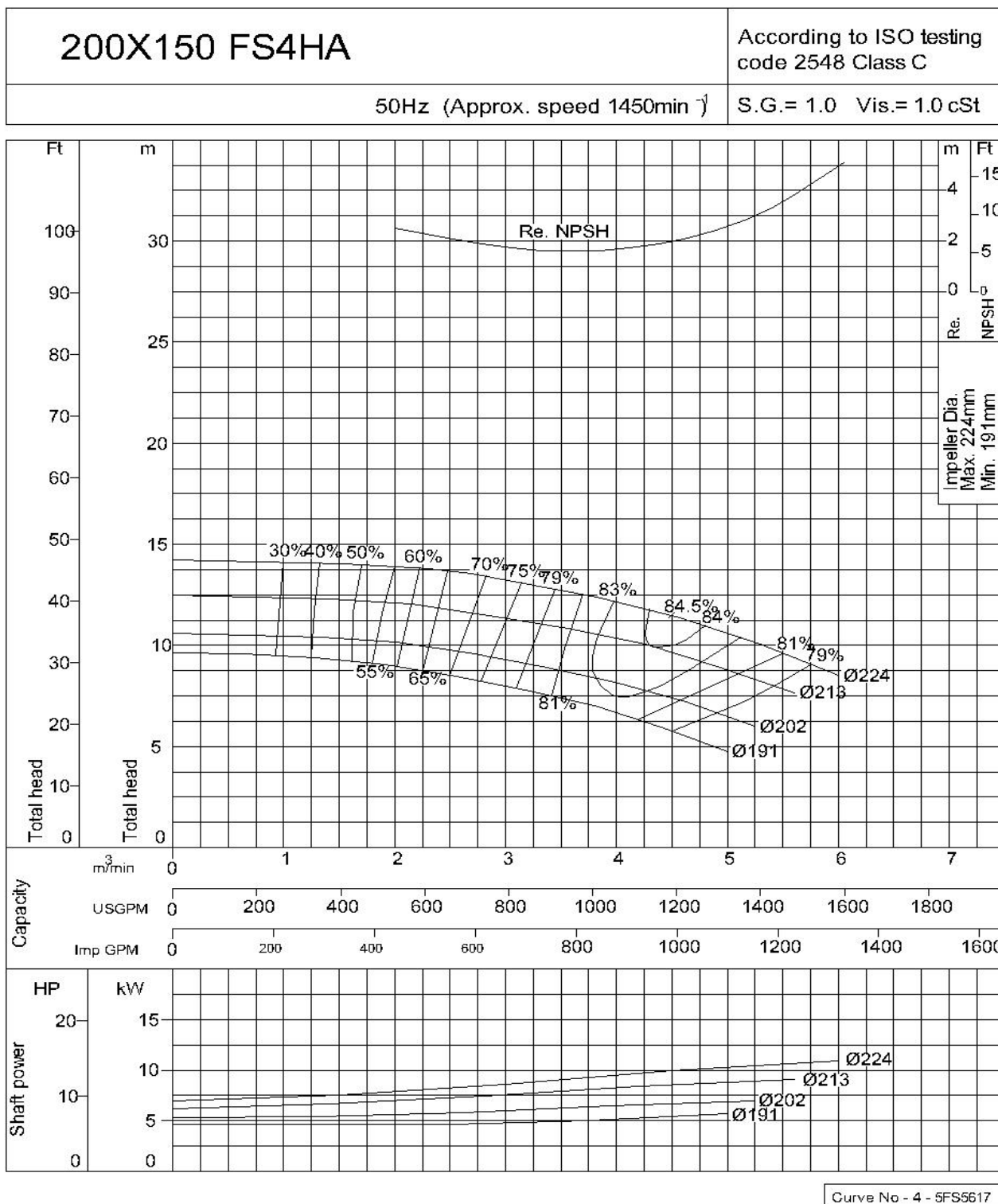
Performance Curve 4 Poles (20/27)

150 x 100 FS4NA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450 min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt



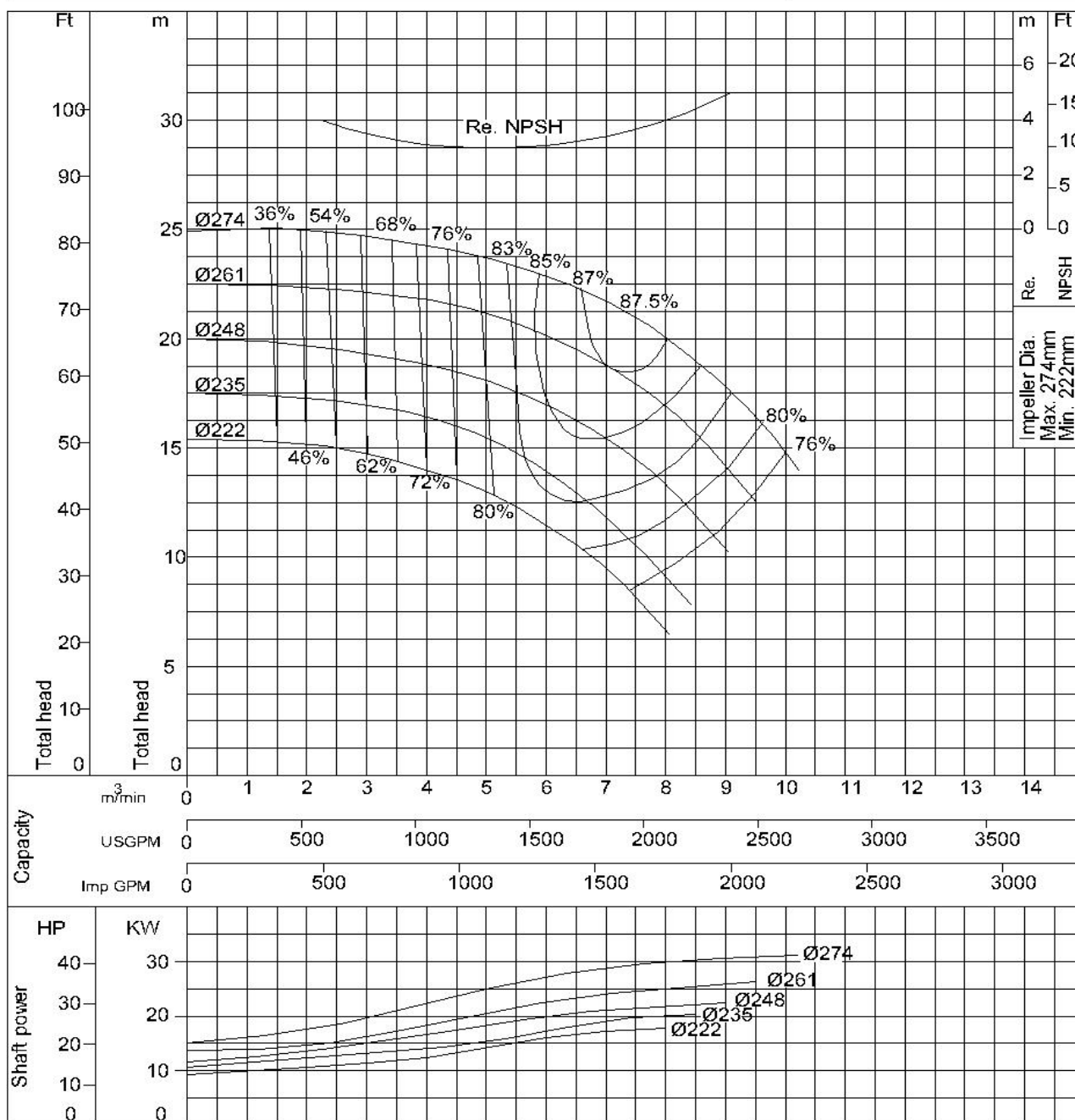
Curve No - 4 - 5FS5624

Performance Curve 4 Poles (21/27)



Performance Curve 4 Poles (22/27)

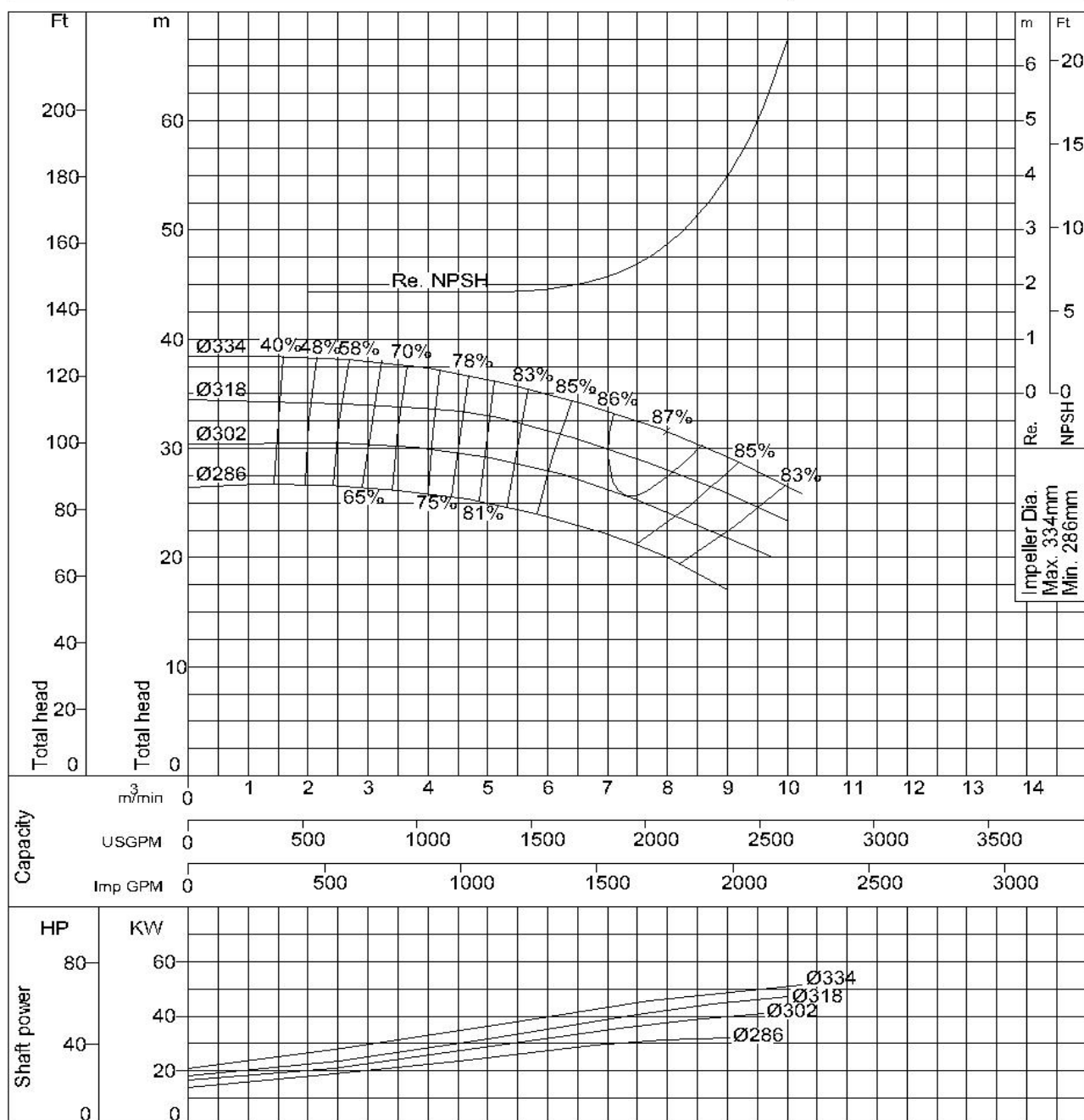
200X150 FS4JA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FS5618

Performance Curve 4 Poles (23/27)

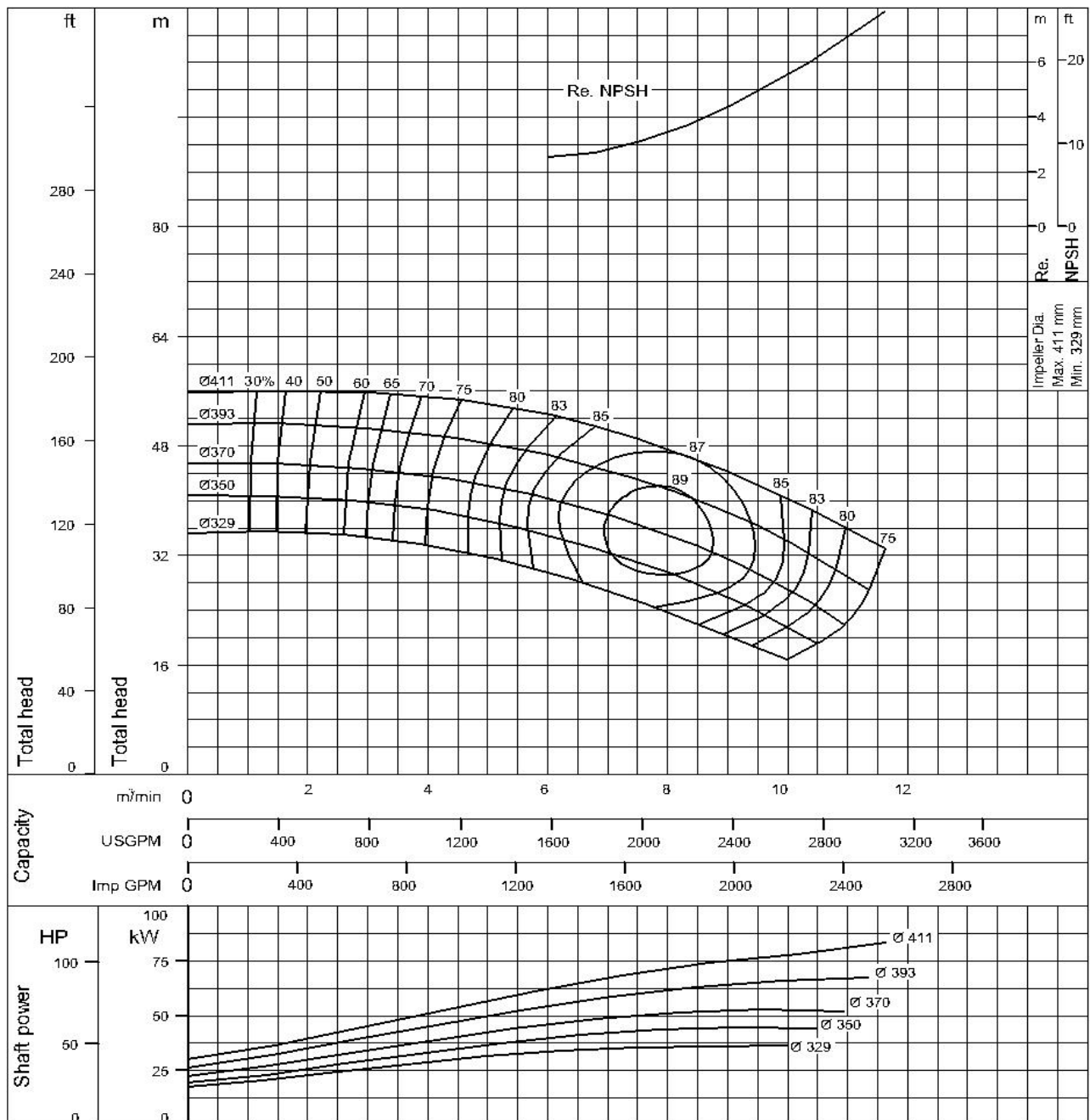
200X150 FS4KA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FS5619

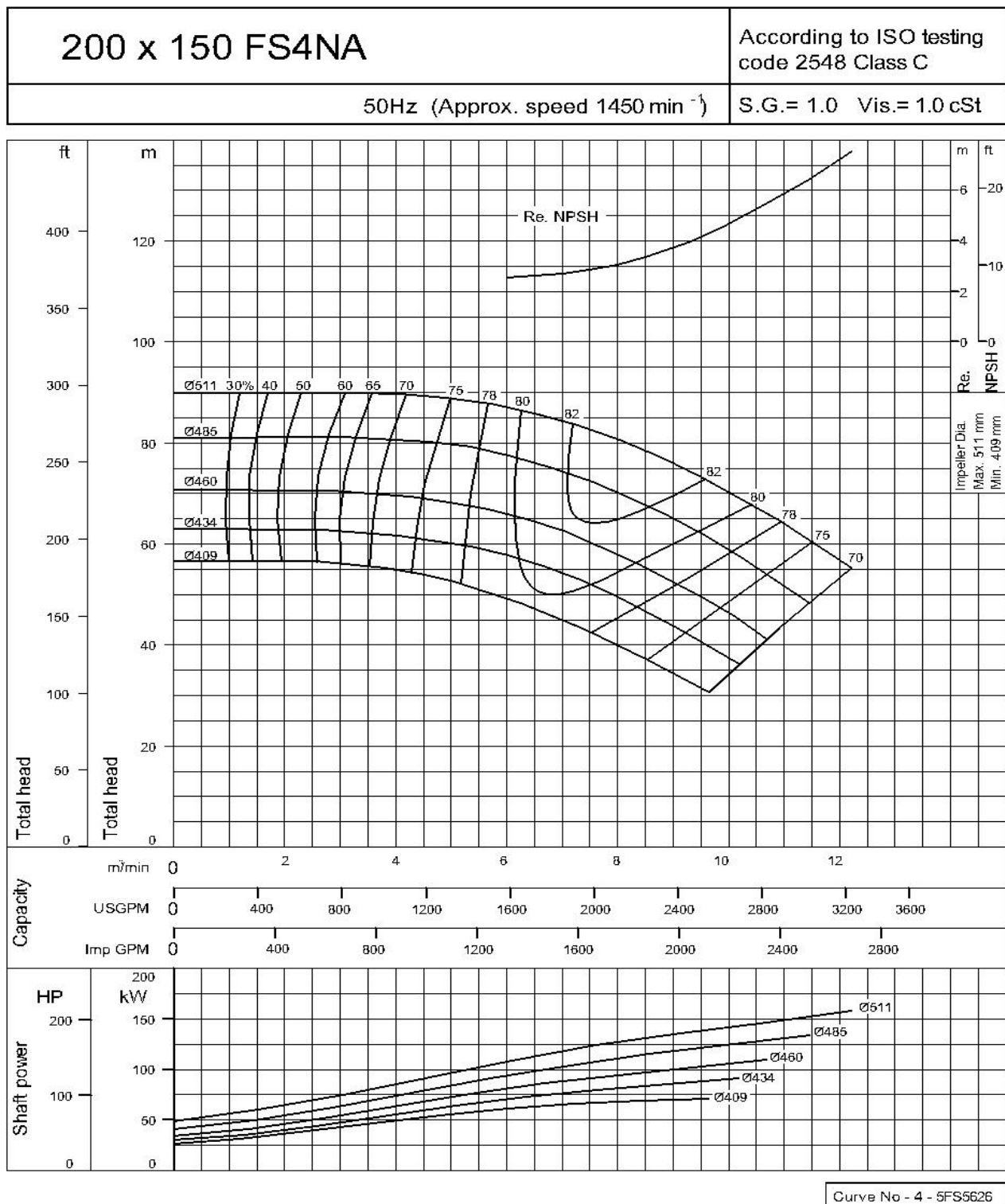
Performance Curve 4 Poles (24/27)

200 x 150 FS4LA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450 min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt

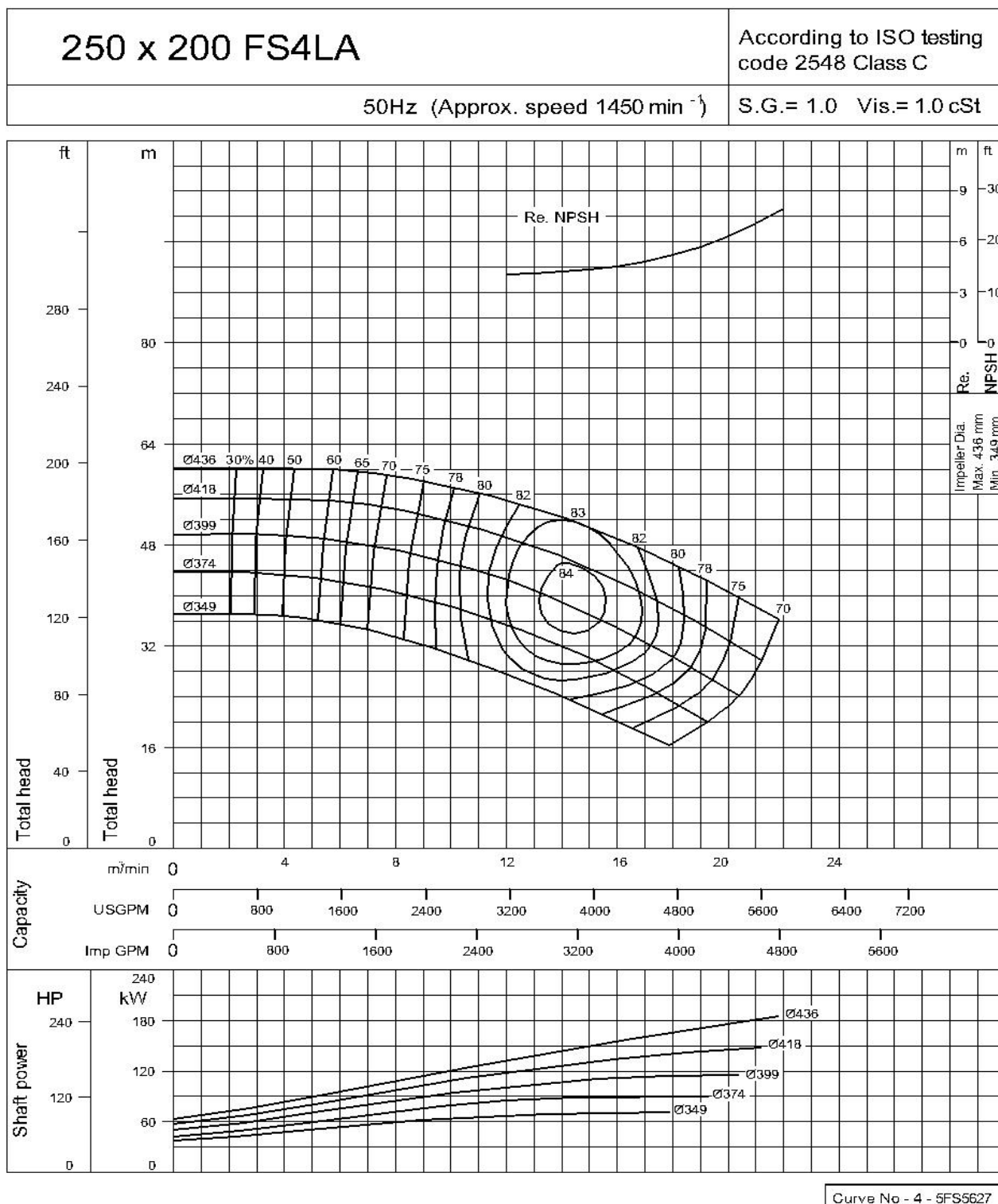


Curve No - 4 - 5FSS625

Performance Curve 4 Poles (25/27)

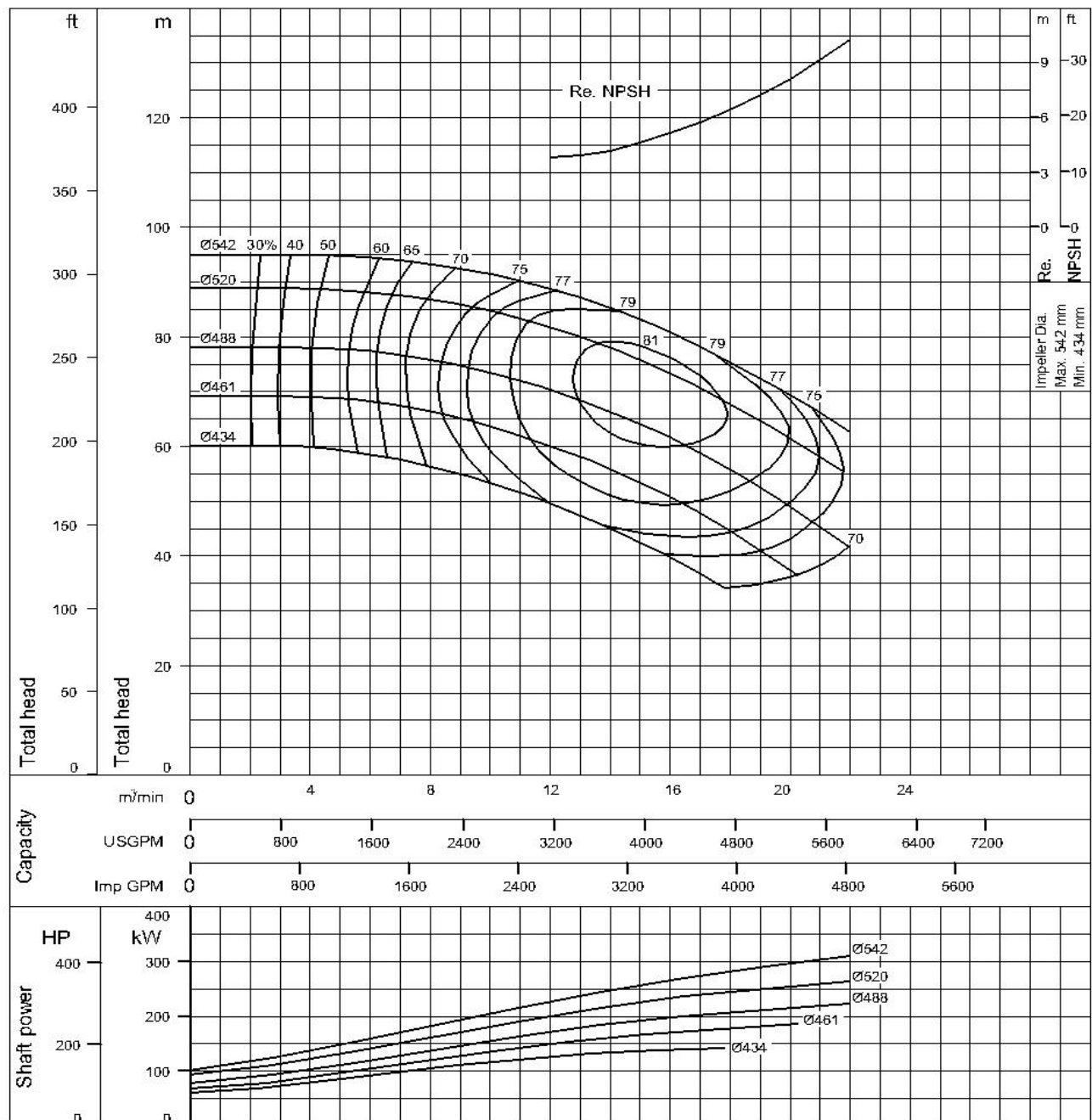


Performance Curve 4 Poles (26/27)



Performance Curve 4 Poles (27/27)

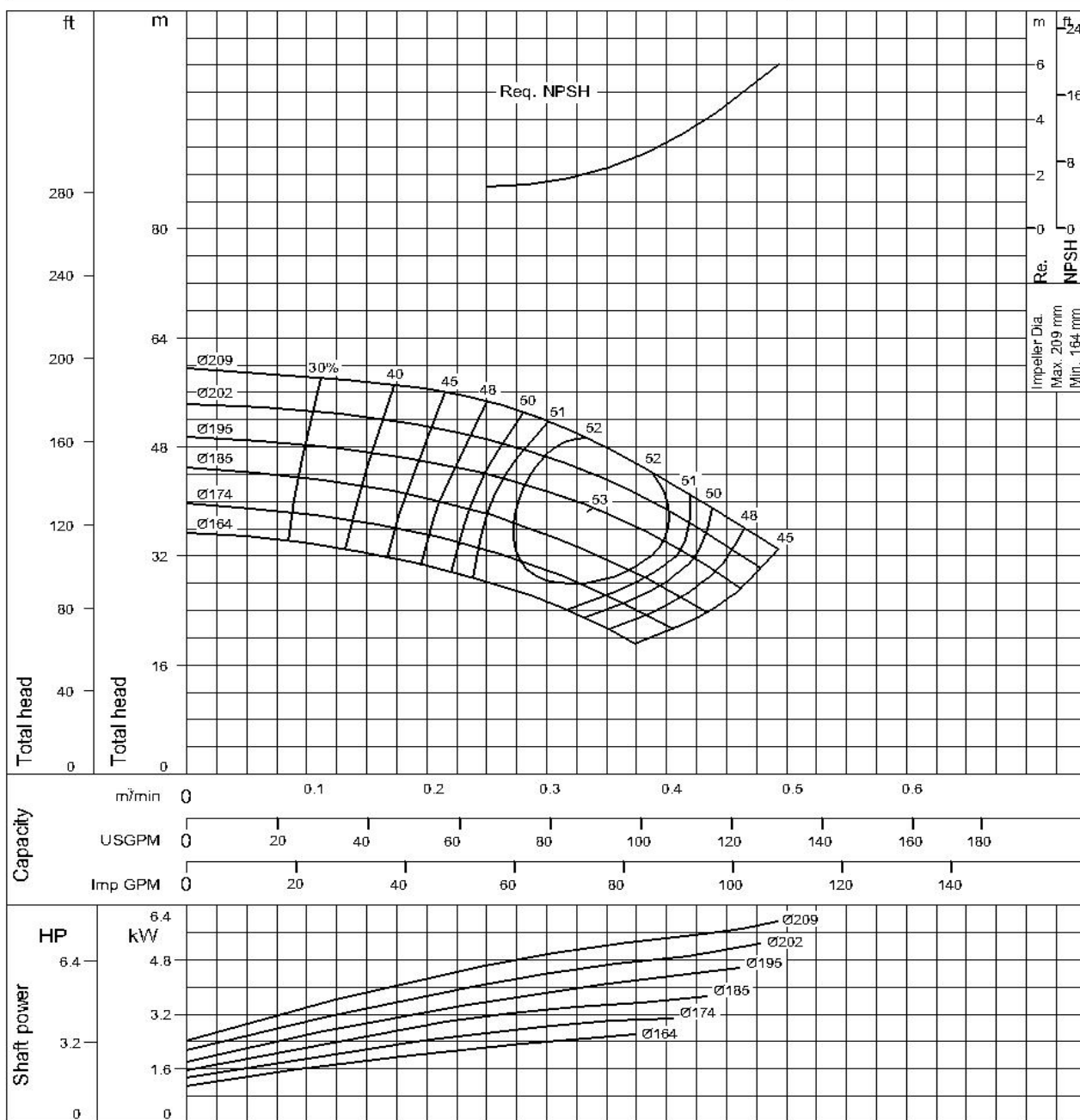
250 x 200 FS4NA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450 min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FS5628

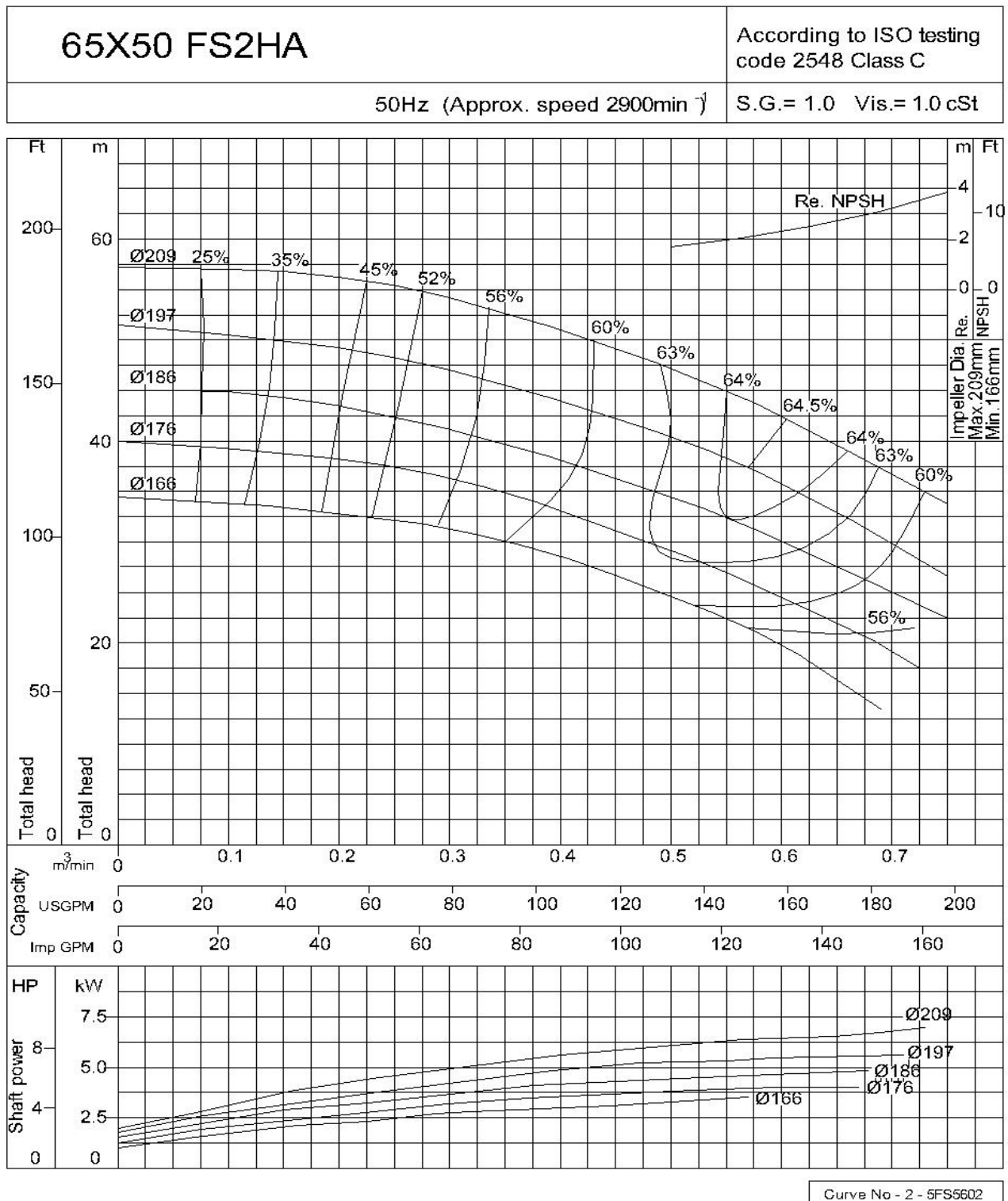
Performance Curve 2 Poles (1/14)

50 x 40 FS2HA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 2900 min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt

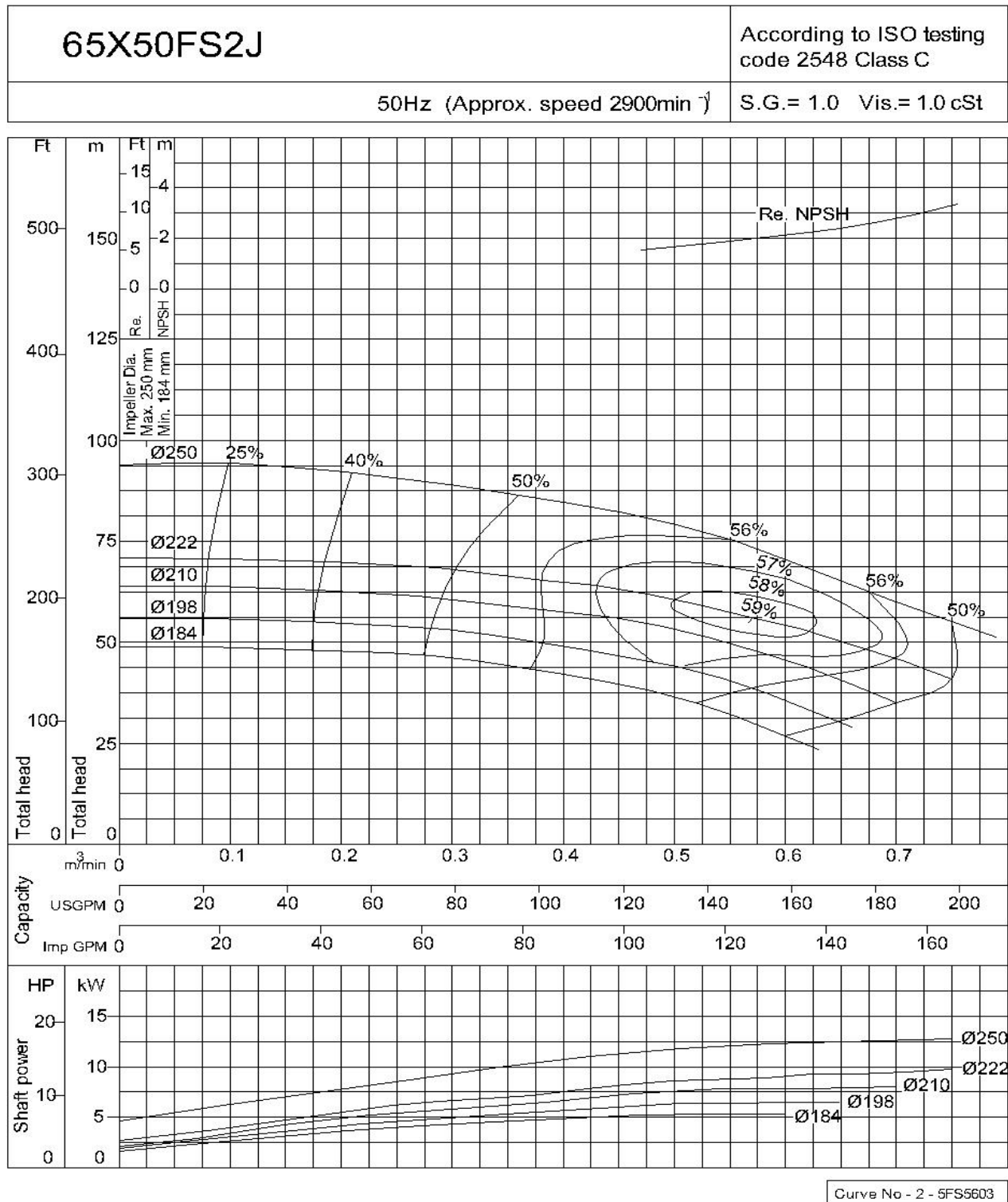


Curve No - 2 - 5FS5601

Performance Curve 2 Poles (2/14)

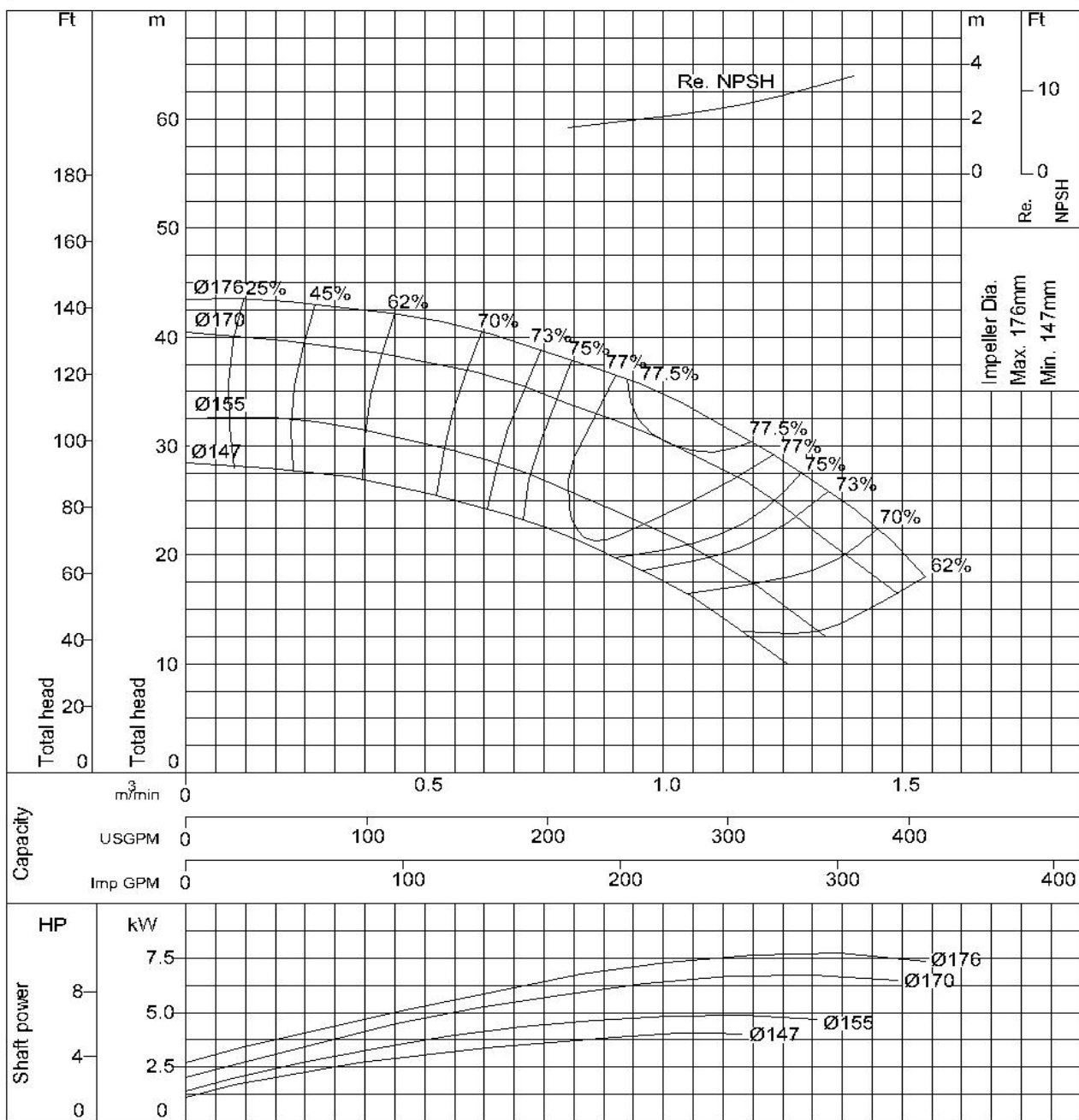


Performance Curve 2 Poles (3/14)



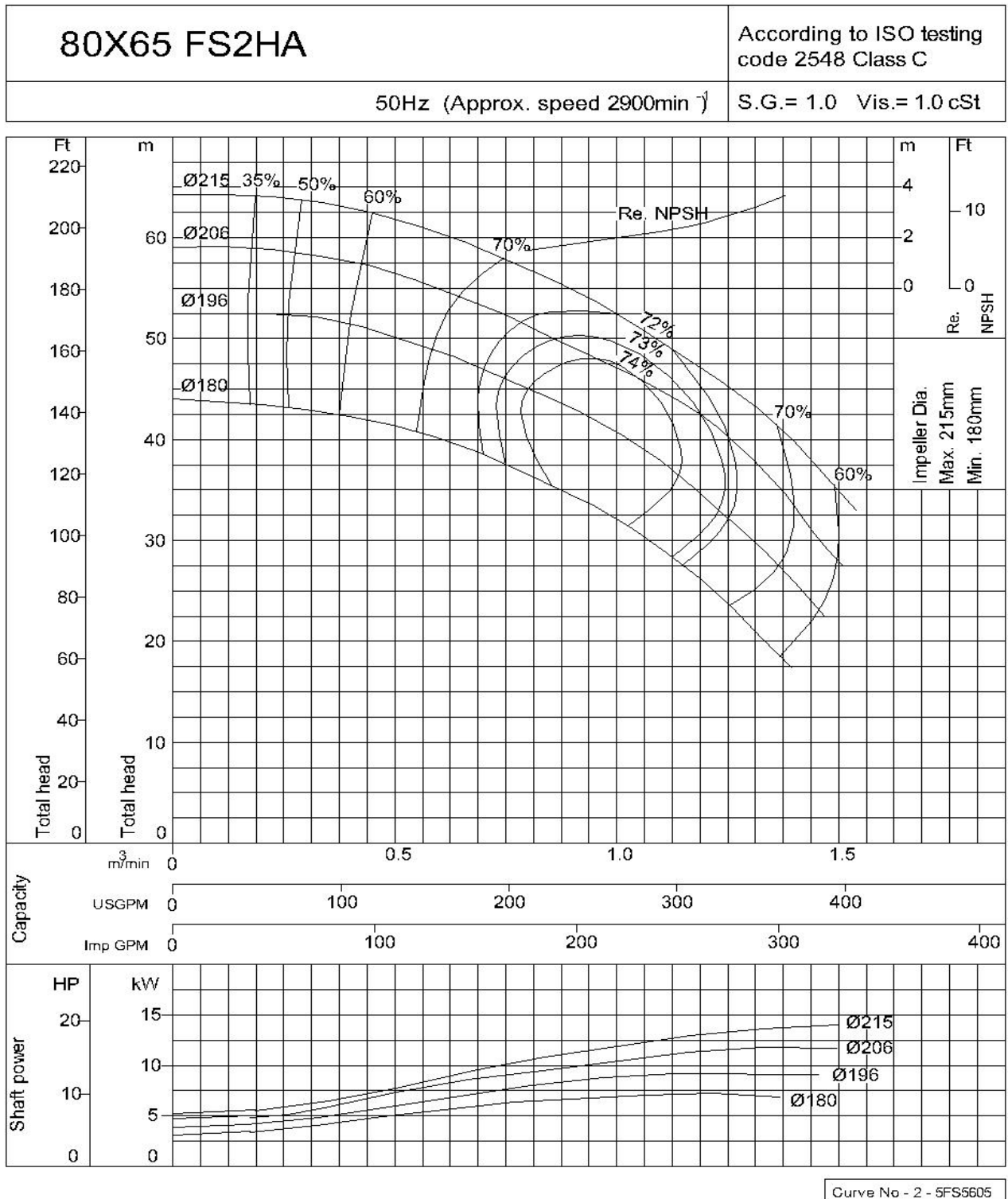
Performance Curve 2 Poles (4/14)

80X65 FS2GA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 2900min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt

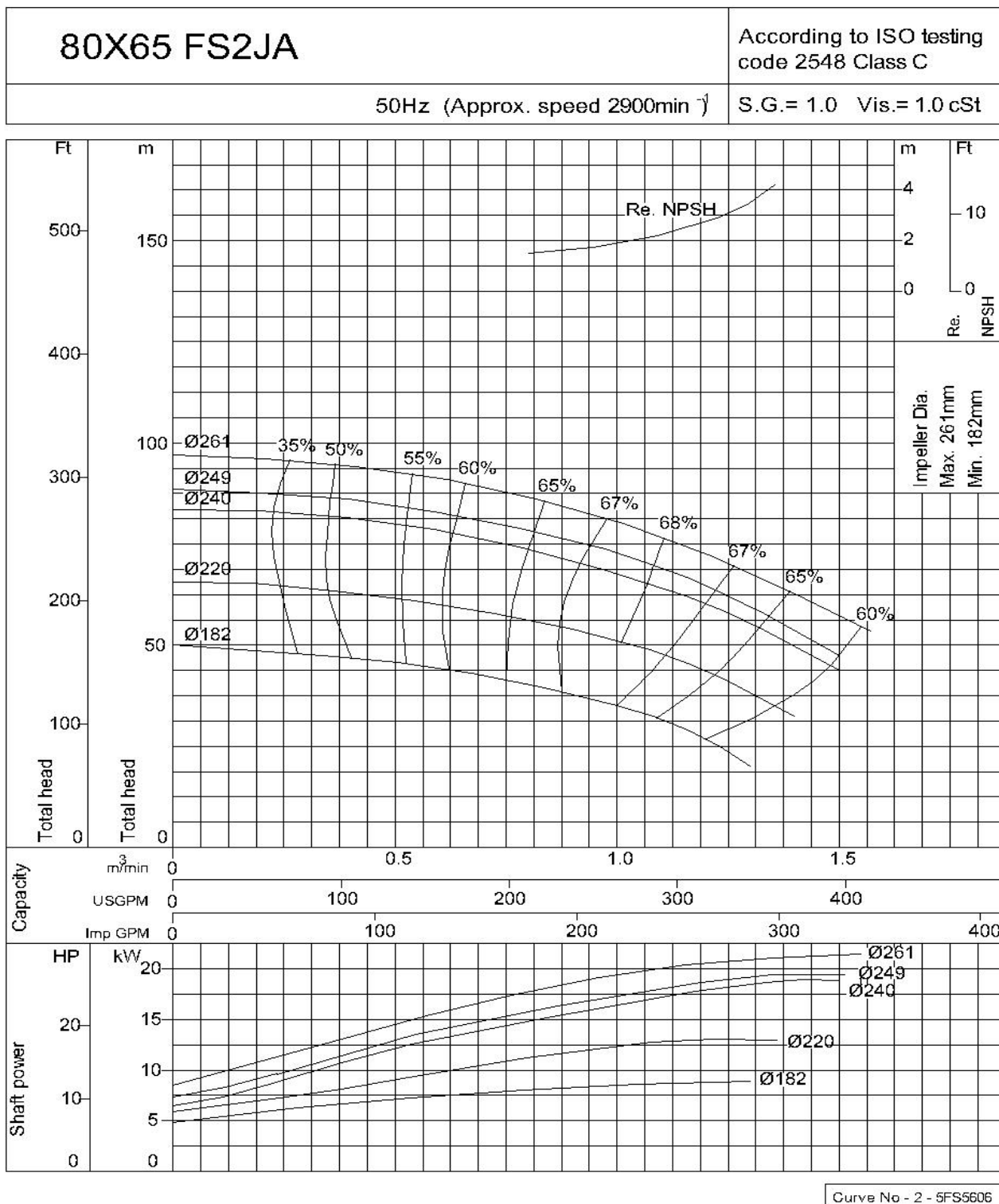


Curve No - 2 - 5FS5604

Performance Curve 2 Poles (5/14)

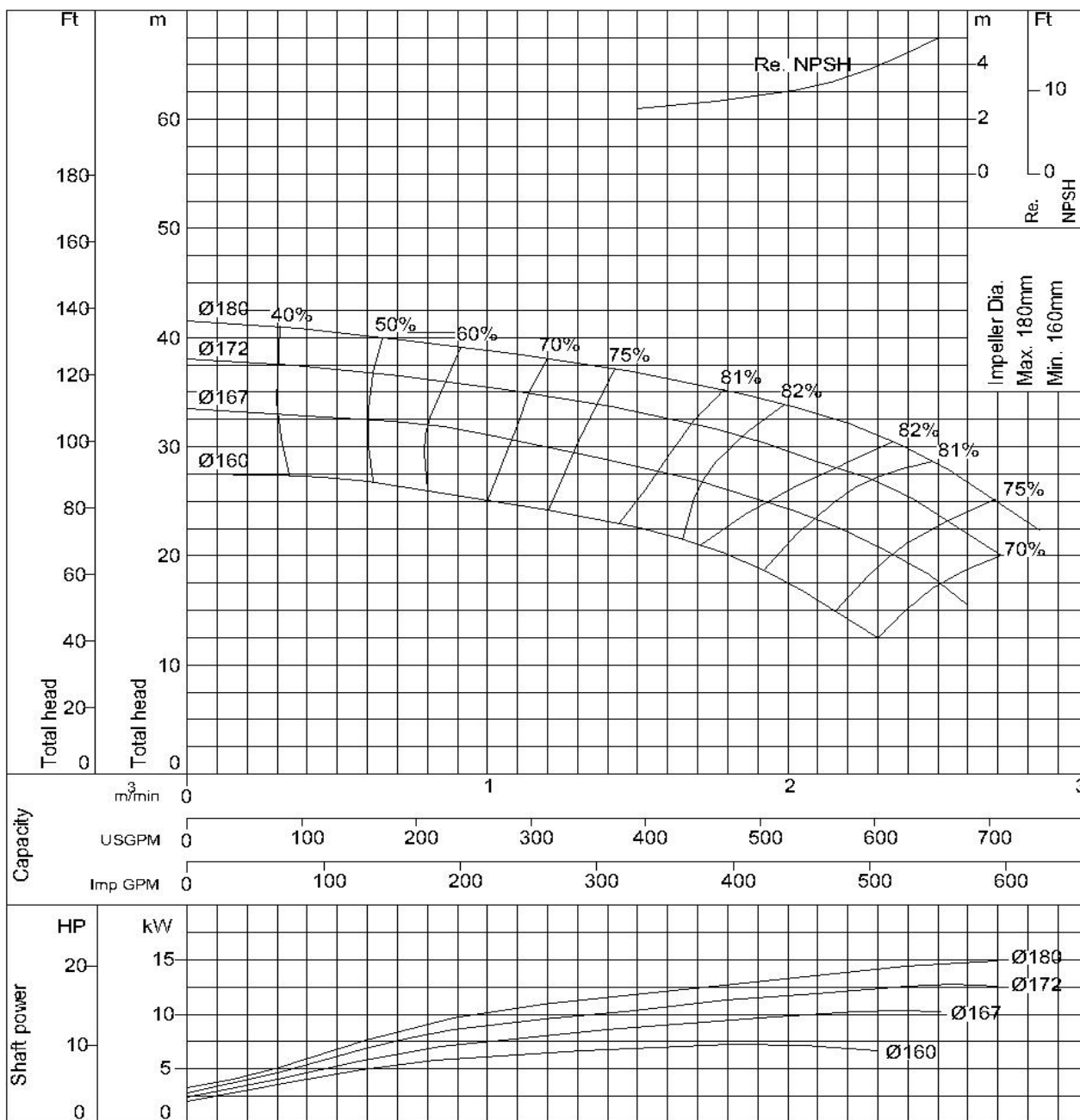


Performance Curve 2 Poles (6/14)



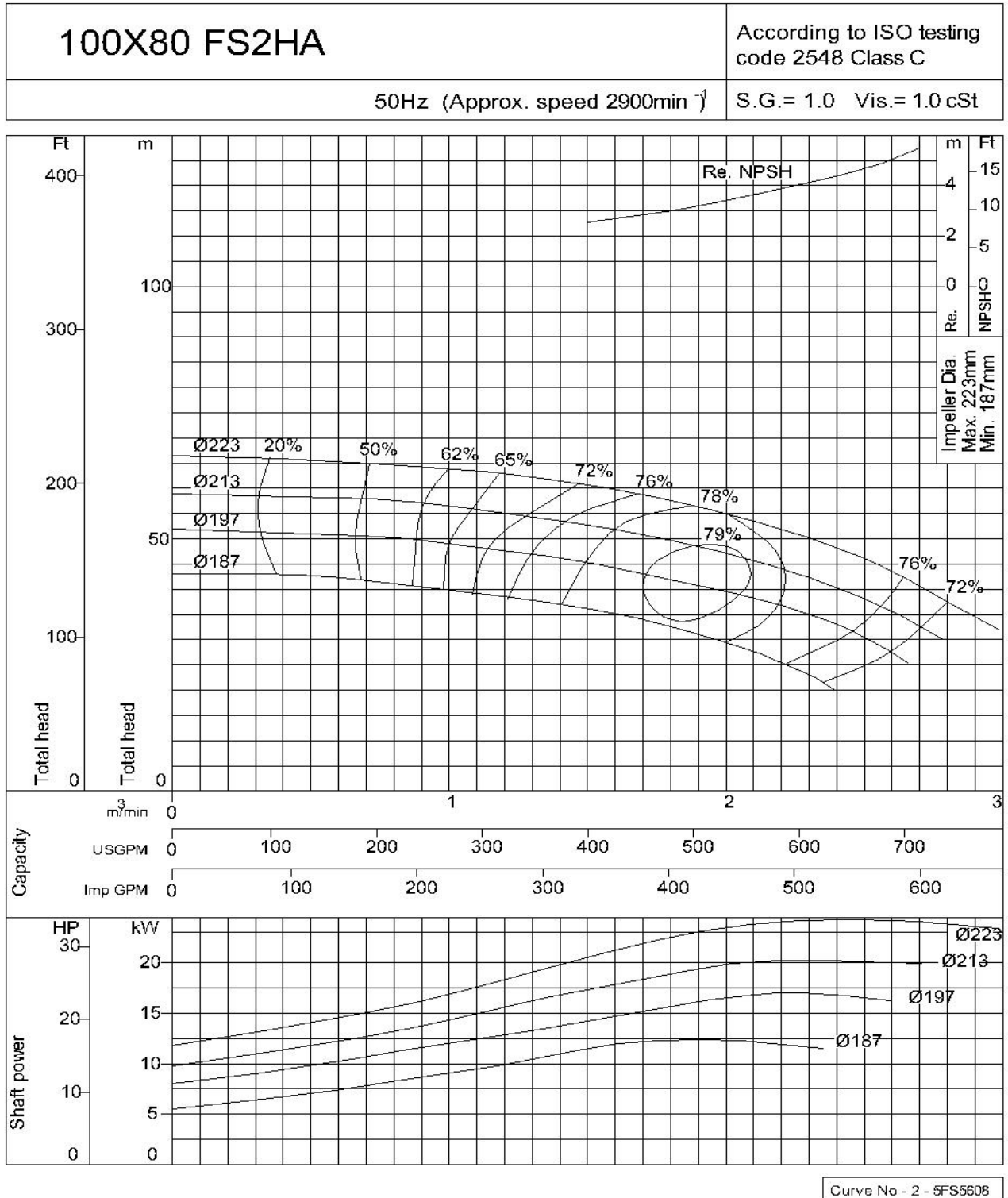
Performance Curve 2 Poles (7/14)

100X80 FS2GA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 2900min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt

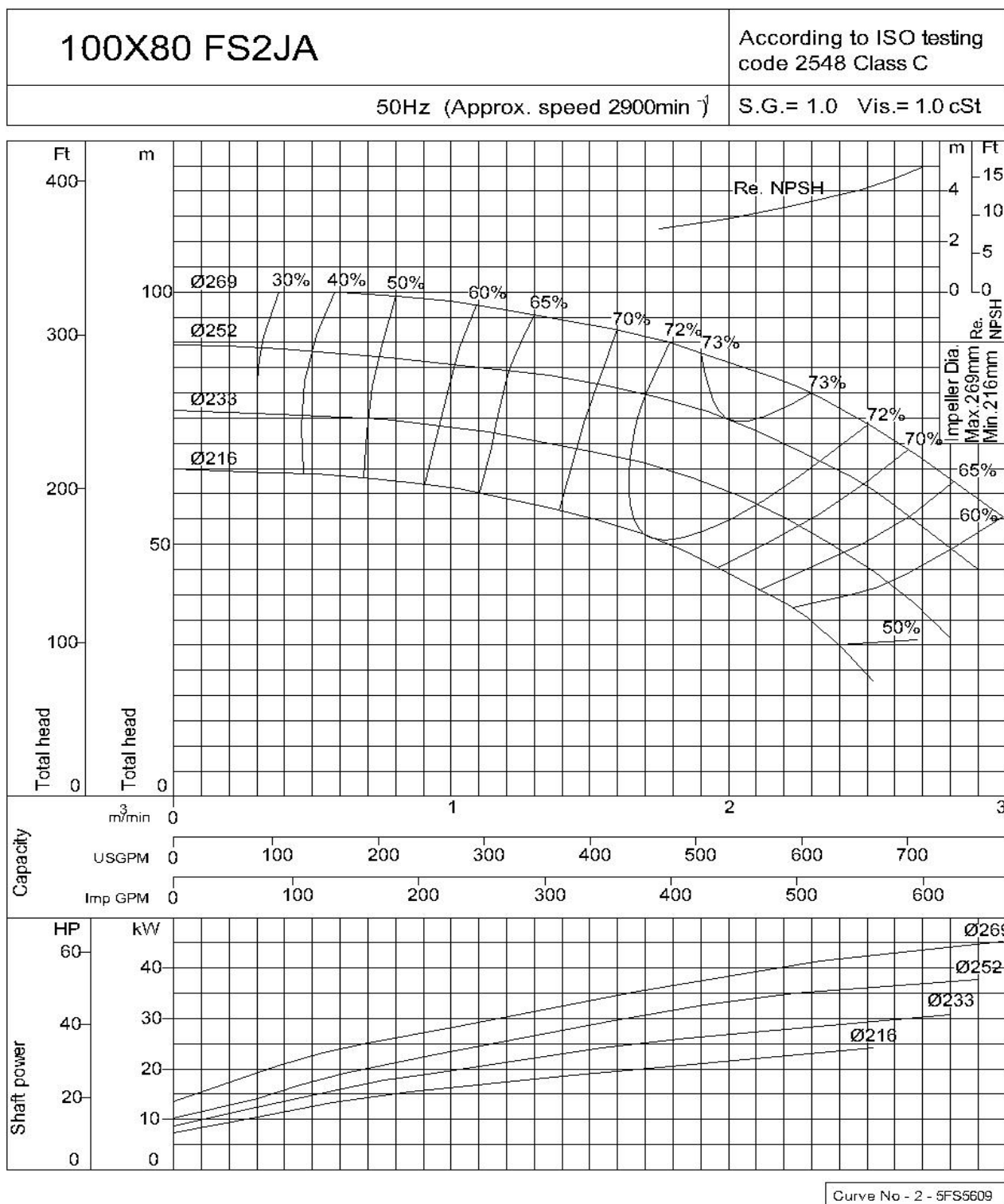


Curve No - 2 - 5FS5607

Performance Curve 2 Poles (8/14)

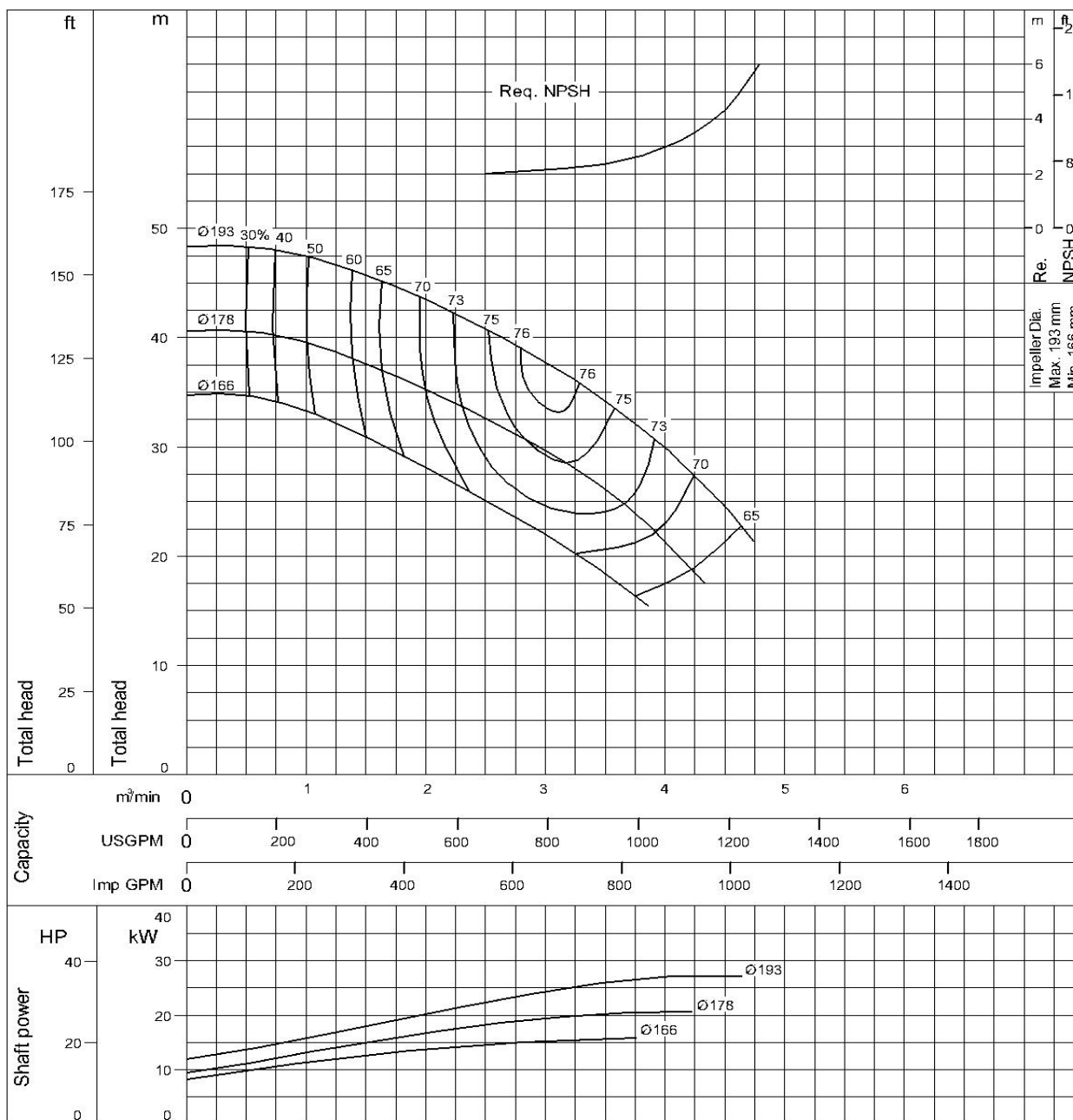


Performance Curve 2 Poles (9/14)



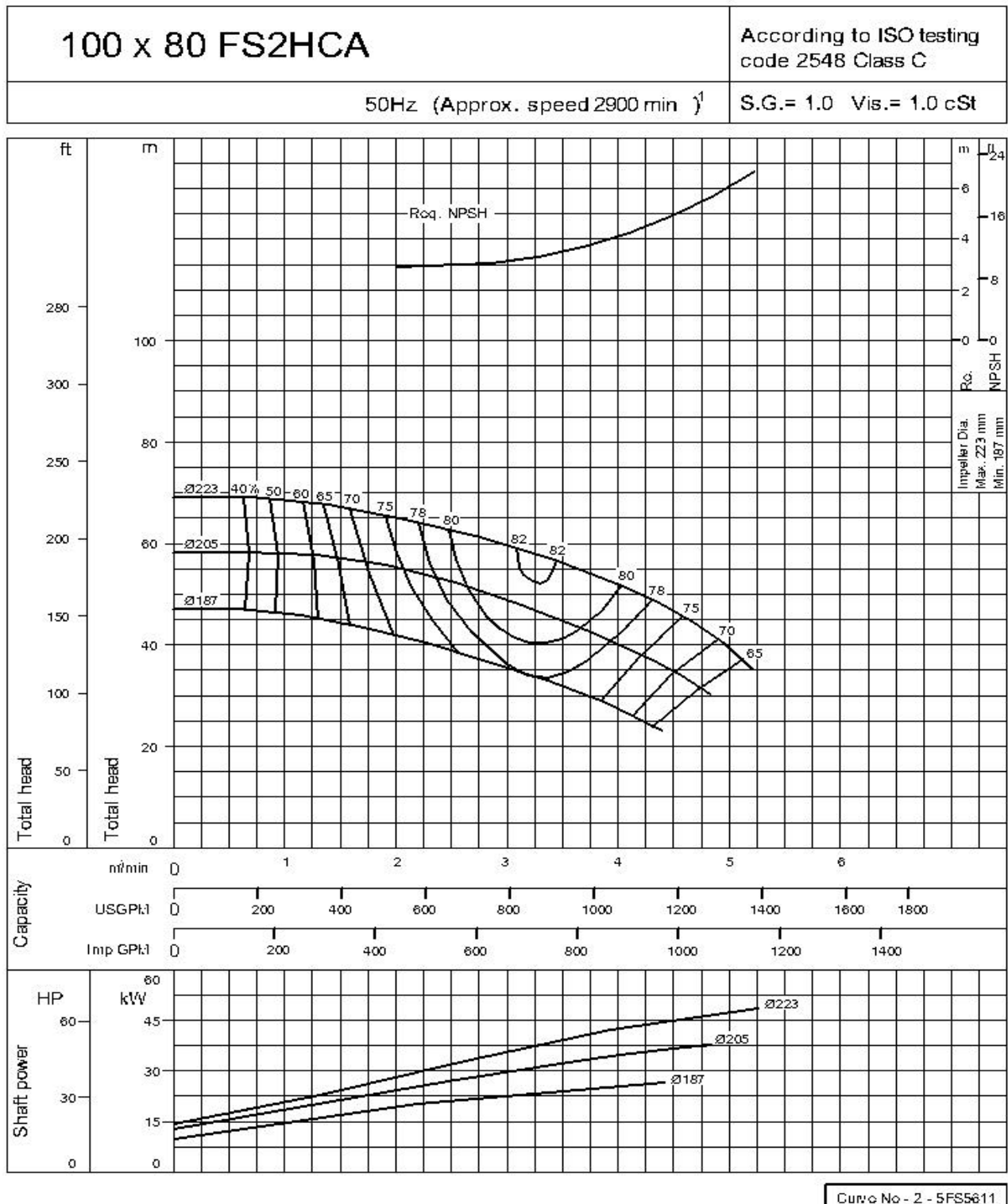
Performance Curve 2 Poles (10/14)

100 x 80 FS2GCA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 2900 min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt

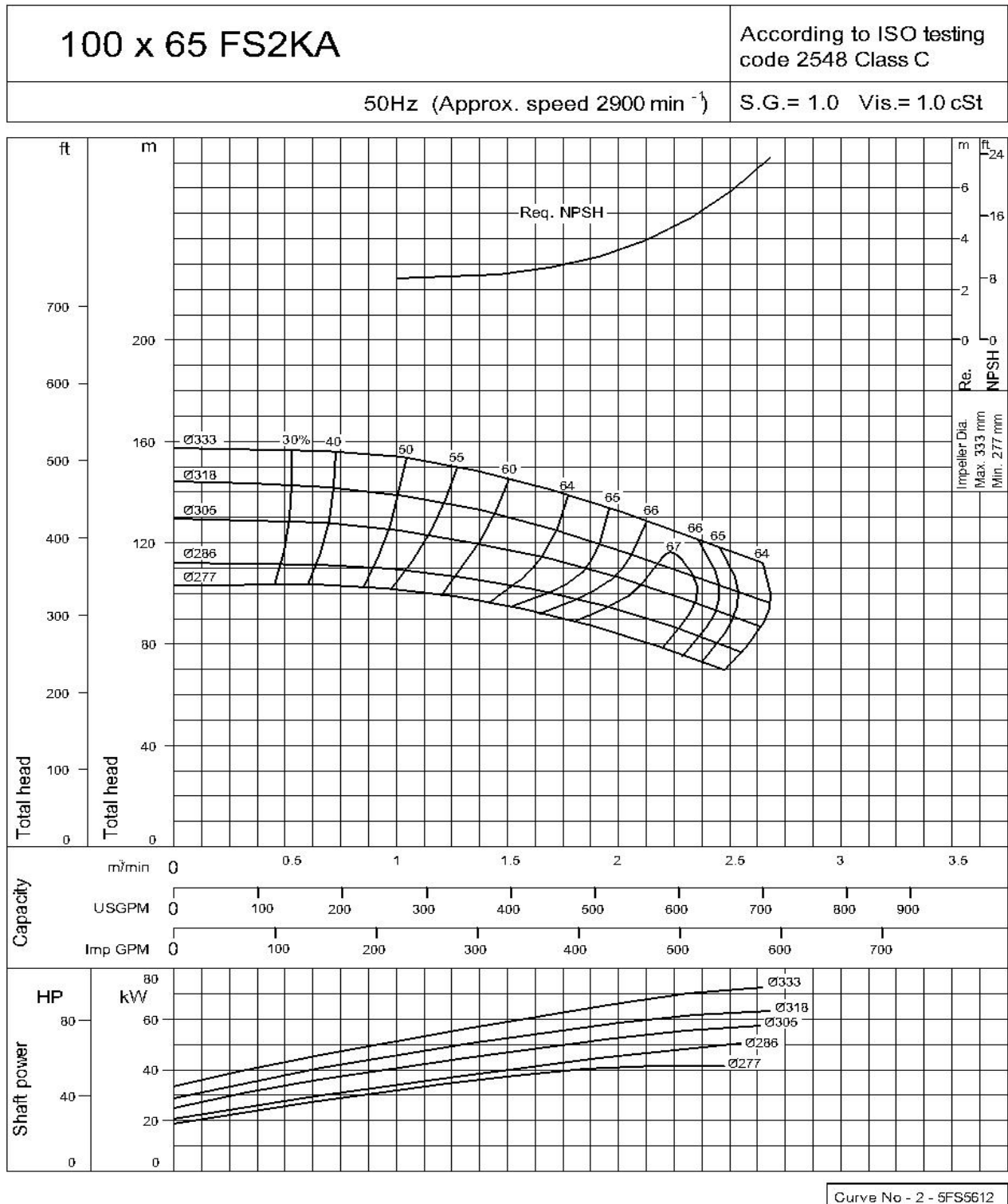


Curve No - 2 - 5FS5610

Performance Curve 2 Poles (11/14)

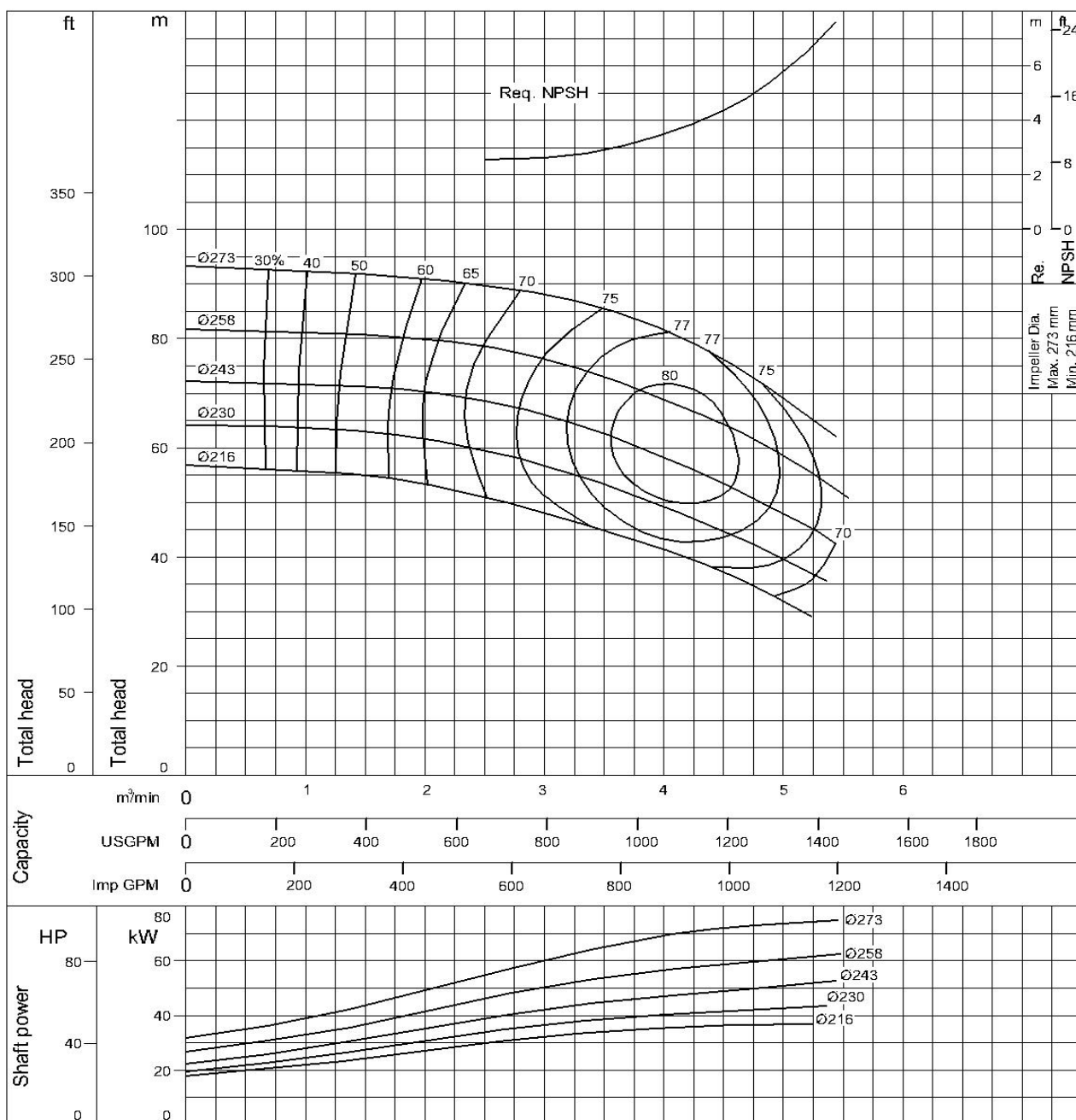


Performance Curve 2 Poles (12/14)



Performance Curve 2 Poles (13/14)

125 x 100 FS2JCA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 2900 min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt

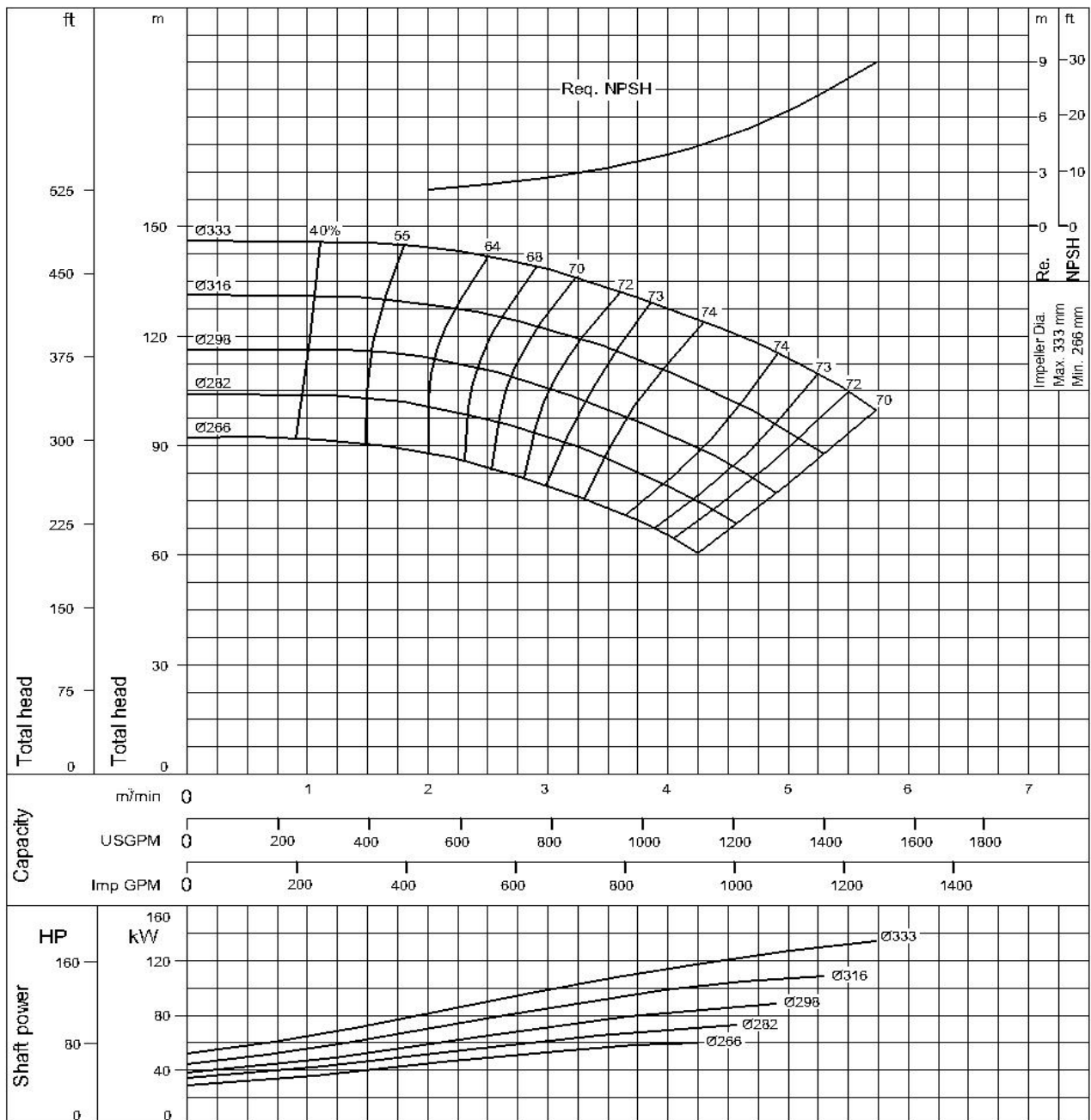


Curve No - 2 - 5FS5613

Performance Curve 2 Poles (14/14)

50 Hz

150 x 100 FS2KA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 2900 min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 2 - 5FS5614

All specifications are subject to change without notice



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Distributor / Dealer



SELECTION CHART

4 POLE

2 POLE

BY ROTATION

END SUCTION VOLUTE PUMP – 50 Hz

• FSA



• FSSA



• FSDA



HORISONTAL SPLIT CASING PUMP – 50 Hz

• CNA / CSA



SUBMERSIBLE PUMP – 50 Hz

• DS , DVS



• DL , DF



• DLM



MIXED FLOW PUMP (SZ)

• 200 , 250 , 300 , 350 , 400 , 500



SELF PRIMING PUMP (SQPB)

• 50 , 80 , 100 , 150



INDEX BACK

BACK