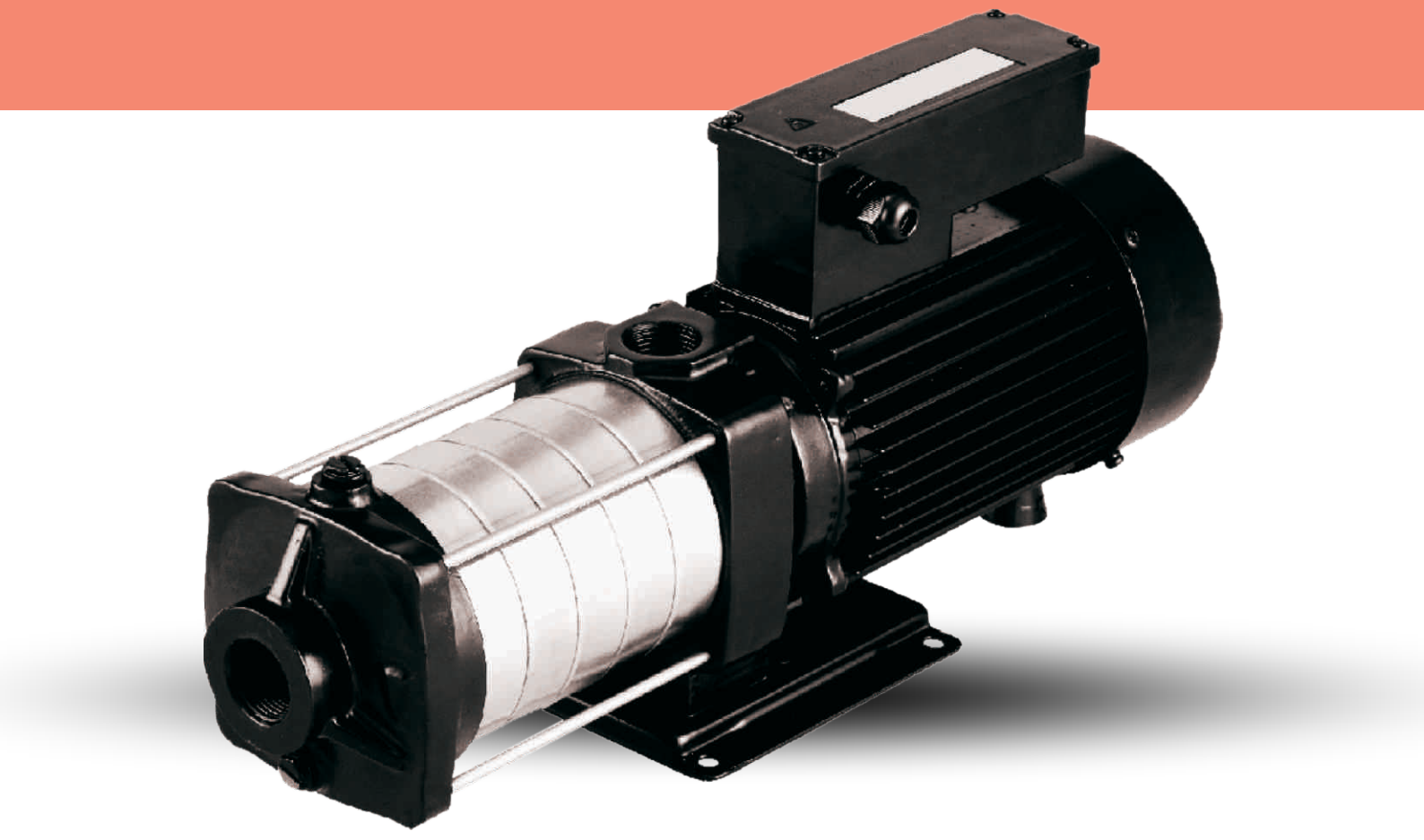
Zirantec

Horizontal Multistage Pumps



GENERAL

FH SERIES - 50 Hz

HORIZONTAL MULTISTAGE PUMPS - FH SERIES

The ZIRANTEC horizontal multistage centrifugal pumps are non-self- priming, axial suction and vertical radial discharge ports. The suction and discharge of the pump is supplied with threaded ports for connecting the pipes easily. This multi stage horizontal booster pump is specially to meet pressure boosting needs. Corrosion resistance stainless steel is used for all wetted parts in these pumps to ensure hygiene. These pumps are monoblock type and supplied with TEFC energy efficient electric motors for trouble free long running hours. The dynamically balanced rotor ensures noise and vibration free operations. All single phase motors are supplied with inbuilt thermal protection to safeguard the winding while overload and extreme operating condition. The highly reliable mechanical seal and 'O' ring will ensure leak free operations in high pressure applications like pressure boosting, car washing and industrial washing etc.

FEATURES

- Superior efficiency and performances
- Impellers and diffusers are made of stainless steel
- Easy maintenance
- Supplied with high efficient IE2 motors in 3 Phase versions
- Inbuilt thermal overload protector

APPLICATIONS

- Residential and small industrial pressure boosting system
- Residential lawn sprinkler
- High pressure pumping in small RO systems
- Small Utility water supply in industries
- Industrial washing
- Hygiene water transfer in food industries
- Gardening

Zirantec

MODEL IDENTIFICATION CODE

F H X XXX - XX X (H)

- F — ZIRANTEC CENTRIFUGAL PUMP
- H — HORIZONTAL MULTISTAGE
- X — TYPE OF MATERIALS OF CONSTRUCTION (M.O.C) Impeller / Diffuser / Pump Casing & Bracket / Pump Base
  - S = SS 304/SS 304/Cast Iron/SS 304
  - T = SS 304/SS 304/Cast Steel 304/M.S (Tube Type)
  - L = SS 304/SS 304/Cast Steel 304/M.S
  - N = SS 316/SS 316/Cast Steel 316/M.S
  - P = Noryl/Noryl/Cast Iron/M.S
  - B = SS304/Noryl/Cast Iron/M.S
- XXX — NOMINAL FLOW RATE (m^3/h)
- XX — NUMBER OF IMPELLERS
- X — Phase / Connection / Control box / Frequency
  - M = Single Phase -PSC
  - S = Single Phase -CSCR
  - T = Three Phase -DOL
  - D = Three Phase -SD
- (H) — This Digit is applicable only for high head models

HORIZONTAL MULTISTAGE PUMP SET

PUMP MODEL	/	CODE
F H X XXX - XX X	/	FHS2,5-02M

TECHNICAL SPECIFICATIONS

Power Range	0,3 to 3HP
Speed	2900 rpm
Degree of protection	IP 54
Insulation class	B
Version	Single Phase 220 / 240V, 50Hz Three Phase 220 / 240V, 50Hz
Sealing	Mechanical Seal
Type of Duty	S1 (Continuous)
Max. Nominal Flow	$200m^3/h$
Max. Head	320 m

MATERIALS OF CONSTRUCTION	
Pump Casing & Bracket	S.S. 304 / Cast Iron
Impeller	S.S. 304
Diffuser	S.S. 304
Motor Frame	Aluminum
Shaft	S.S. 410
Sealing	Mechanical Seal
Base Plate	Mild Steel

OPERATING LIMITS

Maximum Liquid Temperature ..... 90° C

Maximum Ambient Temperature ..... 40° C

Maximum Operating Pressure ..... 0,55 Mpa (5,5 bar)

Max. Operating Pressure	1 mpa (10bar)	0,6 mpa (6bar)
FH-2,5 & 5	0°C to 40°C	41°C to 90°C
FH-8 & 12	0°C to 55°C	56°C to 90°C

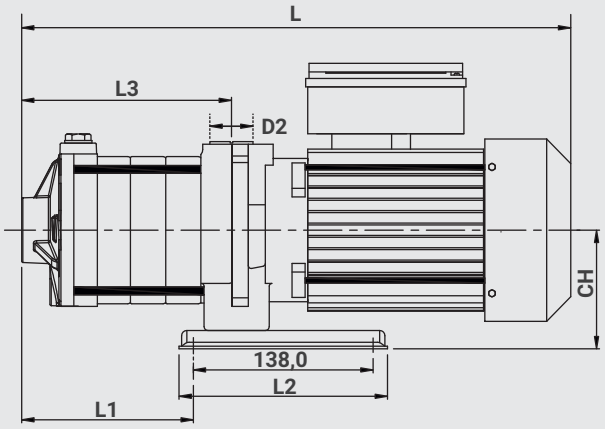
CHARACTERISTICS OF PUMPED LIQUIDS	
a) Temperature	90°C
b) Permissible amount of sand	25 gm / m^3
c) Chlorine ion density	500 ppm
d) Allowable solids	3000 ppm
e) Specific gravity	1,004
f) Hardness (Drinking water)	300
g) Viscosity	1,75 x 10^{-6} m^2 / Sec.
h) Turbidity	50 ppm silica scale
i) pH	6,5 to 8,5

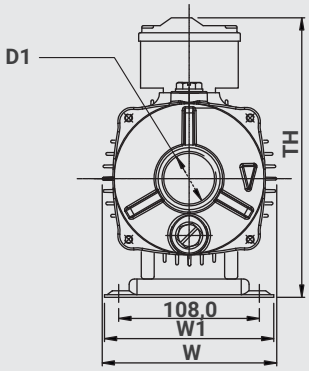
Min. Inlet pressure : As per NPSH Curve + Safety Margin 0.5 metre.

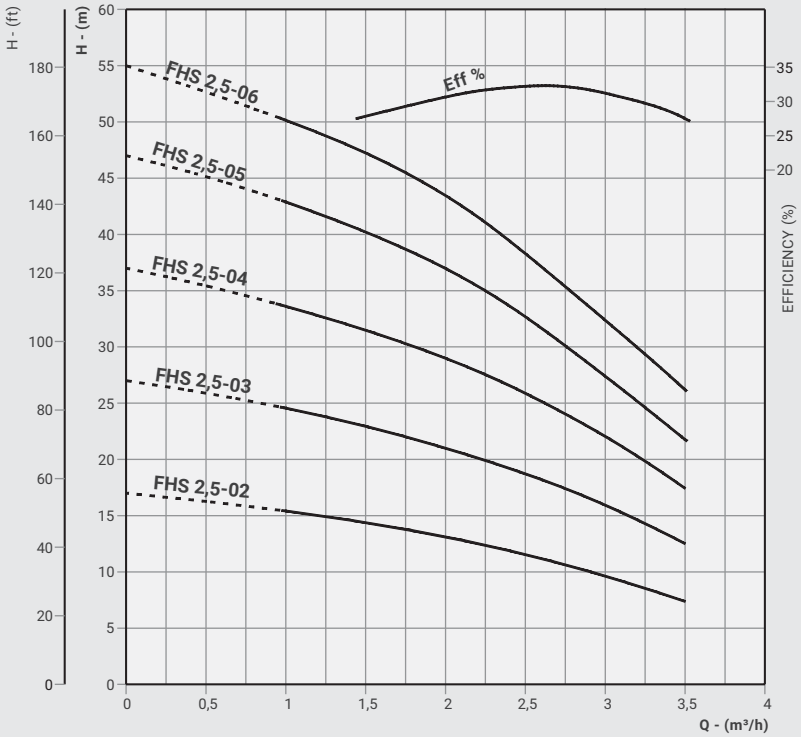
Max. Inlet pressure : Limited by max. operating pressure.

PERFORMANCE CURVES & TABLES

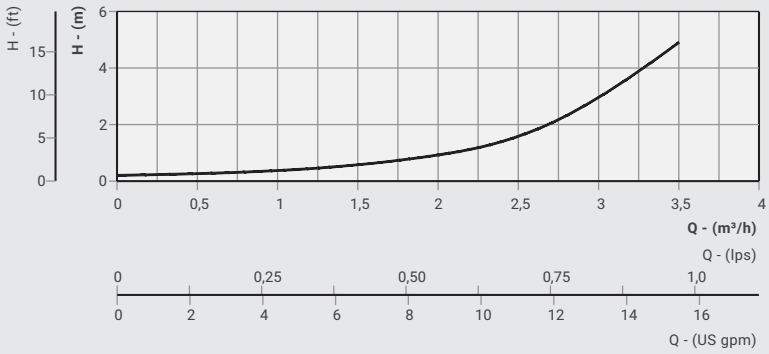
FH - 2,5







NPSH CURVE



Model	Electrical Data			
	Power Supply	P1 Max kW	P2 Nominal	
			kW	HP
FHS 2,5-02	1 x 220 ~ 240 V ~	0,4	0,22	0,3
FHS 2,5-03	1 x 220 ~ 240 V ~	0,46	0,3	0,4
FHS 2,5-04	1 x 220 ~ 240 V ~	0,6	0,37	0,5
FHS 2,5-05	1 x 220 ~ 240 V ~	0,7	0,45	0,6
FHS 2,5-06	1 x 220 ~ 240 V ~	0,92	0,55	0,75

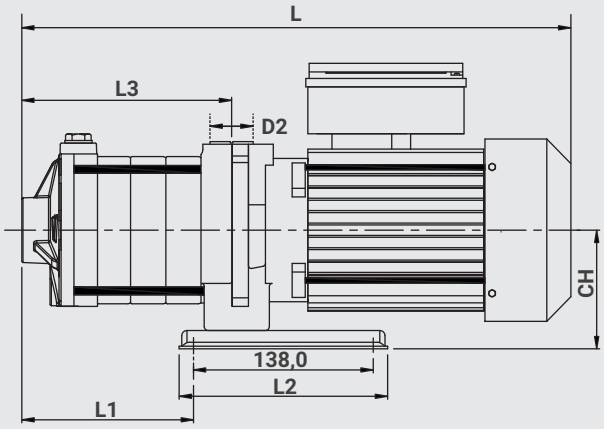
DIMENSIONAL & WEIGHT

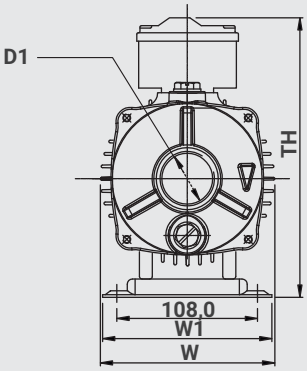
Model	L		D1	D2	L1	L2	L3	W	W1	TH	CH	Approx. Weight in kg
	1Ph	3Ph										
FHS 2,5-02	320	320	25	25	70	160	99	134	130	215	90	12
FHS 2,5-03	338	343	25	25	89	160	118	134	130	215	90	13
FHS 2,5-04	362	362	25	25	108	160	137	134	130	215	90	14
FHS 2,5-05	390	400	25	25	127	160	156	134	130	215	90	15
FHS 2,5-06	409	419	25	25	146	160	175	134	130	215	90	16

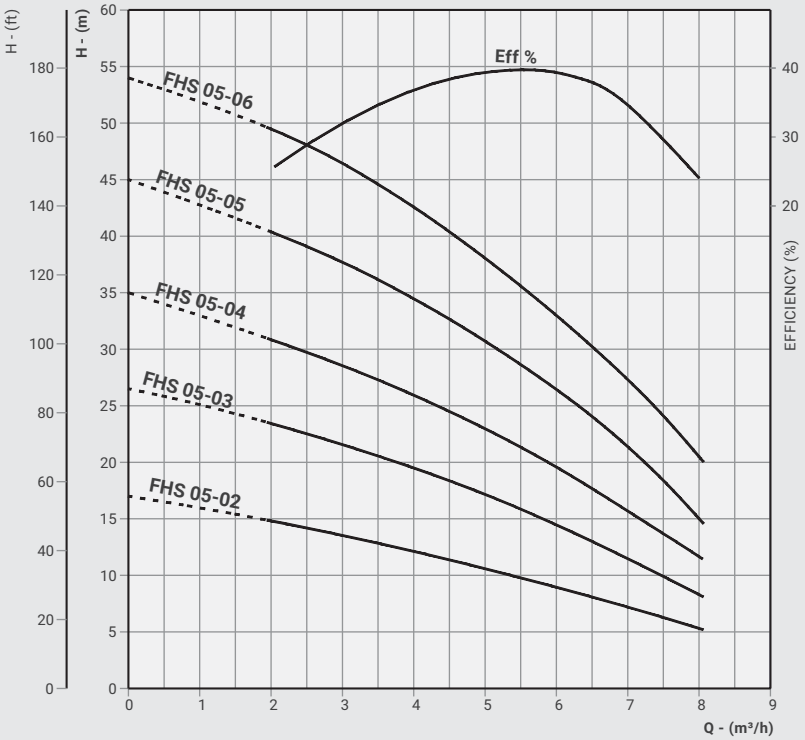
* All Dimensions are in mm.

PERFORMANCE CURVES & TABLES

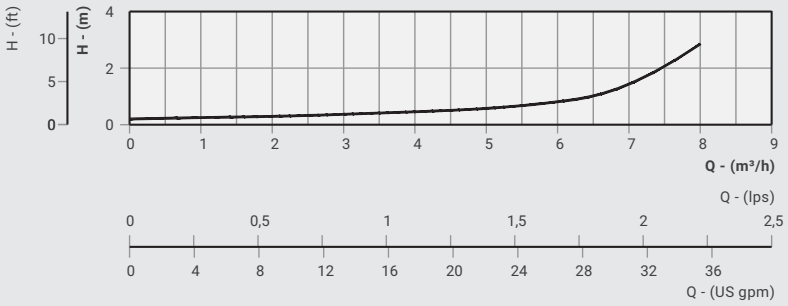
FH - 05







NPSH CURVE



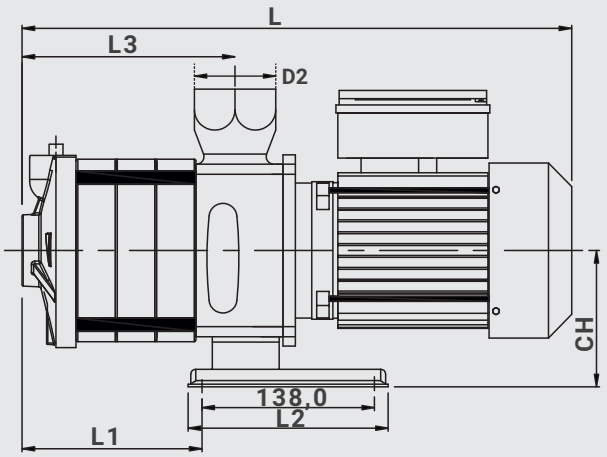
Model	Electrical Data			
	Power Supply	P1 Max kW	P2 Nominal	
			kW	HP
FHS 05-02	1 x 220 ~ 240 V ~	0,53	0,3	0,4
FHS 05-03	1 x 220 ~ 240 V ~	0,75	0,37	0,5
FHS 05-04	1 x 220 ~ 240 V ~	0,92	0,55	0,75
FHS 05-05	1 x 220 ~ 240 V ~	1,2	0,75	1
FHS 05-06	1 x 220 ~ 240 V ~	1,36	1,1	1,5

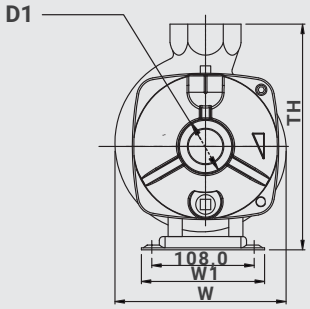
DIMENSIONAL & WEIGHT

Model	L		D1	D2	L1	L2	L3	W	W1	TH	CH	Approx. Weight in kg
	1Ph	3Ph										
FHS 05-02	329	333	25	25	79	160	108	134	130	215	90	12
FHS 05-03	371	381	25	25	107	160	135	134	130	215	90	14
FHS 05-04	414	424	25	25	135	160	162	134	130	215	90	15
FHS 05-05	461	471	25	25	163	160	190	134	130	215	90	18
FHS 05-06	514	514	25	25	191	160	217	134	130	215	90	20

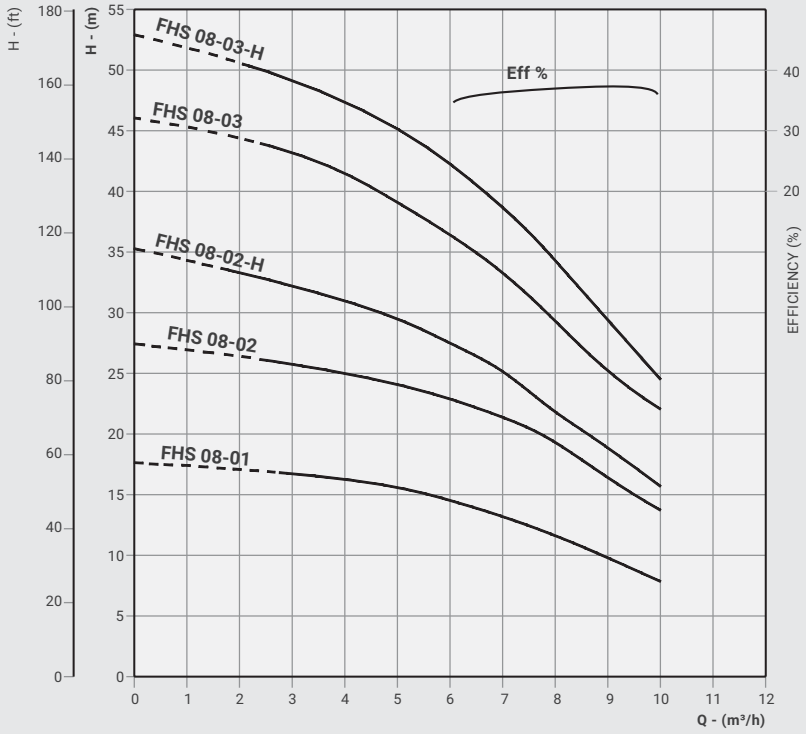
* All Dimensions are in mm.

PERFORMANCE CURVES & TABLES

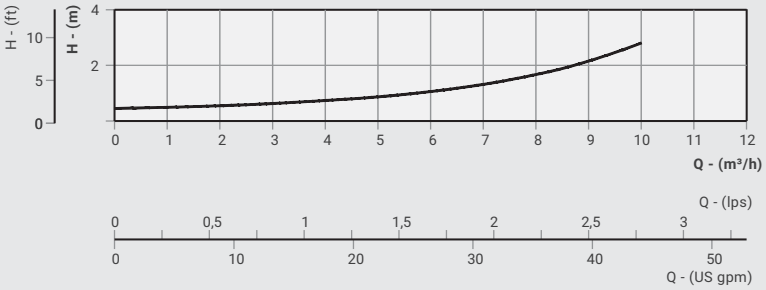




FH - 08



NPSH CURVE



Model	Electrical Data			
	Power Supply	P1 Max kW	P2 Nominal	
			kW	HP
FHS 08-01	1 x 220 ~ 240 V ~	0,75	0,37	0,5
FHS 08-02	1 x 220 ~ 240 V ~	1,3	0,75	1
FHS 08-02-H	1 x 220 ~ 240 V ~	1,5	0,93	1,25
FHS 08-03	1 x 220 ~ 240 V ~	1,8	1,1	1,5
FHS 08-03-H	1 x 220 ~ 240 V ~	2,2	1,5	2

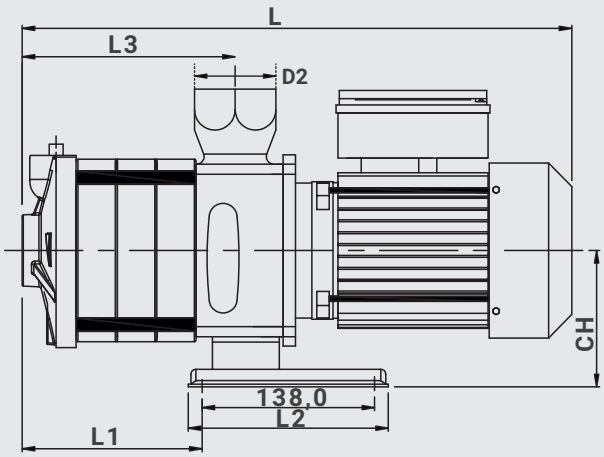
DIMENSIONAL & WEIGHT

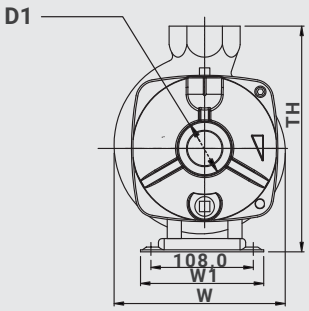
Model	L		D1	D2	L1	L2	L3	W	W1	TH	CH	Approx. Weight in kg
	1Ph	3Ph										
FHS 08-01	339	339	40	32	52	160	72	181	130	238	109	16
FHS 08-02	399	399	40	32	82	160	102,5	181	130	238	109	20
FHS 08-02-H	414	414	40	32	82	160	102,5	181	130	238	109	20,5
FHS 08-03	467	467	40	32	114	160	133	181	130	238	109	25
FHS 08-03-H	460	460	40	32	114	160	133	181	130	238	109	28,5

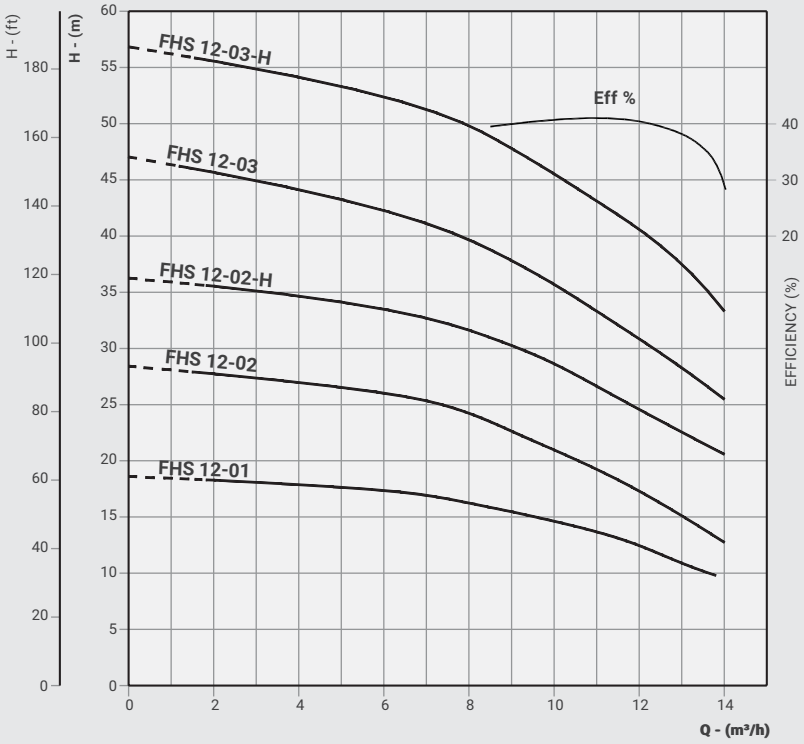
* All Dimensions are in mm.

PERFORMANCE CURVES & TABLES

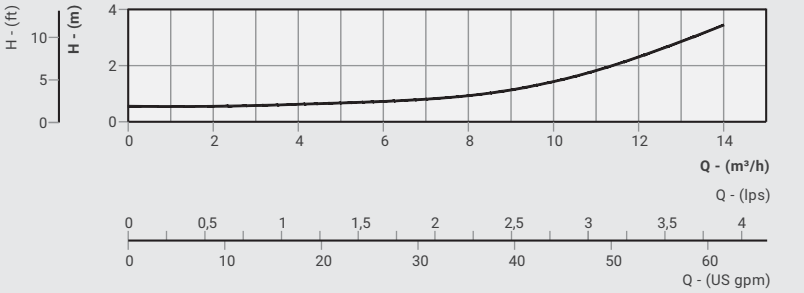
FH - 12







NPSH CURVE



Model	Electrical Data			
	Power Supply	P1 Max kW	P2 Nominal	
			kW	HP
FHS 12-01	1 x 220 ~ 240 V ~	1,1	0,55	0,75
FHS 12-02	1 x 220 ~ 240 V ~	1,6	0,75	1
FHS 12-02-H	1 x 220 ~ 240 V ~	2,2	1,1	1,5
FHS 12-03	1 x 220 ~ 240 V ~	2,6	1,5	2
FHS 12-03-H	1 x 220 ~ 240 V ~	3,3	2,2	3

DIMENSIONAL & WEIGHT

Model	L		D1	D2	L1	L2	L3	W	W1	TH	CH	Approx. Weight in kg
	1Ph	3Ph										
FHS 12-01	349	349	40	40	52	160	72	181	130	238	109	18
FHS 12-02	414	414	40	40	82	160	102,5	181	130	238	109	20,5
FHS 12-02-H	430	430	40	40	82	160	102,5	181	130	238	109	28,5
FHS 12-03	476	476	40	40	114	160	133	181	130	238	109	30,5
FHS 12-03-H	496	496	40	40	114	160	133	181	130	238	109	34

* All Dimensions are in mm.