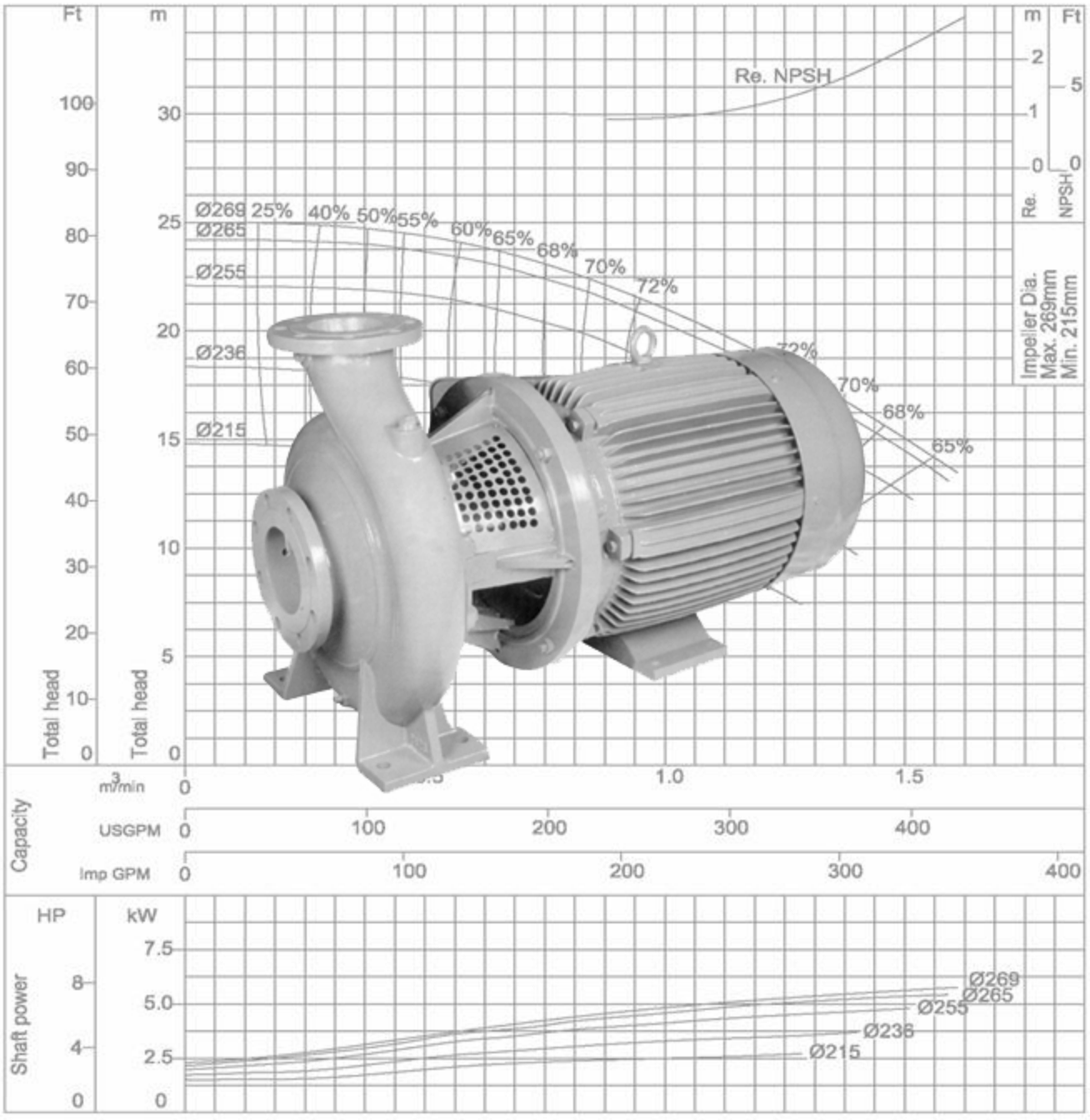
EBARA

FSD9001-5

TECHNICAL DATA BOOK
EBARA FLANGE MOTOR WITH STABSHAFT END SUCTION VOLUTE PUMP

Model **FSDA** SUCTION SIZE 80 ~ 200 mm 50HZ



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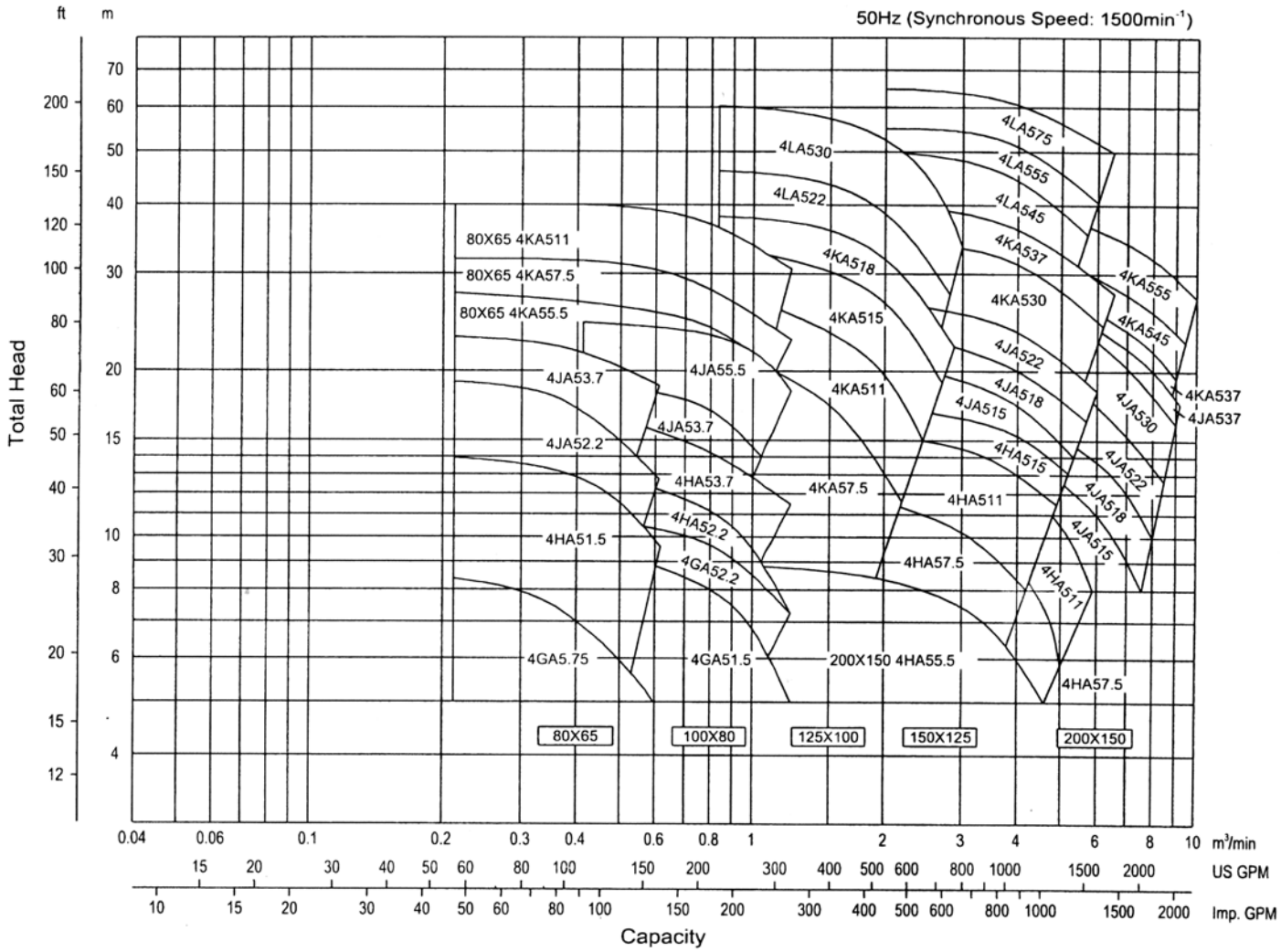
Note :

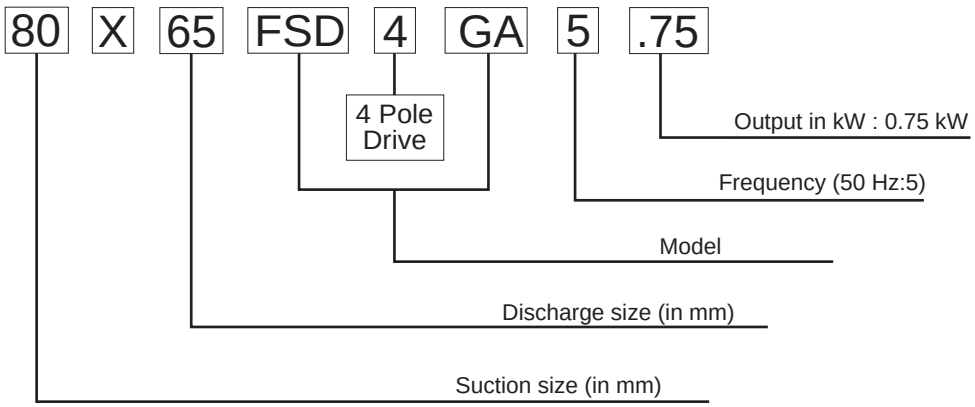
All specifications subject to change without prior notice

Ebara Flange Motor With Stabshaft End Suction Volute Pump Model **FSDA**

Performance Chart - 4 Pole Drive 50 Hz



Model Code



Ebara Flange Motor With Stabshaft End Suction Volute Pump Model **FSDA**

Features & Aplications 50 Hz

■ Feature

- Pump portion contacting liquid is made of high grade 316 stailess steel.
- Easy removal and maintenance, BPO (Back Pull Out) system allows all rotating elements to be removed without disconecting suction and discharge pipework.
- Top centerline discharge, foot support under casing for maximum resistanceto misaligment and distorsion from pipe loads.
- Non-overload design to ensure stable performance for all applications.
- Compact construction, aplicable for two-poles high speed motor provides a compact unit and minimizes installation area.
- Wide range application with wide optimal application.

■ Application

- Industrial use
- Chemical solusions
- Industrial drainage
- Hot and cold water supply
- Sea water
- For swimming pool
- Drinking water
- Air conditioning

Ebara Flange Motor With Stabshaft End Suction Volute Pump Model **FSDA**

Specifications 50 Hz

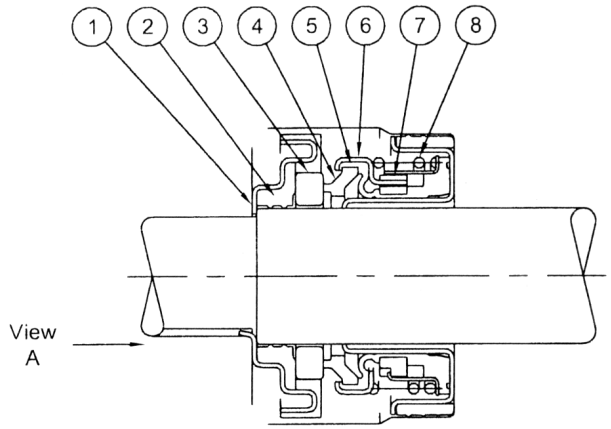
Description		Standard
Pump		
Model		FSDA
No. of Pole		4
Liquid Handled	Type of liquid	Clean Water
	Temperature	0^{o}C - 100^{o}C (32 - 212^{o}F)
Max. Positive Suction Pressure (kgf/cm^2) For M.seal		All except FSLA : 8.2 - (Shutoff Pressure) FSLA :10.2 - (Shutoff Pressure)
Max. Working Pressure		10.2 kgf/cm2 (10 bar)
Available Suction Lift		Suction <= 125 : 6m 125x100 : 4m
Synchronous speed		1450 min-1
Location		Indoor, Optional : Outdoor
Construction	Shaft seal	Mechanical Seal
	Pump Shaft	Stab Shaft
Material	Casing	Cast Iron
	Bracket	Cast Iron
	Impeller	Bronze
	Shaft	316 Stainless Steel
	M. Seal	Ceramic vs carbon
Flange	Suction	JIS 10 K RF
	Discharge	JIS 10 K RF
Motor		
Type		IEC Standard Flange Type
No. of Pole		4
Synchronous speed		1450 min-1
Insulation Class		F
Protection		IP 54. Optional : IP 55
Voltage / Phase/ Hz		380 V / 3 phase / 50 Hz
Material	Frame	Cast Iron

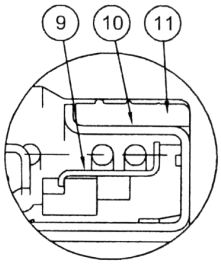
Technical Data - Shaft Seal and O ring 50 Hz

Model	Mechanical Seal	O-Ring
80x65 FSDGA	FH-25	Gs-180
80x65 FSDHA		Gs-225
80x65 FSDJA	FH-35	Gs-275
80x65 FSDKA		Gs-335
100x80 FSDGA	FH-25	Gs-275
100x80 FSDHA	FH-35	Gs-225
100x80 FSDJA		Gs-275
125x100 FSDKA	FH-35	Gs-335
125x100 FSDLA	AKN-035	Gs-425
150x125 FSDHA	AKN-035	Gs-225
150x125 FSDJA		Gs-275
150x125 FSDKA	AKN-045	Gs-335
150x125 FSDLA		Gs-425
200x150 FSDHA	AKN-035	Gs-225
200x150 FSDJA	AKN-045	Gs-275
200x150 FSDKA	AKN-055	Gs-335

Technical Data - Sectional View of Mechanical Seal 50 Hz

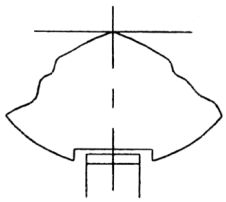
■ Model FH





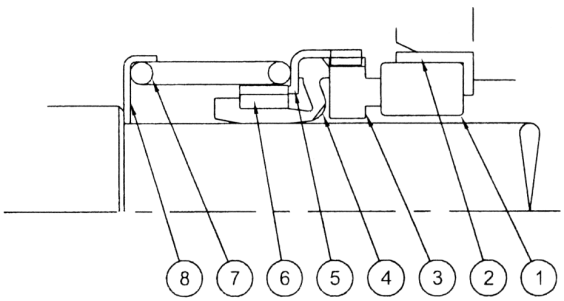
Detail of Cartridge, Seat Ring

Part No	Part Name	Material	Qty/Unit
1	Case	304 Stainless Steel	1
2	Cup Gasket	NBR A834	1
3	Mating Ring	Ceramic NT-32	1
4	Seal Ring	Carbon NC-11B1	1
5	Bellows	NBR A226	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	Catridge	304 Stainless Steel	1
11	Seat Ring	NBR A834	1



View A

■ Model AKN



Part No	Part Name	Material	Qty/Unit
1	Seat	Ceramic	1
2	Seat Elastomer	Nitrilie	1
3	Face	Carbon	1
4	Friction Ring	Nitrilie	1
5	Shell	316 Stainless Steel	1
6	Band	316 Stainless Steel	1
7	Spring	316 Stainless Steel	1
8	Spring Holder	316 Stainless Steel	1

Technical Data - Recommended Spare Parts 50 Hz

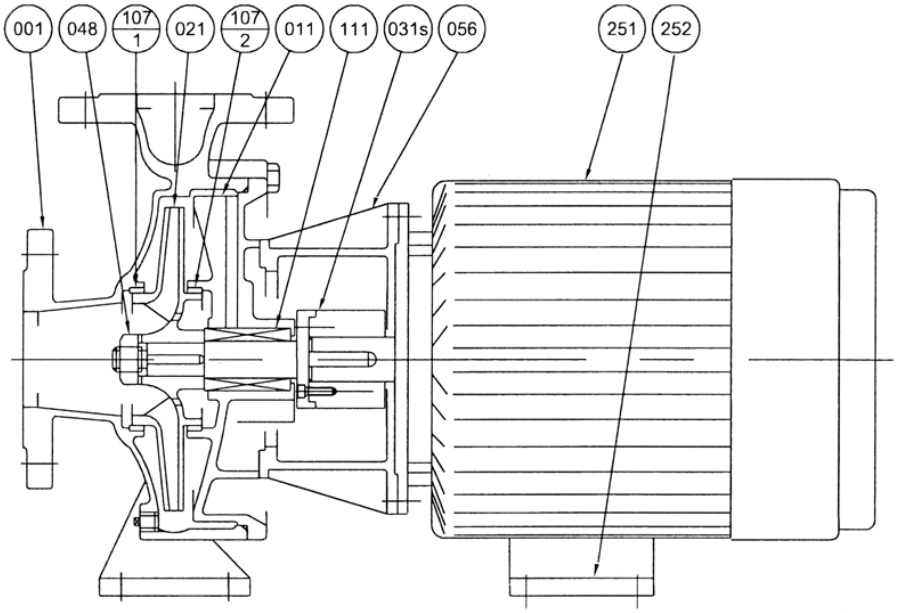
Part No	Part Name	Standard Material	Qty/Unit
056	Ball Bearing	-	2
107	Casing Wear Ring	Bronze	2
111	Mechanical Seal	-	1
	Couping Rubber	NBR	1 set

Technical Data - Paint Specifications 50 Hz

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 Zinc chromate primer Finish coat - 1 coat of Phthalic resin enamel	1 coat of Tar epoxy resin
Casing Cover Bracket	Cast Iron (FC)			

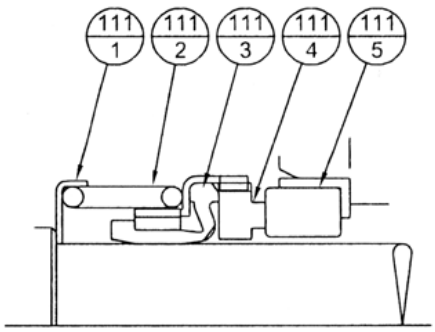
Ebara Flange Motor With Stabshaft End Suction Volute Pump Model **FSDA**

Sectional View - 125x100 FSDLA, 150x125 FSDHA,FSDJA,FSDKA,FSDLA; 200x150 FSHA,FSJA,FSKA 50 Hz



Mechanical Seal Type (Standard)

Model AKN

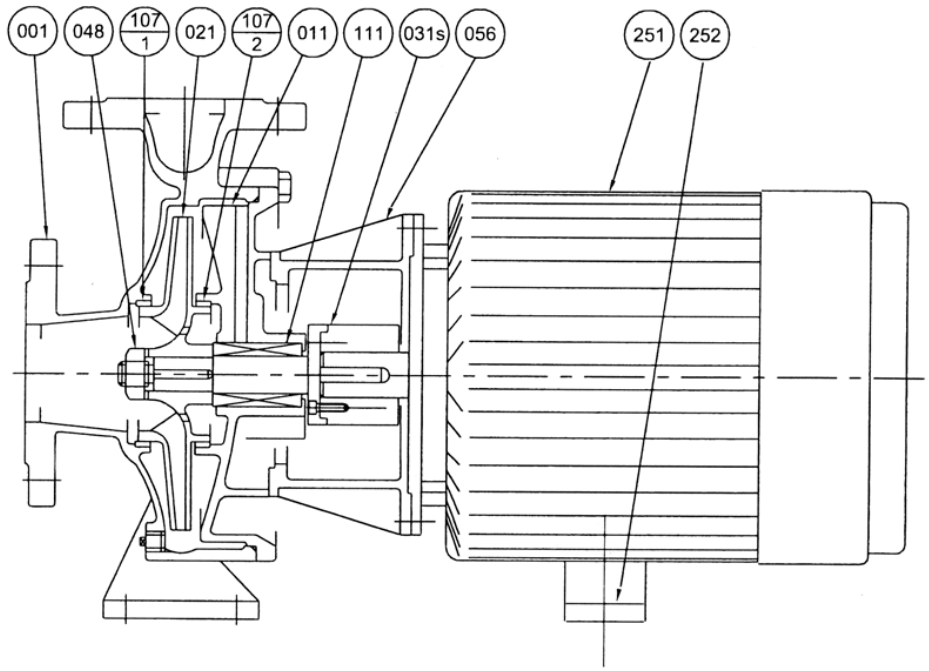


No	Part Name	Material	Qty
252	Motor Stay	Steel	1
251	Electric Motor	-	
111	Mechanical seal	-	
107-2	Casing Ring	Bronze	
107-1	Casing Ring		
048	Impeller Nut	Brass	
031s	Stud Shaft	316 Stainless Steel	
021	Impeller	Bronze	
011	Casing Cover	Cast Iron	
001	Casing		

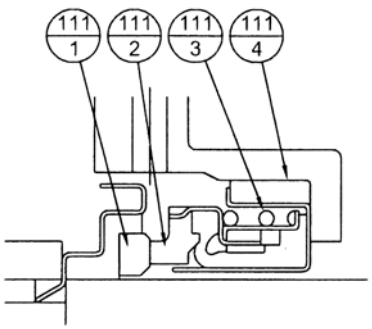
No	Part Name	Material	Qty
111-5	Seat	Ceramic	1
111-4	Face	Carbon	
111-3	Friction Ring	Nitrilie	
111-2	Spring	316 Stainless Steel	
111-1	Spring Holder		

Ebara Flange Motor With Stabshaft End Suction Volute Pump Model **FSDA**

Sectional View - 80x65 FSDGA,HA,JA,KA; 100x80 FSDGA,HA,JA; 125x100 FSDKA 50 Hz



Mechanical Seal Type (Standard)
Model FH



111-4	Packing	Rubber/ NBR	1
111-3	Spring	Stainless	
111-2	Seal Ring	Carbon	
111-1	Mating Ring	Ceramic	
No	**Part Name**	**Material**	**Qty**

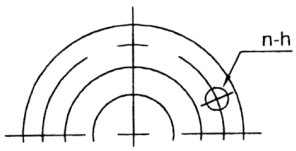
252	Motor Stay	Steel	1
251	Electric Motor	-	
111	Mechanical seal	-	
107-2	Casing Ring	Bronze	
107-1	Casing Ring		
048	Impeller Nut	Brass	
031s	Stud Shaft	316 Stainless Steel	
021	Impeller	Bronze	
011	Casing Cover	Cast Iron	
001	Casing		
No	**Part Name**	**Material**	**Qty**

Dimension - 4 Pole Drive with Motor (1/2) 50 Hz

■ Flange ■ Pump

Dimension - Flange

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
150	280	240	212	2	26	8	23



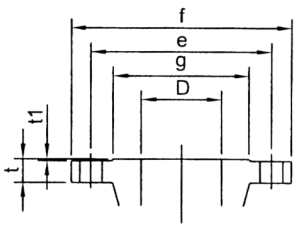
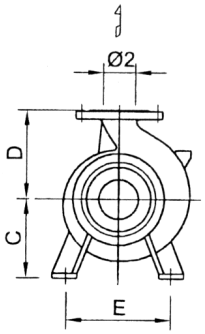
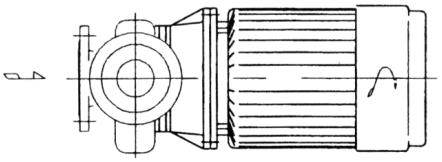


Fig. 1





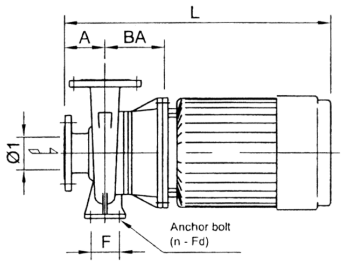
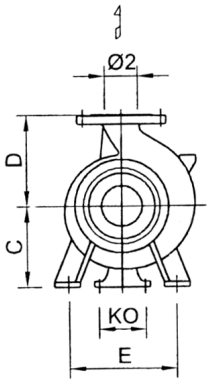
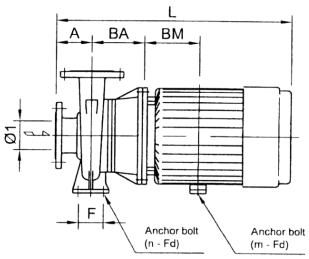


Fig. 2





Dimension - Pump

Model	Motor	Size		Fig.	Pump											Motor		Total	
	kW	∅1	∅2	No.	A	BA	BM	C	D	E	F	K	KO	n - Fd	m - Fd	Frame	wt kg	L	wt kg
80x65 FSD4GA	0.75	80	65	1	100	135	-	160	180	212	70	-	125	4-M12	-	80	17	477	78
80x65 FSD4HA	1.5	80	65	1	100	135	-	160	200	212	70	-	125	4-M12	-	90L	23.5	556.5	95
80x65 FSD4JA	2.2	80	65	2	100	156	133	180	225	250	95	-	125	4-M12	2-M12	100L	32	570.5	114
	3.7						180									112M	43	627	125
80x65 FSD4KA	5.5	80	65	3	125	186	159	225	280	315	120	100	190	4-M16	4-M16	132S	62	685	225
	7.5						178									132M	77	723	239
	11					211	213					150				160M	115	834	280
100x80 FSD4GA	1.5	100	80	1	100	135	-	160	200	212	95	-	125	4-M12	-	90L	23.5	556.5	94
	2.2			2			133								2-M12	100L	32	579.5	102
100x80 FSD4HA	2.2	100	80	2	100	156	133	180	225	250	95	-	125	4-M12	2-M12	100L	32	570.5	115
	3.7						180									112M	43	627	126
100x80 FSD4JA	3.7	100	80	2	100	156	180	200	250	280	120	-	125	4-M16	2-M16	112M	43	627	134
	5.5			3		186	159					100	190		4-M16	132S	62	660	171
125x100 FSD4KA	7.5	125	100	3	140	186	178	250	315	315	120	150	190	4-M16	4-M16	132M	77	738	258
	11						213									160M	115	849	303
	15					211	235									160L	132	893	345
	18.5						241.5									180MC	172	778	369
125x100 FSD4LA	22	125	100	3	140	251	260.5	280	355	400	150	250	300	4-M20	4-M20	180LC	205	1000	473
	30						285.5									200LC	278	1060	557
150x125 FSD4HA	7.5	150	125	3	140	226	178	250	315	315	120	150	190	4-M16	4-M16	132M	77	738	250.5
	11						213									160M	115	864	282
	15						235									160L	132	908	330

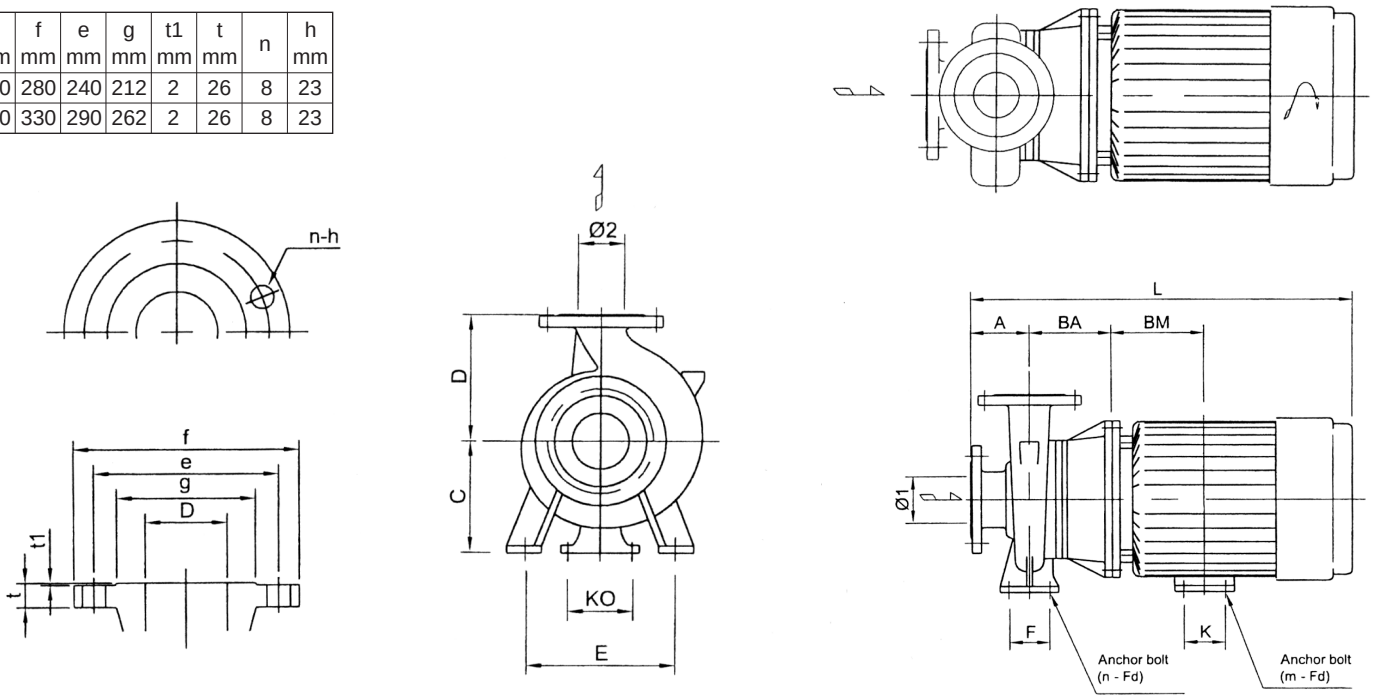
Unit: mm, unless otherwise stated

Dimension - 4 Pole Drive with Motor (2/2) 50 Hz

■ Flange ■ Pump

Dimension - Flange

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	8	23



Dimension - Pump

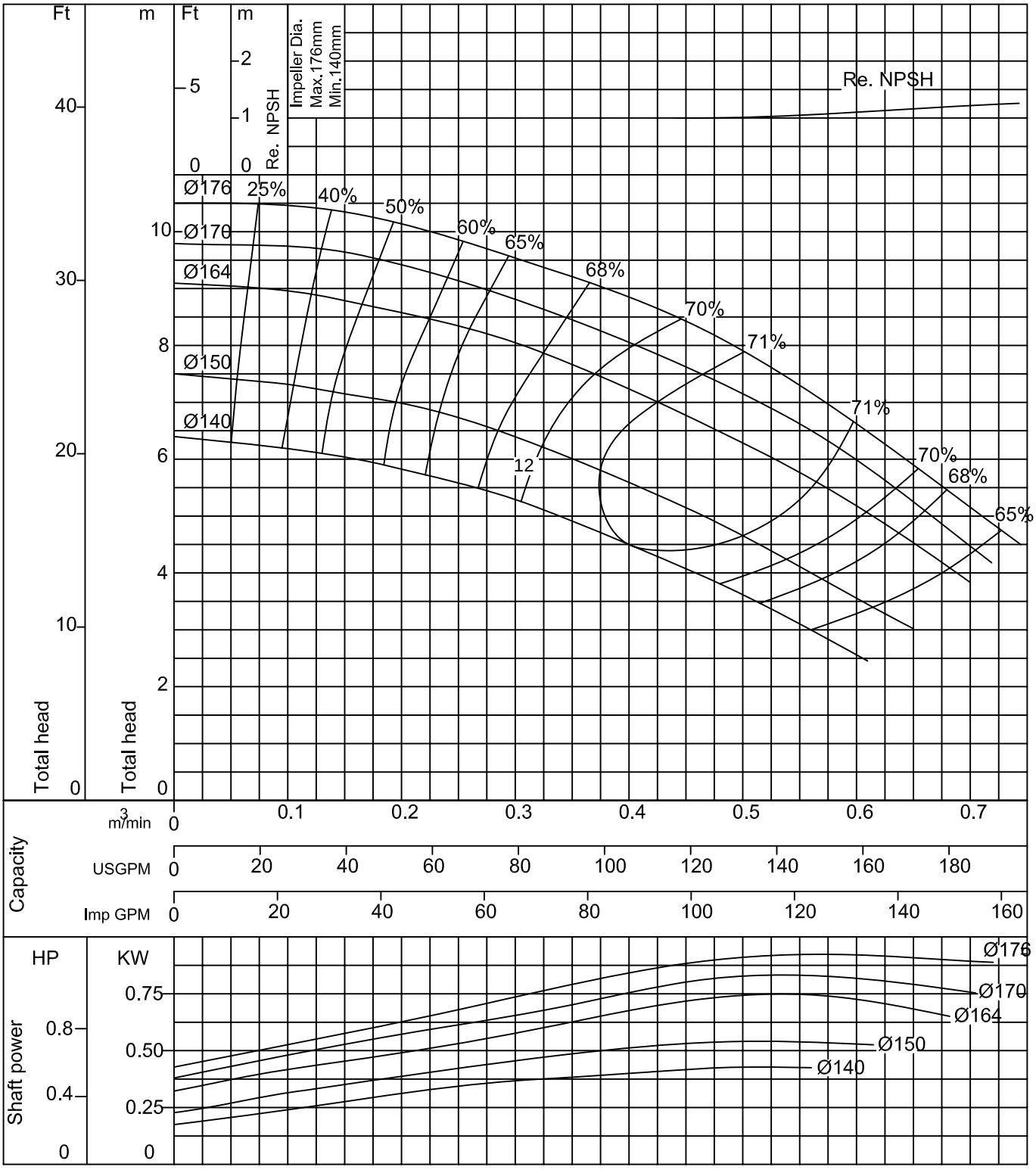
Model	Motor	Size		Fig.	Pump											Motor		Total	
	kW	∅1	∅2	No.	A	BA	BM	C	D	E	F	K	KO	n - Fd	m - Fd	Frame	wt kg	L	wt kg
150x125 FSD4JA	15	150	125	3	140	226	235	250	355	315	120	150	190	4-M16	4-M16	160L	132	908	337.5
	18.5						241.5					200	250			180MC	172	928	359.5
	22						260.5					250	300			180LC	205	966	394
150x125 FSD4KA	30	150	125	3	140	260	285.5	280	355	400	150	250	300	4-M20	4-M20	200LC	278	1060	559.5
	37					295	292									225SC	327	1111	594
150x125 FSD4LA	45	150	125	3	140	295	305	315	400	400	150	300	350	4-M20	4-M20	225MC	351	1136	661
	55						325									250SC	475	1177.5	822
	75						344									250MC	550	1215.5	876
200x150 FSD4HA	5.5	200	150	3	160	186	159	280	355	400	150	150	190	4-M20	4-M20	132S	62	720	277
	7.5						178									132M	77	758	288
	11					226	213					200	250			160M	115	884	329
200x150 FSD4JA	15	200	150	3	160	260	235	280	375	400	150	200	250	4-M20	4-M20	160L	132	962	422
	18.5						241.5									180M	172	982	463
	22						260.5									180L	205	1020	493
	30					295	285.5					250	300			200L	278	1080	577
	37						292									225SC	327	1131	607
200x150 FSD4KA	37	200	150	3	160	336	292	315	400	450	150	250	300	4-M20	4-M20	225SC	327	1172	645.5
	45						305					300	350			225MC	351	1197	693
	55						325									250SC	475	1238.5	816

Unit: mm, unless otherwise stated

Performance Curve

50 Hz

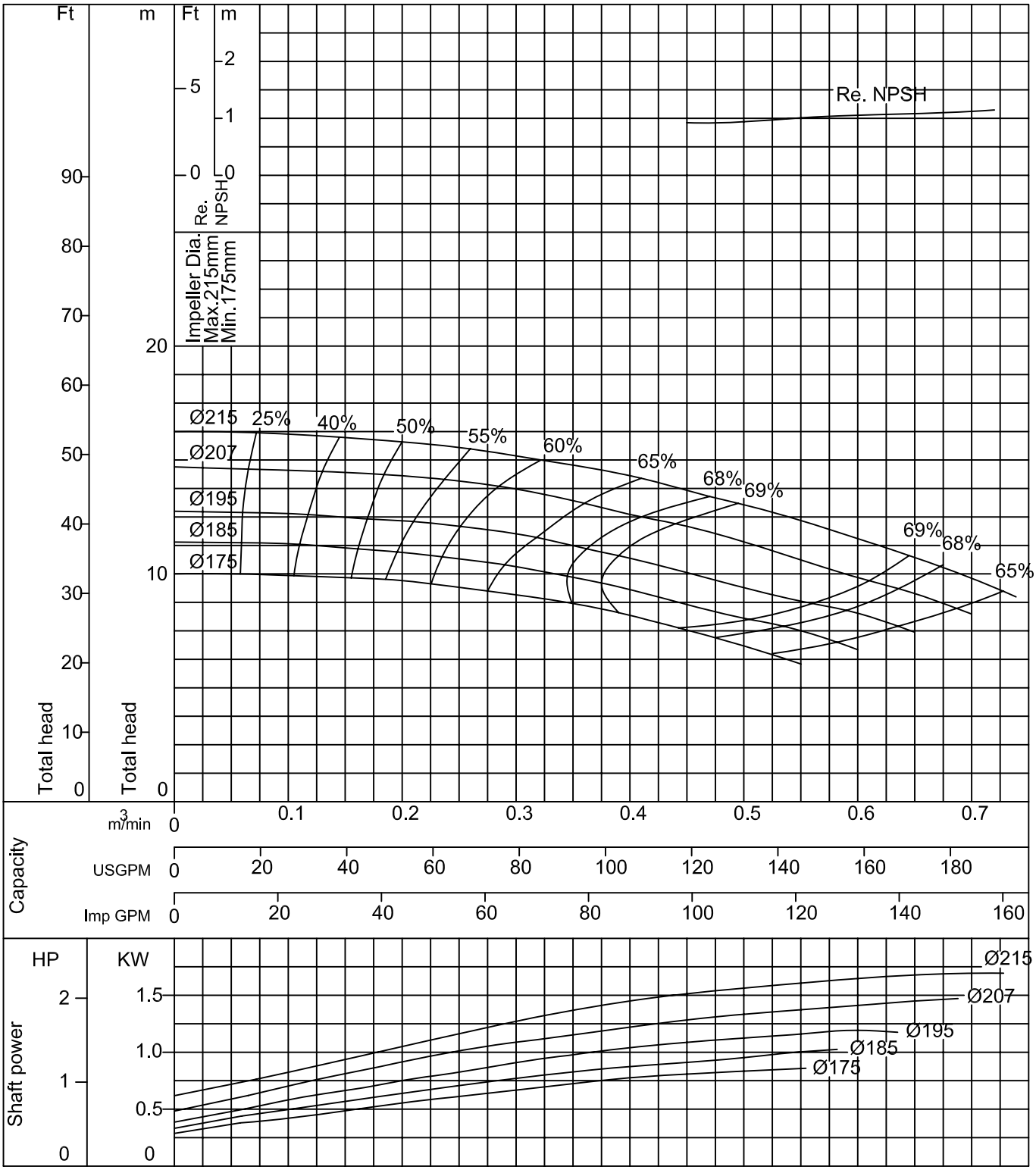
80X65 FSD4GA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FSD5604

Performance Curve 50 Hz

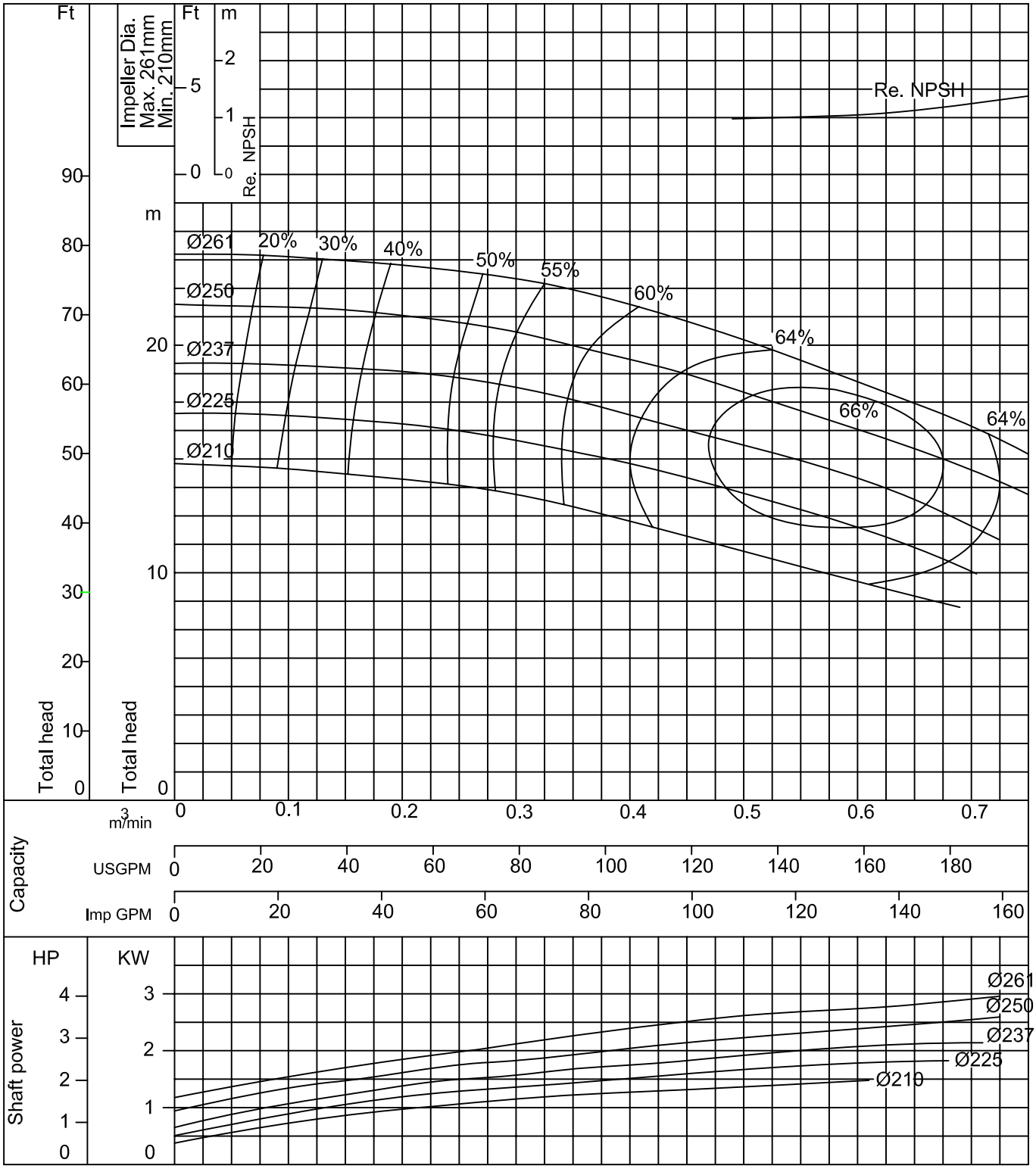
80X65 FSD4HA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FSD5605

Performance Curve 50 Hz

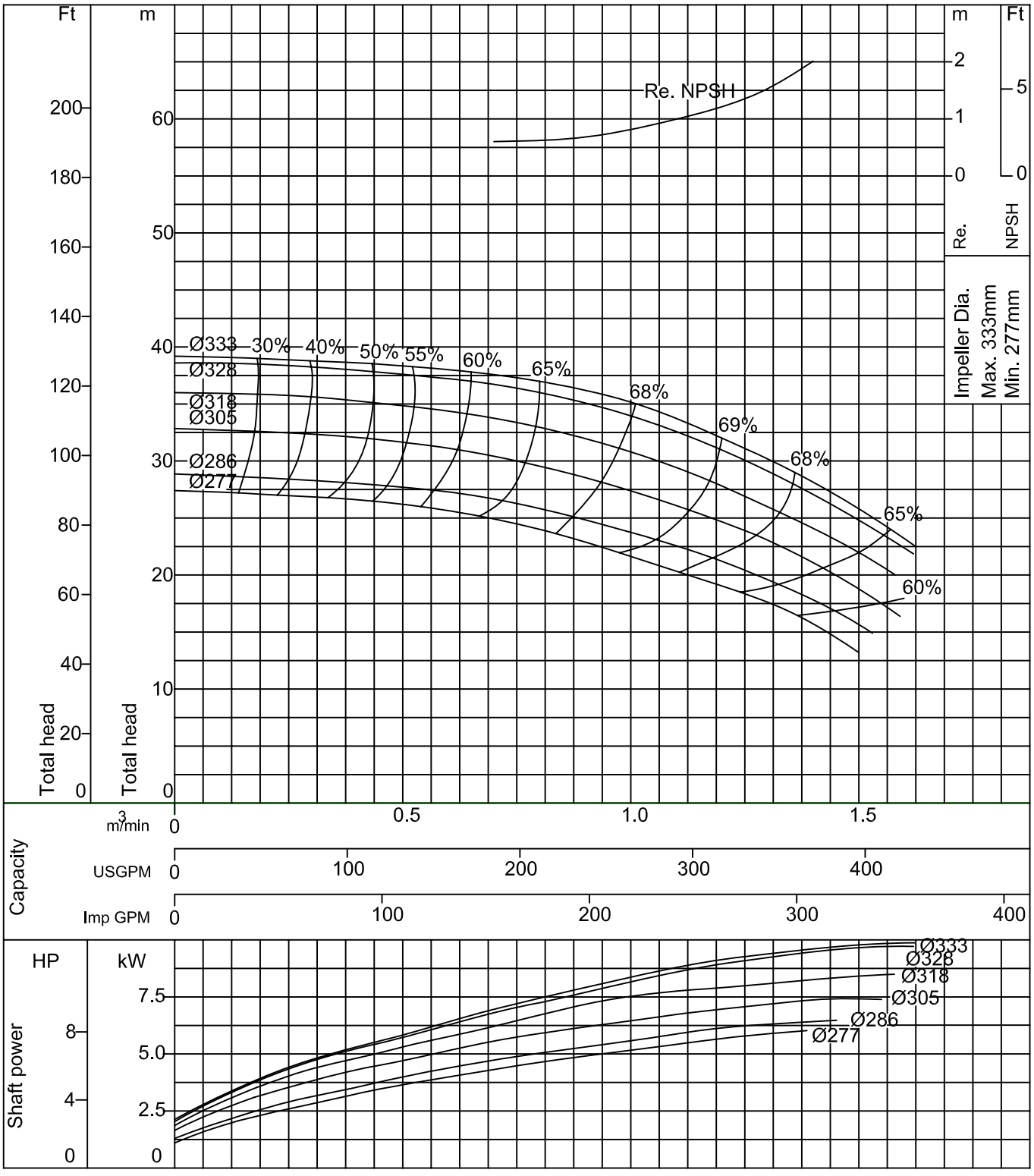
80X65 FSD4JA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FSD5606

Performance Curve 50 Hz

80X65 FSD4KA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt

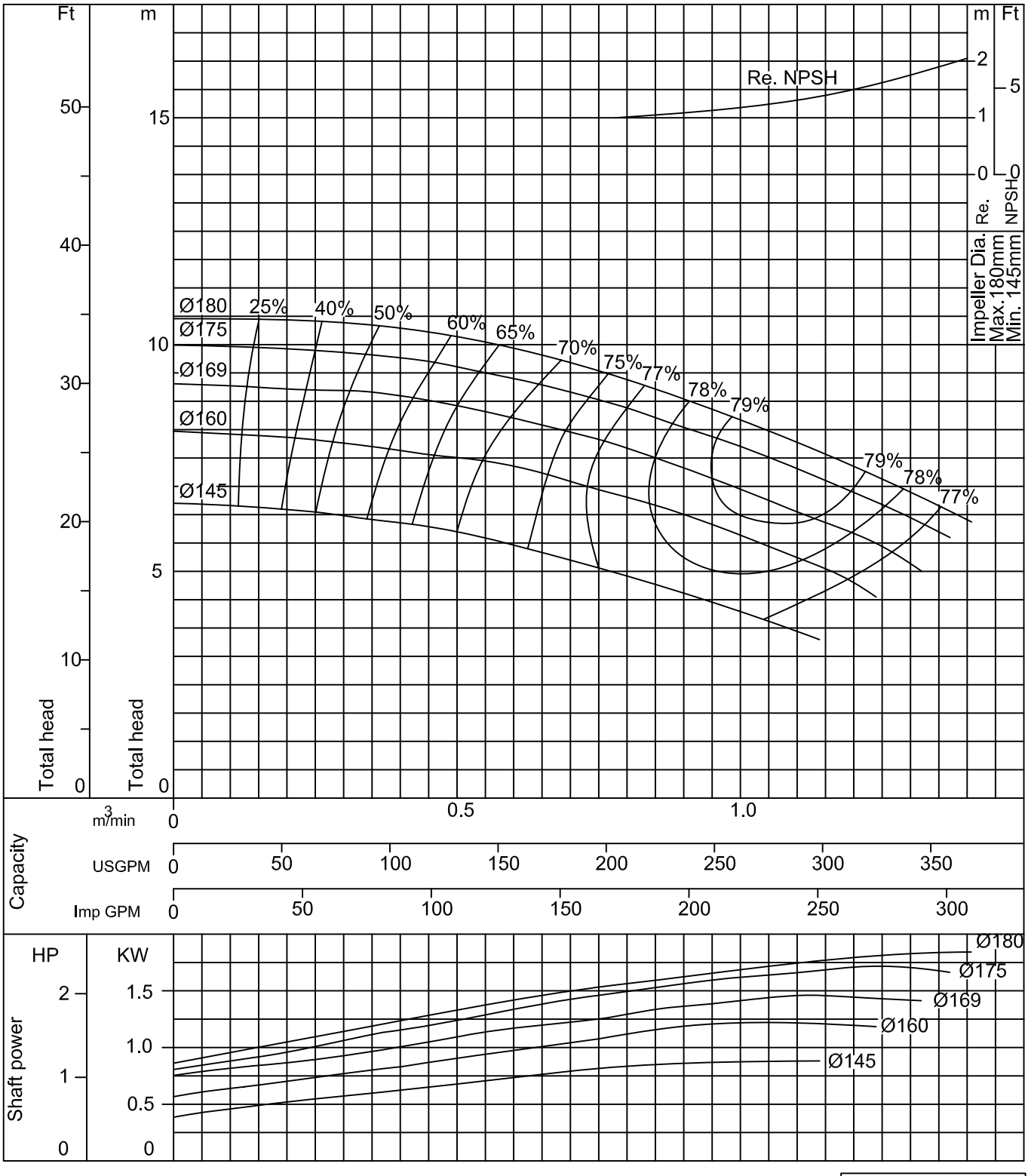


Curve No - 4 - 5FSD5607

Performance Curve

50 Hz

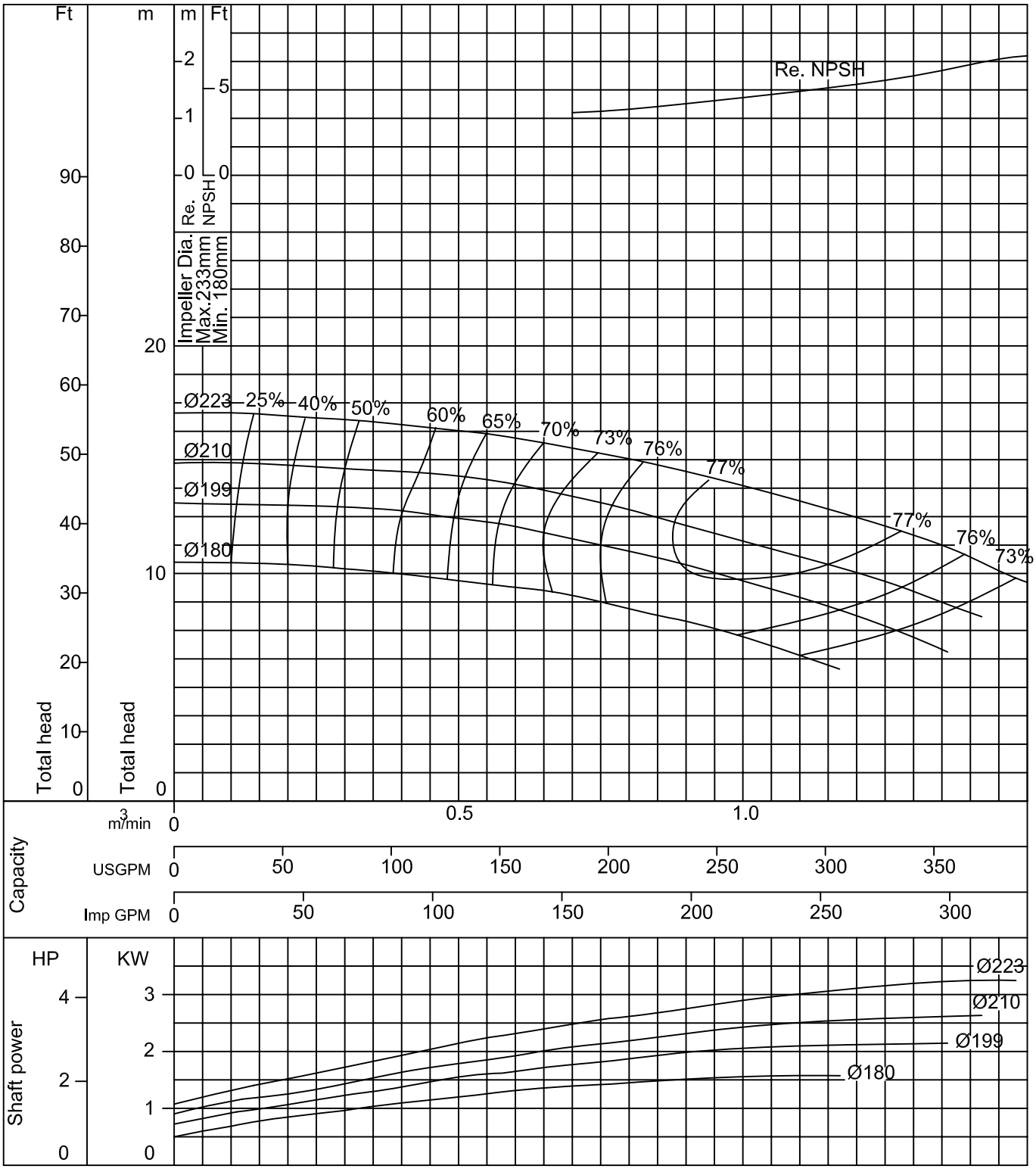
100X80 FSD4GA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FSD5608

Performance Curve 50 Hz

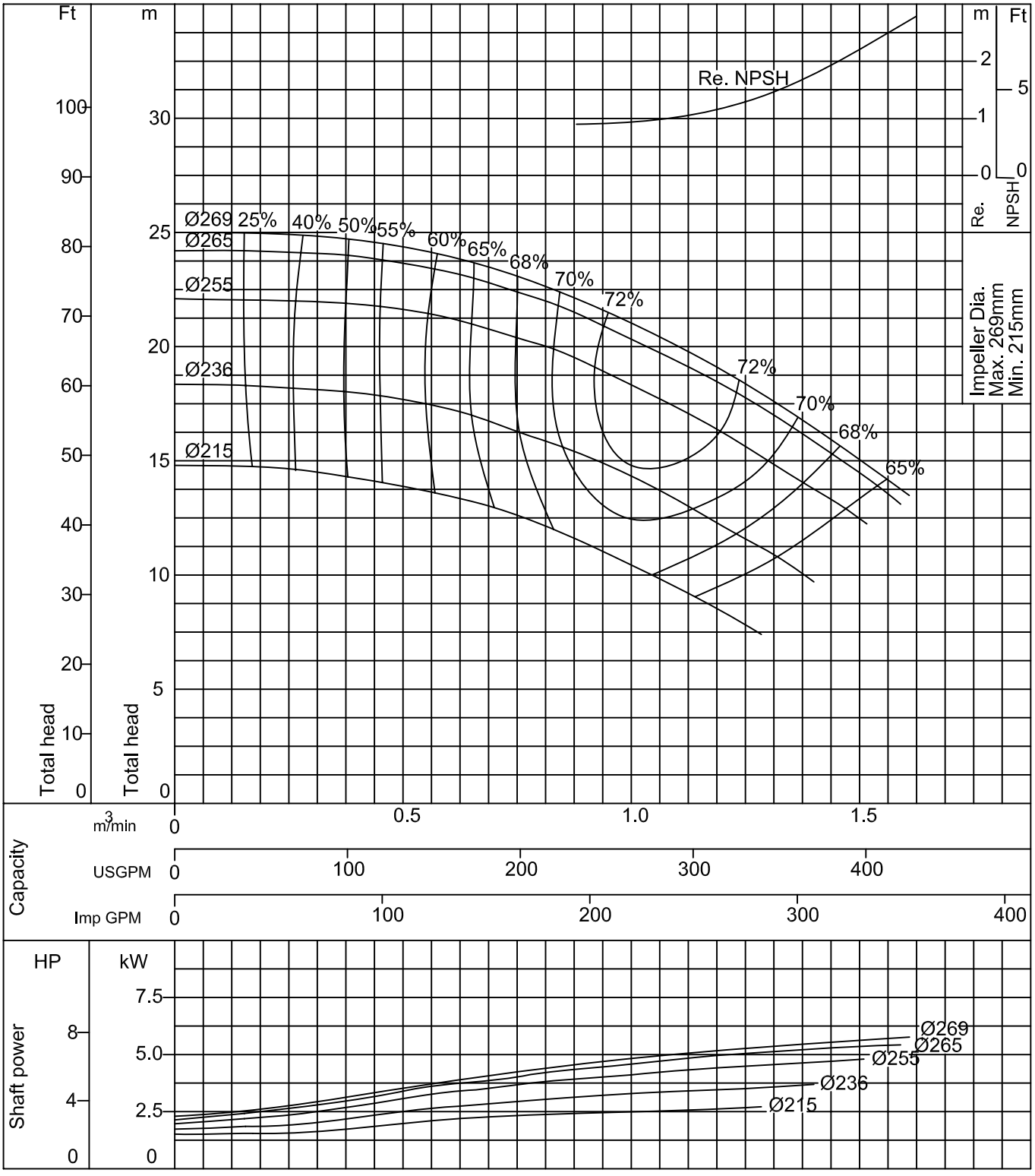
100X80 FSD4HA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FSD5609

Performance Curve 50 Hz

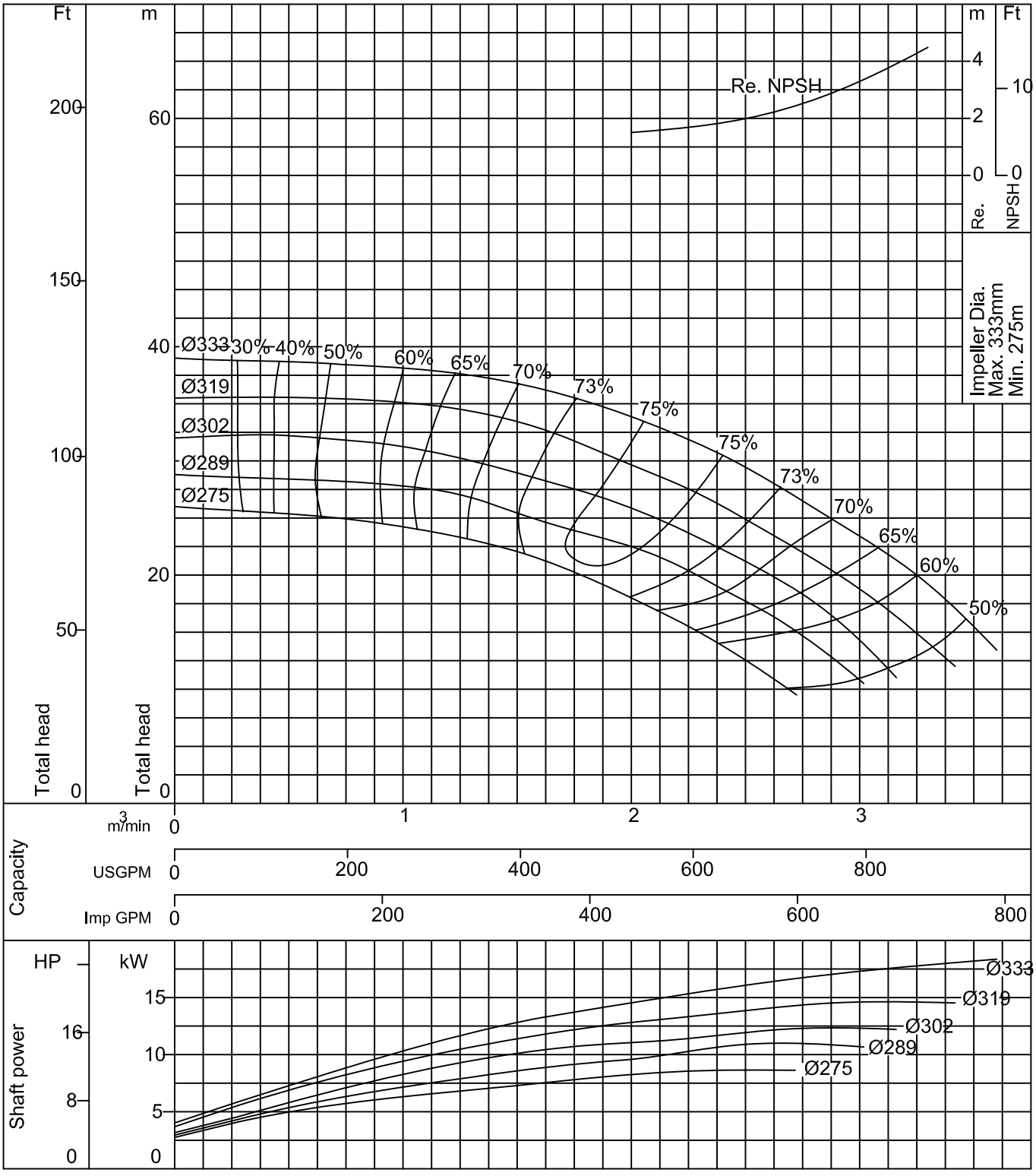
100X80 FSD4JA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FSD5610

Performance Curve 50 Hz

125X100 FSD4KA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt

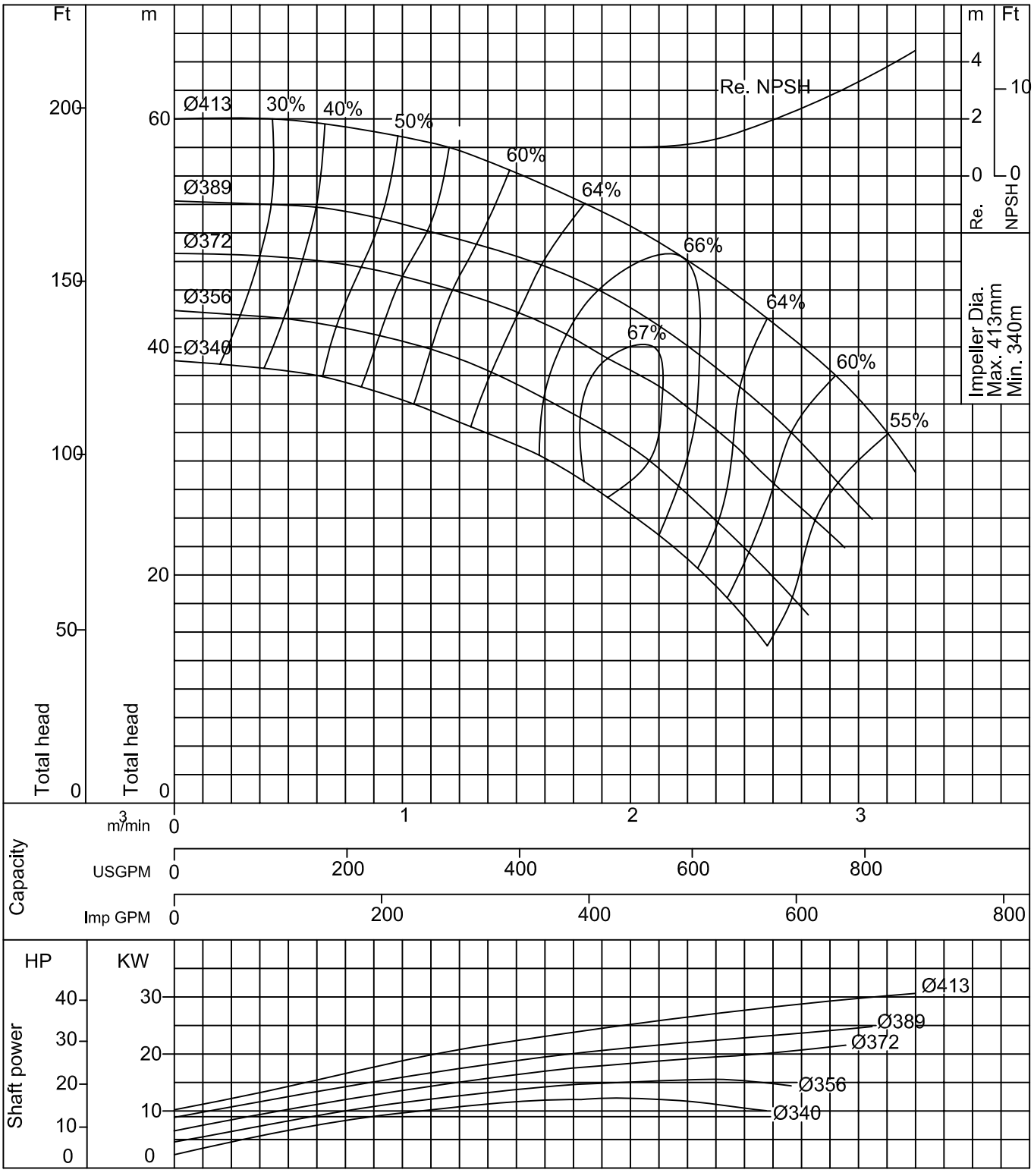


Curve No - 4 - 5FSD5611

Performance Curve

50 Hz

125X100 FSD4LA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt

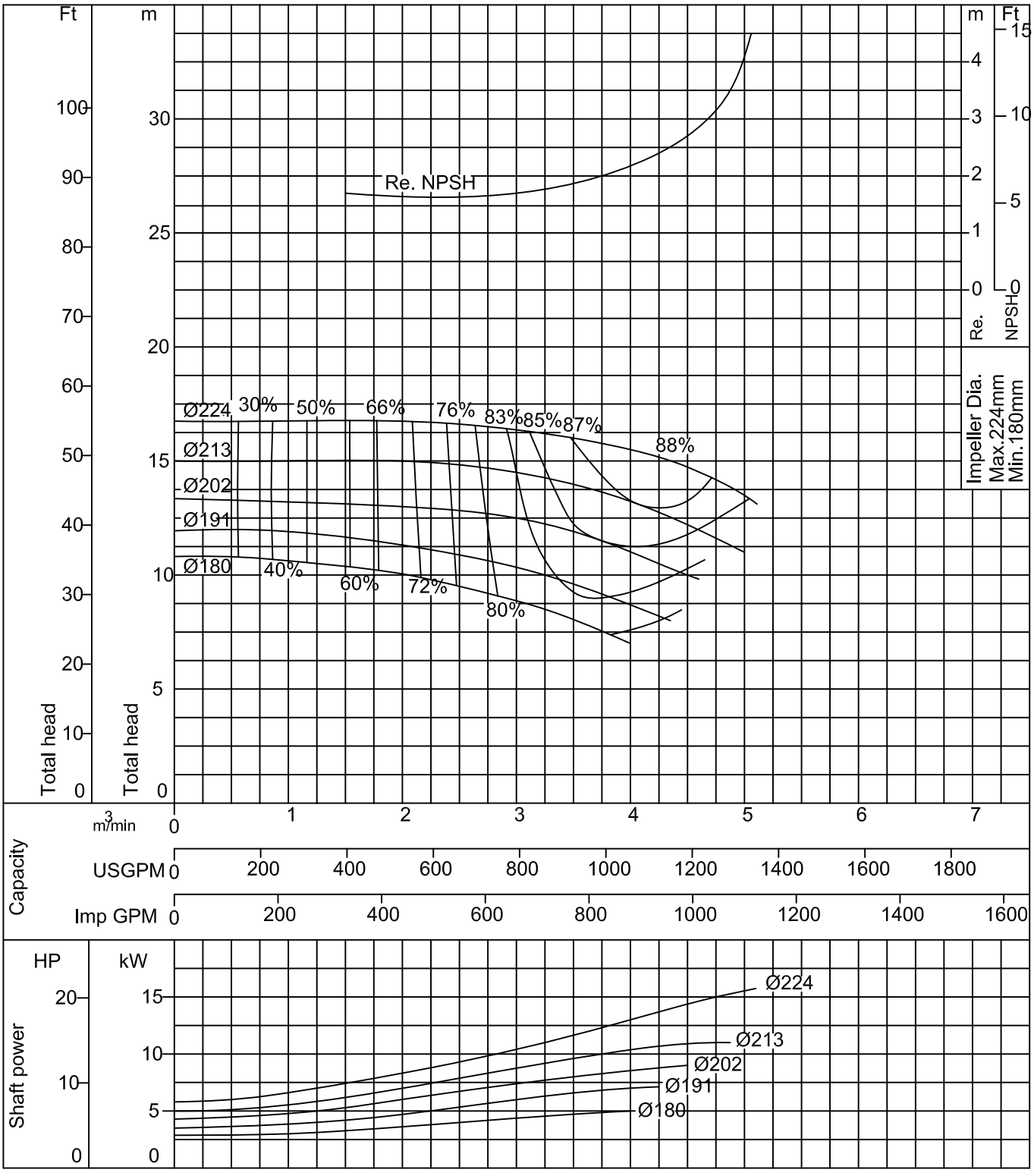


Curve No - 4 - 5FSD5612

Performance Curve

50 Hz

150X125 FSD4HA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt

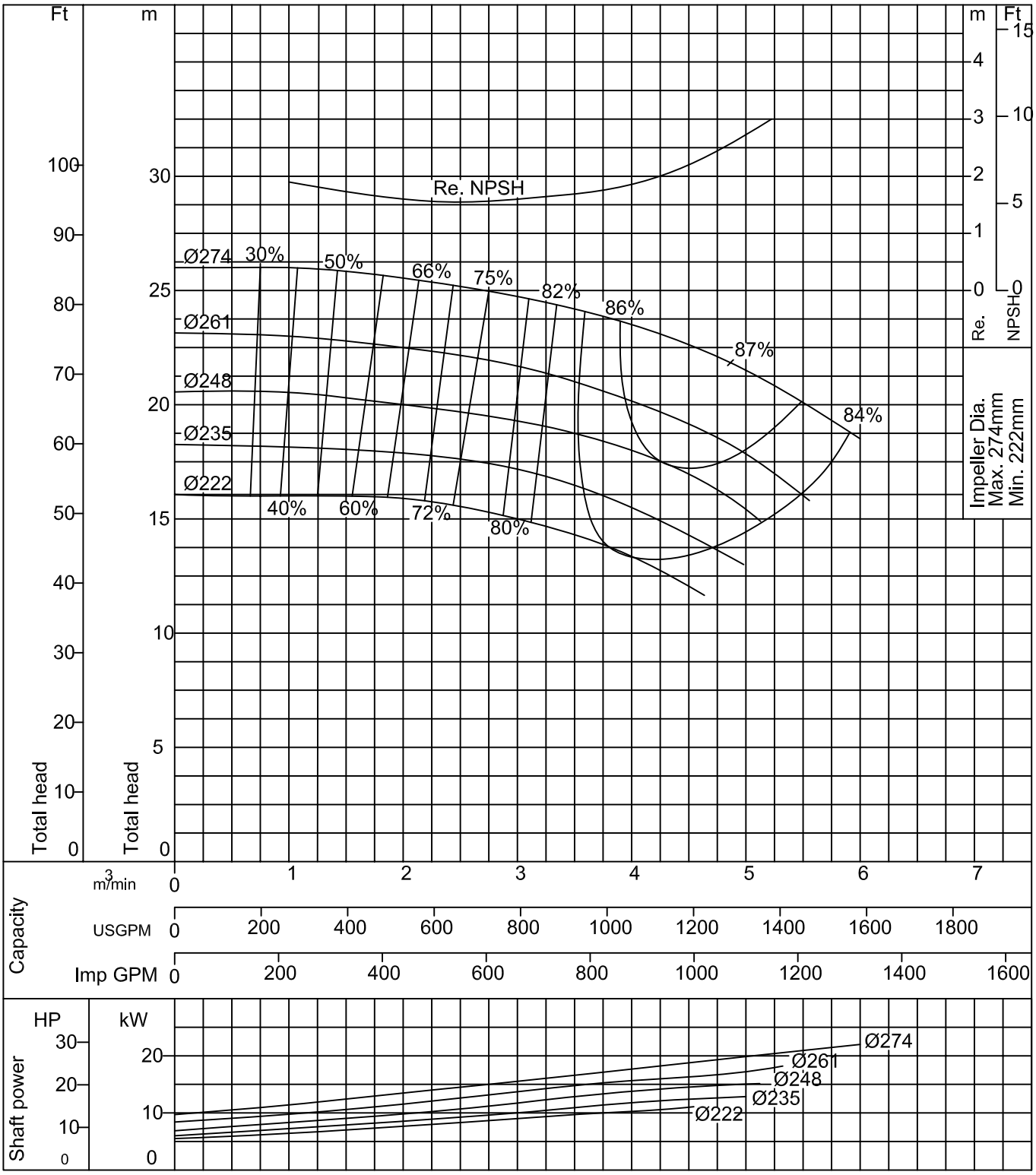


Curve No - 4 - 5FSD5613

Performance Curve

50 Hz

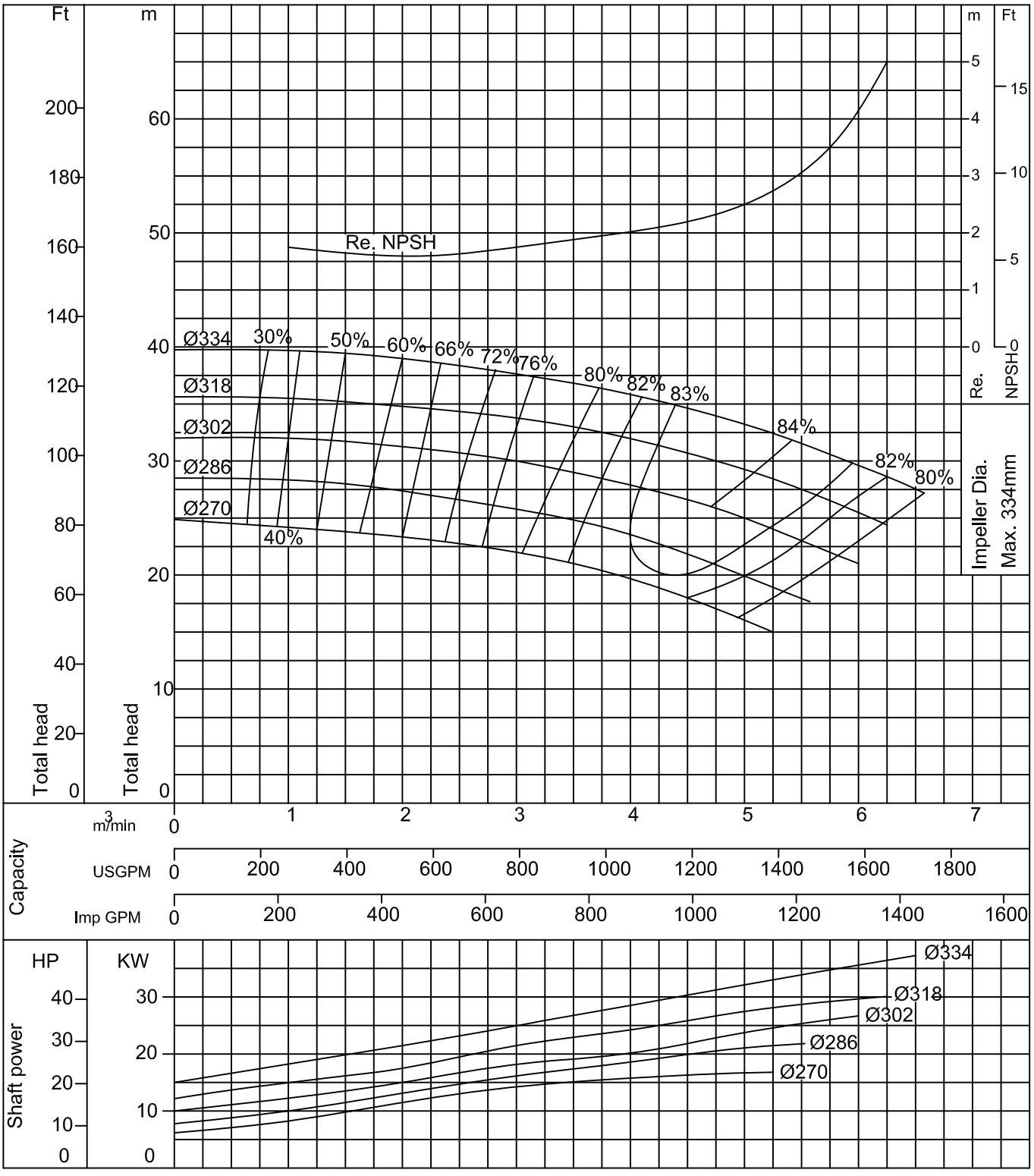
150X125 FSD4JA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FSD5614

Performance Curve 50 Hz

150X125 FSD4KA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt

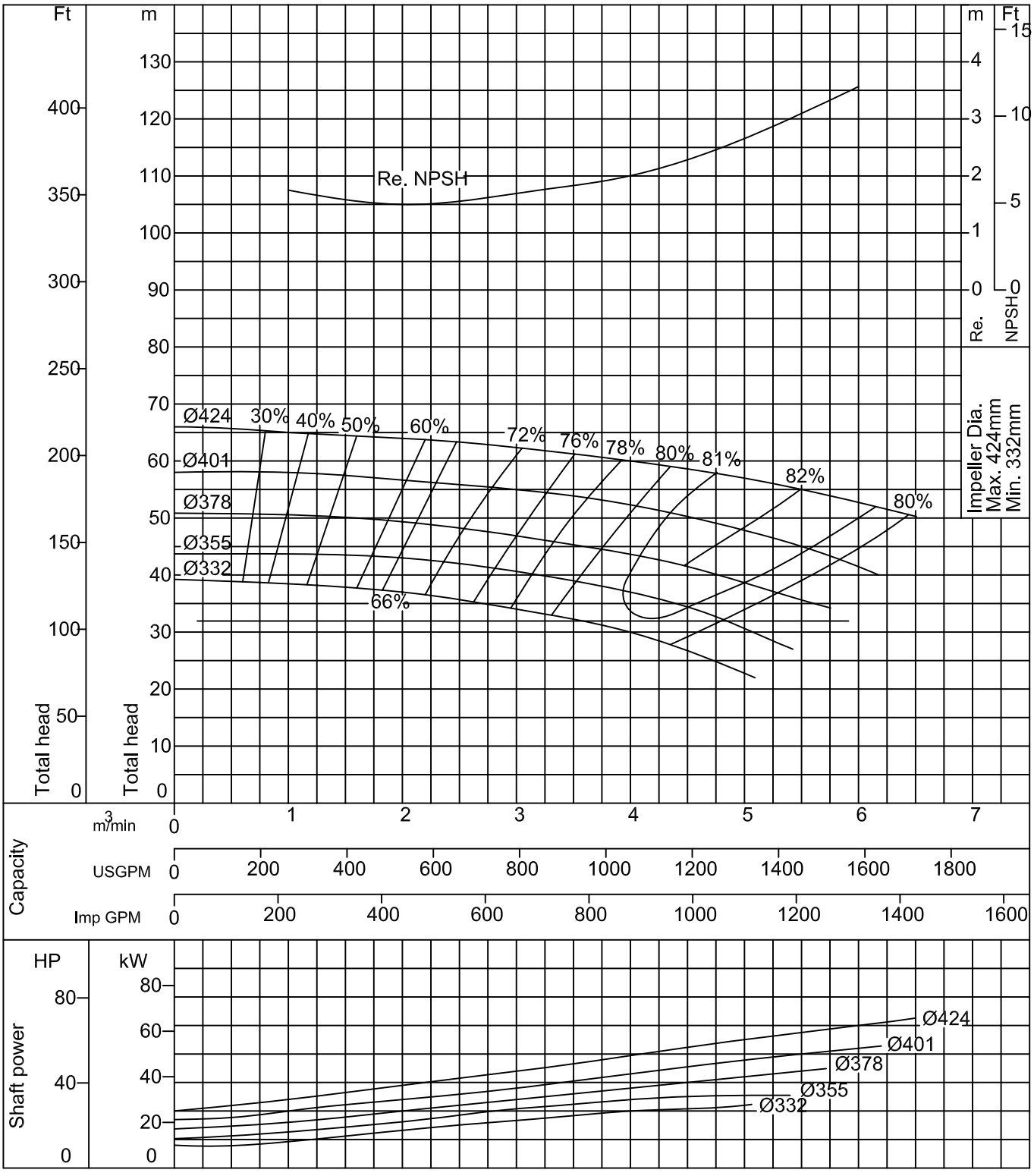


Curve No - 4 - 5FSD5615

Performance Curve

50 Hz

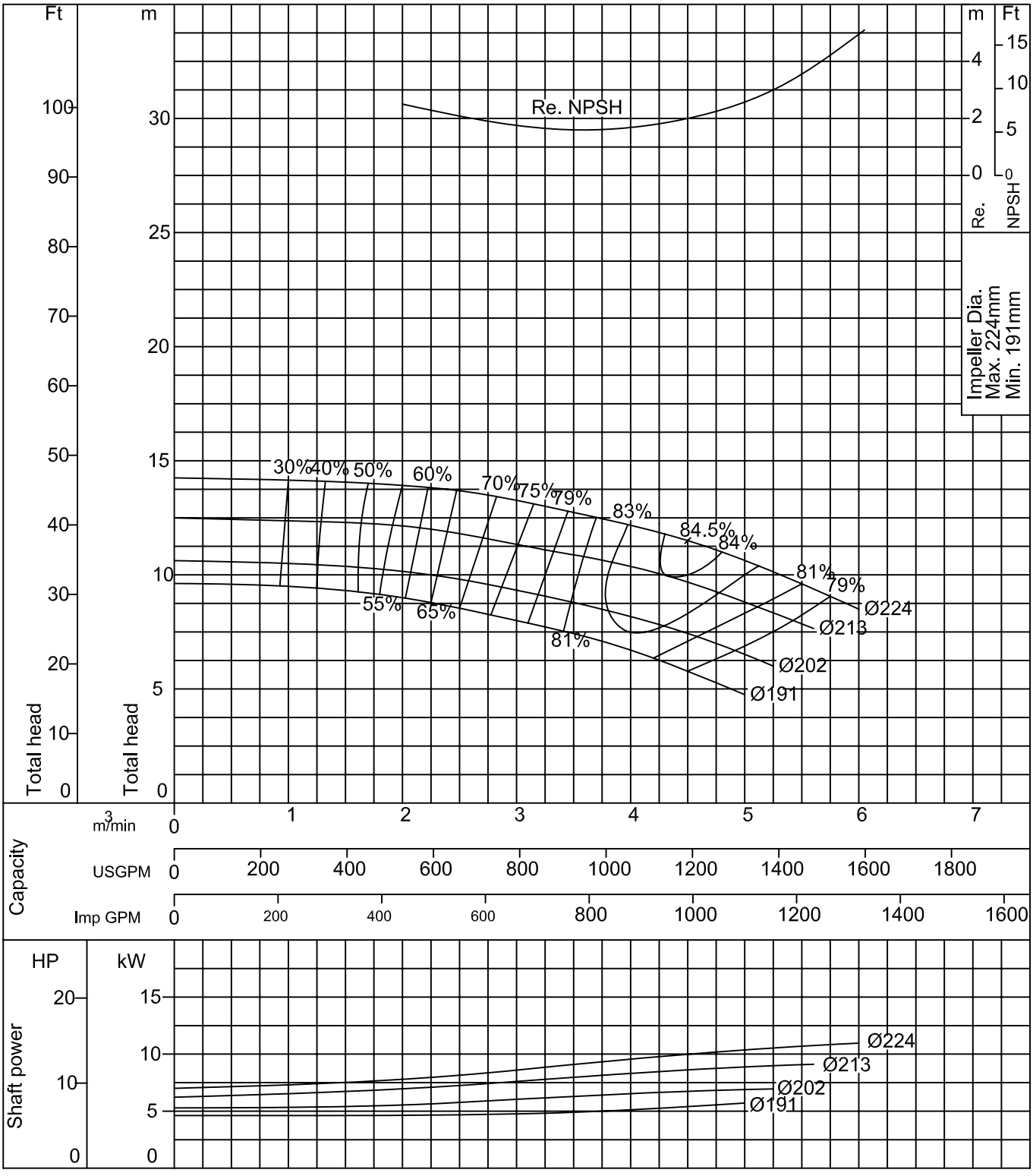
150X125 FSD4LA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FSD5616

Performance Curve 50 Hz

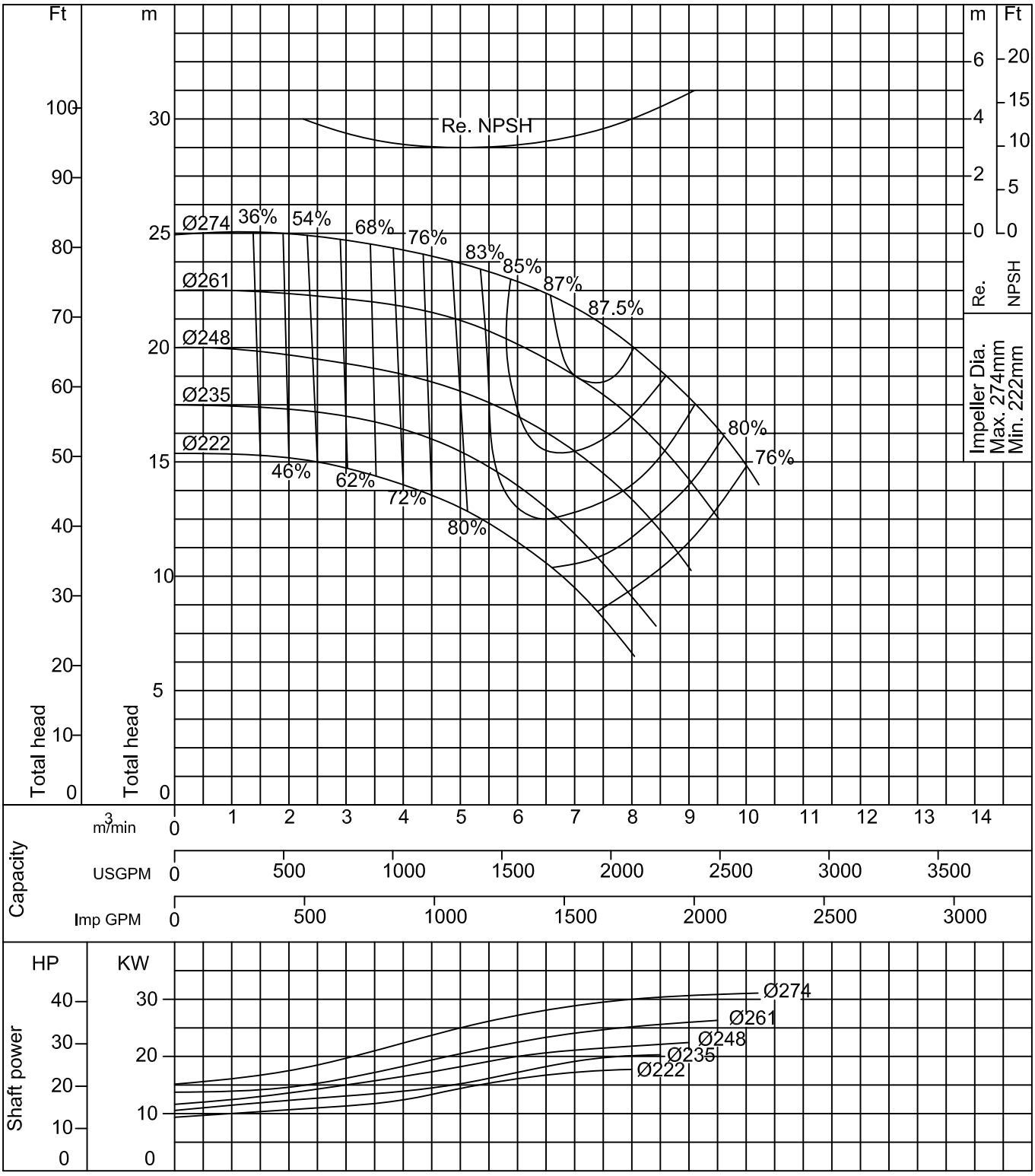
200X150 FSD4HA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FSD5617

Performance Curve 50 Hz

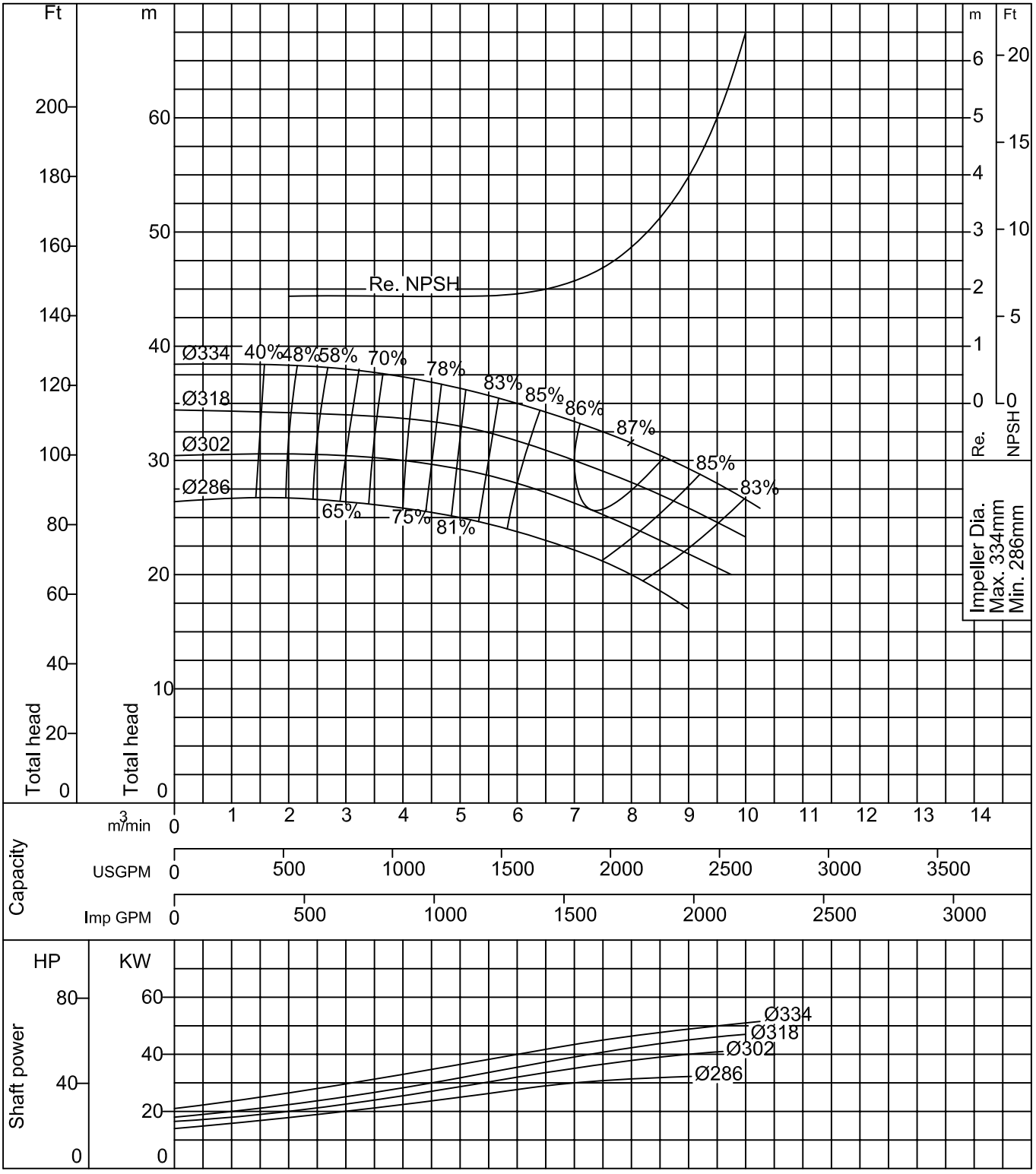
200X150 FSD4JA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FSD5618

Performance Curve 50 Hz

200X150 FSD4KA	According to ISO testing code 2548 Class C
50Hz (Approx. speed 1450min^{-1})	S.G.= 1.0 Vis.= 1.0 cSt



Curve No - 4 - 5FSD5619

All specifications are subject to change without notice

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Distributor / Dealer

EBARA INDONESIA PRODUCTS

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			