



EBARA

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FP10CT-R2

FIRE FIGHTING PUMP

Model FSPA and CNPA

Compliance to NFPA 20



CENTRIFUGAL FIRE PUMP-END SUCTION



CENTRIFUGAL FIRE PUMP-SPLIT CASE



ISO 9001:2000
Lic.No.QEC22090

•FEATURES

1. Non Overload design to ensure stable performance for all applications
2. Corrosion resistant materials used on the rotating parts
3. Hydraulically balanced impeller extends bearing life and assures smoother operation
4. Fully compliance to NFPA-20 and certified by Underwriters Laboratories (UL)

• End Suction Pumps ^{*)}

1. Easy removal and maintenance, BPO (Back Pull Out) system allows all rotating elements to be removed without disconnecting suction and discharge pipe work.
2. Top centreline discharge, foot support under casing for maximum resistance to misalignment and distortion from pipe loads.
3. Flow rate capacity 250 up to 750 USGPM.
4. Working pressure up to 250 psi with 250 lb. ANSI Flanges.

^{*)} UL File Number "EX15585"



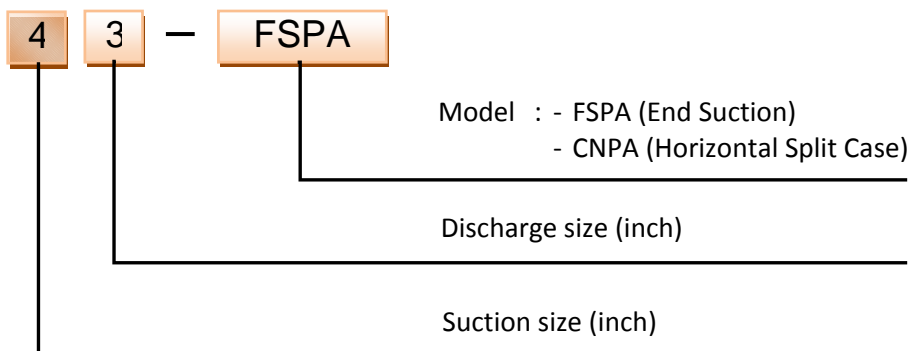
• Horizontal Split Case Pumps ^{**)}



1. Very compact design for easy of installation and permits minimum maintenance.
2. Axially split casing allows the easy removal of the top casing for inspection and service.
3. Available in horizontal or vertical configuration.
4. Available in clockwise or counter clockwise rotation to simplify pump room layout.
5. Flow rate capacity 500 up to 1250 USGPM.
6. Working pressure up to 250 psi with 250 lb. ANSI Flanges.

^{**)} UL File Number "EX15584"

•MODEL CODE

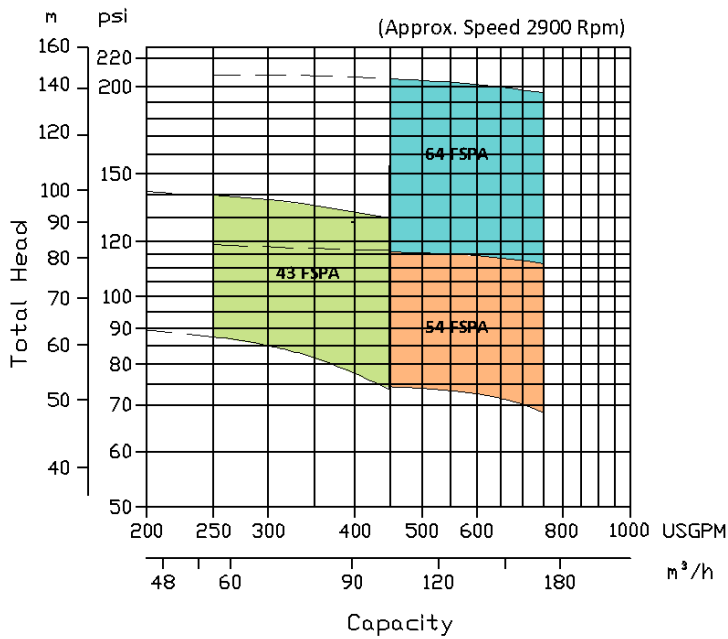


•SPECIFICATIONS

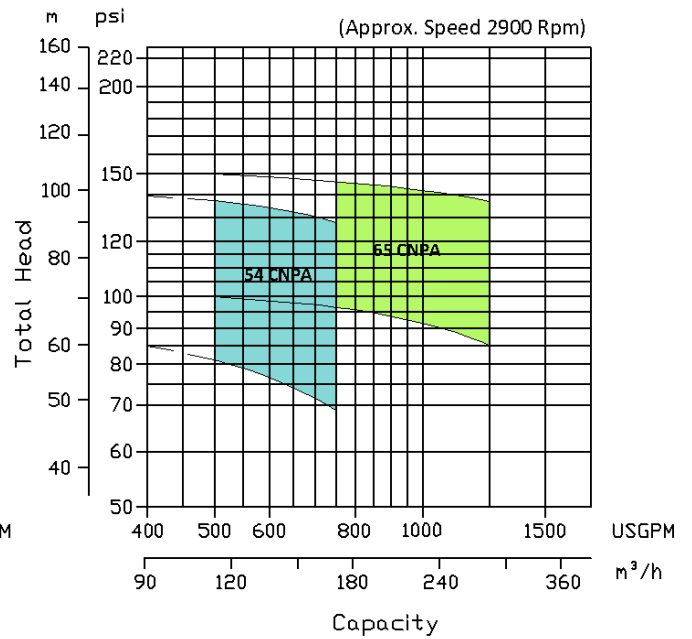
Item		Specifications
Liquid handled property		Clean water, 0 – 80 °C (32 to 176 °F)
Max. Working Pressure		250 psi
Approx. speed		2900 rpm
Construction	Impeller	Enclosed
	Shaft seal	Gland Packing
	Flushing	Self Flushing
	Bearing	Shield Ball Bearing
Flange	Suction	ANSI 250
	Discharge	ANSI 250
Material	Casing	Ductile Cast Iron (FCD450) for FSPA model Cast Iron (FC250) for CNPA model
	Impeller	Bronze casting (CAC406)
	Shaft	Stainless Steel (SUS316)
	Shaft Sleeve	Bronze Casting (CAC406)
Standard Accessories	Gland Packing	Teflon (PTFE) Impregnated
	Pressure Gauge	0 – 220 psi
	Compound Gauge	-30 in Hg – 60 psi
	Air Relieve Valve	standard

•SELECTION CHART

End Suction Pump

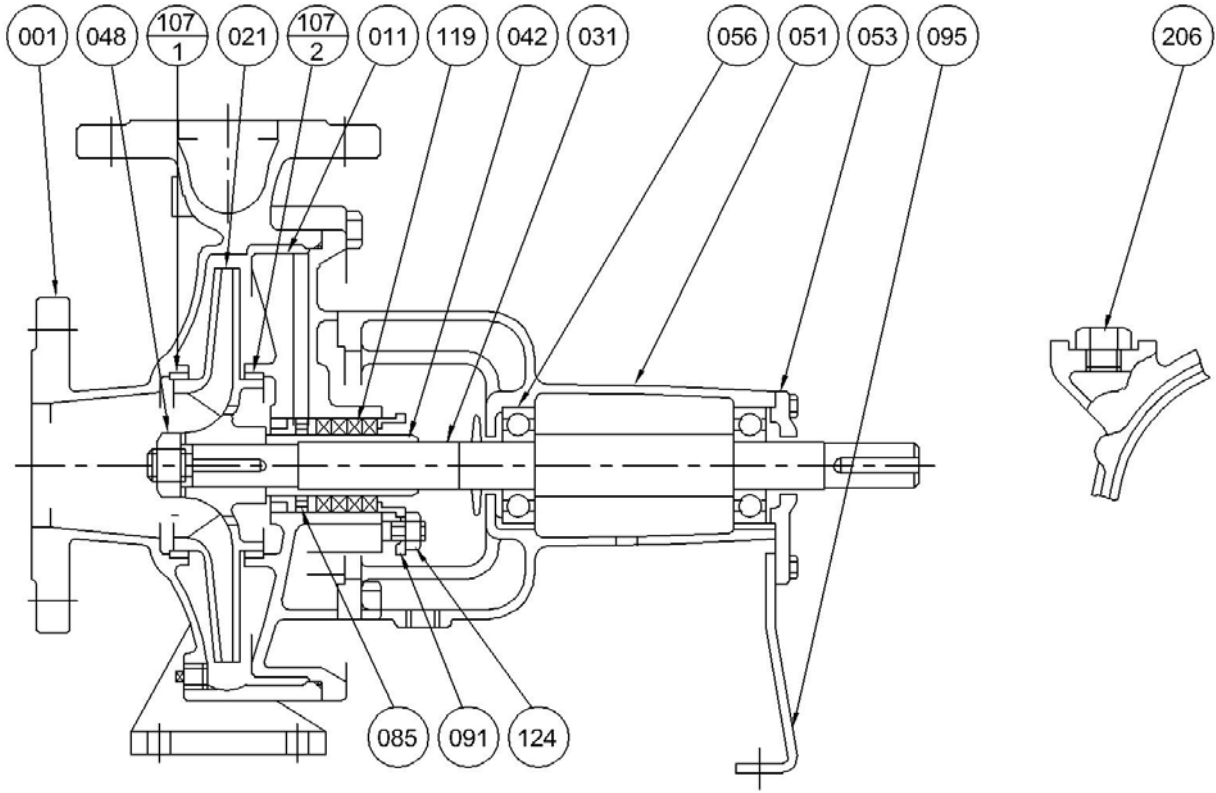


Split Case Pump



•SECTIONAL VIEW

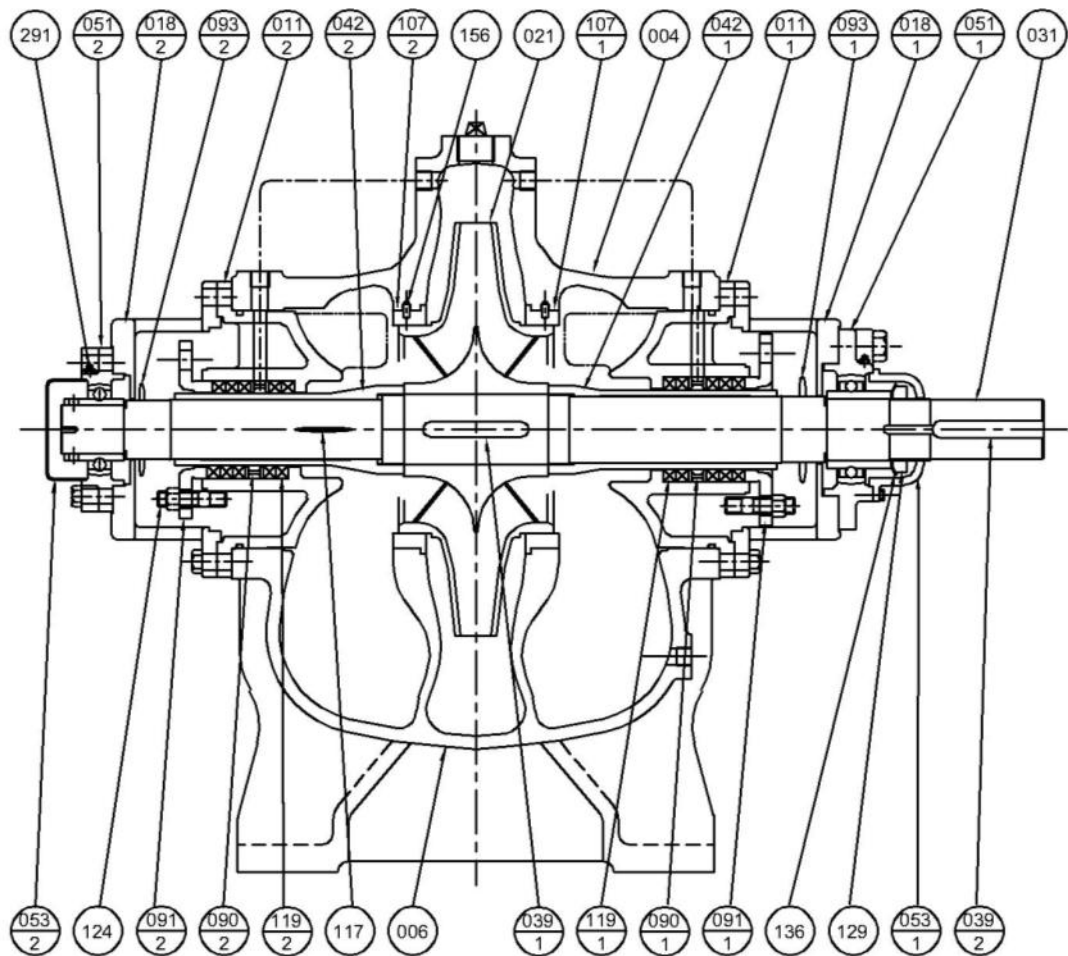
End Suction Pump



124	Gland bolt	Brass	2	119	Gland packing	Carbonized fibre	4-5
056	Ball bearing	-	2	091	Gland	Bronze (CAC406)	1
053	Bearing cover	Cast iron (FC200)	1	085	Lantern ring		
051	Bearing housing			042	Shaft sleeve		
048	Impeller nut	Brass		206	Priming plug	Stainless steel (SUS304)	
031	Shaft	Stainless steel (SUS316)	1	107-2	Casing wear ring	Bronze (CAC406)	
021	Impeller	Bronze (CAC406)		107-1	Casing wear ring		
011	Casing cover	Ductile cast iron (FCD450)		095	Stay	Steel	
001	Casing						
No.	Part Name	Material	Qty	No.	Part Name	Material	Qty

•SECTIONAL VIEW

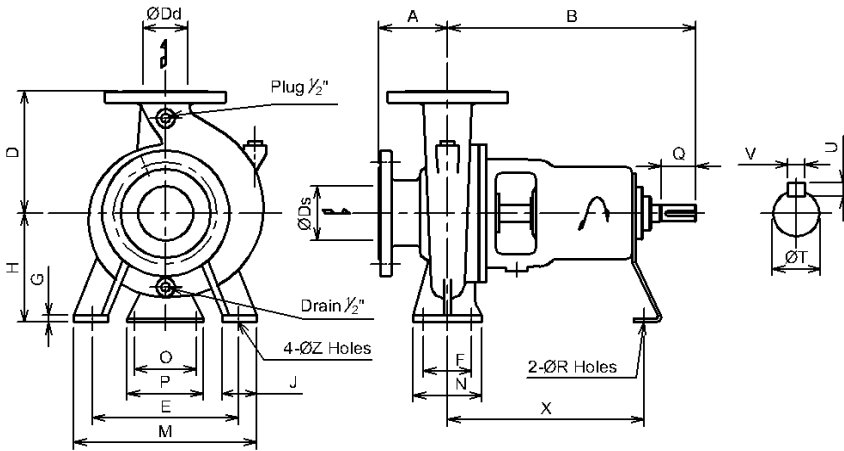
Horizontal Split Case Pump



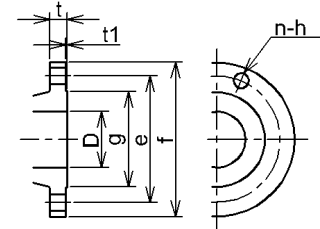
053-2	Bearing cover (CCP side)	Cast iron (FC200)	2	291	Grease nipple	C3604BD-F	2
053-1	Bearing cover (CP side)			156	Lock pin	SUS304	
051-2	Bearing unit (CCP side)	Cast iron	1	136	Bearing washer	Steel (SS400)	
051-1	Bearing unit (CP side)			129	Bearing nut		
042-2	Shaft sleeve (CCP side)	Bronze (CAC406)	4	124	Gland bolt	C3604BD-F	
042-1	Shaft sleeve (CP side)			119-2	Gland packing (CCP side)	Carbonized fibre	5
039-2	Coupling key	Steel (S50C)	119-1	Gland packing (CP side)			
039-1	Impeller key	Stainless steel (SUS316)	1	117	Gasket (casing)	V#6500	
031	Shaft			107-2	Casing wear ring (CCP side)	Bronze (CAC406)	
021	Impeller	Bronze (CAC406)	107-1	Casing wear ring			
018-2	Bearing support (CCP side)	Cast iron (FC200)	1	093-2	Deflector (CCP side)	Rubber	
018-1	Bearing support (CP side)			093-1	Deflector (CP side)		
011-2	Side cover (CCP side)	Cast iron (FC250)	1	091-2	Gland (CCP side)	Bronze (CAC406)	
011-1	Side cover (CP side)			091-1	Gland (CP side)		
006	Casing lower half			090-2	Lantern ring (CCP side)		
004	Casing upper half			090-1	Lantern ring (CP side)		
No.	Part Name	Material	Qty	No.	Part Name	Material	Qty

•DIMENSION

End Suction Pump



Flange

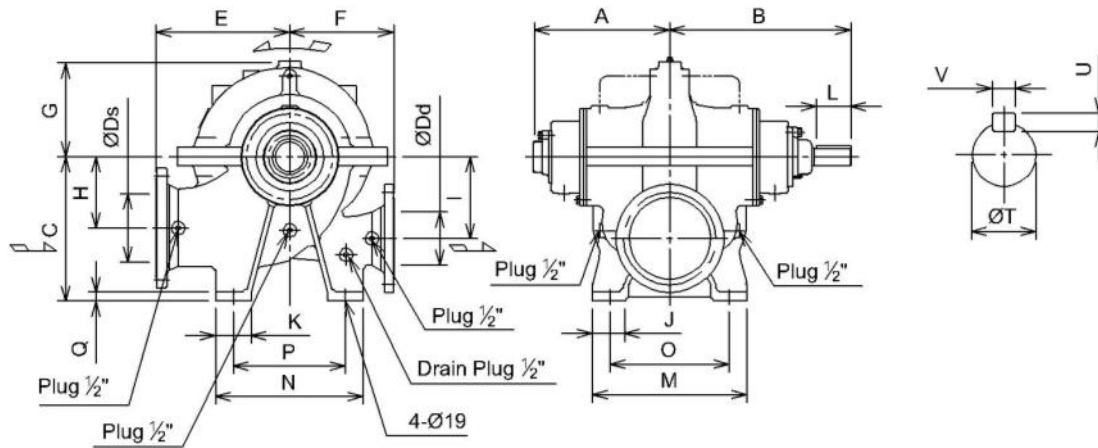


Unit: Inch (mm), unless otherwise stated

D	f	e	g	t1	t	n	h
3 (80)	8 3/4 (210)	6 3/8 (168)	5 11/16 (144)	1 1/8 (1.6)	1 1/8 (29)	8	7/8 (22)
4 (100)	10 (254)	7 7/8 (200)	6 3/8 (176)	1 1/8 (1.6)	1 3/4 (32)	8	7/8 (22)
5 (125)	11 (279)	9 3/4 (235)	8 3/16 (211)	1 1/8 (1.6)	1 3/8 (35)	8	7/8 (22)
6 (150)	12 1/2 (381)	10 5/8 (270)	9 3/16 (246)	1 1/8 (1.6)	1 7/16 (37)	12	7/8 (22)

Model	Size		Pump														Shaft				Wt kg	
	Ds	Dd	A	B	C	D	E	F	G	J	M	N	O	P	R	X	Z	T	Q	U		V
43 FSPA	4 (100)	3 (80)	3 11/16 (100)	14 3/16 (360)	7 7/8 (200)	9 7/8 (250)	11 (280)	4 3/4 (120)	5 1/2 (15)	3 1/8 (80)	14 3/16 (360)	6 3/16 (160)	4 3/16 (110)	5 7/8 (150)	11 1/4 (17)	11 3/4 (285)	19 (19)	1 3/4 (32)	3 1/8 (80)	2 1/8 (8)	2 3/8 (10)	70
54 FSPA	5 (125)	4 (100)	5 1/2 (140)	14 3/16 (360)	8 7/8 (225)	11 (280)	12 5/8 (315)	4 3/4 (120)	5 1/2 (15)	3 1/8 (80)	15 3/4 (400)	6 3/16 (160)	4 3/16 (110)	5 7/8 (150)	11 1/4 (17)	14 3/16 (370)	19 (19)	1 3/8 (42)	3 3/4 (95)	2 3/8 (8)	2 3/8 (12)	125
64 FSPA	6 (150)	4 (100)	5 1/2 (140)	20 7/8 (530)	9 7/8 (250)	12 3/8 (315)	12 5/8 (315)	4 3/4 (120)	5 1/2 (15)	3 1/8 (80)	15 3/4 (400)	6 3/16 (160)	4 3/16 (110)	5 7/8 (150)	11 1/4 (17)	14 3/16 (370)	19 (19)	1 3/8 (42)	3 3/4 (95)	2 3/8 (8)	2 3/8 (12)	146

Horizontal Split Case Pump



Unit: Inch (mm), unless otherwise stated

Model	Size		Pump														Shaft				Wt kg	
	Ds	Dd	A	B	C	E	F	G	H	I	J	K	M	N	O	P	Q	L	T	U		V
54 CNPA	5 (125)	4 (100)	12 1/2 (326)	17 1/2 (450)	11 3/8 (295)	11 11/16 (300)	9 7/8 (250)	7 1/4 (195)	5 7/8 (150)	6 3/16 (160)	2 3/8 (60)	2 3/4 (70)	11 1/2 (300)	11 7/16 (290)	9 7/8 (250)	9 1/16 (230)	10 1/16 (20)	3 1/8 (80)	1 1/2 (38)	2 1/8 (8)	2 3/8 (10)	249
65 CNPA	6 (150)	5 (125)	14 3/16 (364)	19 7/8 (505)	13 3/16 (355)	13 (330)	10 1/4 (260)	8 1/4 (224)	7 1/2 (190)	7 1/2 (190)	3 3/8 (80)	3 5/8 (90)	14 1/2 (380)	14 3/16 (360)	12 3/16 (310)	10 3/8 (270)	1 (25)	3 7/16 (90)	1 7/8 (48)	2 3/8 (9)	2 3/8 (14)	283

•SELECTION DATA

End Suction Pump

Flow Rate	Head	Pump Model	Max. Power at 2900 rpm	Electric motor	
	PSI (kPa)		HP	RPM	HP
250 USGPM (57 m ³ /h)	87 (600)	43 FSPA	25	2900	25
	105 (724)		32		40
	122 (841)		38		40
	139 (958)		44		50
300 USGPM (68 m ³ /h)	85 (586)	43 FSPA	27	2900	30
	102 (703)		34		40
	121 (834)		42		50
	138 (951)		48		50
350 USGPM (80 m ³ /h)	82 (565)	43 FSPA	29	2900	30
	100 (689)		37		40
	119 (820)		45		50
	136 (937)		52		60
400 USGPM (91 m ³ /h)	78 (538)	43 FSPA	31	2900	40
	97 (669)		38		40
	117 (806)		47		50
	133 (917)		55		60
450 USGPM (102 m ³ /h)	73 (503)	43 FSPA	30	2900	40
	93 (641)		40		40
	113 (779)		49		50
	129 (889)		57		60
500 USGPM (113 m ³ /h)	74 (510)	54 FSPA	49	2900	50
	86 (593)		60		60
	101 (696)		74		75
	116 (800)		85		100
	126 (869)	64 FSPA	71	2900	75
	144 (993)		82		100
	162 (1117)		93		100
	183 (1262)		115		125
205 (1413)		131		150	
750 USGP (170 m ³ /h)	68 (469)	54 FSPA	53	2900	60
	82 (565)		63		75
	97 (669)		85		100
	112 (772)		98		100
	113 (779)	64 FSPA	70	2900	75
	132 (910)		98		100
	152 (1048)		115		125
	175 (1206)		136		150
198 (1365)		158		200	

•SELECTION DATA

Horizontal Split Case Pump

Flow Rate	Head	Pump Model	Max. Power at 2900 rpm	Electric motor	
	PSI (kPa)		HP	RPM	HP
500 USGPM (113 m ³ /h)	81 (558)	54 CNPA	42	2900	50
	90 (620)		47		50
	100 (689)		54		60
	114 (786)		61		75
	125 (862)		68		75
	137 (944)		76		100
750 USGPM (170 m ³ /h)	69 (476)	54 CNPA	46	2900	50
	77.5 (534)		50		50
	89 (614)		55		60
	101 (696)		60		75
	114 (786)		84		100
	128 (882)		94		100
	97 (669)	65 CNPA	81	2900	100
	108 (745)		91		100
	120 (827)		102		125
	132 (910)		114		125
	146 (1007)		128		150
	92 (634)		65 CNPA		90
103 (710)	102	125			
115 (793)	114	125			
128 (882)	128	150			
1250 USGPM (284 m ³ /h)	142 (979)	65 CNPA	145	2900	150
	85 (586)		92		100
	97 (669)		112		125
	110 (758)		127		150
	122 (841)		143		150
	137 (944)		163		200

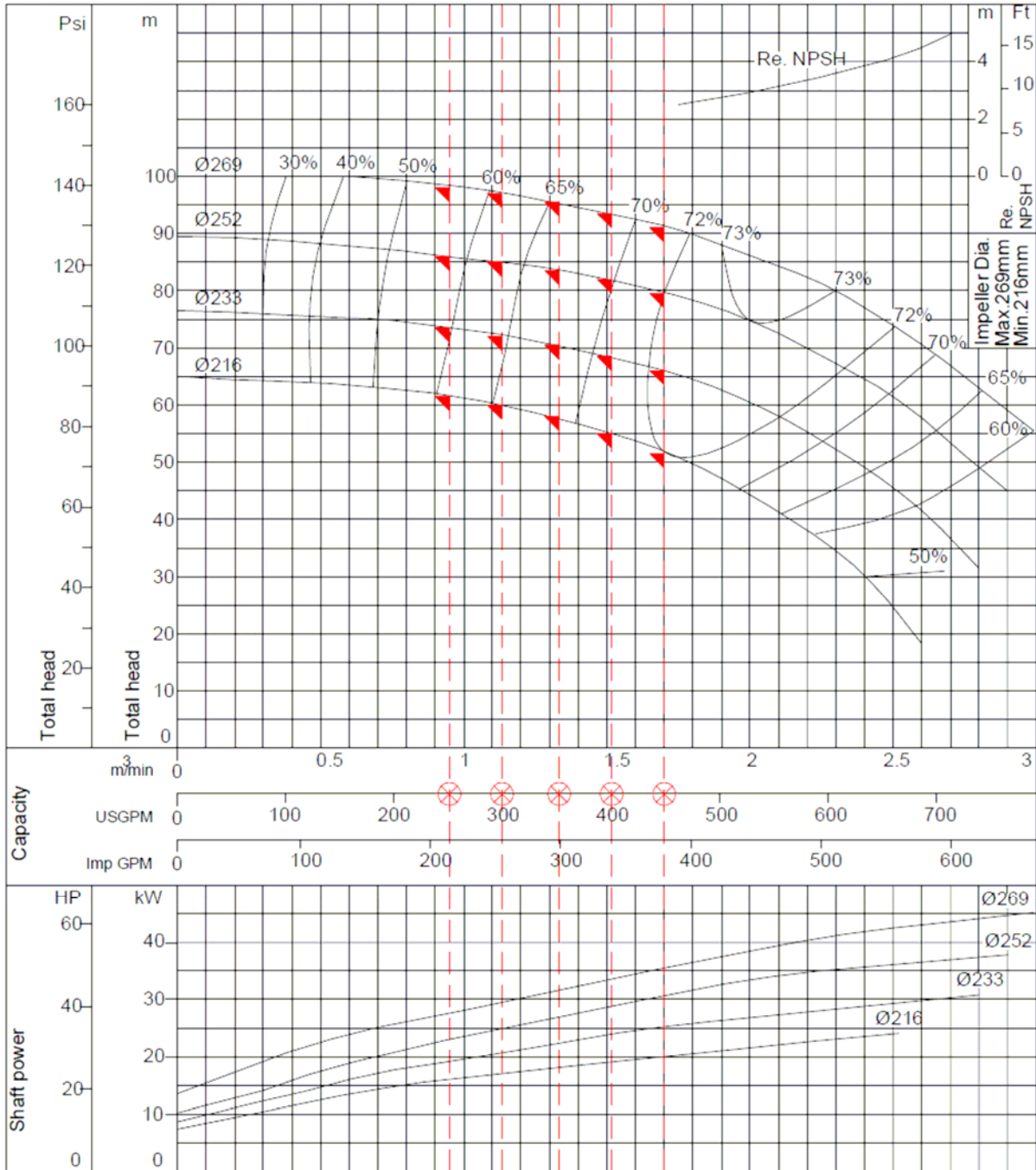
Ebara End Suction Centrifugal Pump

Model FSPA

Performance Curve

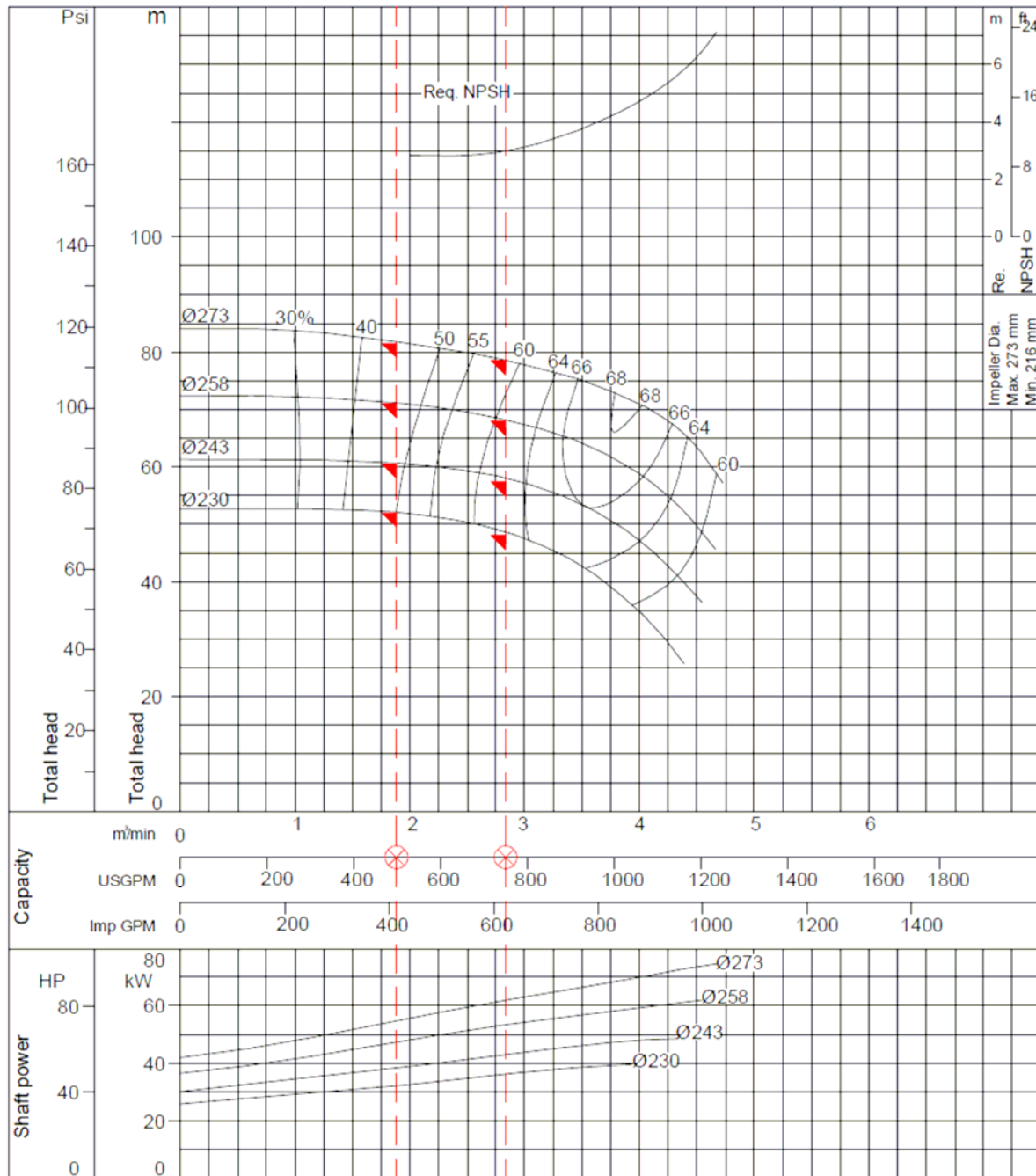
50Hz

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



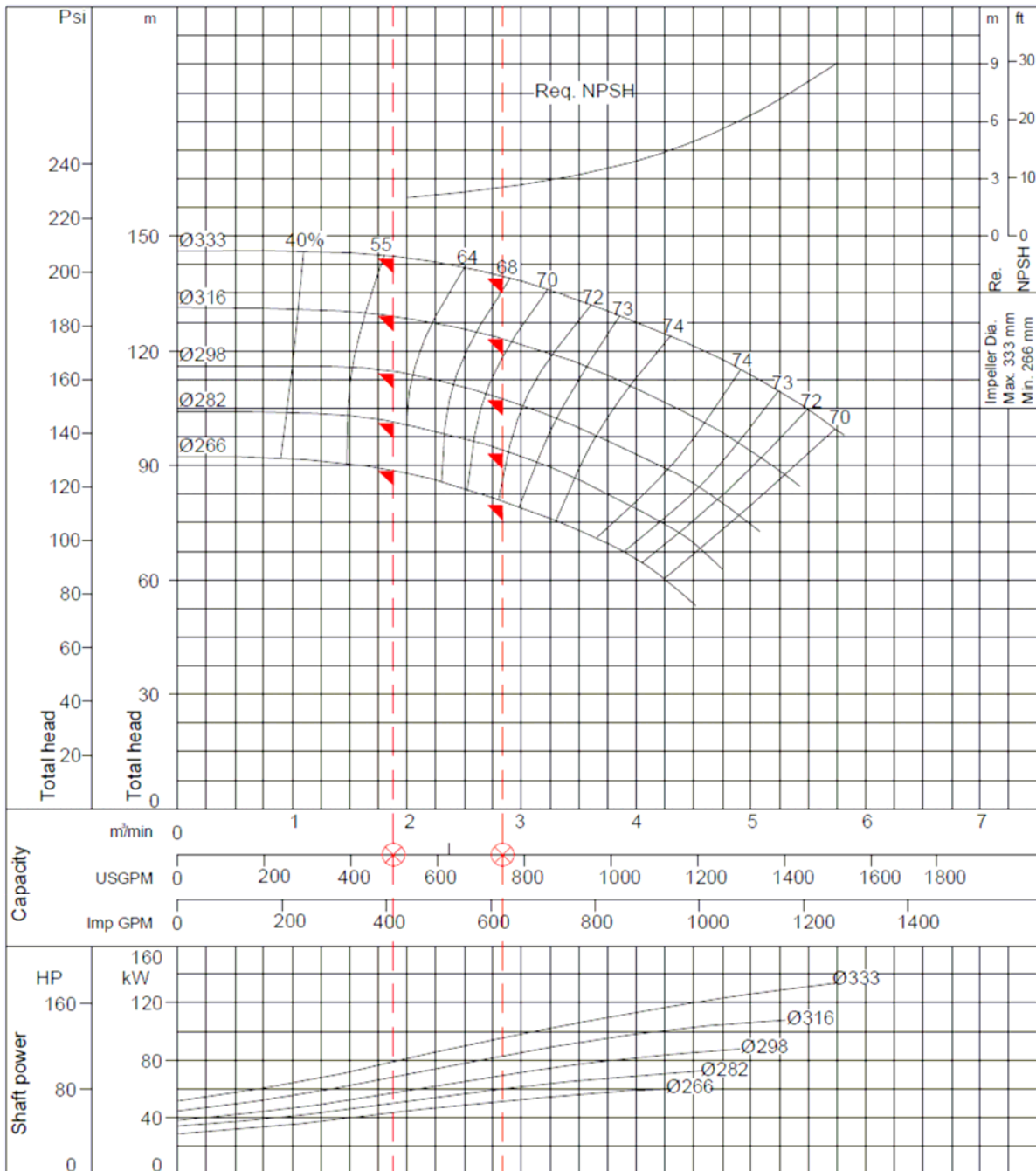
Curve No-1-FSP5609R0

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



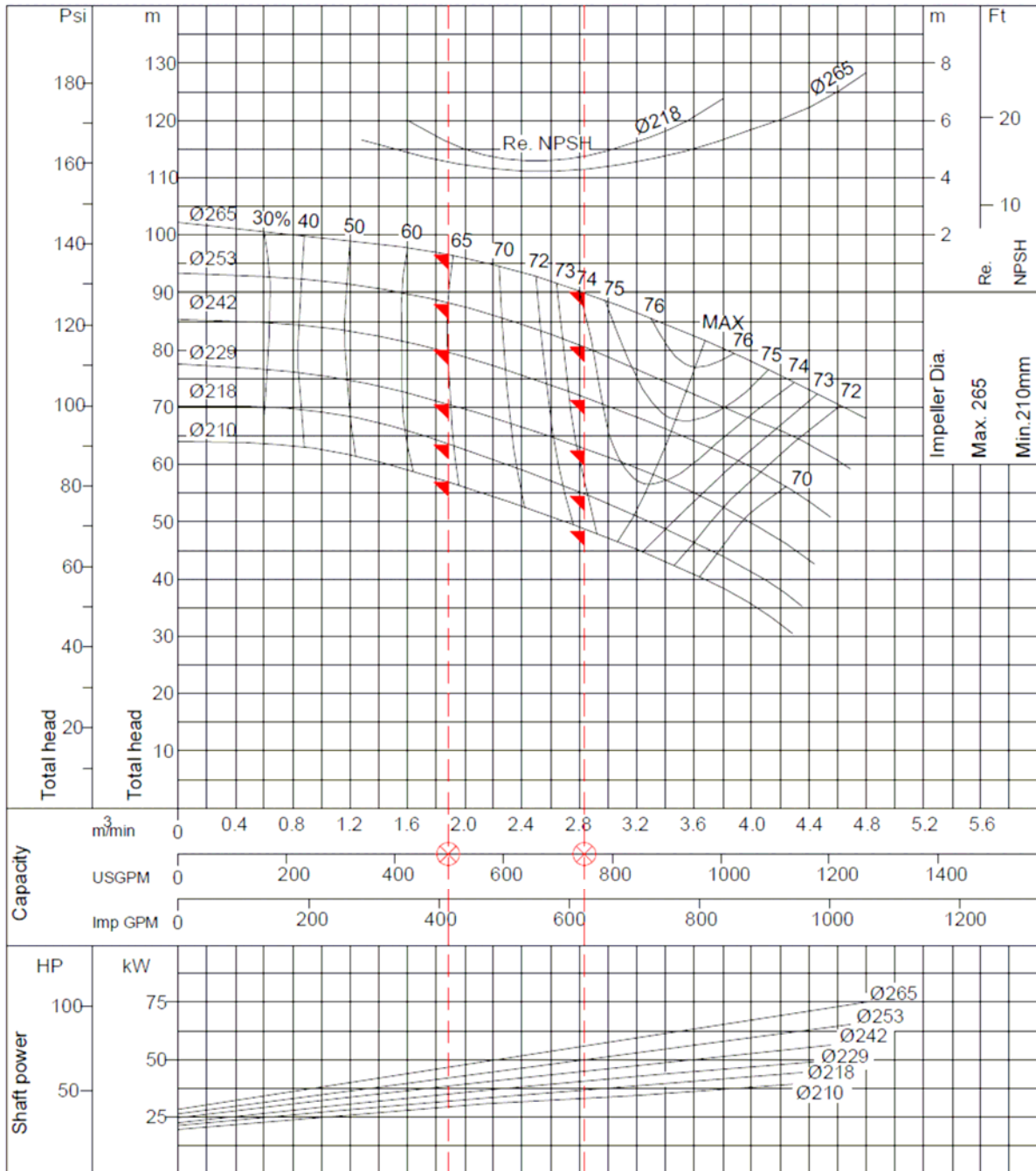
Curve No-2-FSP5613R0

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



Curve No-3-FSP5614R0

54 CNPA	According to JIS testing code B8301, B8302
50Hz (Approx. speed 2900min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt



Curve No-1-CNP5604R0

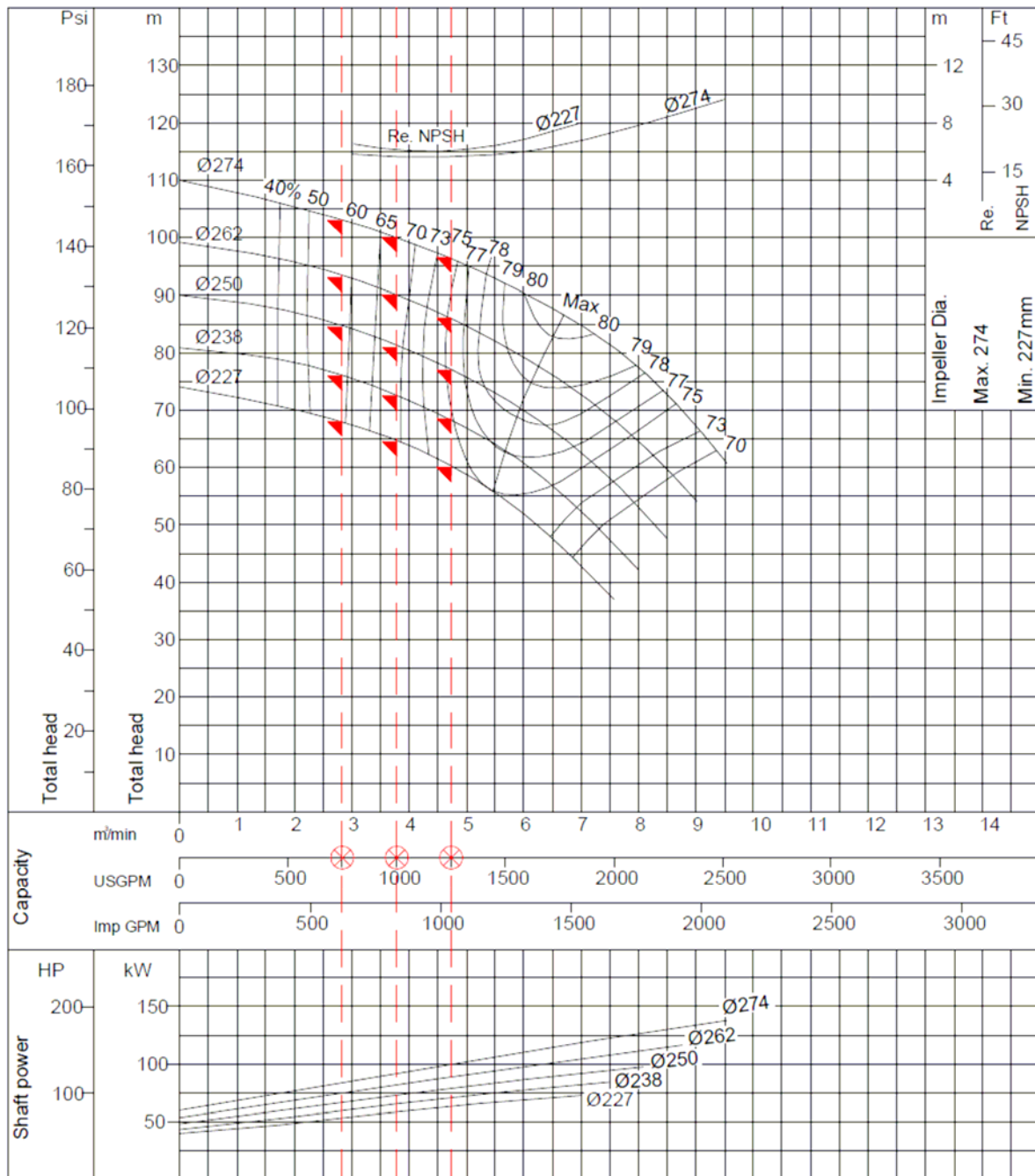
Ebara Horizontal Split Casing Pump

Model CNPA

Performance Curve

50Hz

65 CNPA	According to JIS testing code B8301, B8302
50Hz (Approx. speed 2900min ⁻¹)	S.G.= 1.0 Vis.= 1.0 cSt



Curve No-2-CNP5607R0