

# STAINLESS STEEL HORIZONTAL MULTISTAGE (EH) AND SELF-PRIMING (EHsp) PUMPS

## APPLICATIONS

- Small domestic and industrial systems / Domestic water supply
- Water distribution / pressure boosting
- Irrigation / Gardening / Sprinklers / Rainwater recovery
- Industrial plants / Wash down unit
- Cooling and chilling / Heating and conditioning / Air conditioning systems
- Pumping of clear non-loaded fluids
- Other various installations

## FEATURES

- Compact close-coupled design, robust and corrosion resistant
- Superior efficiency and performance
- WRAS and ACS approved
- Flexible application base plate (only for EH)
- Floating neck ring in PPS
- Heavy duty oversize motor shaft
- Impellers and diffusers are made of stainless steel
- Easy maintenance
- Mechanical seal Type E0 = Carbon graphite / Ceramic alumina / EPDM: EH 3-5-9, EHsp 3-5
- Mechanical seal Type E1 = Carbon graphite / Silicon carbide / EPDM: EH 15-20

## PUMP SPECIFICATIONS

- Flow: up to 29 m<sup>3</sup>/h (EH), up to 8 m<sup>3</sup>/h (EHsp)
- Head: up to 104 m (EH and EHsp)
- Connections: Rp threaded for inlet and outlet
- Maximum working pressure 10 Bar
- Maximum allowable amount of sand 50 g/m<sup>3</sup> (EH)
- Maximum ambient temperature 40 °C
- Liquid temperature range (EH):
  - Minimum: from -15 °C to -10 °C according to gasket material
  - Maximum: +90 °C for domestic use (uses covered by EN standard 60335-2-41);  
+110 °C only for industrial use (uses other than those covered by EN standard 60335-2-41)
- Liquid temperature range (EHsp): from 0 °C up to 35 °C
- The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

## MOTOR SPECIFICATIONS

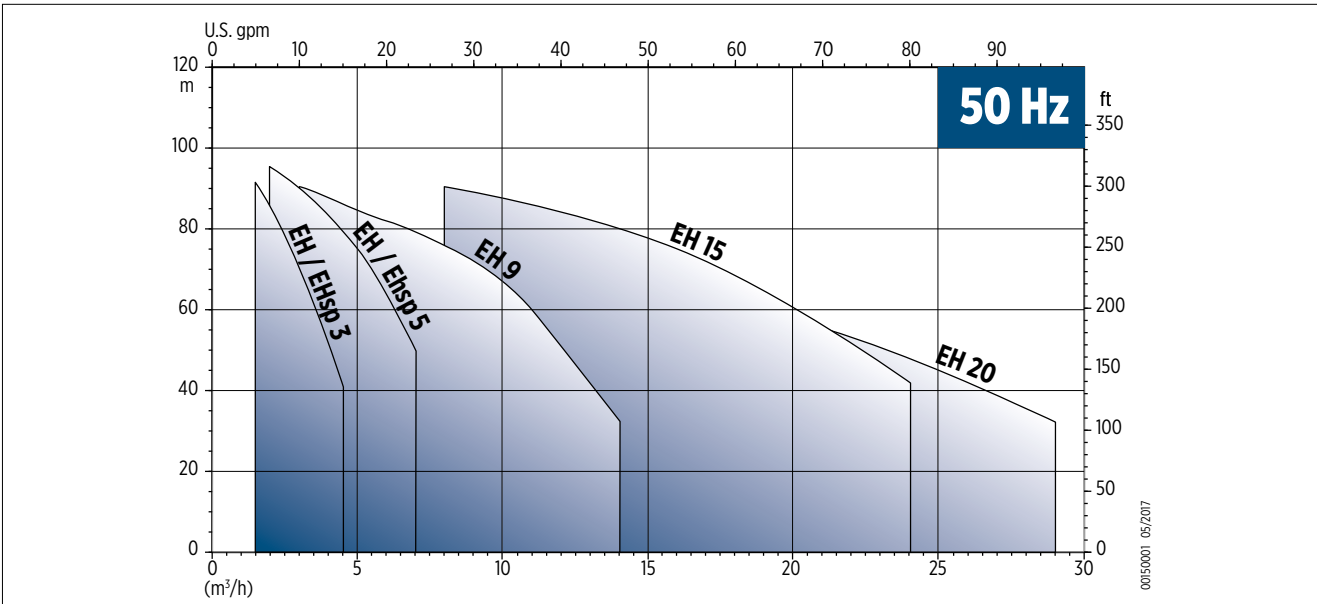
- Single-phase
- Three-phase motor efficiency class IE3
- Asynchronous, TEFC (Totally Enclosed, Fan-Cooled)
- 2 pole
- IP55 protection motor, Insulation class F
- Standard voltage:
  - Single-phase: 220-240 V ± 5 % (thermal protection built into the motor)
  - Three-phase: 220-240 V / 380-415 V ± 5 % up to 3 kW (thermal protection to be provided into the starter panel by the installer)  
380-415 V / 660-690 V ± 5 % from 4 kW (thermal protection to be provided into the starter panel by the installer)
- Frequency of starts:
  - Max. 60 starts/hour for motor power up to 3 kW (with min. 1 minute resting time)
  - Max. 30 starts/hour for motor power from 4 kW (with min. 2 minute resting time)



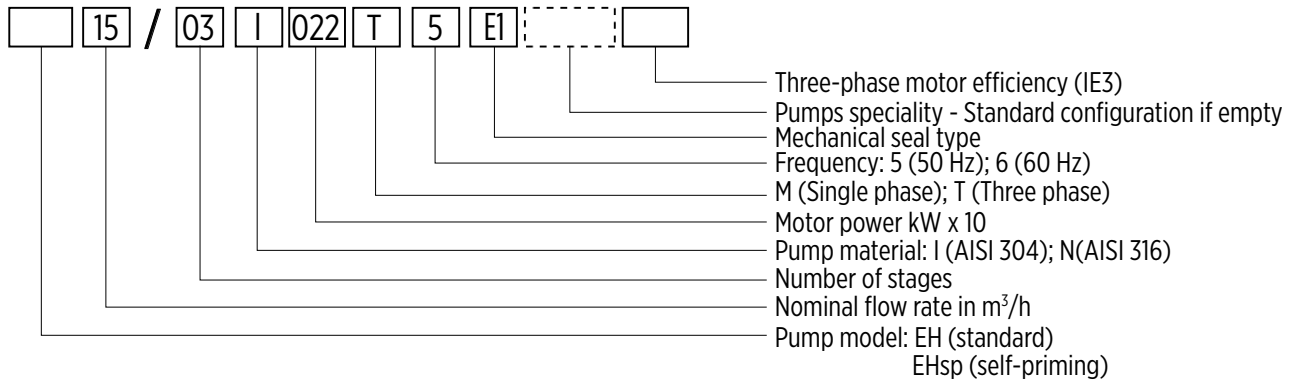
### AVAILABLE ON REQUEST

- Special mechanical seal (EH)
- Suction/discharge nozzles NPT
- Models with switch ON-OFF, 1.5 m of cable and Schuko plug (EHsp PLUG)

### FAMILY CURVES



### PUMP IDENTIFICATION CODE



# TABLES OF HYDRAULIC PERFORMANCE AT 50 HZ

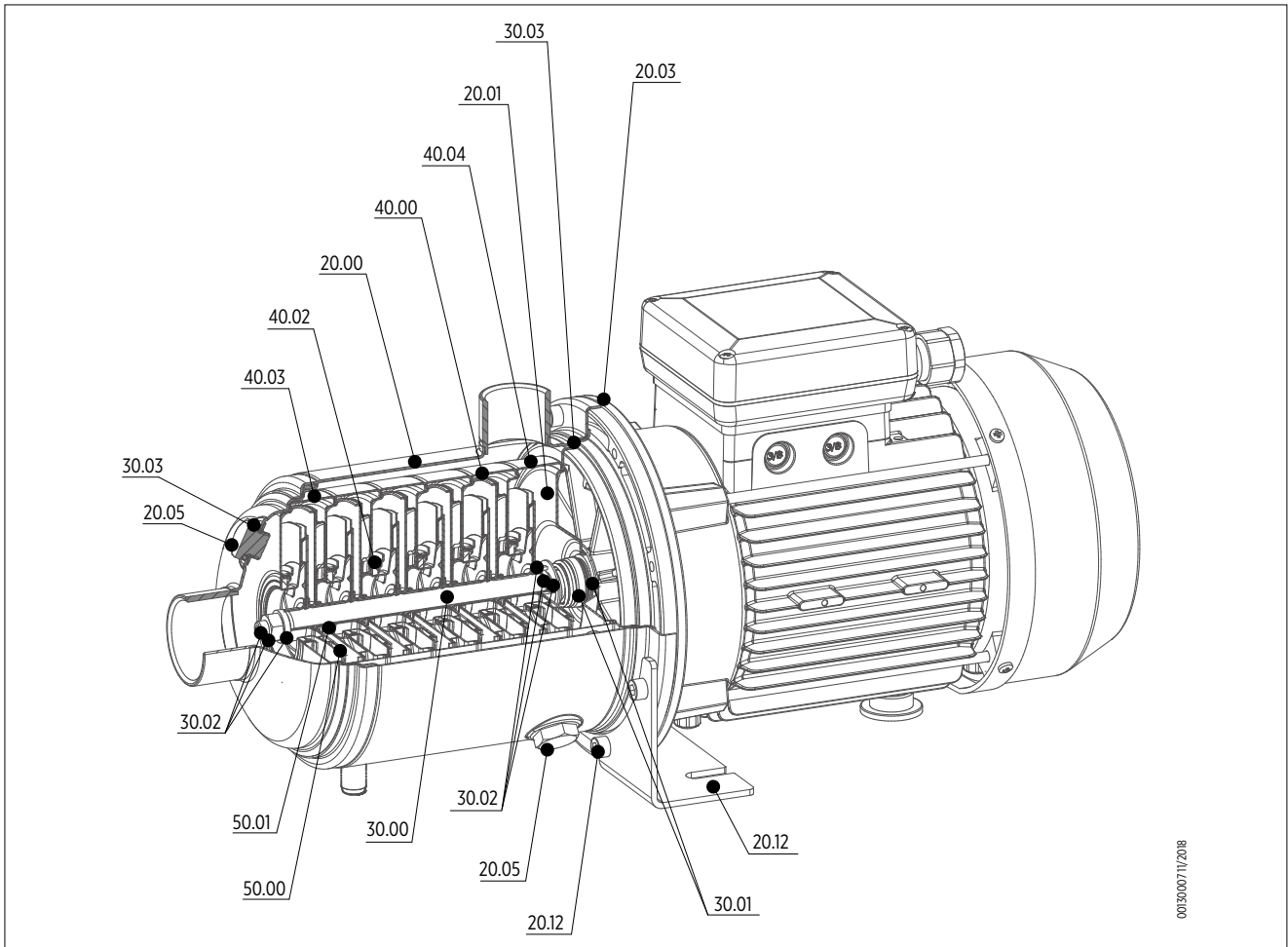
EH 3-5-9-15-20

Pump model	Q = DELIVERY																							
	l/min 0	25	33	42	50	58	67	75	83	92	100	117	133	150	167	183	233	267	300	333	367	417	467	483
	m <sup>3</sup> /h 0	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	7	8	9	10	11	14	16	18	20	22	25	28	29
	US GMP 0	6.6	8.8	11.0	13.2	15.4	17.6	19.8	22.01	24.2	26.4	30.8	35.2	39.6	44.02	48.4	61.6	70.4	79.2	88.05	96.8	110.07	123.2	127.6
H = TOTAL M.HEAD OF WATER COLUMN [m]																								
EH 3/2	23	21	19.5	18	16.5	14.5	12.5	10																
EH 3/3	33.5	30.5	29	26.5	24	21	17.5	14																
EH 3/4	44.5	40	37.5	34.5	31	27	23	18																
EH 3/5	55	49	46	42	37	32.5	27	21																
EH 3/6	67.5	61	57	53	47	41.5	35	28																
EH 3/7	78	70.5	66	60.5	54	47.5	40	32																
EH 3/8	90	82	77	71	64	56	47	38																
EH 3/9	101	91.5	85.5	79	70.5	61.5	52	41																
EH 5/2	23.5		21.5	21	20.5	19.5	19	18	17	16	15	11.5												
EH 5/3	34.5		31.5	31	29.5	28.5	27.5	26	25	23	21	16												
EH 5/4	46.5		43	42	41	39.5	38	36	34	32	29	23												
EH 5/5	58		53	51.5	50	48.5	46.5	44	41.5	38.5	35.5	27.5												
EH 5/6	70		64.5	63	61	59	56.5	54	51	47.5	43.5	34												
EH 5/7	81.5		74.5	72.5	70	68	65	61.5	58	54	49.5	38.5												
EH 5/8	92.5		84	82	79	76.5	73	69	65	60	54.5	42												
EH 5/9	104		95.5	93	90.5	87.5	83.5	79.5	75	70	64	50												
EH 9/2	23.5				22	21.5	21	20.5	20	20	19.5	18.5	18	17	15.5	13.5	6.5							
EH 9/3	35.5				33	32.5	32	31.5	31	30.5	30	28.5	27.5	26	24	21	11							
EH 9/4	48				45	44.5	43.5	43	42	41.5	41	39.5	38	36	33	29.5	16							
EH 9/5	59.5				55.5	55	54	53	52	51	50	48.5	46.5	44	40.5	36	18.5							
EH 9/6	71				66	65	64	62.5	61.5	60	59	57	54.5	51	47	41.5	21							
EH 9/7	84				79.5	78.5	77.5	76	74.5	73.5	72	70	67	64	59.5	53.5	29.5							
EH 9/8	96				90.5	89.5	88	86	84.5	83	82	79.5	76	72.5	67	60	32.5							
EH 15/2	29												26	25.5	25.5	25	23	21.5	19.5	17.5	14.5	9.5		
EH 15/3	44												39.5	39	38	37.5	34.5	32.5	29.5	26	22	14.5		
EH 15/4	58.5												53	52	51.5	50.5	47	44	40	35.5	30	20		
EH 15/5	73												65.5	64.5	63.5	62.5	57.5	54	49	43.5	36.5	24		
EH 15/6	87.5												79.5	78	77	75.5	71	67	61.5	54	46	31.5		
EH 15/7	102												92	90.5	89	87.5	82	77.5	70.5	62	52.5	36		
EH 20/2	31												28.5	28	27.5	27	26	25	24	22.5	20.5	16.5	12	10
EH 20/3	46.5												43	42.5	41.5	41	39.5	38	36.5	34.5	31.5	25.5	19	16
EH 20/4	62.5												58	57	56	55.5	53.5	51.5	49.5	46.5	42.5	34.5	26	22
EH 20/5	78.5												72.5	71.5	70.5	69.5	67	64.5	62	58.5	53.5	43.5	32.5	28

EHsp 3-5

Pump model	Q = DELIVERY																							
	l/min 0	25	33	42	50	58	67	75	83	92	100	117	133	150	167	183	233	267	300	333	367	417	467	483
	m <sup>3</sup> /h 0	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	7	8	9	10	11	14	16	18	20	22	25	28	29
	US GMP 0	6.6	8.8	11.0	13.2	15.4	17.6	19.8	22.01	24.2	26.4	30.8	35.2	39.6	44.02	48.4	61.6	70.4	79.2	88.05	96.8	110.07	123.2	127.6
H = TOTAL M.HEAD OF WATER COLUMN [m]																								
EHsp 3/4	43.5	38.0	35.0	32.0	28.5	24.5	20.0	15.0																
EHsp 3/5	54.0	46.5	43.0	39.0	34.0	29.0	23.5	17.0																
EHsp 3/4T	44.0	38.5	35.5	32.0	29.0	25.0	20.0	15.0																
EHsp 3/5T	54.0	47.0	43.0	39.0	35.0	30.0	24.0	18.0																
EHsp 5/4	45.0		42.0	41.0	39.5	38.0	36.0	34.0	32.0	30.0	27.0	20.0												
EHsp 5/5	56.0		51.5	50.0	48.0	46.5	44.0	42.0	39.0	36.0	33.0	24.0												
EHsp 5/4T	45.0		41.5	40.0	39.0	37.0	36.0	34.0	32.0	30.0	26.5	20.0												
EHsp 5/5T	55.5		51.0	49.0	47.5	45.5	43.0	41.0	38.0	35.0	31.5	23.0												

## EH 3-5-9



## PARTS IN CONTACT WITH LIQUID

Ref. No.	Part description	Material	Standard			
			I version		N version	
			ASTM/AISI	DIN/EN	ASTM/AISI	DIN/EN
20.00	Outer case	Stainless steel	AISI 304	1.4301	AISI 316 L	1.4404
20.01	Mechanical seal housing	Stainless steel	AISI 304	1.4301	AISI 316 L	1.4404
20.05	Filling plug	Stainless steel	AISI 304	1.4301	AISI 316	1.4401
30.00	Pump shaft	Stainless steel	AISI 304	1.4301	AISI 316	1.4401
30.01	Kit mechanical seal	Carbon graphite / Ceramic alumina / EPDM	-	-	-	-
30.02	Mechanical seal fastening kit	Stainless steel	AISI 304	1.4301	AISI 316	1.4401
30.03	Kit O-rings	EPDM	-	-	-	-
40.00	Stage housing and diffuser	Stainless steel	AISI 304	1.4301	AISI 316 L	1.4404
40.02	Floating neck ring	Stainless steel and PPS	AISI 304	1.4301	AISI 316 L	1.4404
40.03	Initial stage housing	Stainless steel	AISI 304	1.4301	AISI 316 L	1.4404
40.04	Last Stage with diffuser	Stainless steel	AISI 304	1.4301	AISI 316 L	1.4404
50.00	Impeller	Stainless steel	AISI 304	1.4301	AISI 316 L	1.4404
50.01	Impeller spacers	Stainless steel	AISI 304	1.4301	AISI 316 L	1.4404

## SPARE PARTS LIST

Ref. No.	Part description
20.00	Outer case
20.01	Mechanical seal housing
20.03	Motor bracket
20.05	Filling plug
20.12	Support foot and screws
30.00	Pump shaft
30.01	Kit mechanical seal
30.02	Mechanical seal fastening kit

Ref. No.	Part description
30.03	Kit O-rings
40.00	Stage housing and diffuser
40.02	Floating neck ring
40.03	Initial stage housing
40.04	Last Stage with diffuser
50.00	Impeller
50.01	Impeller spacer