


## Standardised “EN 733” centrifugal pumps

-  Clean water
-  Industrial use



### PERFORMANCE RANGE

- Flow rate up to **3000 l/min** (180 m<sup>3</sup>/h)
- Head up to **24 m**

### APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature between **-10 °C** and **+40 °C**
- Max. pressure in pump body **10 bar** (PN10)
- Continuous service **S1**

### CONSTRUCTION AND SAFETY STANDARDS

EN 60335-1  
IEC 60335-1  
CEI 61-150

EN 60034-1  
IEC 60034-1  
CEI 2-3



Pump body dimensions in compliance with **EN 733**  
**EU REGULATION N. 547/2012**

### INSTALLATION AND USE

- Water supply
- Pressure boosting
- Irrigation
- Water circulation in air-conditioning units
- Cleaning sets
- Firefighting sets
- Industrial applications
- Agricultural applications

Installation needs to be undertaken in well ventilated closed areas or anyway protected from bad weather.

### OPTIONS AVAILABLE ON REQUEST

- Counter flange KIT complete with bolts, nuts and washers
- Other voltages or 60 Hz frequency
- Compatibility with hotter or colder liquids
- Compatibility with hotter or colder environments

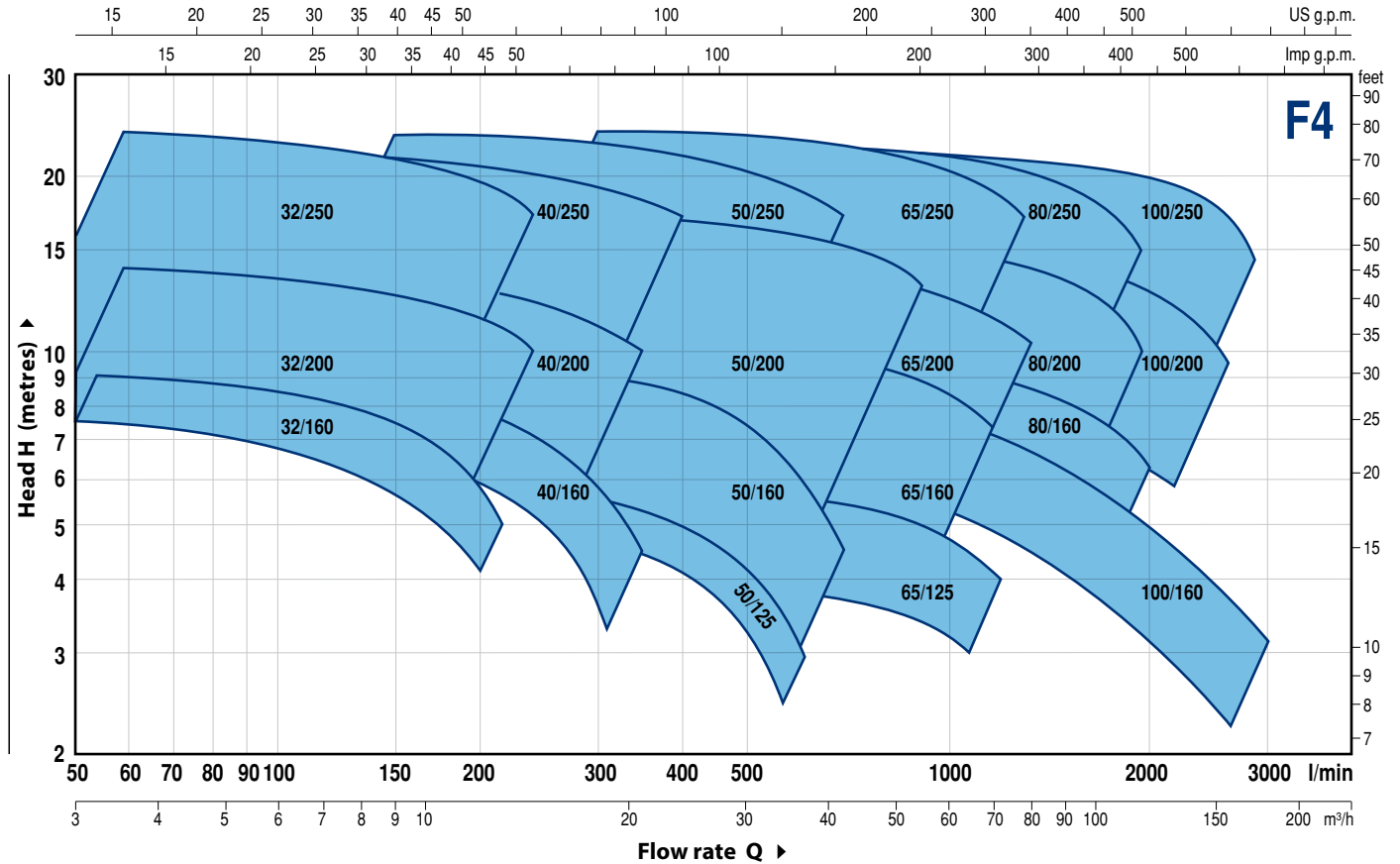
### CERTIFICATIONS

Company with management system certified DNV  
ISO 9001: QUALITY



## PERFORMANCE RANGE

50 Hz n = 1450 min<sup>-1</sup>



## PERFORMANCE DATA

50 Hz n = 1450 min<sup>-1</sup>

MODEL	POWER (P <sub>2</sub> )			PERFORMANCE		
	Three-phase	kW	HP ▲	Q l/min	H metres	
F4-32/160B	0.37	0.5	IE2	50 – 200	7.5 – 4.5	
F4-32/160A	0.37	0.5		50 – 225	9 – 5	
F4-32/200B	0.75	1	IE3	50 – 250	12.5 – 9	
F4-32/200A	1.1	1.5		50 – 250	14 – 10.5	
F4-32/200BH	0.75	1		50 – 150	11.3 – 9.2	
F4-32/200AH	0.75	1		50 – 160	13.8 – 11	
F4-32/250C	1.1	1.5		50 – 220	18.4 – 15	
F4-32/250B	1.5	2		50 – 250	21.7 – 17.4	
F4-32/250A	2.2	3	IE3	50 – 270	23.8 – 18.7	
F4-40/160B	0.37	0.5		IE2	50 – 320	7.5 – 3.5
F4-40/160A	0.55	0.75			50 – 350	9 – 4.5
F4-40/200B	0.75	1		IE3	50 – 350	11.5 – 7
F4-40/200A	1.1	1.5			50 – 350	13.8 – 10
F4-40/250C	1.1	1.5			50 – 400	15.5 – 10
F4-40/250B	1.5	2	50 – 400		17.5 – 12	
F4-40/250A	2.2	3	50 – 400		22 – 17	
F4-50/125B	0.55	0.75	IE2		150 – 600	5 – 2
F4-50/125A	0.55	0.75		150 – 600	6 – 3	
F4-50/160B	0.75	1	IE3	150 – 650	8 – 3.8	
F4-50/160A	1.1	1.5		150 – 700	9.3 – 4.5	
F4-50/200C	1.5	2		200 – 850	11 – 7.5	
F4-50/200B	2.2	3		200 – 850	13 – 9.5	
F4-50/200A	2.2	3		200 – 900	15 – 11.2	
F4-50/200AR	3	4		200 – 900	17 – 13.2	
F4-50/250D	1.1	1.5	IE3	150 – 650	12.5 – 5	
F4-50/250C	1.5	2		150 – 700	14 – 5	
F4-50/250B	2.2	3		150 – 700	18 – 10.5	
F4-50/250A	2.2	3		150 – 700	20 – 13	
F4-50/250AR	3	4		150 – 700	23.5 – 17	

MODEL	POWER (P <sub>2</sub> )			PERFORMANCE		
	Three-phase	kW	HP ▲	Q l/min	H metres	
F4-65/125B	0.75	1	IE3	300 – 1100	4.7 – 3	
F4-65/125A	1.1	1.5		300 – 1200	5.7 – 4	
F4-65/160C	1.1	1.5		300 – 1100	7.5 – 5.5	
F4-65/160B	1.5	2		300 – 1200	9.1 – 5.7	
F4-65/160A	2.2	3		300 – 1200	10.1 – 7	
F4-65/200A	2.2	3		300 – 1250	12 – 8.5	
F4-65/200AR	3	4	IE3	300 – 1300	14 – 10	
F4-65/250B	4	5.5		200 – 1250	21.8 – 15.5	
F4-65/250A	5.5	7.5		200 – 1300	23.5 – 17	
F4-80/160D	1.5	2		IE3	300 – 2000	6.3 – 2.5
F4-80/160C	2.2	3			300 – 2000	7.5 – 3.8
F4-80/160B	2.2	3			300 – 2000	8.8 – 5
F4-80/160A	3	4	300 – 2000		10 – 6.2	
F4-80/200B	4	5.5	300 – 1800		14 – 9	
F4-80/200A	5.5	7.5	300 – 1900		15.5 – 10.5	
F4-80/250B	5.5	7.5	IE3	300 – 1800	19.5 – 13.5	
F4-80/250A	7.5	10		300 – 1950	22 – 15	
F4-100/160B	2.2	3		IE3	400 – 2600	8.3 – 3.5
F4-100/160A	3	4			400 – 2800	10 – 4.7
F4-100/200C	4	5.5			400 – 2300	12.7 – 7
F4-100/200B	5.5	7.5			400 – 2400	14.2 – 8.5
F4-100/200A	5.5	7.5	400 – 2600		15.8 – 9.5	
F4-100/250B	7.5	10	400 – 2600		18.5 – 11.5	
F4-100/250A	9.2	12.5	IE3	400 – 2900	22 – 13.5	

Q = Flow rate

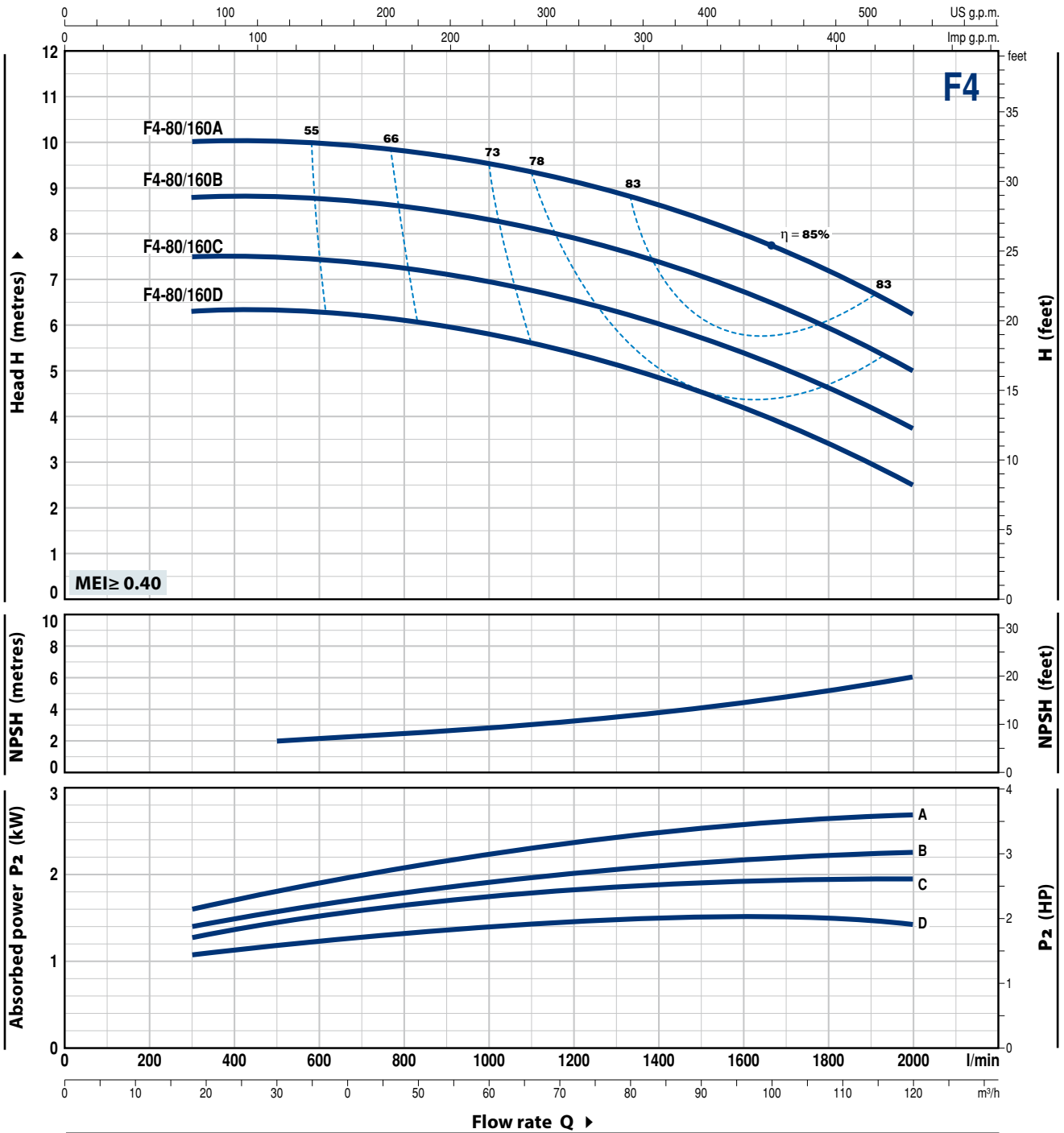
H = Total manometric head

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

▲ Three-phase motor efficiency class (IEC 60034-30-1)

## CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 1450 min<sup>-1</sup> HS = 0 m



MODEL	POWER (P <sub>2</sub> )		Q	H metres											
	kW	HP		m <sup>3</sup> /h	18	24	36	48	60	72	84	96	108	120	
Three-phase			l/min	300	400	600	800	1000	1200	1400	1600	1800	2000		
F4-80/160D	1.5	2		6.3	6.3	6.3	6.1	5.8	5.4	4.8	4.2	3.4	2.5		
F4-80/160C	2.2	3		7.5	7.5	7.4	7.3	6.9	6.5	6	5.4	4.6	3.8		
F4-80/160B	2.2	3		8.8	8.8	8.8	8.6	8.3	7.9	7.4	6.7	5.9	5		
F4-80/160A	3	4		10	10	10	9.8	9.5	9.1	8.6	8	7.2	6.2		

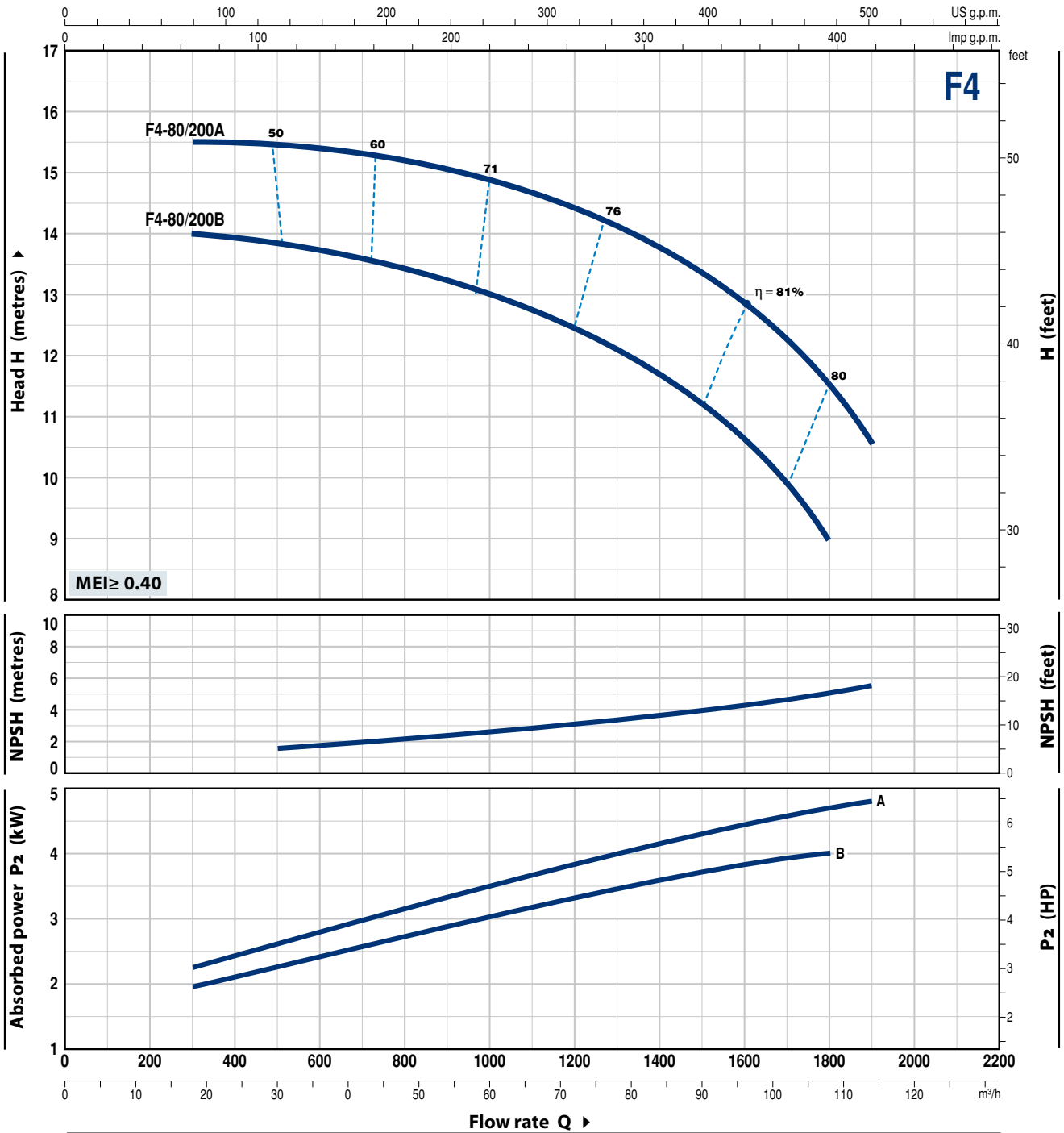
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

# F4-80/200

## CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 1450 min<sup>-1</sup> HS = 0 m



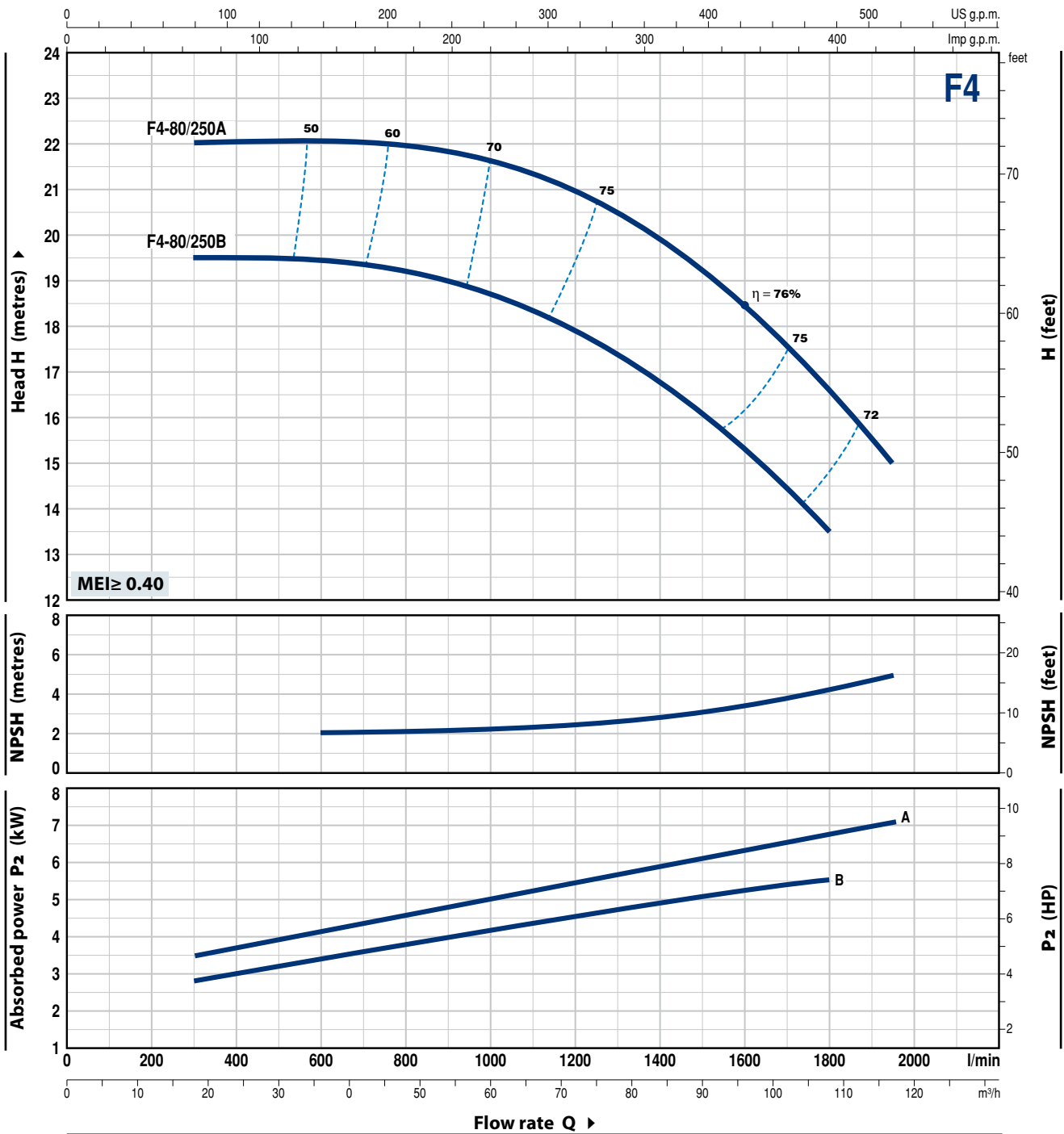
MODEL	POWER (P <sub>2</sub> )		Q	Flow rate											
	kW	HP		m <sup>3</sup> /h	18	24	36	48	60	72	84	96	108	114	
Three-phase			l/min	300	400	600	800	1000	1200	1400	1600	1800	1900		
<b>F4-80/200B</b>	4	5.5	H metres	14	13.9	13.7	13.4	13	12.5	11.7	10.6	9			
<b>F4-80/200A</b>	5.5	7.5		15.5	15.5	15.4	15.2	14.8	14.5	13.7	12.8	11.5	10.5		

Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

## CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 1450 min<sup>-1</sup> HS = 0 m



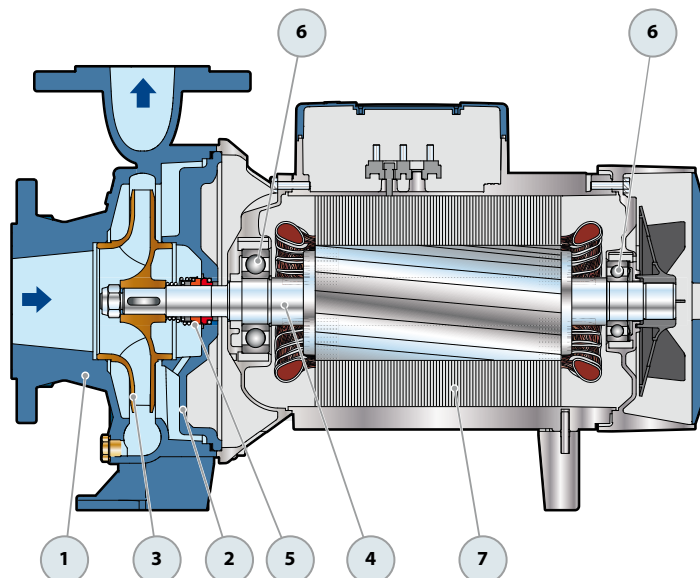
MODEL	POWER (P <sub>2</sub> )		Q	Flow rate											
	kW	HP		m <sup>3</sup> /h	18	24	36	48	60	72	84	96	108	117	
Three-phase			l/min	300	400	600	800	1000	1200	1400	1600	1800	1950		
F4-80/250B	5.5	7.5	H metres	19.5	19.5	19.5	19.2	18.7	17.9	16.7	15.3	13.5			
F4-80/250A	7.5	10		22	22	22	21.9	21.6	21	20	18.5	16.5	15		

Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

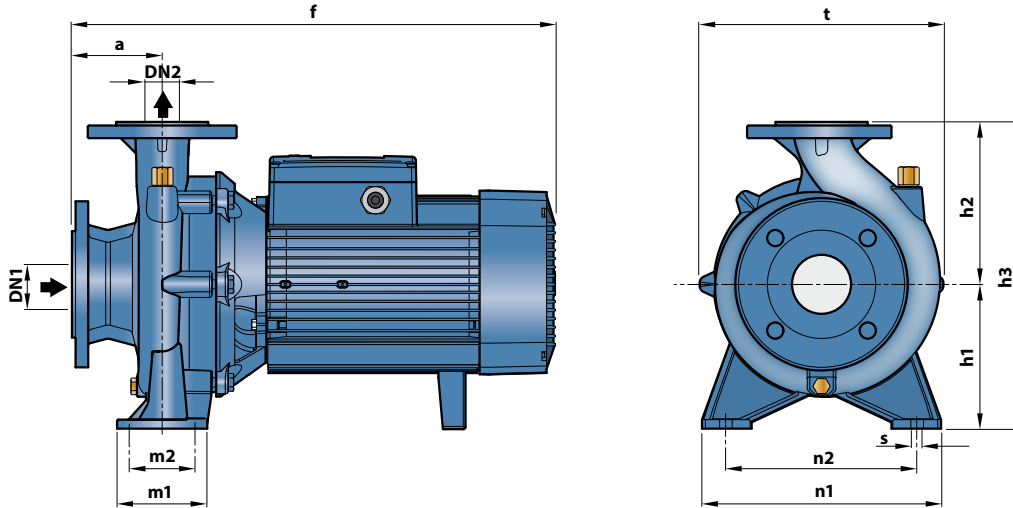
## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

<b>1 PUMP BODY</b>	Cast iron, complete with flanged suction and delivery ports					
<b>2 BODY BACKPLATE</b>	Cast iron					
<b>3 IMPELLER</b>	Brass for F4-32/160, 32/200, 40/160, 40/200, 50/125, 50/160					
<b>4 MOTOR SHAFT</b>	Stainless steel AISI 431					
<b>5 MECHANICAL SEAL</b>	<b>Pump Model</b>	<b>Seal Model</b>	<b>Shaft Diameter</b>	<b>Stationary ring</b>	<b>Rotational ring</b>	<b>Elastomer</b>
	F4-32/160 F4-40/160	F4-50/125	<b>FN-20</b>	<b>Ø 20 mm</b>	Graphite	Ceramic NBR
	F4-32/200 F4-40/200	F4-50/160 F4-65/125	<b>FN-24</b>	<b>Ø 24 mm</b>	Graphite	Ceramic NBR
	F4-50/200 F4-65/200 F4-65/160	F4-80/160 F4-100/160	<b>FN-32 NU</b>	<b>Ø 32 mm</b>	Graphite	Ceramic NBR
	F4-32/250 F4-40/250	F4-50/250	<b>FN-38</b>	<b>Ø 38 mm</b>	Graphite	Ceramic NBR
	F4-65/250 F4-80/200	F4-100/200	<b>FN-40 NU</b>	<b>Ø 40 mm</b>	Graphite	Ceramic NBR
	F4-80/250	F4-100/250	<b>FN-45 NU</b>	<b>Ø 45 mm</b>	Graphite	Ceramic NBR
<b>6 BEARINGS</b>	<b>Pump Model</b>	<b>Pump Model</b>	<b>Pump Model</b>	<b>Pump Model</b>	<b>Pump Model</b>	<b>Pump Model</b>
	F4-32/160 F4-40/160 F4-50/125	<b>6206 ZZ-C3 / 6204 ZZ</b>	F4-32/250 F4-40/250 F4-50/200 F4-50/250 F4-65/160 F4-65/200 F4-80/160 F4-100/160	<b>6208 ZZ-C3 / 6206 ZZ-C3</b>		
	F4-32/200 F4-40/200 F4-50/160 F4-65/125	<b>6307 ZZ-C3 / 6206 ZZ-C3</b>	F4-65/250 F4-80/200 F4-80/250 F4-100/200 F4-100/250	<b>6310 ZZ-C3 / 6308 ZZ-C3</b>		
<b>7 ELECTRIC MOTOR</b>	<b>F4:</b> with 4 poles three-phase 230/400 V - 50 Hz ➔ <b>The three-phase pumps are fitted with high performance motors up to P<sub>2</sub>=0.37 kW in class IE2 and from P<sub>2</sub>=0.75 kW in class IE3 (IEC 60034-30-1)</b> – Insulation: class F – Protection: IP 55					



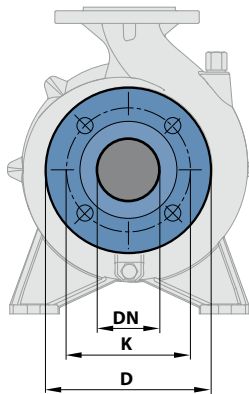
# F4

## DIMENSIONS AND WEIGHT



MODEL	DIMENSIONS mm											kg												
	DN1	DN2	a	f	h3	h1	h2	t	n2	n1	m1		m2	s										
<b>Three-phase</b>																								
F4-32/160B	50	32	80	412	292	132	160	242	190	240	100	70	14	31.2										
F4-32/160A																	31.2							
F4-32/200B																		43.4						
F4-32/200A																		43.5						
F4-32/200BH					100	469	340	160	180	270				95		42.3								
F4-32/200AH																42.4								
F4-32/250C							522	405	180	225	330	250		320	125	95	64.1							
F4-32/250B							568										63.1							
F4-32/250A													68.7											
F4-40/160B	65	40	80	412	292	132	160	240	190	240	100	70	14	32.5										
F4-40/160A																	32.9							
F4-40/200B					100	489	340	160	180	275	212	265				46.0								
F4-40/200A																46.2								
F4-40/250C							522	405	180	225	328	250		320	125	95	59.7							
F4-40/250B							568										60.1							
F4-40/250A													72.4											
F4-50/125B	65	50	100	431	292	132	160	242	190	240	100	70	14	32.2										
F4-50/125A																		32.2						
F4-50/160B						160	489	340		180				269	212	265			44.4					
F4-50/160A																				44.6				
F4-50/200C						529										59.2								
F4-50/200B						576	360		200	316						68.3								
F4-50/200A																68.5								
F4-50/200AR																68.8								
F4-50/250D						522										59.9								
F4-50/250C																63.3								
F4-50/250B						568	405	180	225	337	250	320		125	95	68.7								
F4-50/250A																69.1								
F4-50/250AR																78.0								
F4-65/125B			80	65	100	511	340	160	180	291	212	280		125	95	14	50.2							
F4-65/125A																					50.4			
F4-65/160C						180	533	360		200			300								55.0			
F4-65/160B																					58.7			
F4-65/160A								579														65.0		
F4-65/200A								582	405	180			225				340	250	320			72.0		
F4-65/200AR															78.4									
F4-65/250B						627	450	200	250	373	280	360	160	120	18		111.2							
F4-65/250A															139.6									
F4-80/160D	100	80			125	565	405	180	225	330	250	320	125	95	14		65.8							
F4-80/160C																				67.3				
F4-80/160B						250			611			225				330	250	320			70.0			
F4-80/160A																					76.4			
F4-80/200B						655	430		250	360	280	345				100.0								
F4-80/200A																130.2								
F4-80/250B						673	480	200	280	405	315	400	160	120		18	149.5							
F4-80/250A																137.6								
F4-100/160B	125	100	125	622	480	200	280	362	280	360	160	120	18	91.0										
F4-100/160A																							97.0	
F4-100/200C																								122.0
F4-100/200B															657				391					116.0
F4-100/200A																124.1								
F4-100/250B					140	694	505	225		422	315	400				143.0								
F4-100/250A										789													159.3	

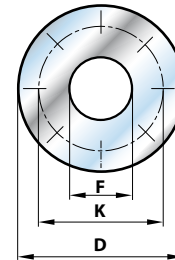
## FLANGED PORTS



DN FLANGES mm	D mm	K mm	HOLES	
			N°	Ø (mm)
32	140	100	4	18
40	150	110		
50	165	125		
65	185	145		
80	200	160	8	
100	220	180		
125	250	210		

## COUNTER FLANGES

(CAN BE ORDERED SEPARATELY)



DN FLANGES mm	F COUNTERFLANGES	D mm	K mm	HOLES	
				N°	Ø (mm)
32	1¼"	140	100	4	18
40	1½"	150	110		
50	2"	165	125		
65	2½"	185	145		
80	3"	200	160	8	
100	4"	220	180		
125	5"	250	210		

## ABSORPTION

MODEL	VOLTAGE	
	230–240 V	400–415 V
<b>Three-phase</b>		
F4-32/160B	1.9 A	1.1 A
F4-32/160A	1.9 A	1.3 A
F4-32/200B	3.6 A	2.1 A
F4-32/200A	4.0 A	2.3 A
F4-32/200BH	3.3 A	1.9 A
F4-32/200AH	3.5 A	2.0 A
F4-32/250C	5.7 A	2.6 A
F4-32/250B	7.3 A	3.3 A
F4-32/250A	7.8 A	5.2 A
F4-40/160B	2.1 A	1.2 A
F4-40/160A	2.8 A	1.6 A
F4-40/200B	3.6 A	2.1 A
F4-40/200A	4.2 A	2.4 A
F4-40/250C	5.5 A	2.6 A
F4-40/250B	6.1 A	3.5 A
F4-40/250A	8.5 A	5.2 A
F4-50/125B	2.3 A	1.4 A
F4-50/125A	2.6 A	1.5 A
F4-50/160B	3.3 A	2.1 A
F4-50/160A	4.2 A	2.4 A
F4-50/200C	6.1 A	3.5 A
F4-50/200B	8.0 A	4.6 A
F4-50/200A	9.0 A	5.2 A
F4-50/200AR	10.6 A	6.8 A
F4-50/250D	4.9 A	2.8 A
F4-50/250C	5.9 A	3.4 A
F4-50/250B	8.5 A	4.9 A
F4-50/250A	9.9 A	5.7 A
F4-50/250AR	11.8 A	6.8 A

MODEL	VOLTAGE	
	230–240 V	400–415 V
<b>Three-phase</b>		
F4-65/125B	3.6 A	2.1 A
F4-65/125A	4.5 A	2.6 A
F4-65/160C	5.2 A	2.7 A
F4-65/160B	5.9 A	3.4 A
F4-65/160A	7.8 A	4.5 A
F4-65/200A	9.0 A	5.2 A
F4-65/200AR	11.8 A	6.8 A
F4-65/250B	17.3 A	9.5 A
F4-65/250A	21.7 A	13.5 A
F4-80/160D	5.9 A	3.4 A
F4-80/160C	8.1 A	4.7 A
F4-80/160B	9.2 A	5.3 A
F4-80/160A	10.6 A	6.8 A
F4-80/200B	13.8 A	9.5 A
F4-80/200A	18.2 A	12.8 A
F4-80/250B	20.8 A	13.5 A
F4-80/250A	25.6 A	14.8 A
F4-100/160B	9.0 A	5.2 A
F4-100/160A	11.2 A	6.5 A
F4-100/200C	14.2 A	9.5 A
F4-100/200B	17.8 A	12.1 A
F4-100/200A	20.8 A	13.5 A
F4-100/250B	26.8 A	15.9 A
F4-100/250A	34.1 A	19.7 A