

 Clean water
(Maximum sand content 100 g/m³)

 Domestic use

 Civil use

 Industrial use

PERFORMANCE RANGE

- Flow rate up to **420 l/min** (25.2 m³/h)
- Head up to **176 m**

APPLICATION LIMITS

- Maximum liquid temperature **+35 °C**
- Maximum sand content **100 g/m³**
- Immersion limit:
 - **200 m** with 4PD motor
 - **100 m** with 4PS motor
- Installation:
 - vertical
 - horizontal up to **12 stages**
- Starts/hour: **20** at regular intervals
- Minimum flow rate for motor cooling **8 cm/s**
- Continuous service **S1**

CONSTRUCTION AND SAFETY STANDARDS

ELECTRIC MOTOR

- Single-phase 230 V - 50 Hz
- Three-phase 400 V - 50 Hz

Length of power cable:

- **2 m** powers from 0.37 to 2.2 kW
- **3.6 m** powers from 3 to 7.5 kW.

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

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



EU REGULATION N. 547/2012

CERTIFICATIONS

Company with management system certified DNV
ISO 9001: QUALITY



INSTALLATION AND USE

Suitable for use with clean water with a sand content of no more than **100 g/m³**. Because of their high efficiency and reliability, they are suitable for use in domestic, civil and industrial applications such as for the distribution of water in combination with pressure tanks, for irrigation, for washing plants and for pressure boosting in fire-fighting sets, etc.

PATENTS - TRADE MARKS - MODELS

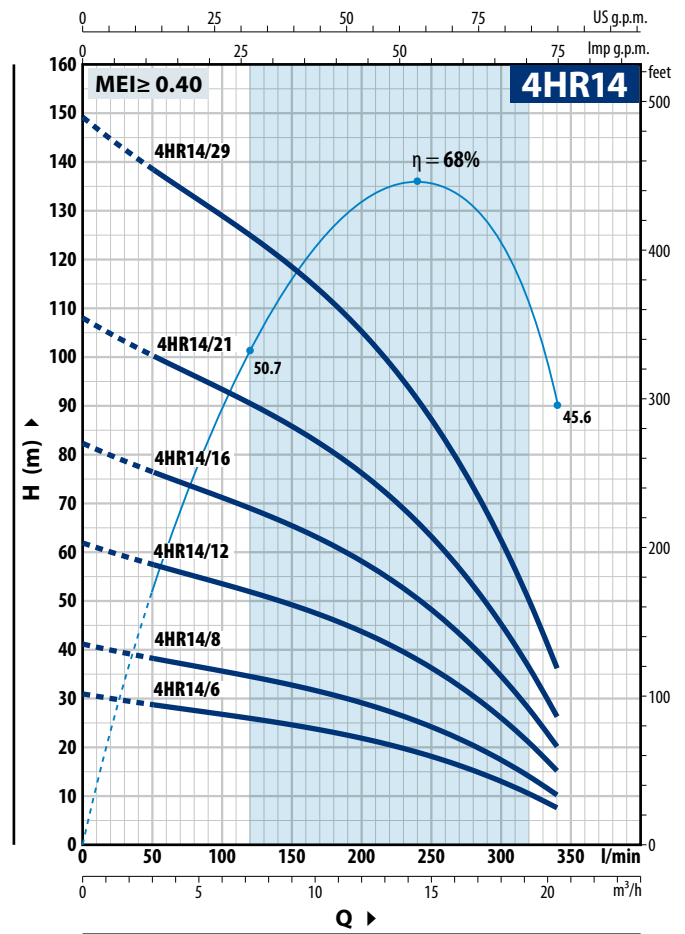
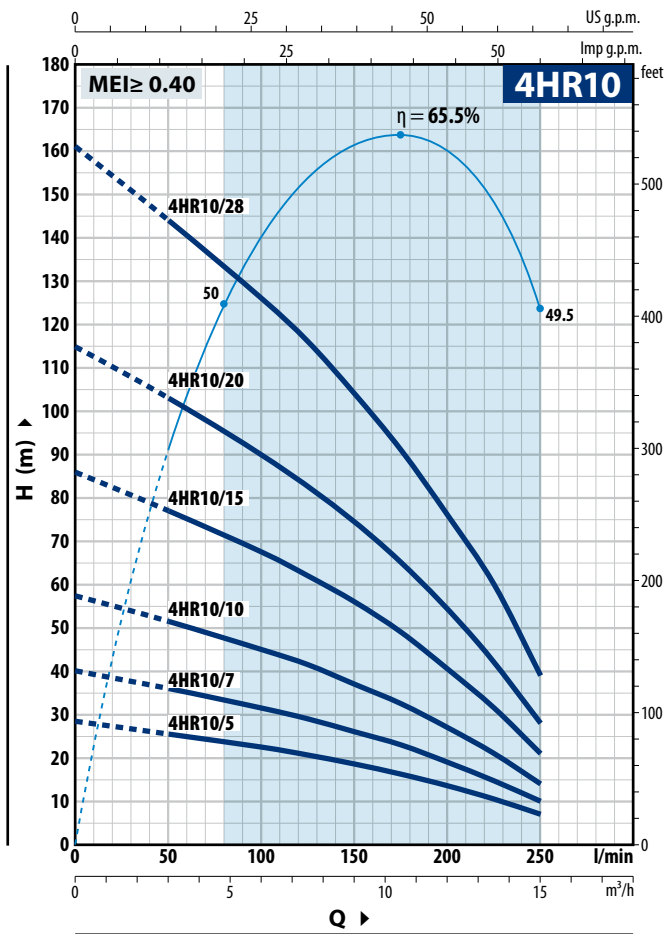
- Registered EU Design n. 004128619

OPTIONS AVAILABLE ON REQUEST

- Other voltages or 60 Hz frequency

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n = 2900 min⁻¹



4HR10

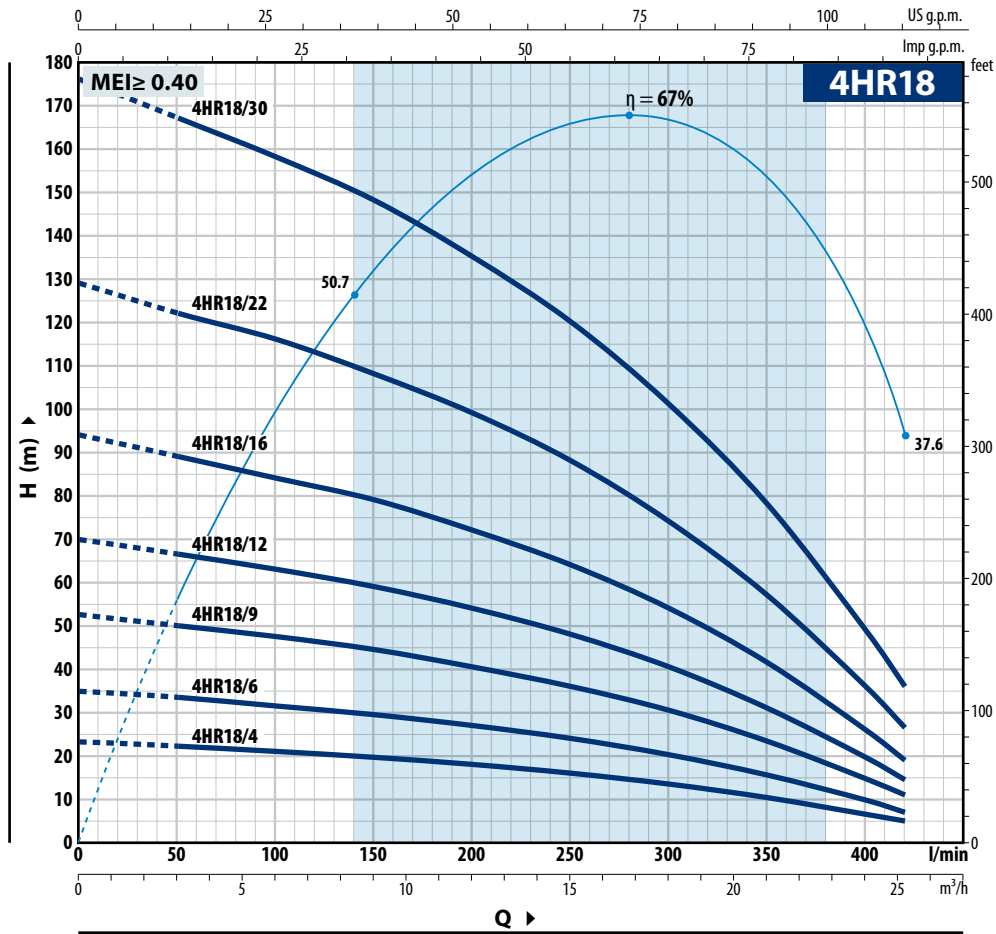
MODEL		POWER (P ₂)		Q	H metres									
Single-phase	Three-phase	kW	HP		m ³ /h	0	3.0	6.0	7.5	9.0	10.5	12.0	13.5	15.0
				l/min	0	50	100	125	150	175	200	225	250	
4HRm 10/5	4HR 10/5	0.75	1	H metres	28.5	25.5	22.5	20.7	18.6	16.3	13.6	10.5	7	
4HRm 10/7	4HR 10/7	1.1	1.5		40	36	31.5	29	26	23	19	14.7	10	
4HRm 10/10	4HR 10/10	1.5	2		57.5	51.5	45	41.5	37	32.5	27	21	14	
4HRm 10/15	4HR 10/15	2.2	3		86	77	67.5	62	56	49	40.5	31.5	21	
-	4HR 10/20	3	4		115	103	90	83	74	65	54.5	42	28	
-	4HR 10/28	4	5.5		161	144	126	116	104	91	76	60	39	

4HR14

MODEL		POWER (P ₂)		Q	H metres									
Single-phase	Three-phase	kW	HP		m ³ /h	0	3.0	6.0	9.0	12.0	15.0	18.0	19.2	20.4
				l/min	0	50	100	150	200	250	300	320	340	
4HRm 14/6	4HR 14/6	1.1	1.5	H metres	31	28.5	26.7	24.5	21.8	18.1	12.9	10.4	7.5	
4HRm 14/8	4HR 14/8	1.5	2		41	38.5	35.5	32.5	29	24.1	17.2	13.8	10	
4HRm 14/12	4HR 14/12	2.2	3		62	57.5	53.5	49	43.5	36	25.8	20.7	15	
-	4HR 14/16	3	4		82	77	71	65.5	58	48	34.5	27.5	20	
-	4HR 14/21	4	5.5		108	100	93	86	76	63	45	36.5	26.5	
-	4HR 14/29	5.5	7.5		149	139	129	119	105	87	62.5	50	36.5	

Q = Flow rate H = Total manometric head

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



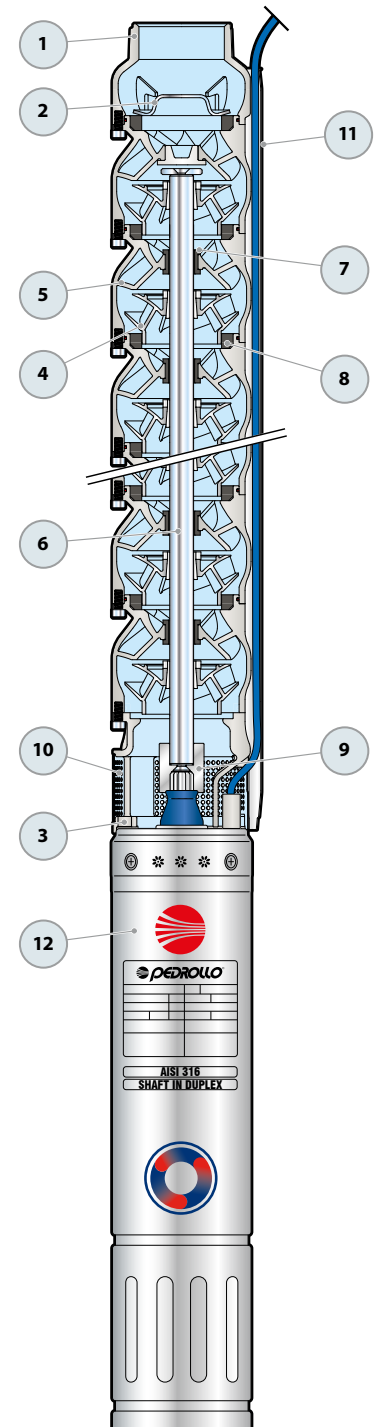
4HR18

MODEL		POWER (P ₂)		Q	Flow Rate (Q)												
Single-phase	Three-phase	kW	HP		m ³ /h	0	3.0	6.0	9.0	12.0	15.0	18.0	21.0	24.0	25.2		
					l/min	0	50	100	150	200	250	300	350	400	420		
4HRm 18/4	4HR 18/4	1.1	1.5	H metres	23.4	22	21	19.7	18	16	13.5	10.4	6.6	5			
4HRm 18/6	4HR 18/6	1.5	2		35	33.5	31.5	29.5	27	24	20.3	15.6	9.8	7			
4HRm 18/9	4HR 18/9	2.2	3		52.5	50	47.5	44.5	40.5	36	30.5	23.4	14.8	11			
-	4HR 18/12	3	4		70	66.5	63	59	54	48	40.5	31	19.7	14.5			
-	4HR 18/16	4	5.5		94	89	84	79	72	64	54	41.5	26	19			
-	4HR 18/22	5.5	7.5		129	122	116	108	99	88	74	57	36	26.5			
-	4HR 18/30	7.5	10		176	167	158	148	135	120	101	78	49	36			

Q = Flow rate H = Total manometric head

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

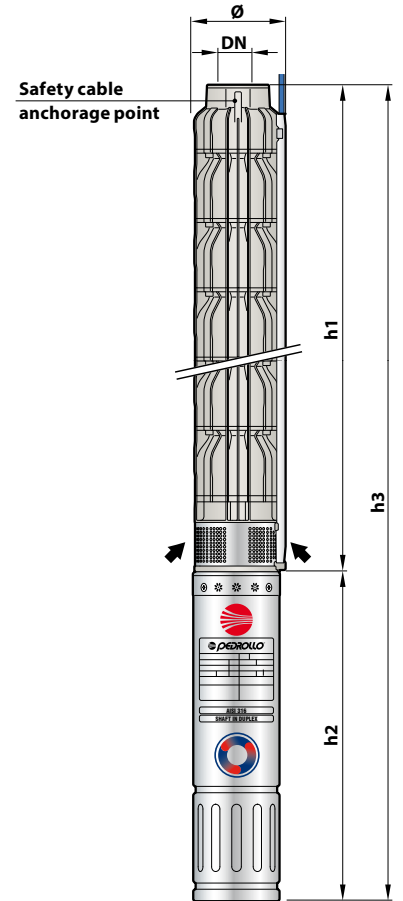
POS. COMPONENT	CONSTRUCTION CHARACTERISTICS
1 DELIVERY BODY	Precision cast stainless steel AISI 304 complete with threaded delivery port in compliance with ISO 228/1
2 NON-RETURN VALVE	Stainless steel AISI 304
3 MOTOR BRACKET	Precision cast stainless steel AISI 304 in compliance with NEMA standards
4 IMPELLERS	Precision cast stainless steel AISI 304
5 DIFFUSERS	Precision cast stainless steel AISI 304
6 PUMP SHAFT	Stainless steel AISI 304
7 PUMP BEARINGS	Special elastomer
8 WEAR RINGS	Special elastomer
9 DRIVE COUPLING	Stainless steel AISI 304
10 FILTER	Stainless steel AISI 304
11 CABLE COVER	Stainless steel AISI 304
12 MOTOR 4"	4PD = rewindable oil filled submersible motor 4PS = encapsulated water cooled submersible motor



DIMENSIONS AND WEIGHT

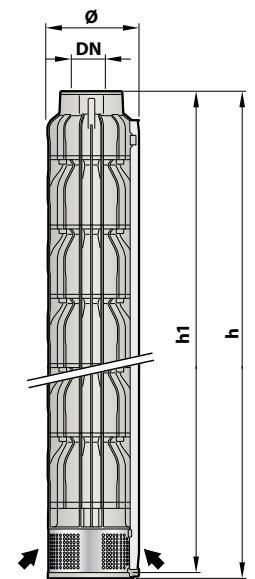
MODEL	4HRm - PD (with 4PD motor)						4HRm - PS (with 4PS motor)						
	DN	DIMENSIONS mm				kg	DN	DIMENSIONS mm				kg	
		Ø	h1	h2	h3			Ø	h1	h2	h3		
Single-phase													
4HRm 10/5	2"	100	511	356	867	19.7	2"	100	511	272	783	20.3	
4HRm 10/7			657	396	1053	23.8			657	312	969	24.8	
4HRm 10/10			876	437	1313	31.0			876	352	1228	32.7	
4HRm 10/15			1241	492	1733	38.7			1241	402	1643	38.0	
4HRm 14/6			584	396	980	21.0			584	312	896	22.0	
4HRm 14/8			730	437	1167	25.2			730	352	1082	26.9	
4HRm 14/12			1022	492	1514	33.7			1022	402	1424	33.0	
4HRm 18/4			438	396	834	18.4			438	312	750	19.4	
4HRm 18/6			584	437	1021	22.6			584	352	936	24.3	
4HRm 18/9			803	492	1295	29.8			803	402	1205	29.1	

MODEL	4HR - PD (with 4PD motor)						4HR - PS (with 4PS motor)						
	DN	DIMENSIONS mm				kg	DN	DIMENSIONS mm				kg	
		Ø	h1	h2	h3			Ø	h1	h2	h3		
Three-phase													
4HR 10/5	2"	100	511	356	867	18.9	2"	100	511	257	768	18.3	
4HR 10/7			657	371	1028	22.3			657	272	929	22.0	
4HR 10/10			876	396	1272	27.8			876	297	1173	28.8	
4HR 10/15			1241	437	1678	35.9			1241	352	1593	37.6	
4HR 10/20			1606	450	2056	45.4			1606	484	2090	49.2	
4HR 10/28			2190	505	2695	59.6			2190	574	2764	66.9	
4HR 14/6			584	371	955	20.2			584	272	856	19.9	
4HR 14/8			730	396	1126	23.6			730	297	1027	24.6	
4HR 14/12			1022	437	1459	30.4			1022	352	1374	32.1	
4HR 14/16			1314	450	1764	37.2			1314	484	1798	41.0	
4HR 14/21			1679	505	2184	46.7			1679	574	2253	54.0	
4HR 14/29			2263	590	2853	61.1			2263	664	2927	69.1	
4HR 18/4			438	371	809	17.6			438	272	710	17.3	
4HR 18/6			584	396	980	21.0			584	297	881	22.0	
4HR 18/9			803	437	1240	26.5			803	352	1155	28.2	
4HR 18/12			1022	450	1472	32.0			1022	484	1506	35.8	
4HR 18/16			1314	505	1819	40.2			1314	574	1888	47.5	
4HR 18/22			1752	590	2342	51.9			1752	664	2416	59.9	
4HR 18/30			2336	800	3136	70.8			2336	764	3100	63.2	

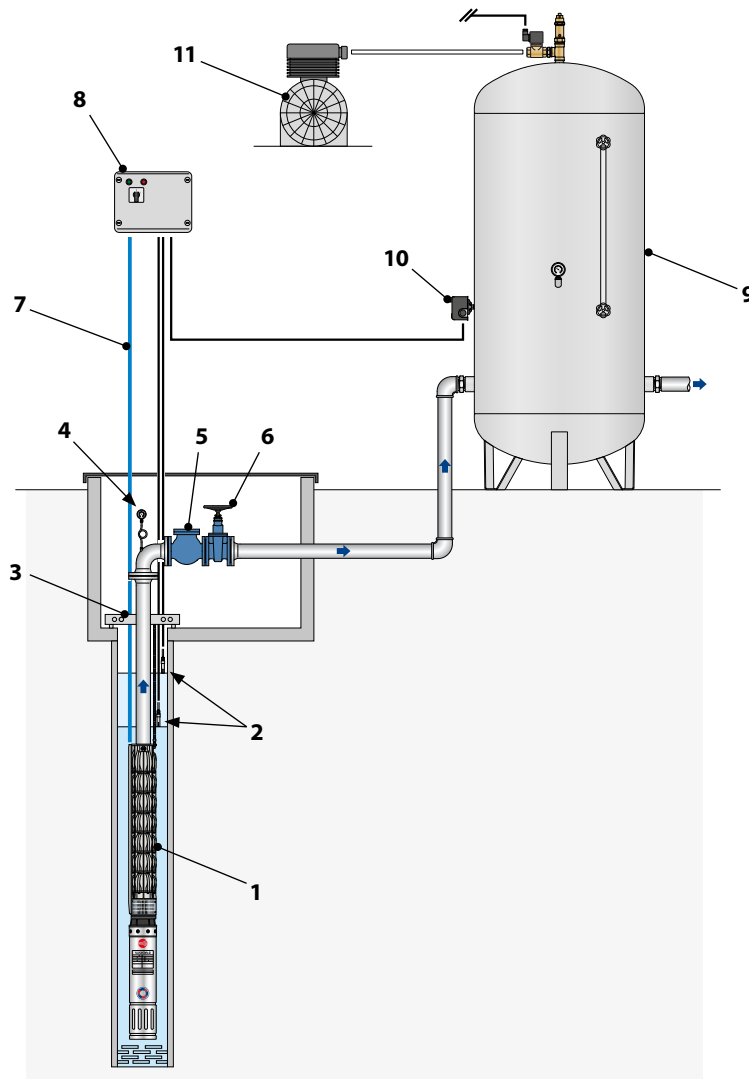


DIMENSIONS AND WEIGHT (PUMP ONLY)

MODEL	PORT DN	Ø	DIMENSIONS mm		kg
			h1	h	
Pump					
4HR 10/5 - HYD	2"	100	511	514	8.8
4HR 10/7 - HYD			657	660	11.5
4HR 10/10 - HYD			876	879	15.4
4HR 10/15 - HYD			1241	1244	22.0
4HR 10/20 - HYD			1606	1609	28.5
4HR 10/28 - HYD			2190	2193	39.0
4HR 14/6 - HYD			584	587	10.2
4HR 14/8 - HYD			730	733	12.8
4HR 14/12 - HYD			1022	1025	18.0
4HR 14/16 - HYD			1314	1317	23.3
4HR 14/21 - HYD			1679	1682	29.9
4HR 14/29 - HYD			2263	2266	40.4
4HR 18/4 - HYD			438	441	7.5
4HR 18/6 - HYD			584	587	10.2
4HR 18/9 - HYD			803	806	14.1
4HR 18/12 - HYD			1022	1025	18.0
4HR 18/16 - HYD			1314	1317	23.3
4HR 18/22 - HYD			1752	1755	31.2
4HR 18/30 - HYD			2336	2339	41.7



STANDARD INSTALLATION



COMPONENTS

- 1) Submersible pump
- 2) Level probes
- 3) Pump anchorage
- 4) Pressure gauge
- 5) Non-return valve
- 6) Gate valve; for flow rate regulation
- 7) Power cable
- 8) Control box
- 9) Pressure tank
- 10) Pressure switch
- 11) Electro valve/electro-compressor