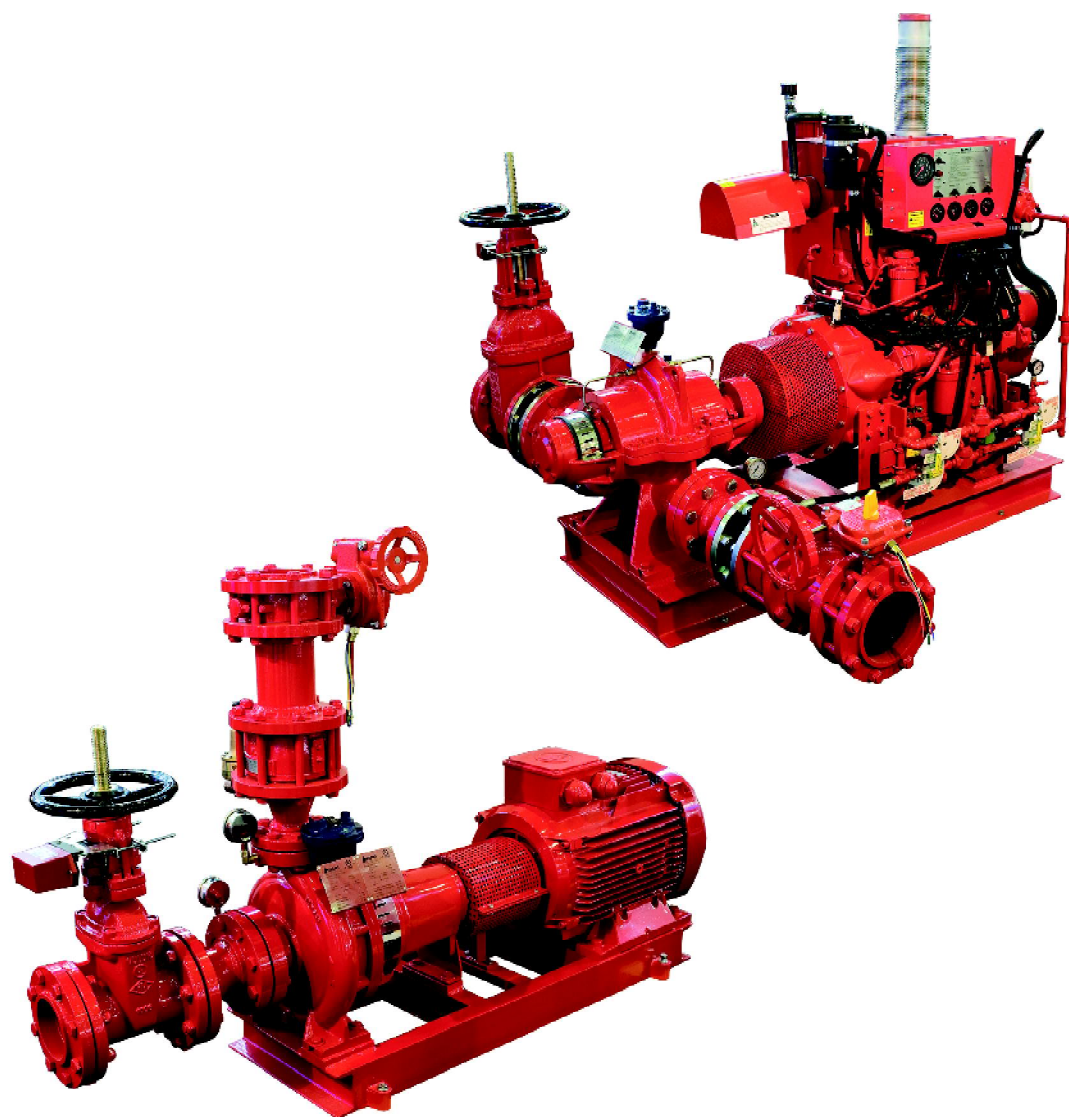


UL 448



# FGPS / FGPE

FIRE PUMPS



## Who UL is and What UL does:

- UL (Underwriters Laboratories Inc.) is a global independent safety science company offering expertise across five key strategic businesses: Product Safety, Environment, Life & Health, University and Verification Services. Since the year UL founded in 1894, nearly 70,000 manufacturers in 100 countries have produced 20.000 different types of totally 20 billion UL Marked products.
- UL engineers scientifically investigate and test thousands of types of products, materials, constructions and systems to evaluate the electrical, fire and injury risks; the burglary or fire resistance; or the ability to detect, control or limit fires.
- UL has developed 1,200 Standards for Safety, which serve as the bedrock of compliance in over 200 industries.
- There is an “Online Certifications Directory” in UL’s website and all the products listed by UL can be found here.

## UL Safety Standard: UL 448

- The requirements of this standard cover design and test features of centrifugal fire pumps intended for use in water-supply systems for fire-protection service.
- The pumps covered by these requirements are intended for installation and use in accordance with the Standard for the Installation of Stationary Pumps for Fire Protection, NFPA 20.

## Design Features according to UL:

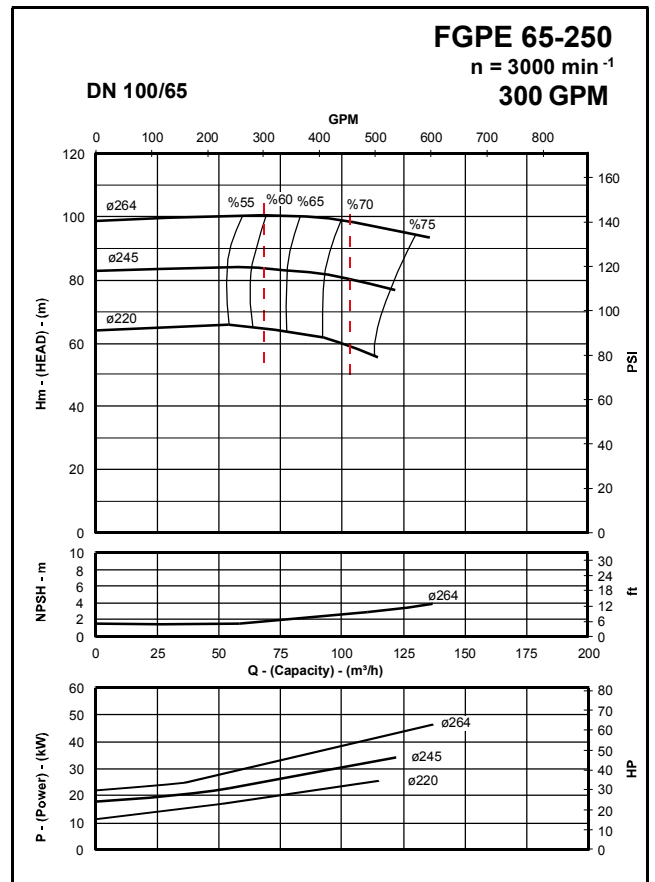
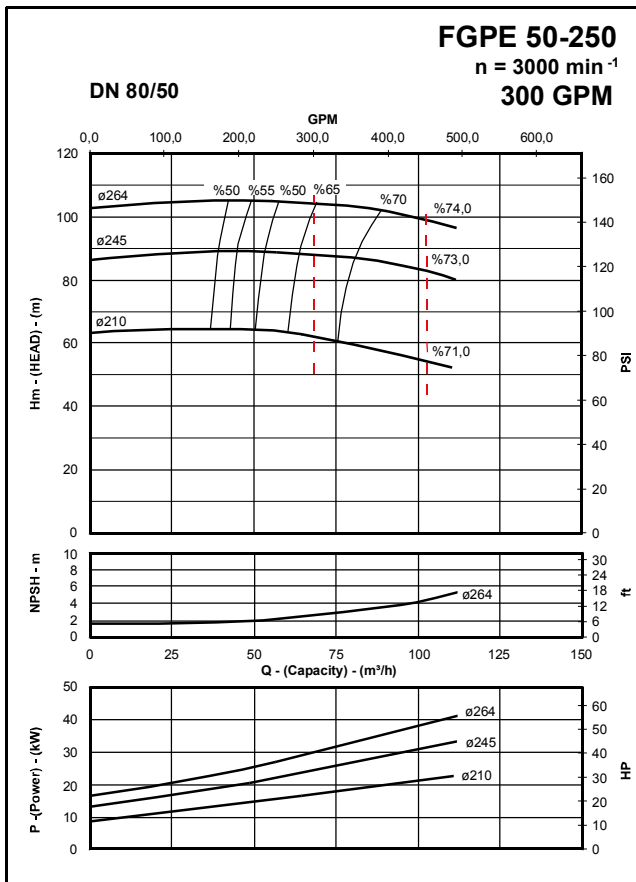
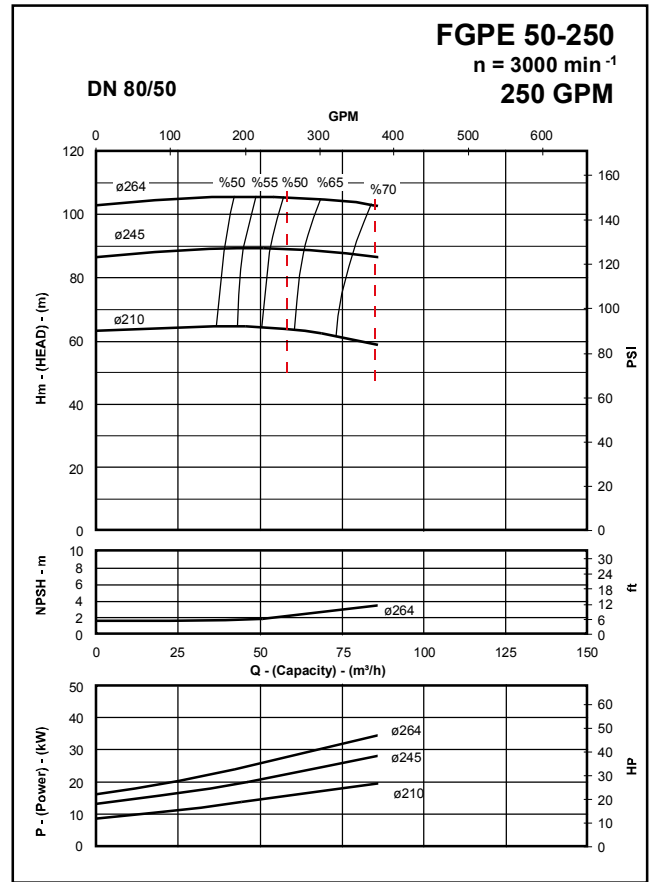
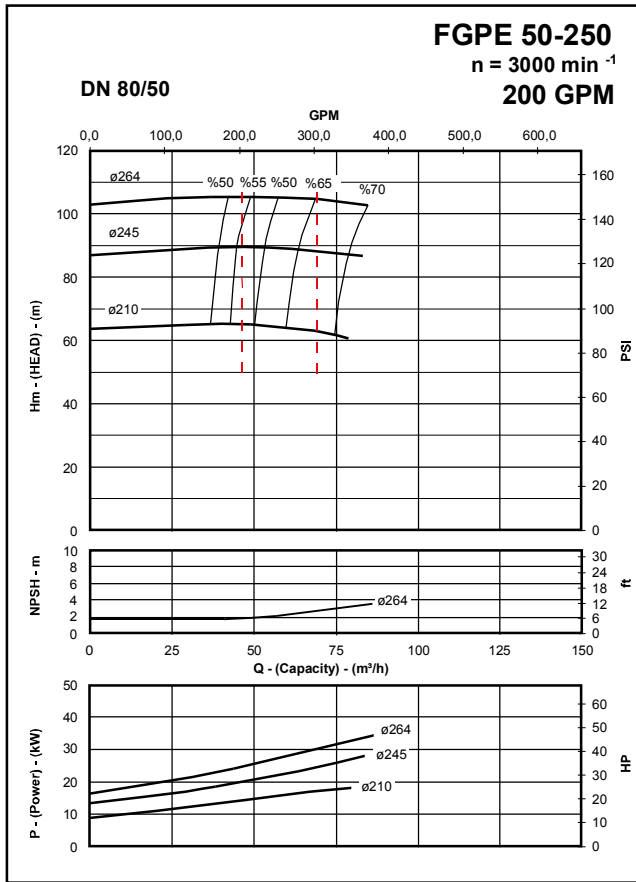
- Only the specified capacities in the below table are allowed for rated capacity. For capacities higher than 5000 GPM, 500 GPM increments are allowed.

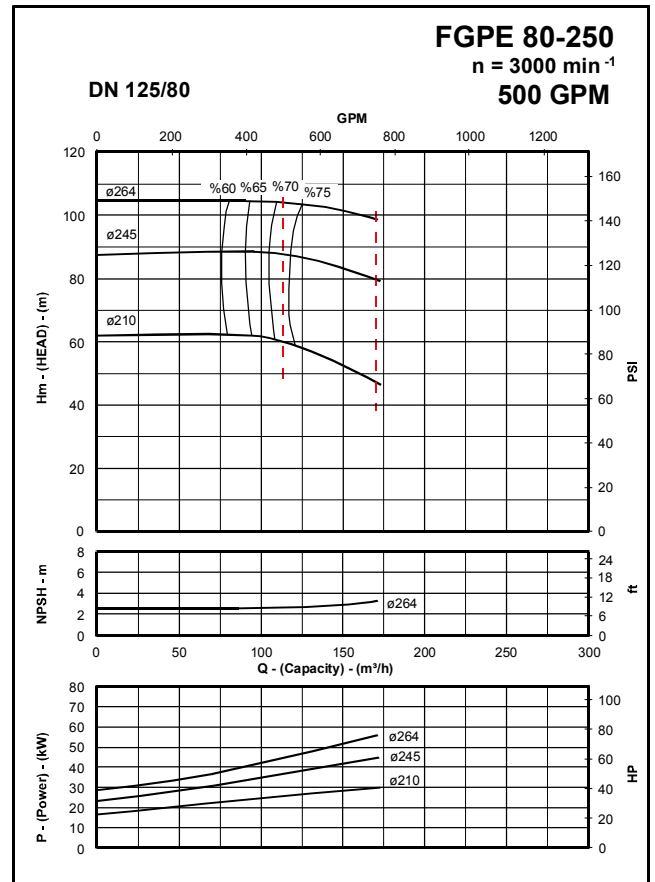
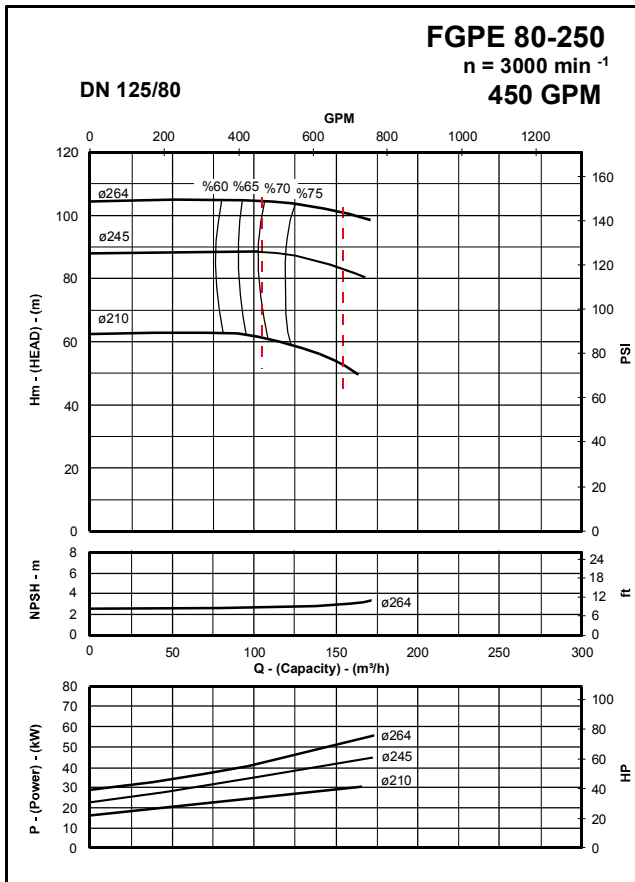
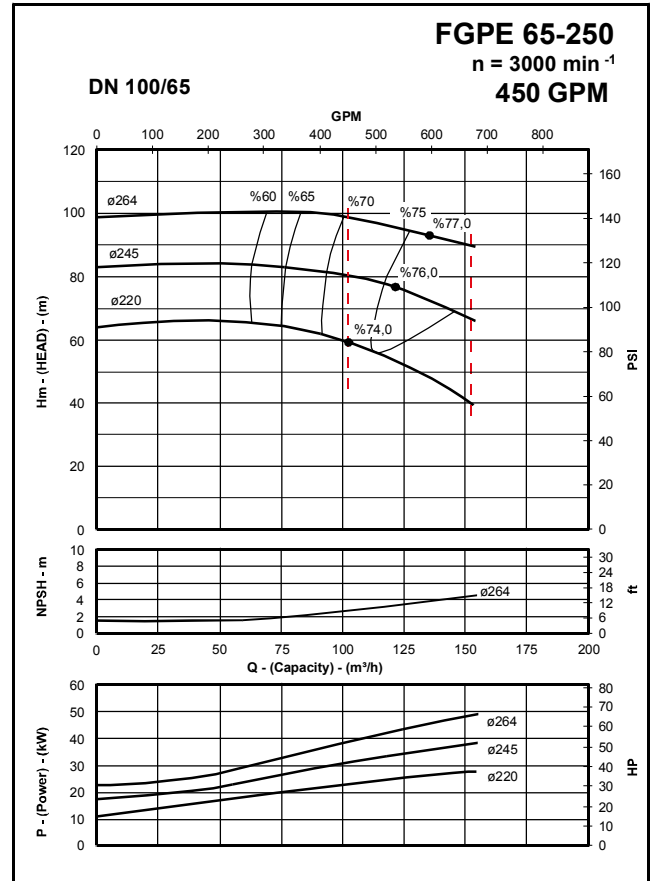
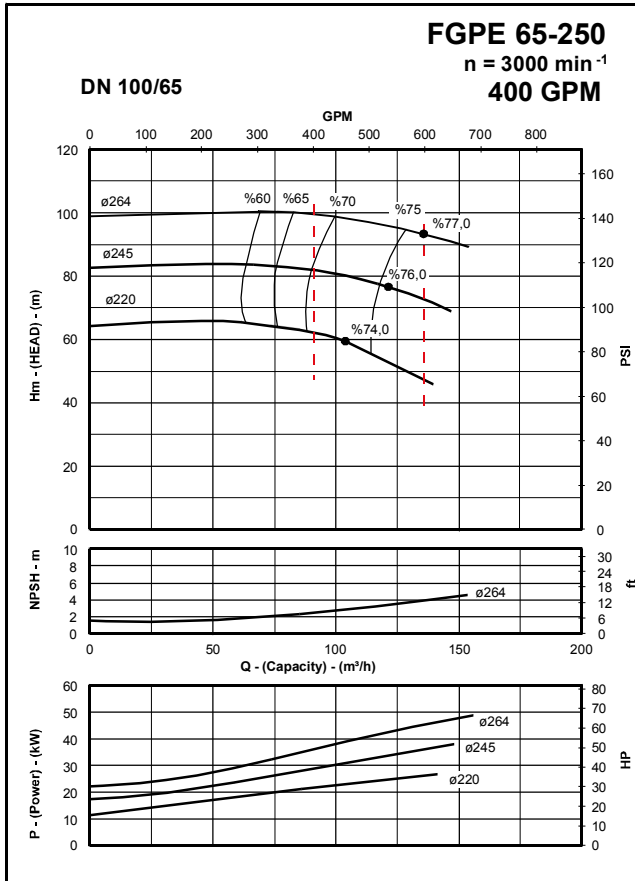
GPM	m³/h	GPM	m³/h	GPM	m³/h
25	5.68	400	90.8	2000	454
50	11.3	450	102.2	2500	568
100	22.7	500	113.5	3000	681
150	34.0	750	170	3500	795
200	45.4	1000	227	4000	909
250	56.8	1250	284	4500	1022
300	68.1	1500	341	5000	1136

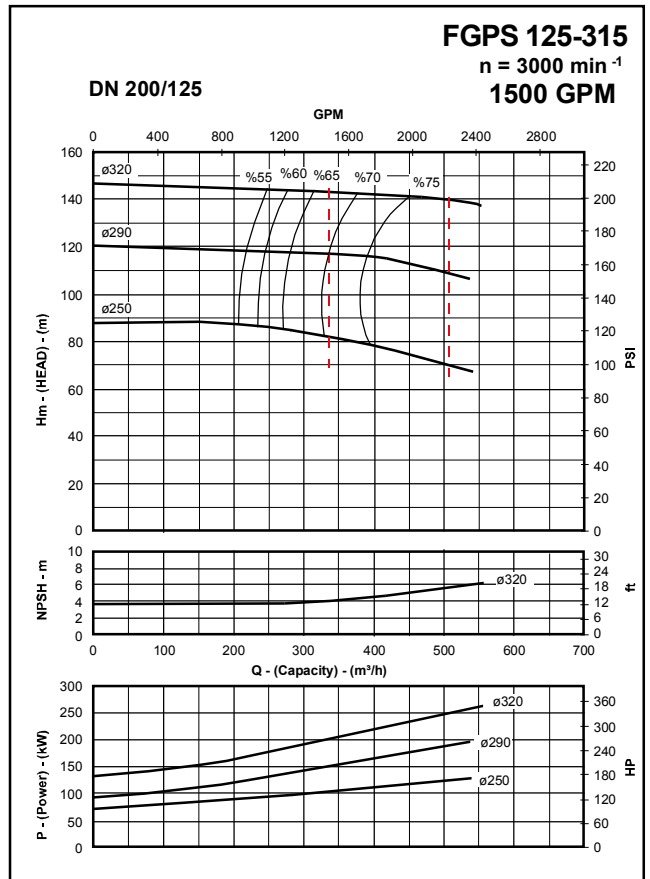
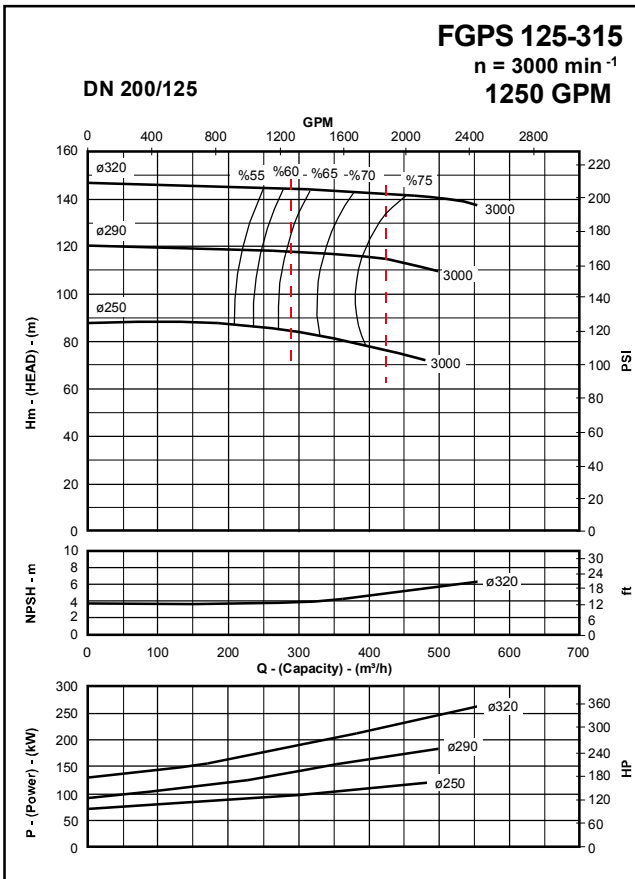
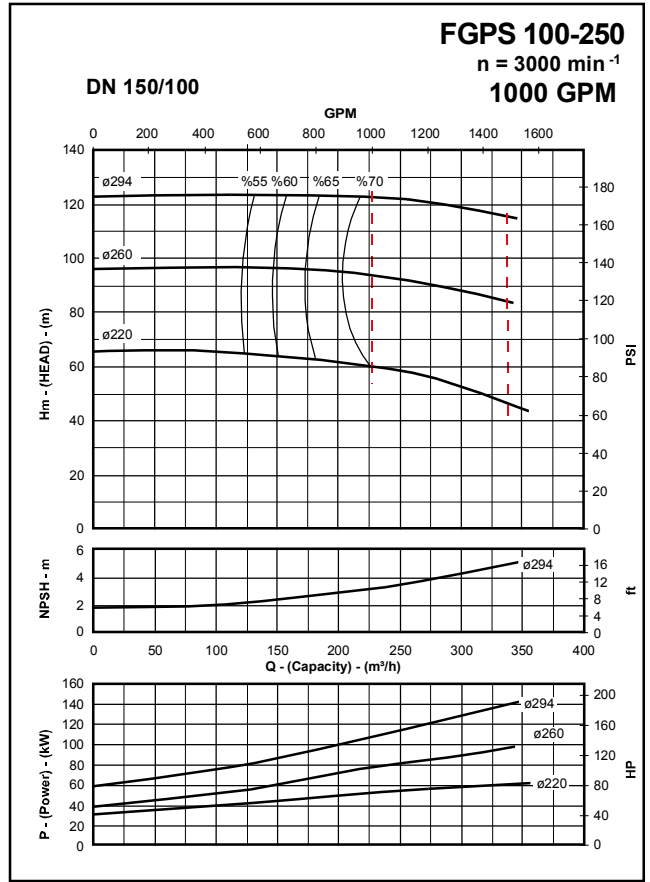
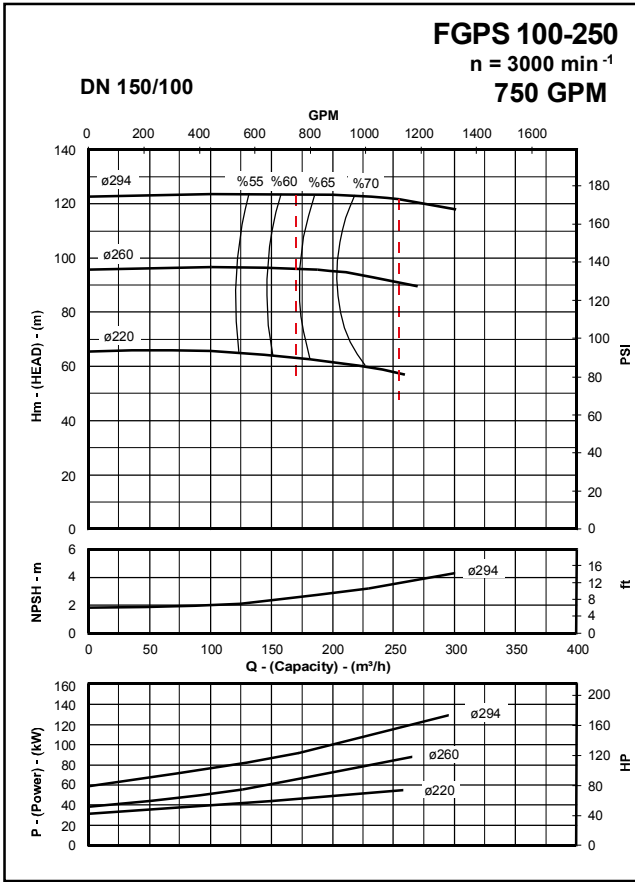
- All interior bolt or screw that are exposed to pumped liquid shall be of rolled bronze or corrosion resistant material
- The pump shall be provided with automatic air-release valve, circulation relief valve and pressure gauges
- Bearings shall have an L-10 rating of not less than 5000 hours at maximum load.
- The pumps shall be provided with at least four packing rings plus a lantern ring. The lantern ring may be permitted to replace one ring of packing.
- Impellers, wear rings, shafts, lantern rings, glands shall be made of corrosion resistant material.
- Following material specifications are applied to FIRE GUARD UL fire pumps:

Part List	Definition	DIN 17007	EN-DIN	ASTM
Casing	Nodular cast iron	0.7040	GGG 40 (GJS-400-15)	A 536 Gr. 60-40-18
Impeller	Cast bronze	2.1050.01	G-CuSn 10	B 584 C 90700
Shaft	Stainless steel	1.4021	X20 Cr 13	A 276 Type 420
Shaft sleeve	Stainless steel	1.4401	X5 Cr Ni Mo 17-12-2	A 276 Type 316

# Performance Curves







# Selection Table



UL Listed Fire Pumps for 3000 rpm									
Pump Type	Capacity (GPM / m3/h)	Pressure (bar/psi)	Power (%100) (kW)	Power (%150) (kW)	Diesel Engine CLARKE Model	Diesel Engine Rated Power kW / HP	Electric Motor Rated Power (kW)		
FGPE 50-250	200 / 45,4	6,4 / 93	13,5	16,6	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	15		
		7 / 101,5	15	18,4	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	18,5		
		8 / 116	17,6	21,6	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	22		
	250 / 56,8	10,34 / 150	9 / 130,5	20,4	24,9	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30	
			6,27 / 91	24,1	29,3	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30	
		7 / 101,5	15,3	19,1	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	18,5		
			17,1	21,3	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	18,5		
		8 / 116	19,8	24,2	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	22		
			22,7	28,4	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30		
	FGPE 65-250	300 / 68,1	10,34 / 150	26,7	33	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30	
			6,06 / 88	16,6	21,1	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	18,5	
			7 / 101,5	19,1	24,2	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	22	
300 / 68,1		8 / 116	22	28,1	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30		
			9 / 130,5	25,1	32,1	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30	
		10,2 / 148	29,1	37,2	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	37		
			6,34 / 92	19,6	23,6	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	22	
		7 / 101,5	21,7	26,4	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30		
			8 / 116	25,1	30,9	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30	
400 / 90,8		9 / 130,5	28,8	35,6	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	37		
			9,8 / 142	32	39,7	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	37	
		6,06 / 88	22,4	26,8	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30		
	7 / 101,5		25,9	31,4	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30		
	8 / 116	29,7	36,6	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	37			
		9 / 130,5	33,9	42,2	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	45		
FGPE 80-250	450 / 102,2	9,78 / 142	37,2	46,7	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	45		
		5,79 / 84	23,6	27,7	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30		
		7 / 101,5	28,2	33,9	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	37		
	450 / 102,2	8 / 116	32,3	39,4	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	37		
			9 / 130,5	36,6	45,4	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	45	
		9,71 / 141	39,7	49,7	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	45		
			6 / 87	25,9	29,8	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30	
		7 / 101,5	30	35,4	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	37		
			8 / 116	34,5	40,7	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	37	
	500 / 113,5	9 / 130,5	39,1	47,5	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	45		
			10,2 / 148	45,1	53	JU4H-UJ14, JU4R-UJ23 (Rad)	53/71, 58/78	55	
		5,79 / 84	26,5	30,6	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	30		
7 / 101,5			31,8	37,7	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	37		
8 / 116		36,5	44	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	45			
		9 / 130,5	41,4	50	JU4H-UJ14, JU4R-UJ13 (Rad)	53/71, 50/66,5	55		
		10,2 / 148	47,5	57,8	JU4H-UJ24, JU4R-UJ23 (Rad)	62/83, 58/77	55		

# Selection Table

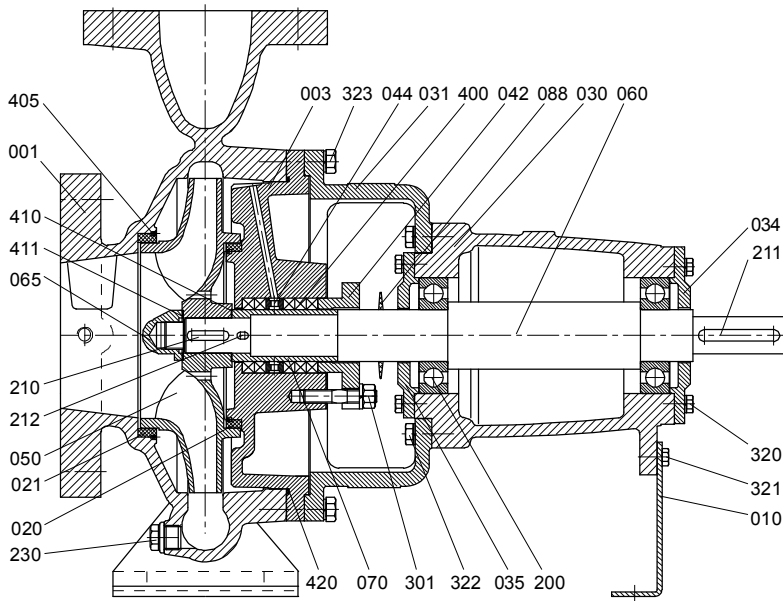


UL Listed Fire Pumps for 3000 rpm							
Pump Type	Capacity (GPM / m3/h)	Pressure (bar/psi)	Power (%100) (kW)	Power (%150) (kW)	Diesel Engine CLARKE Model	Diesel Engine Rated Power kW /HP	Electric Motor Rated Power (kW)
FGPS 100-250	750 / 170	6,13 / 89	46,6	53	JU4H-UF14 , JU4R-UF23 (Rad)	53/71, 58/78	55
		7 / 101,5	51,2	61,8	JU4H-UF24	62/83	75
		8 / 116	56,8	70,9	JU4H-UF34 , JU4R-UF53 (Rad)	86/115, 99/133	75
		9 / 130,5	62,6	78,8	JU4H-UF34 , JU4R-UF53 (Rad)	86/115, 99/133	75
		10 / 145	70,3	90,8	JU4H-UF54 , JU4R-UF53 (Rad)	108/145, 99/133	90
	1000 / 227	11 / 159,5	79,7	102	JU4H-UF54	108/145	110
		11,85 / 172	90,8	115,5	JU6H-UF34	131/175	110
		5,86 / 85	52,1	60,9	JU4H-UF24	62/83	75
		7 / 101,5	60,5	74,9	JU4H-UF34 , JU4R-UF53 (Rad)	86/115, 99/133	75
		8 / 116	68,3	87,7	JU4H-UF54 , JU4R-UF53 (Rad)	108/145, 99/133	90
FGPS 125-315	1250 / 284	9 / 130,5	76,5	101	JU4H-UF54	108/145	110
		10 / 145	85,9	113	JU6H-UF34	131/175	110
		11 / 159,5	96	126	JU6H-UF34	131/175	132
		11,8 / 171	107	138,6	JU6H-UF54	161/216	132
		8,06 / 117	93,1	108	JU4H-UF54	108/145	110
	1500 / 340	9 / 130,5	104	124	JU6H-UF34	131/175	132
		10 / 145	117	142	JU6H-UF54	161/216	160
		11 / 159,5	130	160	JU6H-UF54	161/216	160
		12 / 174	146	179	JU6H-UF84	205/275	185
		13 / 188,5	164	200	JU6H-UF84	205/275	200
1500 / 340	13,72 / 199	178	216	-	-	250	
	7,72 / 112	98,6	115,5	JU6H-UF34	131/175	110	
	9 / 130,5	115	145	JU6H-UF54	161/216	132	
	10 / 145	129	159	JU6H-UF54	161/216	160	
	11 / 159,5	144	178	JU6H-UF84	205/275	185	
1500 / 340	12 / 174	161	200	JU6H-UF84	205/275	200	
	13 / 188,5	179	223	-	-	250	
	13,65 / 198	193	239	-	-	250	



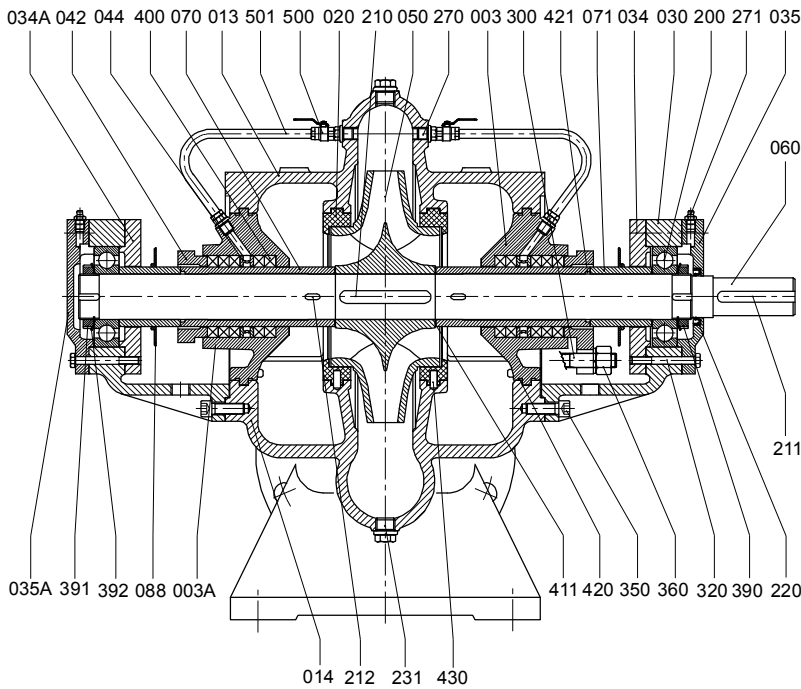
# Sectional Drawings

## FPGE 50-250 , FPGE 65-250 , FPGE 80-250



Part Number	Part Name
001	Volute Casing
003	Stuffing Box
010	Support Foot
020	Wear Ring (back)
021	Wear Ring (front)
030	Bearing Housing
031	Bearing Bracket Lantern
034	Bearing Cover (outboard)
035	Bearing Cover (inboard)
042	Stuffing Box Gland
044	Lantern Ring
050	Impeller
060	Shaft
065	Impeller Nut
070	Shaft Protecting Sleeve
088	Thrower
200	Ball Bearing
210	Impeller Key
211	Coupling Key
212	Sleeve Key
230	Drain Plug
301	Stud+Nut+Washer
320	Hex. Head Bolt
321	Hex. Head Bolt
322	Hex. Head Bolt
323	Hex. Head Bolt
400	Stuffing Box Packing
405	Set Screw
410	Gasket
411	Gasket
420	O-Ring

## FPGS 100-250 , FPGS 125-315



Part Number	Part Name
003	Stuffing Box (right side)
003A	Stuffing Box (left side)
013	Volute Casing (top)
014	Volute Casing (bottom)
020	Wear Ring
030	Bearing Housing
034	Bearing Cover (inboard)
034A	Bearing Cover (inboard)
035	Bearing Cover (outboard)
035A	Bearing Cover (outboard)
042	Stuffing Box Gland
044	Lantern Ring
050	Impeller
060	Shaft
070	Shaft Protecting Sleeve
071	Sleeve (spacer)
088	Thrower
200	Ball Bearing
210	Impeller Key
211	Coupling Key
212	Key
220	Oil Seal
231	Drain Plug
270	Nipple
271	Grease Nipple
300	Stud
320	Hex. Head Bolt
350	Allen Screw
360	Nut
390	Locknut (non drive end)
391	Locknut (drive end)
392	Lock Washer
400	Stuffing Box Packing
411	Gasket
420	O-Ring
421	O-Ring
430	Pin
500	Valve
501	Flushing Pipe



[www.fireguard-uk.com](http://www.fireguard-uk.com) / e-mail: [info@fireguard-uk.com](mailto:info@fireguard-uk.com)

Fireguard Safety Equipment Co Ltd.

2nd Floor, 145-157 St John street  
London EC1V 4PY  
United Kingdom

Pbx: + 44 (0) 845 075 1042

Fax: + 44 (0) 845 299 1039