

## Standardised "EN 733" centrifugal pumps

 Clean water

 Industrial use


## PERFORMANCE RANGE

- Flow rate up to **6000 l/min** (360 m<sup>3</sup>/h)
- Head up to **98 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
- Special mechanical seal
- Other voltages or 60 Hz frequency
- Compatibility with hotter or colder liquids
- Compatibility with hotter or colder environments

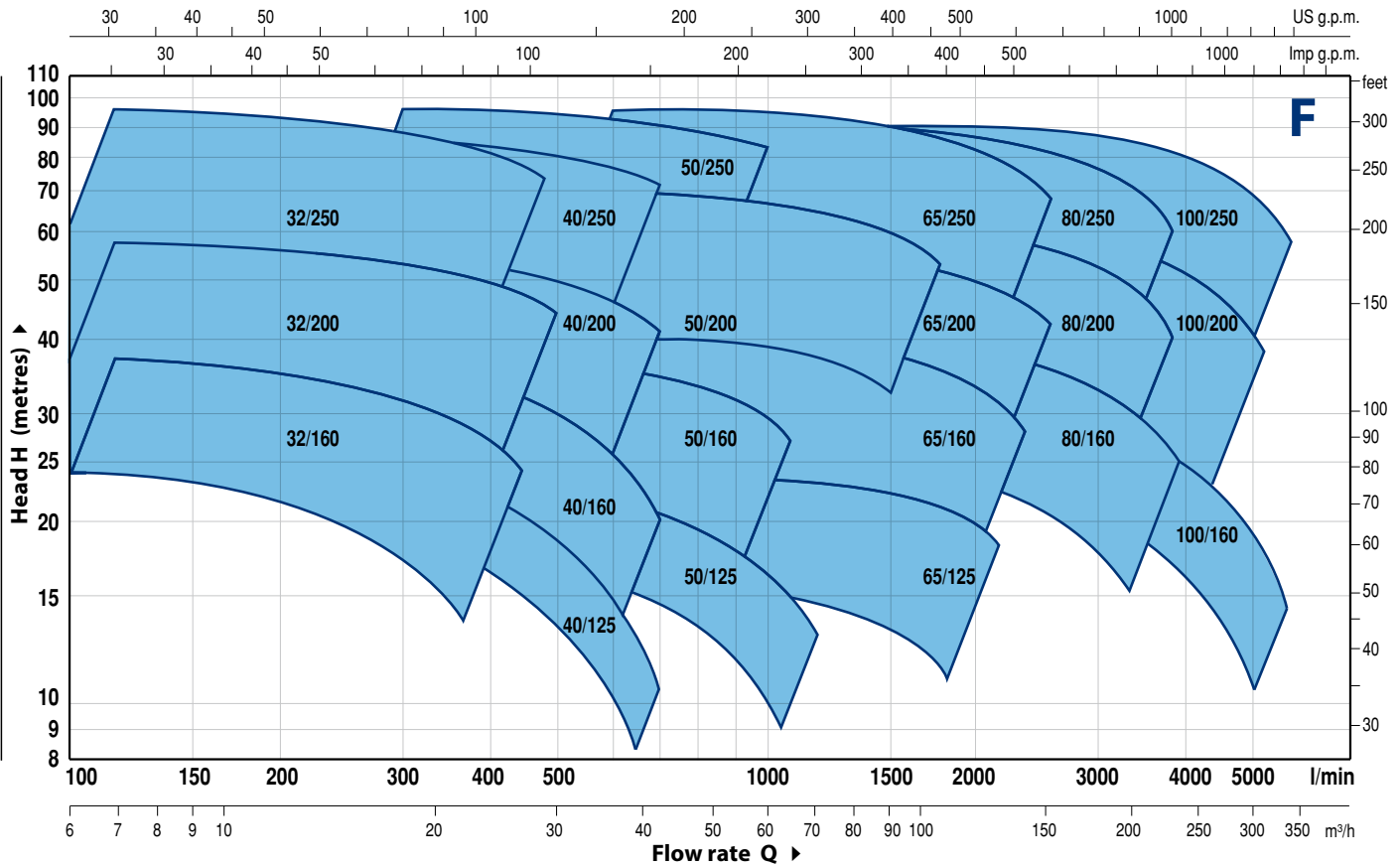
## CERTIFICATIONS

Company with management system certified DNV  
ISO 9001: QUALITY



## PERFORMANCE RANGE

50 Hz n= 2900 min<sup>-1</sup>



## PERFORMANCE DATA

50 Hz n= 2900 min<sup>-1</sup>

MODEL	POWER (P <sub>2</sub> )		▲	PERFORMANCE	
	kW	HP		Q l/min	H metres
F 32/160C	1.5	2	IE3	100 – 350	24 – 14
F 32/160B	2.2	3		100 – 400	30 – 17
F 32/160A	3	4		100 – 450	37 – 24
F 32/200C	4	5.5		100 – 450	44 – 31.5
F 32/200B	5.5	7.5		100 – 500	51 – 36
F 32/200A	7.5	10		100 – 500	57 – 44
F 32/200BH	3	4		100 – 300	45 – 37
F 32/200AH	4	5.5		100 – 320	55 – 44
F 32/250C	9.2	12.5		100 – 450	75 – 60
F 32/250B	11	15		100 – 500	87 – 70
F 32/250A	15	20	100 – 500	97 – 80	
F 40/125C	1.1	1.5	IE3	100 – 550	16 – 6
F 40/125B	1.5	2		100 – 600	20.5 – 9
F 40/125A	2.2	3		100 – 700	26 – 10
F 40/160C	2.2	3		100 – 600	27 – 14
F 40/160B	3	4		100 – 600	32 – 20
F 40/160A	4	5.5		100 – 700	38 – 20
F 40/200B	5.5	7.5		100 – 700	47 – 28
F 40/200A	7.5	10		100 – 700	55 – 41
F 40/250C	9.2	12.5		100 – 700	64 – 47
F 40/250B	11	15		100 – 700	71 – 55
F 40/250A	15	20	100 – 700	88 – 72	
F 50/125C	2.2	3	IE3	300 – 1200	17.5 – 6
F 50/125B	3	4		300 – 1200	20.7 – 9
F 50/125A	4	5.5		300 – 1200	23.5 – 13
F 50/160C	4	5.5		300 – 1000	27 – 16
F 50/160B	5.5	7.5		300 – 1100	32 – 21
F 50/160A	7.5	10		300 – 1100	37 – 27
F 50/200C	11	15		400 – 1700	44 – 30
F 50/200B	15	20		400 – 1700	52 – 38
F 50/200A	18.5	25		400 – 1800	61 – 45
F 50/200AR	22	30		400 – 1800	69 – 53
F 50/250D	9.2	12.5	300 – 900	51 – 32	
F 50/250C	11	15	300 – 900	59 – 42	
F 50/250B	15	20	300 – 1000	72 – 59	
F 50/250A	18.5	25	300 – 1000	85 – 73	
F 50/250AR	22	30	300 – 1000	95 – 83	

MODEL	POWER (P <sub>2</sub> )		▲	PERFORMANCE	
	kW	HP		Q l/min	H metres
F 65/125C	4	5.5	IE3	600 – 1800	16 – 11
F 65/125B	5.5	7.5		600 – 2000	18 – 13
F 65/125A	7.5	10		600 – 2200	23 – 18
F 65/160C	9.2	12.5		600 – 2200	32 – 22
F 65/160B	11	15		600 – 2400	36.5 – 23
F 65/160A	15	20		600 – 2400	40.5 – 28
F 65/200B	15	20		200 – 2400	44 – 30.5
F 65/200A	18.5	25		200 – 2500	50 – 36.5
F 65/200AR	22	30		200 – 2600	57 – 42
F 65/250C	30	40		400 – 2350	76 – 53
F 65/250B	37	50	400 – 2500	87 – 62	
F 65/250A	45	60	400 – 2600	95 – 68	
F 80/160D	11	15	IE3	500 – 4000	25 – 10
F 80/160C	15	20		500 – 4000	30 – 15
F 80/160B	18.5	25		500 – 4000	35 – 20
F 80/160A	22	30		500 – 4000	40 – 25
F 80/200B	30	40		500 – 3650	56 – 34.5
F 80/200A	37	50		500 – 3900	62 – 40
F 80/250B	45	60		600 – 3600	77 – 54
F 80/250A	55	75		600 – 3900	88.5 – 60
F 100/160C	15	20		1000 – 5000	30 – 12
F 100/160B	18.5	25		1000 – 5200	34 – 14.5
F 100/160A	22	30	1000 – 5500	38 – 17.5	
F 100/200C	30	40	IE3	833 – 4650	51 – 28
F 100/200B	37	50		833 – 4900	57 – 33
F 100/200A	45	60		833 – 5250	63 – 38
F 100/250B	55	75		800 – 5150	75 – 48
F 100/250A	75	100		800 – 5750	89 – 58

Q = Flow rate

H = Total manometric head

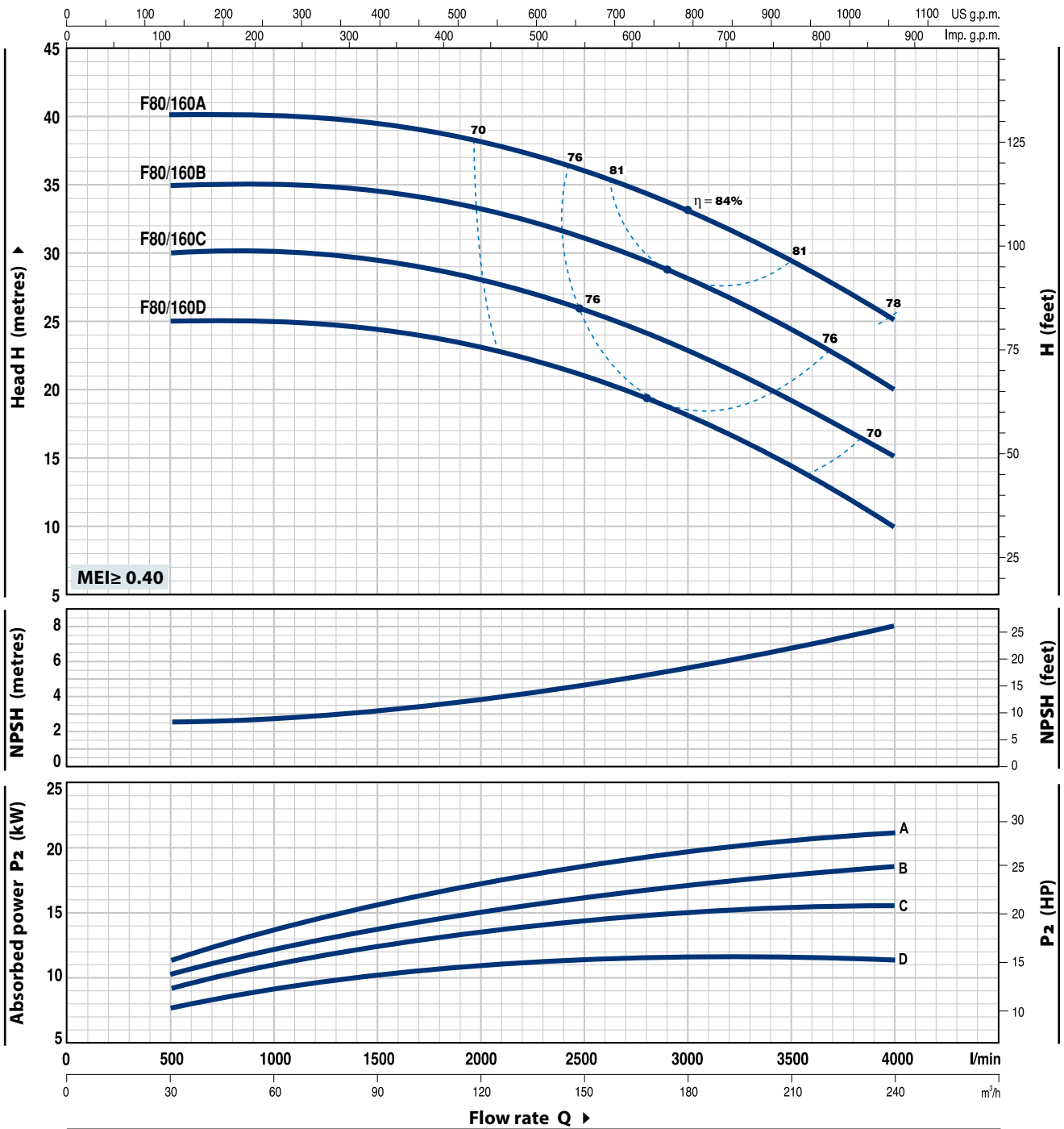
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

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

# F80/160

## CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 2900 min<sup>-1</sup> HS = 0 m



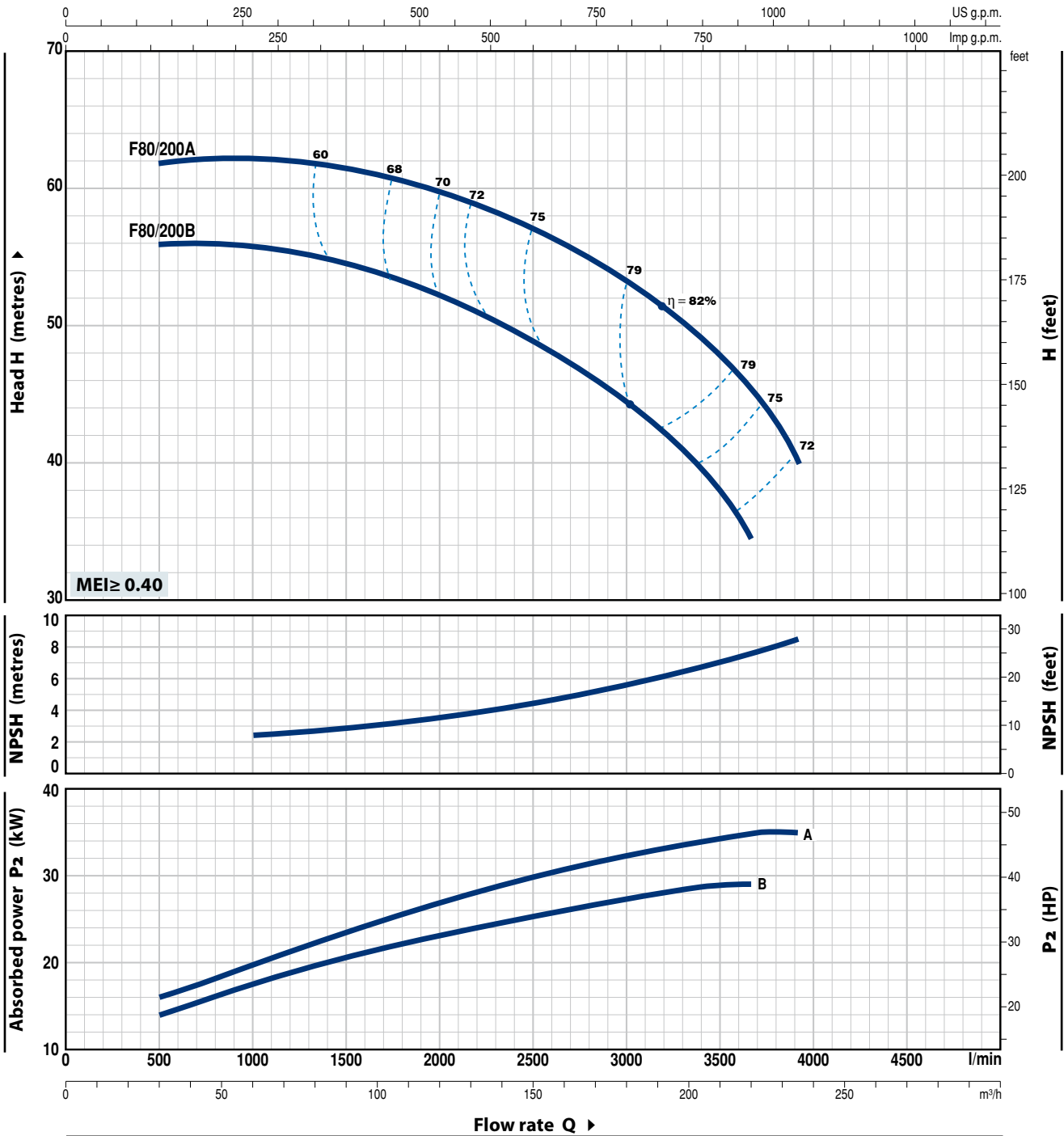
MODEL	POWER (P <sub>2</sub> )		Q	Flow rate Q											
	kW	HP		m <sup>3</sup> /h	0	30	60	90	120	150	180	210	240		
Three-phase			l/min	0	500	1000	1500	2000	2500	3000	3500	4000			
F 80/160D	11	15	H metres	25	25	25	24.5	23.5	21	18	14.5	10			
F 80/160C	15	20		30	30	30	29.5	28.5	26	23	19.5	15			
F 80/160B	18.5	25		35	35	35	34.5	33.5	31	28.5	24.5	20			
F 80/160A	22	30		40	40	40	39.5	38.5	36	33	29.5	25			

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= 2900 min<sup>-1</sup> HS= 0 m



MODEL	POWER (P <sub>2</sub> )		Q	Flow rate						
	kW	HP		m <sup>3</sup> /h	l/min	m <sup>3</sup> /h	l/min	m <sup>3</sup> /h	l/min	
Three-phase				30	50	100	150	200	219	234
				500	833	1667	2500	3333	3650	3900
F 80/200B	30	40	H metres	56	56	54	49	41	34.5	
F 80/200A	37	50		62	62	61	57	50	45.5	40

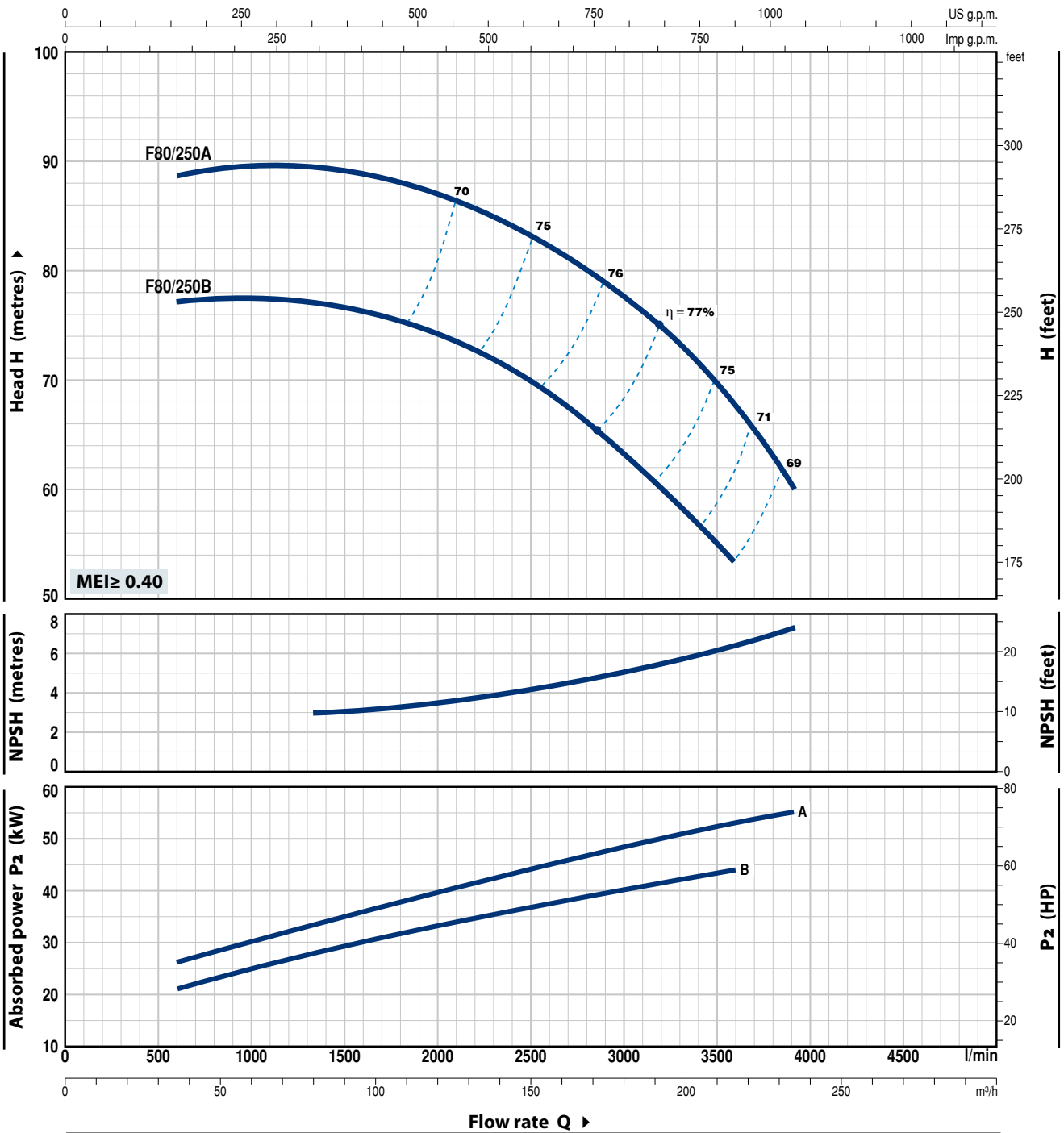
Q =Flow rate H =Total manometric head HS = Suction height

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

# F80/250

## CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 2900 min<sup>-1</sup> HS = 0 m



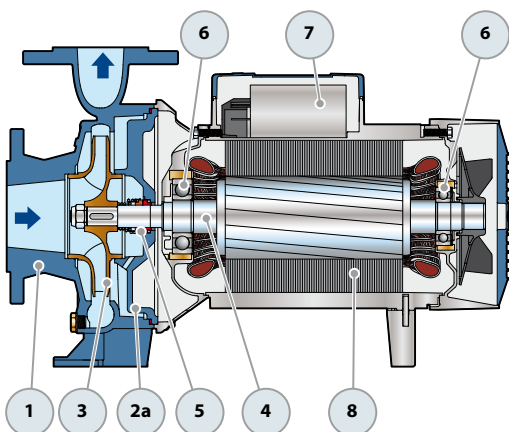
MODEL	POWER (P <sub>2</sub> )		Q	Flow rate						
	kW	HP		m <sup>3</sup> /h	l/min	m <sup>3</sup> /h	l/min	m <sup>3</sup> /h	l/min	
Three-phase				36	50	100	150	200	216	234
F 80/250B	45	60	H metres	77	77.5	76	70.5	58.5	54	
F 80/250A	55	75	H metres	88.5	89.5	89	83	72	68	60

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

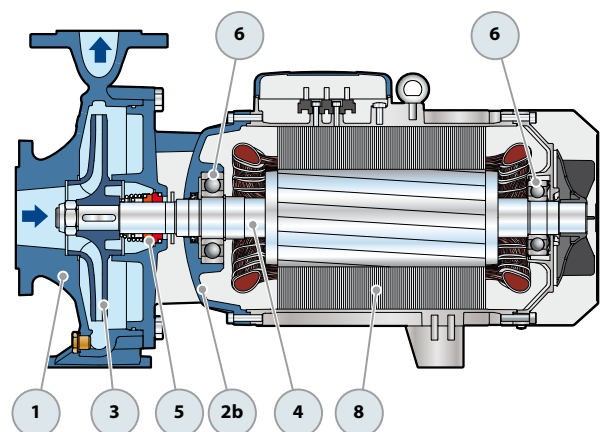
Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

## POS. COMPONENT CONSTRUCTION CHARACTERISTICS

<b>1 PUMP BODY</b>	Cast iron complete with flanged suction and delivery ports				
<b>2a BODY BACKPLATE</b>	Cast iron for F32/160, F32/200, F40/125, F40/160, F40/200, F50/125, F50/160, F65/125				
<b>2b MOTOR BRACKET</b>	Cast iron for F32/250, F40/250, F50/200, F50/250, F65/160, F65/200, F65/250, F80/160, F80/200, F80/250, F100/160, F100/200, F100/250				
<b>3 IMPELLER</b>	Brass for F32/160, F32/200, F40/125, F40/160, F40/200, F50/125, F50/160 Cast iron for F32/250, F40/250, F50/200, F50/250, F65/125, F65/160, F65/200, F65/250, F80/160, F80/200, F80/250, F100/160, F100/200, F100/250				
<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>Materials</b> Stationary ring    Rotational ring    Elastomer	
	F32/160, F40/125, F40/160, F50/125	<b>FN-20</b>	<b>Ø 20 mm</b>	Graphite	Ceramic    NBR
	F32/200, F40/200, F50/160, F65/125	<b>FN-24</b>	<b>Ø 24 mm</b>	Graphite	Ceramic    NBR
	F50/200, F65/160, F65/200, F80/160, F100/160	<b>FN-32 NU</b>	<b>Ø 32 mm</b>	Graphite	Ceramic    NBR
	F32/250, F40/250, F50/250	<b>FN-38</b>	<b>Ø 38 mm</b>	Graphite	Ceramic    NBR
	F65/250, F80/200, F80/250B, F100/200	<b>FN-40 NU</b>	<b>Ø 40 mm</b>	Graphite	Ceramic    NBR
	F80/250A, F100/250	<b>FH-45 NU</b>	<b>Ø 45 mm</b>	Graphite	Ceramic    NBR
<b>6 BEARINGS</b>	<b>Pump Model</b>	<b>Model</b>	<b>Pump Model</b>	<b>Model</b>	
	F32/160C    F40/160C	<b>6206 ZZ-C3 / 6204 ZZ</b>	F32/250    F50/200	<b>6310 ZZ-C3 / 6308 ZZ-C3</b>	
	F32/160B    F50/125C		F40/250    F65/160		
	F40/125		F50/250    F80/160		
	Fm32/160B    F32/160A	<b>6206 ZZ-C3 / 6205 ZZ</b>	F65/200    F100/160	<b>6312 ZZ-C3 / 6212 ZZ-C3</b>	
	Fm40/160C    F40/160B		F65/250    F80/200		
	Fm50/125C    F50/125B		F80/250B    F100/200		
	F40/160A	<b>6306 ZZ-C3 / 6206 ZZ-C3</b>	F80/250A	<b>6314 ZZ-C3 / 6313 ZZ-C3</b>	
	F50/125A		F100/250		
	F32/200    F40/200	<b>6307 ZZ-C3 / 6206 ZZ-C3</b>			
	F50/160    F65/125				
<b>7 CAPACITOR</b>	<b>Pump</b>	<b>Capacitance</b>			
	<i>Single-phase</i>	<i>(230 V or 240 V)</i>			
	Fm32/160C	<b>45</b> µF - 450 VL			
	Fm32/160B	<b>70</b> µF - 450 VL			
	Fm40/125C	<b>31.5</b> µF - 450 VL			
	Fm40/125B	<b>45</b> µF - 450 VL			
	Fm40/160C	<b>70</b> µF - 450 VL			
	Fm50/125C	<b>70</b> µF - 450 VL			
<b>8 ELECTRIC MOTOR</b>	<b>Fm:</b> single-phase 230 V - 50 Hz with thermal overload protector incorporated into the winding (up to 1.5 kW) <b>F:</b> <b>three-phase 230/400 V - 50 Hz up to 4 kW</b> <b>400/690 V - 50 Hz from 5.5 to 75 kW</b> ➡ <b>The three-phase pumps are fitted with high performance motors in class IE3 (IEC 60034-30-1)</b> – Insulation: class F – Protection: IP 55				



Single-phase version



Three-phase version

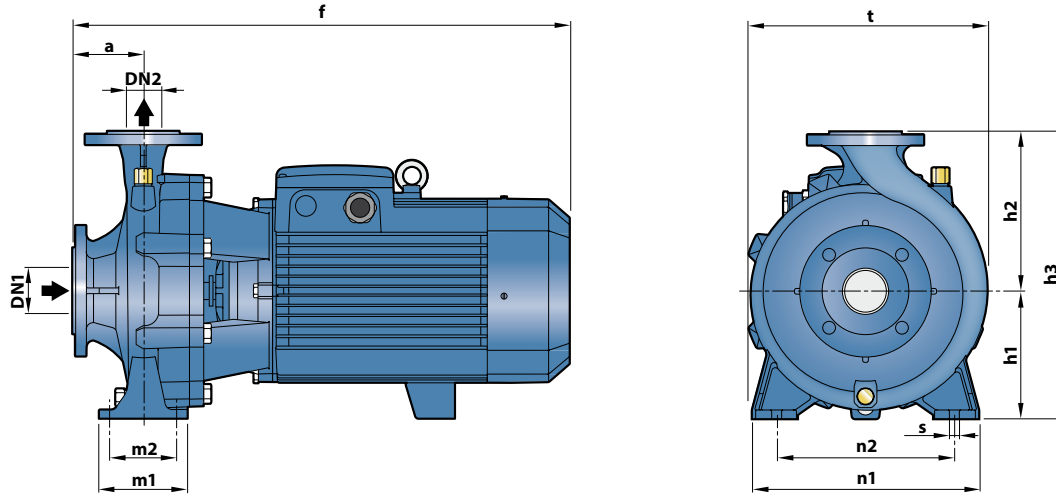
## ABSORPTION

MODEL	VOLTAGE	
	230 V	240 V
Single-phase		
Fm 32/160C	11.0 A	10.0 A
Fm 32/160B	15.0 A	13.8 A
Fm 40/160C	15.0 A	14.4 A
Fm 50/125C	15.0 A	14.4 A

MODEL	VOLTAGE		
	230–240 V	400–415 V	690–720 V
Three-phase			
F 32/160C	7.5 A	4.3 A	2.5 A
F 32/160B	8.65 A	5.0 A	2.9 A
F 32/160A	12.6 A	7.3 A	4.1 A
F 32/200C	17.9 A	10.3 A	6.0 A
F 32/200B	–	11.7 A	6.8 A
F 32/200A	–	14.9 A	8.6 A
F 32/200BH	12.6 A	7.3 A	4.2 A
F 32/200AH	15.4 A	8.9 A	5.1 A
F 32/250C	–	18.5 A	10.7 A
F 32/250B	–	22.0 A	12.7 A
F 32/250A	–	25.0 A	14.5 A
F 40/125C	5.2 A	3.0 A	1.7 A
F 40/125B	7.7 A	4.5 A	2.6 A
F 40/125A	9.0 A	5.2 A	3.0 A
F 40/160C	9.9 A	5.7 A	3.3 A
F 40/160B	12.0 A	6.9 A	4.0 A
F 40/160A	17.2 A	9.9 A	5.6 A
F 40/200B	–	12.6 A	7.3 A
F 40/200A	–	15.6 A	9.0 A
F 40/250C	–	21.0 A	12.1 A
F 40/250B	–	23.5 A	13.6 A
F 40/250A	–	30.5 A	17.6 A
F 50/125C	9.4 A	5.4 A	3.2 A
F 50/125B	12.0 A	6.9 A	4.0 A
F 50/125A	16.3 A	9.4 A	5.4 A
F 50/160C	15.8 A	9.1 A	5.3 A
F 50/160B	–	12.3 A	7.1 A
F 50/160A	–	15.5 A	8.9 A
F 50/200C	–	23.0 A	13.3 A
F 50/200B	–	29.5 A	17.0 A
F 50/200A	–	34.5 A	20.0 A
F 50/200AR	–	41.5 A	24.0 A

MODEL	VOLTAGE		
	230–240 V	400–415 V	690–720 V
Three-phase			
F 50/250D	–	19.0 A	11.0 A
F 50/250C	–	21.0 A	12.0 A
F 50/250B	–	27.0 A	15.6 A
F 50/250A	–	34.0 A	19.6 A
F 50/250AR	–	41.0 A	24.0 A
F 65/125C	17.5 A	10.0 A	5.8 A
F 65/125B	–	12.0 A	7.0 A
F 65/125A	–	16.5 A	9.5 A
F 65/160C	–	19.0 A	11.0 A
F 65/160B	–	23.0 A	13.5 A
F 65/160A	–	27.5 A	16.0 A
F 65/200B	–	30.0 A	17.3 A
F 65/200A	–	34.0 A	19.5 A
F 65/200AR	–	41.0 A	24.0 A
F 65/250C	–	53.0 A	31.0 A
F 65/250B	–	65.0 A	38.0 A
F 65/250A	–	79.0 A	46.0 A
F 80/160D	–	22.0 A	13.0 A
F 80/160C	–	29.0 A	17.0 A
F 80/160B	–	34.5 A	20.0 A
F 80/160A	–	39.0 A	22.5 A
F 80/200B	–	53.0 A	31.0 A
F 80/200A	–	65.0 A	38.0 A
F 80/250B	–	79.0 A	46.0 A
F 80/250A	–	98.0 A	57.0 A
F 100/160C	–	27.5 A	16.0 A
F 100/160B	–	32.5 A	18.8 A
F 100/160A	–	39.8 A	23.0 A
F 100/200C	–	53.0 A	31.0 A
F 100/200B	–	65.0 A	38.0 A
F 100/200A	–	79.0 A	46.0 A
F 100/250B	–	98.0 A	57.0 A
F 100/250A	–	126.0 A	73.0 A

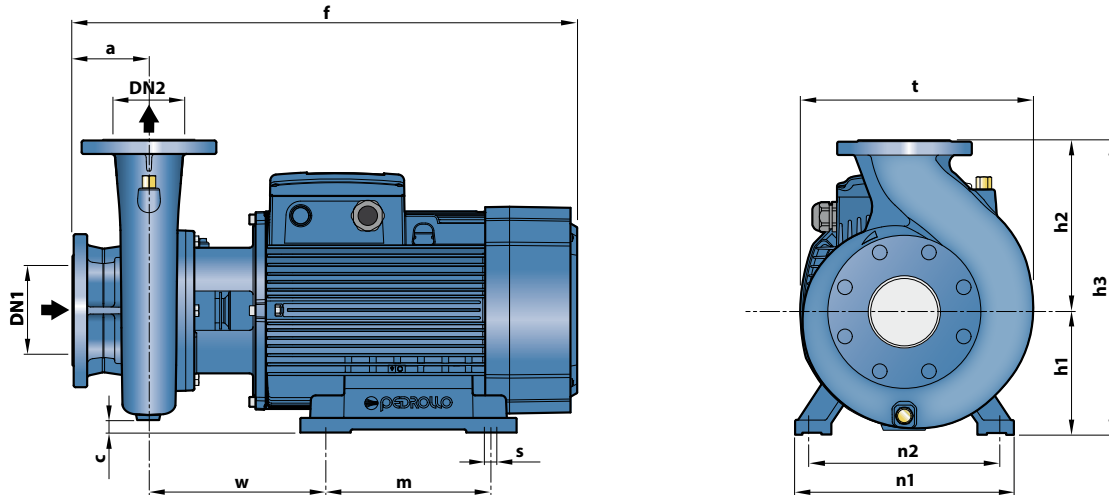
## DIMENSIONS AND WEIGHT



MODEL		DIMENSIONS mm													kg													
Single-phase	Three-phase	DN1	DN2	a	f	h1	h2	h3	t	n1	n2	m1	m2	s	1~	3~												
Fm 32/160C	F 32/160C	50	32	80	419	160	180	340	273	245	190	100	70	14	32.6	32.3												
Fm 32/160B	F 32/160B				448/432										132	292	240	42.3	35.2									
-	F 32/160A				448										-	-	-	-	-									
-	F 32/200C				469										-	-	-	-	-									
-	F 32/200B				515										-	-	-	-	-									
-	F 32/200A			469	160	180	340	273	95	70	-	51.8																
-	F 32/200BH			-	-	-	-	-	-	-	-	-	-		-	-	42.0	-										
-	F 32/200AH			-	-	-	-	-	-	-	-	-	-		-	-	45.8	-										
-	F 32/250C			-	-	100	606	180	225	405	325	320	250		125	95	-	105.5	-									
-	F 32/250B			701	-		-	-	-	-	-	-	-		-	-	-	103.2	-									
-	F 32/250A	-	-	-	-		-	-	-	-	-	-	-	-	121.0	-												
Fm 40/125C	F 40/125C	65	40	80	421	132	160	292	241	240	190	100	70	14	31.5	29.9												
Fm 40/125B	F 40/125B				441										112	252	244	210	160	33.0	32.4							
-	F 40/125A				439										-	-	-	-	-	-	-	-	-	-	-	32.6	-	
Fm 40/160C	F 40/160C				448										-	-	-	-	-	-	-	-	-	-	-	38.3	33.4	
-	F 40/160B				465										-	-	-	-	-	-	-	-	-	-	-	-	38.9	-
-	F 40/160A			535	160	180	340	277	265	212	240	190	100		70	-	43.6	-										
-	F 40/200B			-	-	-	-	-	-	-	-	-	-		-	-	-	53.0	-									
-	F 40/200A			606	160	180	340	277	265	212	240	190	100		70	-	59.0	-										
-	F 40/250C			701	-	-	-	-	-	-	-	-	-		-	-	-	104.0	-									
-	F 40/250B			701	180	225	405	329	320	250	329	320	250		125	95	-	104.0	-									
-	F 40/250A	701	-	-	-	-	-	-	-	-	-	-	-	-	120.0	-												
Fm 50/125C	F 50/125C	65	50	100	465/451	160	180	340	273	265	212	100	70	14	36.8	35.1												
-	F 50/125B				465										132	292	242	240	190	-	-	-	-	-	-	38.5	-	
-	F 50/125A				484										-	-	-	-	-	-	-	-	-	-	-	-	42.8	-
-	F 50/160C				489										-	-	-	-	-	-	-	-	-	-	-	-	47.3	-
-	F 50/160B				535										-	-	-	-	-	-	-	-	-	-	-	-	52.8	-
-	F 50/160A			616	160	180	340	273	265	212	240	190	100		70	-	57.6	-										
-	F 50/200C			-	-	-	-	-	-	-	-	-	-		-	-	-	100.0	-									
-	F 50/200B			711	160	180	340	273	265	212	240	190	100		70	-	115.0	-										
-	F 50/200A			711	160	180	340	273	265	212	240	190	100		70	-	115.0	-										
-	F 50/200AR			743	160	180	340	273	265	212	240	190	100		70	-	127.2	-										
-	F 50/250D	605	-	-	-	-	-	-	-	-	-	-	-	-	141.0	-												
-	F 50/250C	605	-	-	-	-	-	-	-	-	-	-	-	-	104.2	-												
-	F 50/250B	701	180	225	405	333	320	250	333	320	250	125	95	-	105.0	-												
-	F 50/250A	701	180	225	405	333	320	250	333	320	250	125	95	-	121.0	-												
-	F 50/250AR	733	-	-	-	-	-	-	-	-	-	-	-	-	134.2	-												
-	F 65/125C	511	-	-	-	-	-	-	-	-	-	-	-	-	147.0	-												
-	F 65/125B	557	160	180	340	292	280	212	292	280	212	125	95	-	53.2	-												
-	F 65/125A	557	160	180	340	292	280	212	292	280	212	125	95	-	58.3	-												
-	F 65/160C	620	160	180	340	292	280	212	292	280	212	125	95	-	63.0	-												
-	F 65/160B	620	160	180	340	292	280	212	292	280	212	125	95	-	98.5	-												
-	F 65/160A	716	160	180	340	292	280	212	292	280	212	125	95	-	100.2	-												
-	F 65/200B	718	-	-	-	-	-	-	-	-	-	-	-	-	114.0	-												
-	F 65/200A	718	-	-	-	-	-	-	-	-	-	-	-	-	119.3	-												
-	F 65/200AR	751	-	-	-	-	-	-	-	-	-	-	-	-	132.1	-												
-	F 80/160D	652	180	225	405	336	320	250	336	320	250	160	120	18	-	145.3												
-	F 80/160C	652	180	225	405	336	320	250	336	320	250	160	120	18	-	103.1												
-	F 80/160B	747	-	-	-	-	-	-	-	-	-	-	-	-	-	103.1												
-	F 80/160A	779	125	125	125	125	125	125	125	125	125	125	125	18	-	120.0												
-	F 100/160C	760	200	280	480	382	360	280	382	360	280	160	120	18	-	133.8												
-	F 100/160B	760	200	280	480	382	360	280	382	360	280	160	120	18	-	144.0												
-	F 100/160A	790	200	280	480	382	360	280	382	360	280	160	120	18	-	141.2												
-	F 100/160A	790	200	280	480	382	360	280	382	360	280	160	120	18	-	150.3												
-	F 100/160A	790	200	280	480	382	360	280	382	360	280	160	120	18	-	164.0												

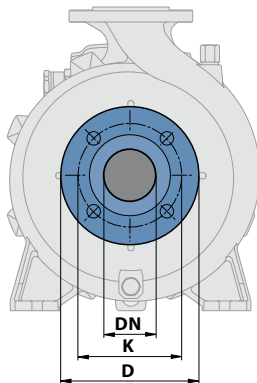


## DIMENSIONS AND WEIGHT



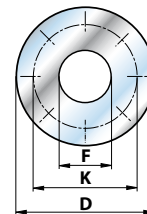
MODEL	DIMENSIONS mm														kg
	Three-phase	DN1	DN2	a	f	h1	h2	h3	c	t	n1	n2	w	m	
F 65/250C	80	65	100	796	201	250	451	16	363	360	318	269.5	305	18.5	208.0
F 65/250B				847											
F 65/250A				847											
F 80/200B	100	80	125	824	280	280	450	26	360	490	400	294	350	24	197.4
F 80/200A				875											
F 80/250B				872											
F 80/250A	125	100	140	1015	250	280	620	55	490	485	406	313	350	24	547.0
F 100/200C				826											
F 100/200B				875											
F 100/200A	125	100	140	877	201	280	481	0	391	360	318	271	305	18.5	232.8
F 100/250B				877											
F 100/250A															551.2
															544.3

## FLANGED PORTS



## COUNTER FLANGES

(CAN BE ORDERED SEPARATELY)



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

DN FLANGES	F	D	K	HOLES	
				N°	Ø (mm)
32	1 1/4"	140	100	4	18
40	1 1/2"	150	110		
50	2"	165	125		
65	2 1/2"	185	145		
80	3"	200	160		
100	4"	220	180	8	
125	5"	250	210		