Multistage Centrifugal Pumps - 60 Hz

FV & FH - SERIES

Zirantec







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FABBRICA ITALIANA POMPE SOMMERGIBILI S.r.l

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GENERAL INFORMATION

VERTICAL MULTISTAGE PUMPS

Zirantec Vertical Multistage centrifugal pumps (FV series) are non-self priming, axial suction and delivery type available with DIN standard port connections. All components like impellers, diffusers & shaft of these pumps are made of corrosion resistant AISI stainless steel and designed to deliver the best possible hydraulic efficiency. As the diffuser chambers, impellers, shaft & pump base (casing) are made of high grade stainless steel S.S. 304/316, these pumps can be used to pump clear water and are quite hygienic to use in drinking water systems too. 'O' rings and gaskets prevent leakage at the intermediate casing during high pressure. The replacement of the seal can even be done in the installed position without removing the pump from the booster system. These pumps are reliable, easily serviceable and used in water boosting units to get trouble free service for years together.

Zirantec Multistage Vertical pumps are powered by a Totally Enclosed Fan Cooled, A.C. induction motor, suitable for continuous duty. Motor stator is made of low watt loss steel laminations assembled under pressure and rigidly locked in the frame. Dynamically balanced rotor ensures vibration and noise free operations. The vacuum impregnated windings made of enamelled copper wire offer excellent resistance.

Shaft of ample size made of quality steel and precisely ground is used for transmitting the rated Horsepower. Construction of motor frames and usage of quality materials result in high performance and low temperature rise thereby increasing the life cycle of the motor. Thermal over load protector is incorporated in all single phase motors. These pumps require an adequate control system. The mounting dimensions are of IEC standard and NEMA Standard dimensions can also be supplied on request.

APPLICATIONS

- Pressure boosting units
- Industrial water supply
- Fire fighting systems
- Irrigation
- Reverse osmosis systems
- High pressure water supply
- Water treatment plants
- Boiler feeding
- Washing systems
- Mining
- Food processing industry
- Golf Course.

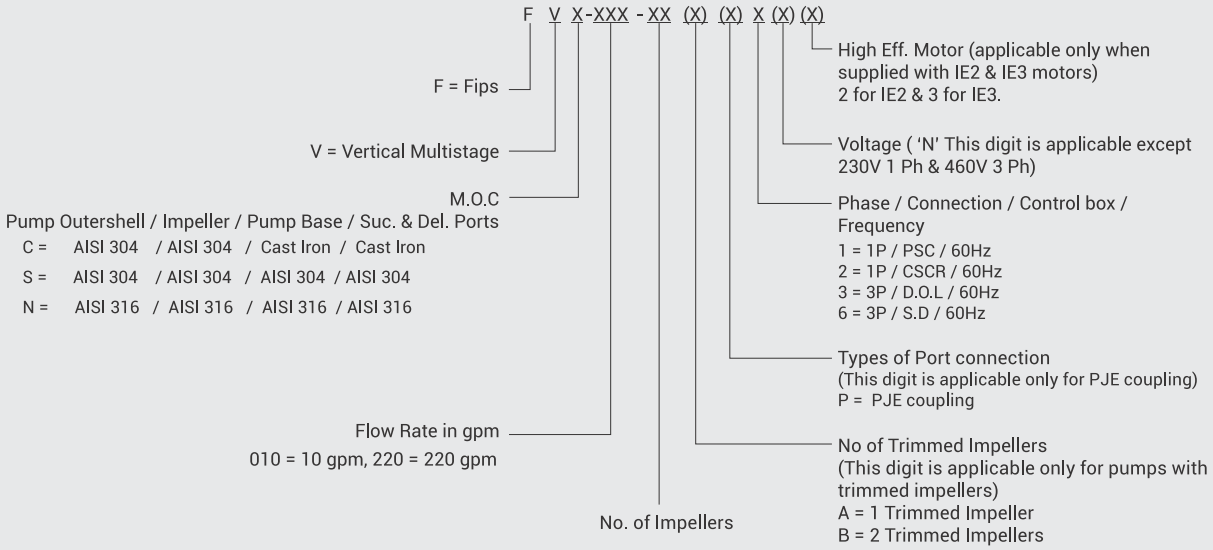
FEATURES

- High operating efficiency
- Precise parts for hygiene
- Good suction lift and operating pressure
- Dynamically balanced rotating parts
- Balanced and rigid construction
- Available M.O.C. Type S, N & C.

IMPORTANT NOTES

| Read our operator's manual carefully before installation | Pump should not be operated dry | Install dry run prevention to protect the pumpset from dry running | Use appropriate size, good quality cable and starter / protection devices | Use low friction good quality pipes | The pipe diameters must never be smaller than the pump connections | Install pump according to our recommended Head range | Reduce number of bends, elbows, T-bends as much as possible in the pipe line | All pumpsets employ a prime mover motor of suitable size | Avoid fatal electrical shock or injury by disconnecting power before working on or around the pumping system | Only technically qualified personnel must perform the works complying with local electricity rules and regulations | To reduce the risk of electrical shock during operation, an appropriate earthing is mandatory | Maximum permissible supply voltage should lie between ±10% of the rated voltage | The performance data and curves are at rated voltage and only indicative | Product pictures shown are only for illustration purpose and the actual product may vary than they appear in picture | Standard pump supply is made for the maximum flange pressure rating mentioned in the dimensional drawing | Pipe sizes mentioned in inches are nominal pipe sizes and are nearest conversion of mm.

MODEL IDENTIFICATION CODE



DESCRIPTION

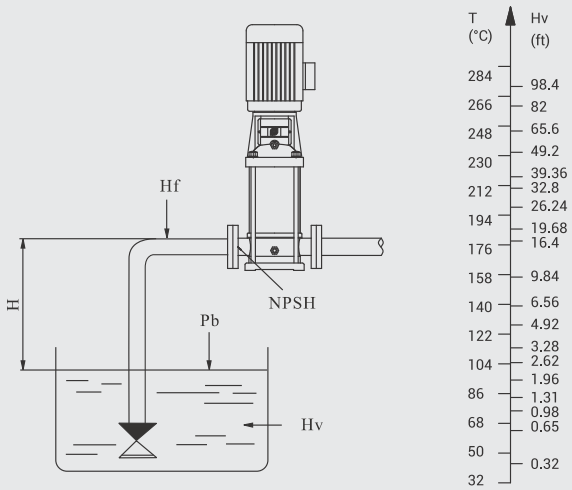
"FV-160-4B62" denotes 160gpm, round flange, 4 stage, with 2 trimmed impellers Vertical Multistage pump with 60Hz, 3Ph, 460V IE2 motor.
"FV-160-4B" denotes only pump end without motor.
Note : Pump is supplied with round flange by default.
Last 3 digits are applicable for pumps supplied with motor (Pumpset)

TECHNICAL DATA	
Power Range	0.5 to 60 HP
Speed	3450 rpm
Degree of protection	IP 55 (Optional IP44 / IP54)
Insulation class	'F' (Optional 'B')
Versions	Single Phase 230V, 60Hz, A.C. Supply (0.5 - 3HP) (Permanent Split Capacitor-PSC & CSCR) Incorporated with thermal over load protector. Three Phase 460V, 60Hz, A.C. Supply (0.5 - 60HP)
Sealing	Mechanical seal - Cartridge type
Direction of rotation	Anti-clockwise viewed from driving end
Type of Duty	S1 (continuous)
Flange type	Round (Optional - PJE)
Flange Standard	DIN (Optional - ANSI)
Pipe Connection	DN 25 to DN100

OPERATION LIMITS	
Suction Lift Upto	21 Feet
Maximum Liquid Temperature	Standard : 32°F to 194°F Optional : 25°F to 248°F
Maximum Ambient Temperature	104°F
Max. Operating Pressure Range	30 Bar

PERFORMANCE RANGE	
Max. Flow Rate	530 gpm / 33.4 lps
Max. Head	980 ft / 300 mtr

INLET PRESSURE



MAXIMUM INLET PRESSURE

The actual inlet pressure plus the Shutt off Pressure(Head) should always be lower than the "maximum operating pressure".

MINIMUM INLET PRESSURE

In case that the pressure in pump is lower that steam pressure used to convey liquid, the cavitations will occur. To avoid the cavitations, and lessen the vibration and noise, you are suggested to adopt NPSH to make sure that the pump are under optimal operation condition.

The following formula can be used for calculation of minimum inlet pressure :

H = Pb - NPSHR - Hf - Hv - Hs
H : Maximum suction head (ft)
Pb : Atmosphere pressure
IS : 33.9 ft at sea leval
NPSH : Net positive suction head (ft)
It can be read from the point of Max.flow rate shown on NPSHR curve.
Hf : Pipeline loss at the inlet (ft)
It is in accordance with pipeline possible Max.flow.
Hv : Stream pressure (ft)

It depends on liquid temperature and system pressure value.
Hs : Safety margin (ft)
Minimum 1.64 ft delivery head

If the calculated result H is positive, the pump may run under the Max. suction head H. In case the calculated result H is negative, a delivery head if Min.inlet pressure is necessary.

Note: Normally, the above calculation will not be done. H is calculated in the following conditions:

- The liquid temperature is comparatively higher.
- Liquid flow exceeds rated value.
- Suction head is comparatively large or inlet pipeline long.
- System pressure is too low.
- Bad inlet condition.

ELECTRICAL DATA (3Ph, 460V, 60Hz)

Motor		Rated Current in Amps	Motor Eff. %	PF (cosø)
(kW)	(HP)			
0,37	0,5	0,8	80	0,75
0,55	0,75	1,2	82	0,71
0,75	1,0	1,6	82	0,71
1,1	1,5	2,0	84	0,77
1,5	2,0	2,6	85	0,83
2,2	3,0	3,9	84	0,83
3,0	4,0	4,1	86	0,77
4,0	5,5	7,0	85	0,80
5,5	7,5	9,2	87	0,89

Motor		Rated Current in Amps	Motor Eff. %	PF (cosø)
(kW)	(HP)			
7,5	10	13,5	88	0,81
11	15	16,6	91	0,89
15	20	24,0	87	0,92
18,5	25	28,0	90	0,92
22	30	34,0	91	0,87
30	40	45,0	91	0,91
37	50	57	93	0,88
45	60	69	93.6	0,90

Other voltages 380V, 220V and Dual Voltage 220/380V, 220/440V also can be supplied on request.

MATERIALS OF CONSTRUCTION

Part Name	Part No.	Type - C	Type - S	Type - N
Pump Outer Shell	29,06	AISI 304	AISI 304	AISI 316
Pump Head	30,00	C.I.	Upto 80gpm - C.I	Upto 80gpm - C.I.
			Above 160gpm - AISI 304	Above 160gpm - AISI 316
Pump Head Cover	30,07	NA	AISI 304*	AISI 316*
Pump Head Stool (Only for 160gpm & above)	30,01	C.I.	C.I.	C.I.
Pump Base	29,01	C.I.	AISI 304	AISI 316
Base Plate	24,03	NA	C.I.	C.I.
Impeller	19,00	AISI 304	AISI 304	AISI 316
** Mechanical Seal	16,00	SiC / SiC / FKM (Standard)	SiC / SiC / FKM (Standard)	SiC / SiC / FKM (Standard)
*** Bush	12,03	SiC / SiC	SiC / SiC	SiC / SiC
Diffuser (Chamber)	18,07	AISI 304	AISI 304	AISI 316
Pump Shaft	22,00	AISI 304 / 431	AISI 304 / 431	AISI 316/329
Wearing Ring	17,01	Teflon	Teflon	Teflon
Flange	29,04	C.I.	AISI 304	AISI 316
Neck Ring	19,01	AISI 304	AISI 304	AISI 316
"O" Ring	32,09	EPDM / FKM	EPDM / FKM	EPDM / FKM
Coupling	22,01	M.S / C.I.	M.S / C.I.	M.S / C.I.
Split Cone	19,02	AISI 304	AISI 304	AISI 316
Split Cone Nut	19,03	AISI 304	AISI 304	AISI 316















* Provided only upto 80gpm

** Optional Mechanical Seal MOCs

TC / TC / FKM (only upto 194°F

SiC / SiC / EPDM

TC / CARBON / EPDM

TC / TC / EPDM

*** Optional Bush MOC

TC / TC

SiC - Silicon Carbide, TC - Tungsten Carbide, FKM - Fluoroelastomer (VITON), EPDM - Ethylene Propylene Diene Monomer



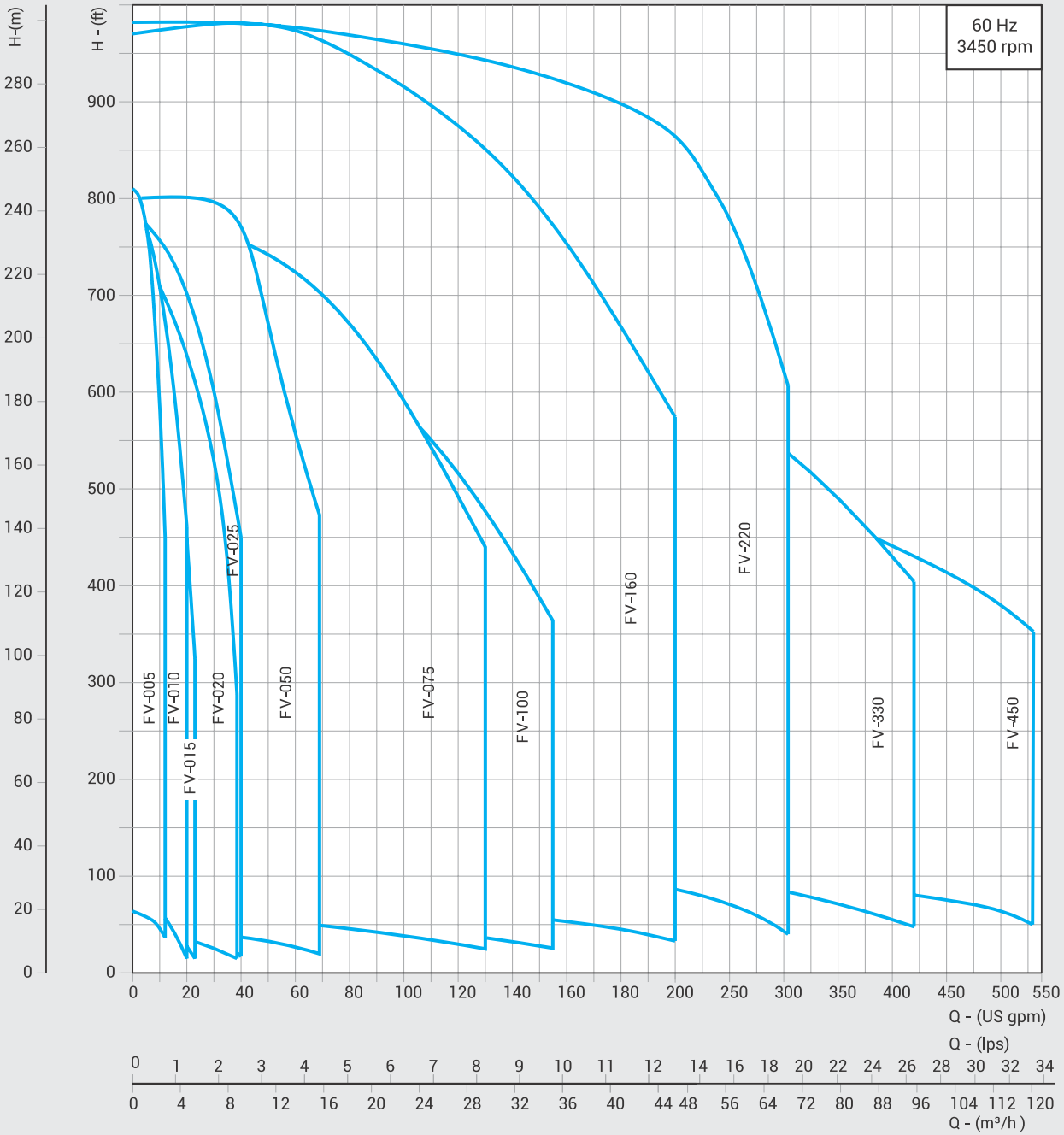








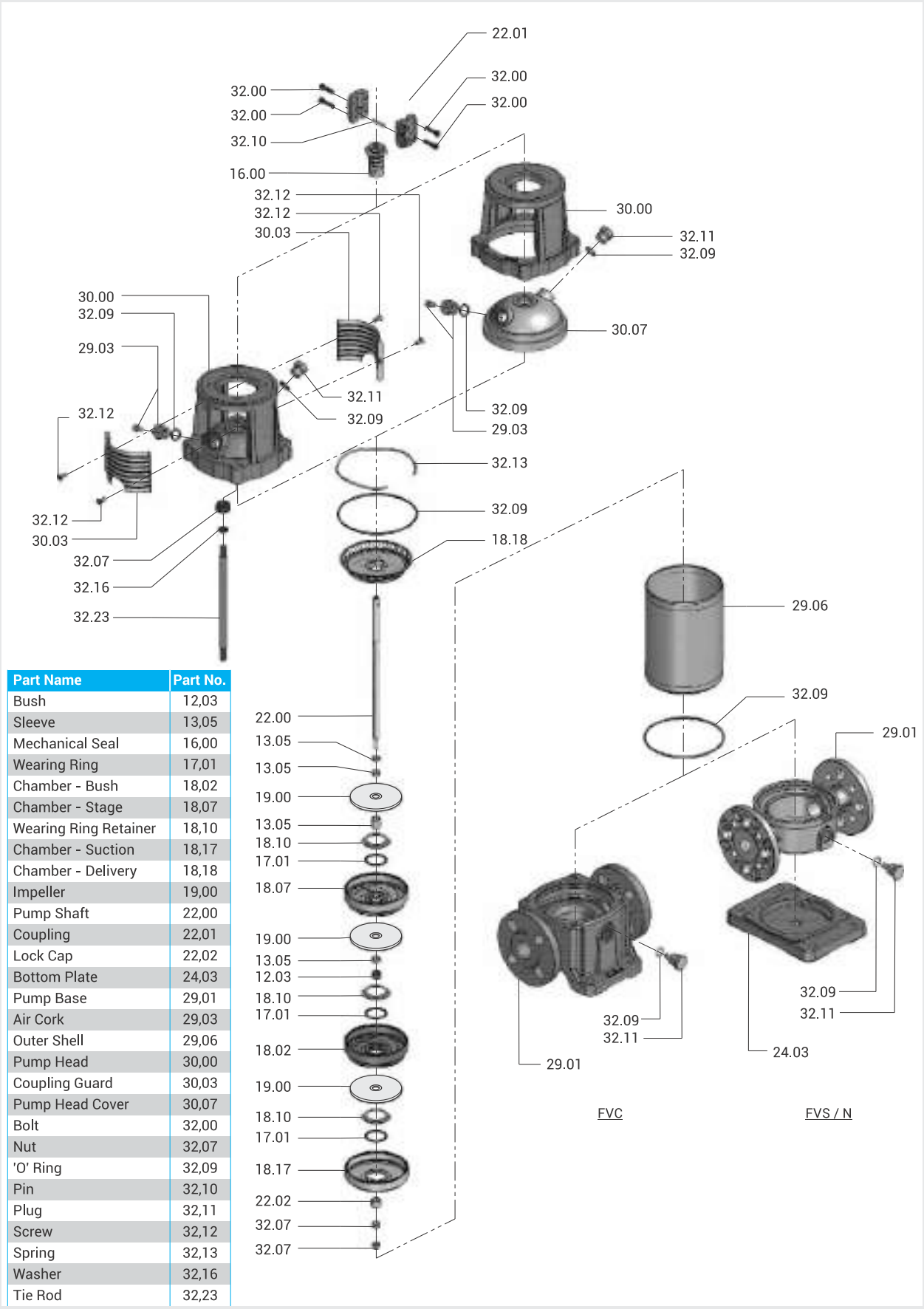
GROUP PERFORMANCE CURVE



CURVE CONDITIONS

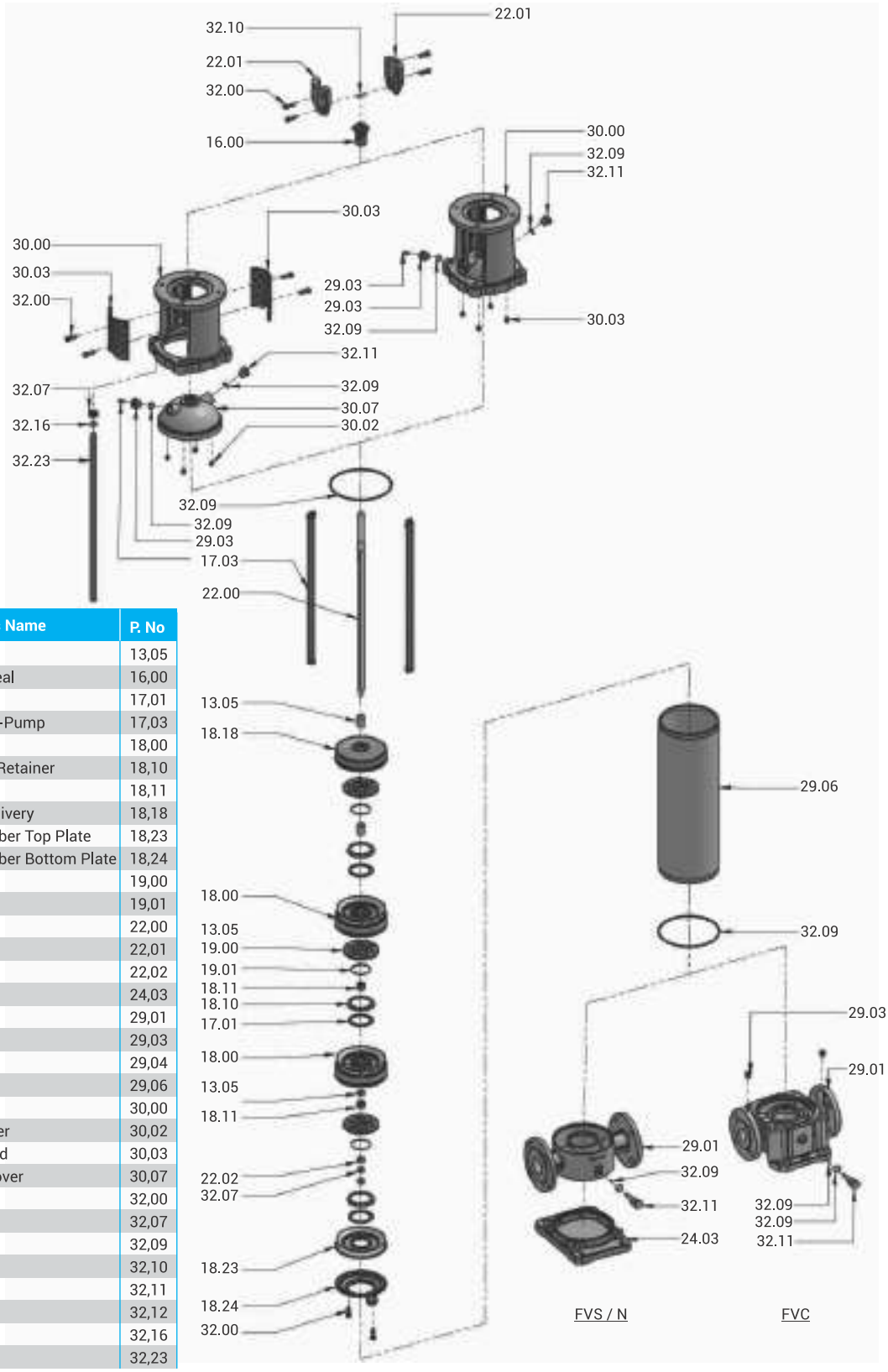
| Curve tolerance are according to ISO 9906, Grade 3B | The performance are taken at rated voltage & speed that are only indicative | Actual discharge depends on availability of water in well / tank, height of water column from the suction pipe end | The measurements were made with airless water at 68°F when pumping liquids with a density higher than of water, motors with correspondingly higher outputs must be used | The bold curves indicate the recommended performance range | Pipe friction losses have not been included in the performance curves & performance tables | The performance curves are applicable for all type of materials of construction.

EXPLODED VIEW - FV 5-25 gpm



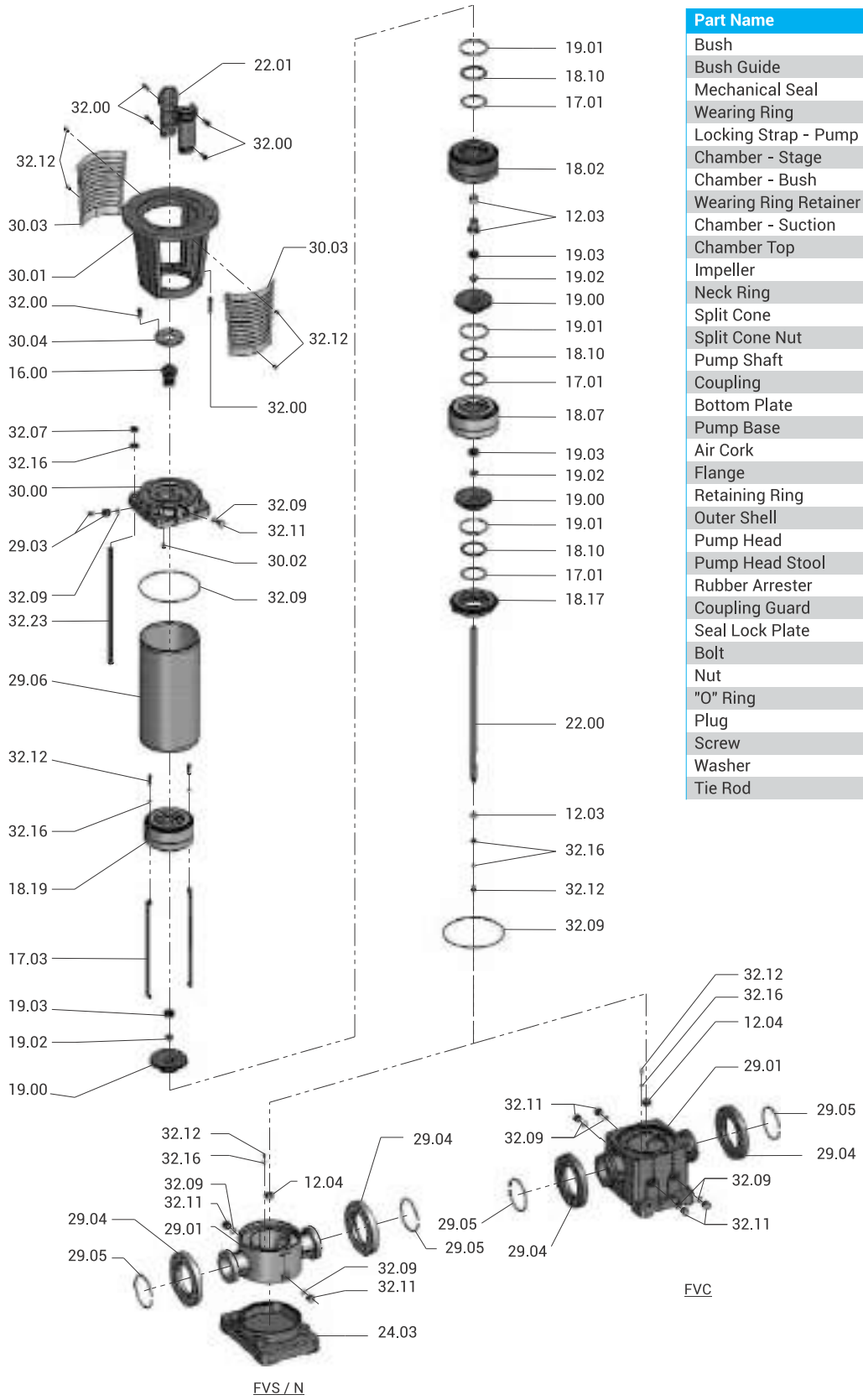
Part Name	Part No.
Bush	12,03
Sleeve	13,05
Mechanical Seal	16,00
Wearing Ring	17,01
Chamber - Bush	18,02
Chamber - Stage	18,07
Wearing Ring Retainer	18,10
Chamber - Suction	18,17
Chamber - Delivery	18,18
Impeller	19,00
Pump Shaft	22,00
Coupling	22,01
Lock Cap	22,02
Bottom Plate	24,03
Pump Base	29,01
Air Cork	29,03
Outer Shell	29,06
Pump Head	30,00
Coupling Guard	30,03
Pump Head Cover	30,07
Bolt	32,00
Nut	32,07
'O' Ring	32,09
Pin	32,10
Plug	32,11
Screw	32,12
Spring	32,13
Washer	32,16
Tie Rod	32,23

EXPLODED VIEW - FV 50-100 gpm



Parts Name	P. No
Sleeve	13,05
Mechanical Seal	16,00
Wearing Ring	17,01
Locking Strap-Pump	17,03
Chamber	18,00
Wearing Ring Retainer	18,10
Bearing Ring	18,11
Chamber - Delivery	18,18
Suction Chamber Top Plate	18,23
Suction Chamber Bottom Plate	18,24
Impeller	19,00
Neck Ring	19,01
Pump Shaft	22,00
Coupling	22,01
Lock Cap	22,02
Base Plate	24,03
Pump Base	29,01
Air Cork	29,03
Flange	29,04
Outer Shell	29,06
Pump Head	30,00
Rubber Arrester	30,02
Coupling Guard	30,03
Pump head Cover	30,07
Bolt	32,00
Nut	32,07
O-Ring	32,09
Pin	32,10
Plug	32,11
Screw	32,12
Washer	32,16
Tie Rod	32,23

EXPLODED VIEW - FV 160-450 gpm



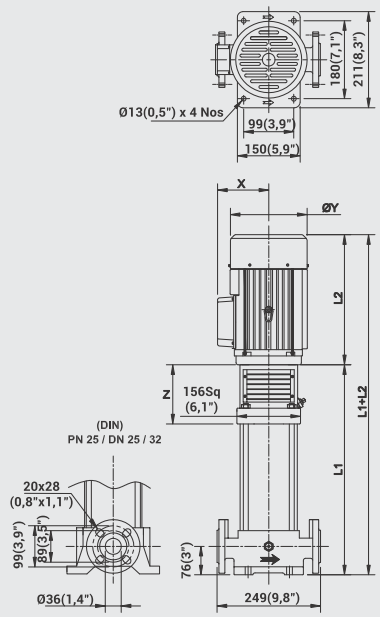
Part Name	Part No.
Bush	12,03
Bush Guide	12,04
Mechanical Seal	16,00
Wearing Ring	17,01
Locking Strap - Pump	17,03
Chamber - Stage	18,07
Chamber - Bush	18,02
Wearing Ring Retainer	18,10
Chamber - Suction	18,17
Chamber Top	18,19
Impeller	19,00
Neck Ring	19,01
Split Cone	19,02
Split Cone Nut	19,03
Pump Shaft	22,00
Coupling	22,01
Bottom Plate	24,03
Pump Base	29,01
Air Cork	29,03
Flange	29,04
Retaining Ring	29,05
Outer Shell	29,06
Pump Head	30,00
Pump Head Stool	30,01
Rubber Arrester	30,02
Coupling Guard	30,03
Seal Lock Plate	30,04
Bolt	32,00
Nut	32,07
"O" Ring	32,09
Plug	32,11
Screw	32,12
Washer	32,16
Tie Rod	32,23

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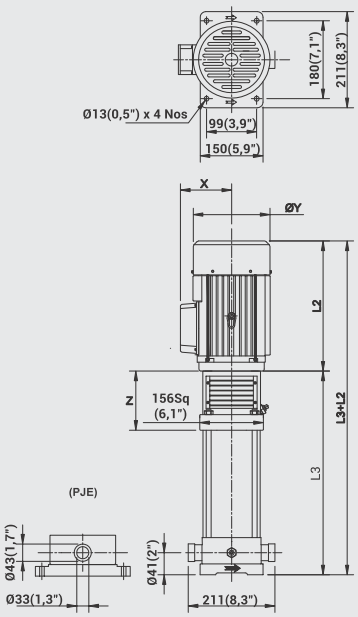
HORIZONTAL MULTISTAGE CENTRIFUGAL PUMPS
FV SERIES - 60Hz



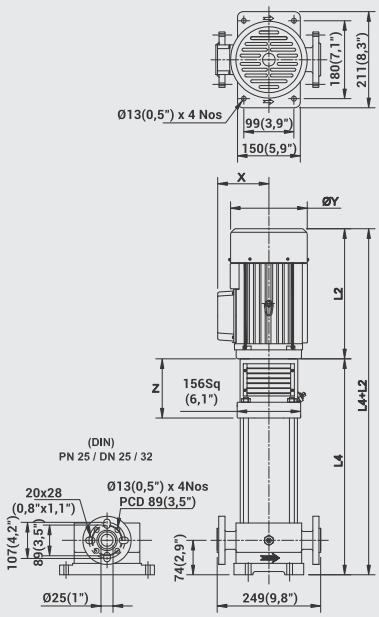
FVC (ROUND FLANGE)



FVS & N (PJE)



FVS & N (ROUND FLANGE)

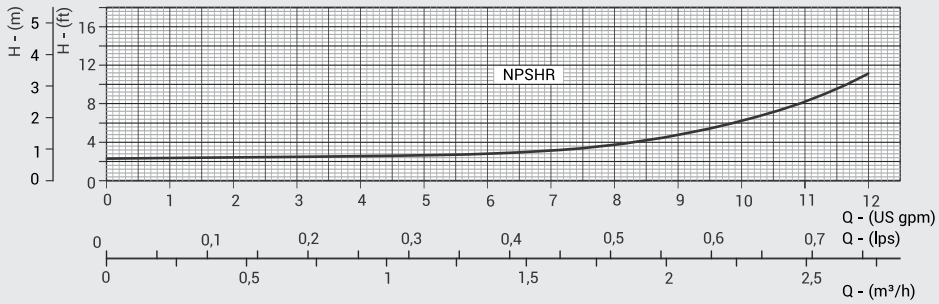


All Dimensions are in mm & Inches

DIMENSIONS & WEIGHT

PUMP MODEL	L1 FVC		APPROX. DIMENSIONS (mm / Inch)														APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)									
			L2				L3 FVS/N(PJE)		L4 FVS/N		X		Y (Ø)		Z		PUMP						MOTOR			
			1Ph		3Ph												FVC (Round)		FVS/N (PJE)		FVS/N (Round)		1Ph		3Ph	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
FVS-005-02	269	10,6	222	8,7	217	8,5	249	9,8	273	10,7	113	4,4	140	5,5	145	5,7	18,6	41	13,2	29	15,0	33	9,1	20	8,2	18
FVS-005-03	287	11,3	222	8,7	217	8,5	267	10,5	291	11,5	113	4,4	140	5,5	145	5,7	19,0	42	14,1	31	15,4	34	9,1	20	8,2	18
FVS-005-04	305	12,0	222	8,7	217	8,5	285	11,2	309	12,2	113	4,4	140	5,5	145	5,7	20,0	44	14,5	32	16,3	36	9,1	20	8,2	18
FVS-005-05	323	12,7	242	9,5	232	9,1	303	11,9	327	12,9	113	4,4	140	5,5	145	5,7	20,4	45	15,0	33	16,8	37	10,0	22	9,1	20
FVS-005-06	341	13,4	242	9,5	232	9,1	321	12,6	345	13,6	113	4,4	140	5,5	145	5,7	20,9	46	15,9	35	17,2	38	10,0	22	9,1	20
FVS-005-07	359	14,1	267	10,5	252	9,9	339	13,3	363	14,3	113	4,4	140	5,5	145	5,7	21,8	48	16,3	36	18,1	40	11,8	27	14,1	31
FVS-005-08	377	14,8	267	10,5	252	9,9	357	14,1	381	15,0	113	4,4	140	5,5	145	5,7	22,2	49	16,8	37	18,6	41	11,8	27	14,1	31
FVS-005-09	395	15,6	267	10,5	252	9,9	375	14,8	399	15,7	113	4,4	140	5,5	145	5,7	22,7	50	17,7	39	19,0	42	11,8	27	14,1	31
FVS-005-10	413	16,3	284	11,2	264	10,4	393	15,5	417	16,4	118	4,6	160	6,3	145	5,7	23,6	52	18,1	40	20,0	44	15,0	33	14,1	31
FVS-005-11	431	17,0	284	11,2	264	10,4	411	16,2	435	17,1	118	4,6	160	6,3	145	5,7	24,0	53	18,6	41	20,4	45	15,0	33	14,1	31
FVS-005-12	449	17,7	284	11,2	264	10,4	429	16,9	453	17,8	118	4,6	160	6,3	145	5,7	24,5	54	19,5	43	20,9	46	15,0	33	14,1	31
FVS-005-13	467	18,4	284	11,2	264	10,4	447	17,6	471	18,5	118	4,6	160	6,3	145	5,7	24,9	56	20,0	44	21,3	47	15,0	33	14,1	31
FVS-005-15	503	19,8	294	11,6	295	11,6	483	19,0	507	20,0	136	5,4	187	7,4	163	6,4	26,3	58	21,3	47	22,7	50	20,0	44	20,0	44
FVS-005-17	539	21,2	294	11,6	295	11,6	519	20,4	543	21,4	136	5,4	187	7,4	163	6,4	27,7	61	22,2	49	24,0	53	20,0	44	20,0	44
FVS-005-19	575	22,6	320	12,6	295	11,6	555	21,9	579	22,8	136	5,4	187	7,4	163	6,4	28,6	64	23,6	52	24,9	55	24,0	53	20,0	44
FVS-005-21	611	24,1	320	12,6	295	11,6	591	23,3	615	24,2	136	5,4	187	7,4	163	6,4	29,9	66	24,9	55	26,3	58	24,0	53	20,0	44
FVS-005-23	647	25,5	320	12,6	295	11,6	627	24,7	651	25,6	136	5,4	187	7,4	163	6,4	31,3	69	25,9	57	27,7	61	24,0	53	20,0	44
FVS-005-25	701	27,6	320	12,6	295	11,6	681	26,8	705	27,8	136	5,4	187	7,4	163	6,4	32,2	71	27,2	60	28,6	63	24,0	53	20,0	44
FVS-005-27	737	29,0	-	-	320	12,6	717	28,2	741	29,2	136	5,4	187	7,4	163	6,4	33,6	74	28,1	63	29,9	66	-	-	24,0	53

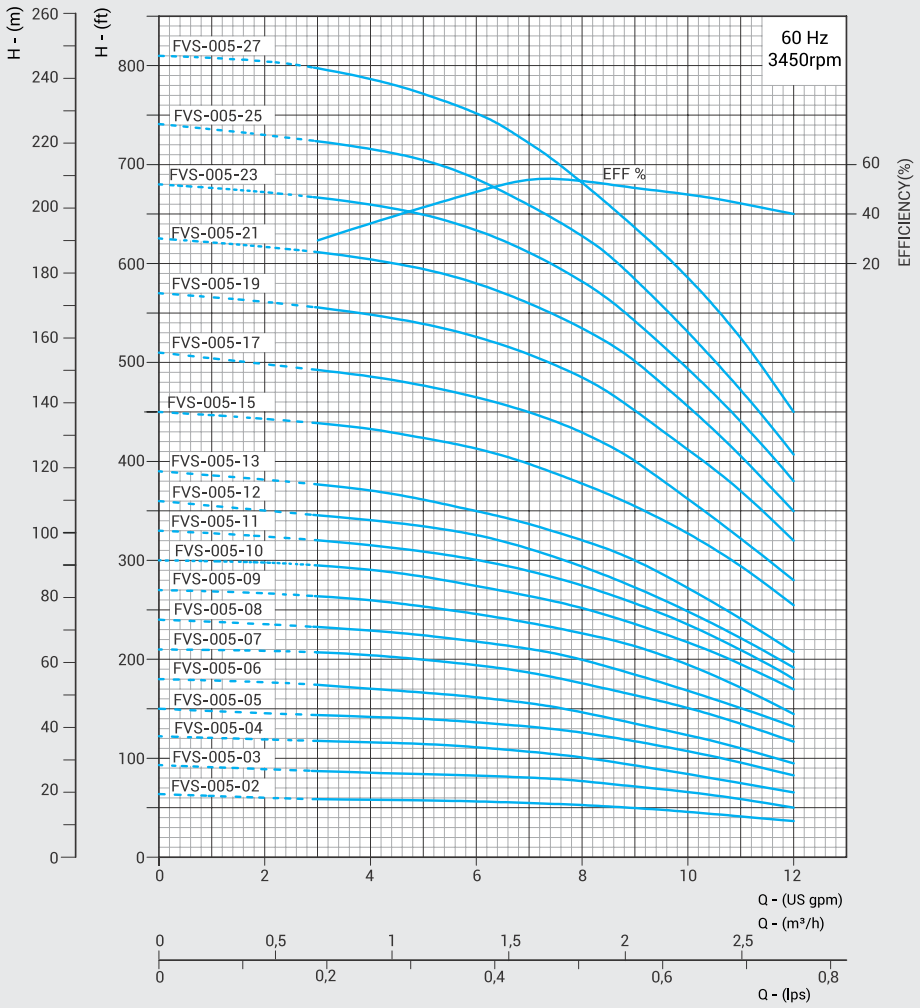
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 5 gpm

FV-005



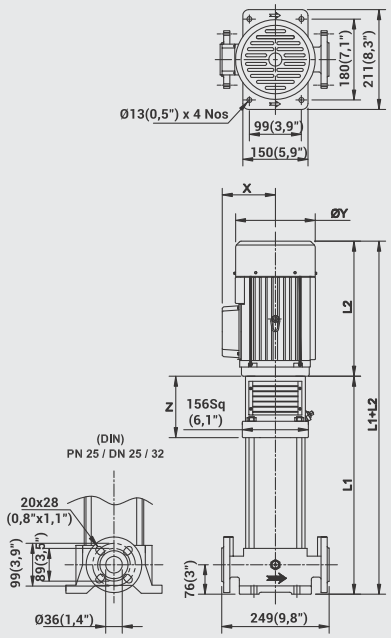
PERFORMANCE TABLE

PIPE SIZE : DN 25 / 32

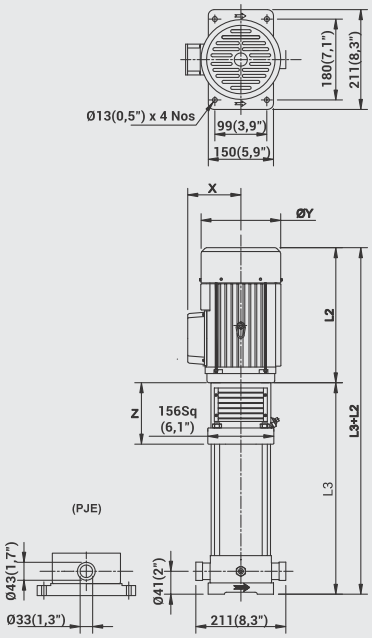
PUMP MODEL	MOTOR POWER		DISCHARGE							
			m³/h	0	0,9	1,1	1,4	1,8	2,3	2,7
	kW	HP	US gpm	0	4	5	6	8	10	12
FVS-005-02	0,37	0,5	TOTAL MANOMETRIC HEAD IN FEET	62	59	58	58	53	46	38
FVS-005-03	0,37	0,5		93	86	84	82	78	66	50
FVS-005-04	0,37	0,5		122	116	114	110	100	83	66
FVS-005-05	0,55	0,75		150	141	140	139	126	109	82
FVS-005-06	0,55	0,75		180	170	168	162	147	123	95
FVS-005-07	0,75	1,0		210	205	200	194	176	150	119
FVS-005-08	0,75	1,0		240	230	224	219	200	169	132
FVS-005-09	0,75	1,0		270	260	252	246	228	195	145
FVS-005-10	1,1	1,50		300	290	283	274	251	219	170
FVS-005-11	1,1	1,50		330	315	309	300	275	235	180
FVS-005-12	1,1	1,50		360	340	335	326	294	250	191
FVS-005-13	1,1	1,50		390	370	361	350	320	271	209
FVS-005-15	1,5	2,0		450	432	472	412	379	328	255
FVS-005-17	1,5	2,0		510	486	478	465	430	361	280
FVS-005-19	2,2	3,0		570	549	540	526	484	411	320
FVS-005-21	2,2	3,0		625	604	595	580	534	455	350
FVS-005-23	2,2	3,0		680	660	650	633	581	493	380
FVS-005-25	2,2	3,0		740	716	704	688	629	530	408
FVS-005-27	3,0	4,0		810	788	771	751	682	586	450

Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
The given performance is same for Type - C, S, N
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

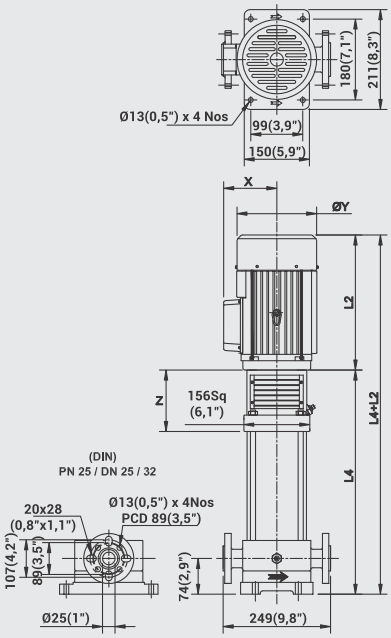
FVC (ROUND FLANGE)



FVS & N (PJE)



FVS & N (ROUND FLANGE)

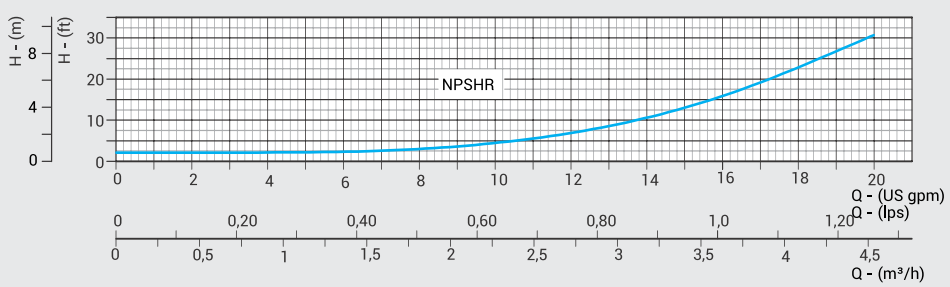


All Dimensions are in mm & Inches

DIMENSIONS & WEIGHT

PUMP MODEL	APPROX. DIMENSIONS (mm / Inch)																		APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)							
	L1 FVC		L2				L3 FVS/N(PJE)		L4 MVS/N		X		Y (Ø)		Z				PUMP				MOTOR			
			1Ph		3Ph												FVC (Round)		FVS/N (PJE)		FVS/N (Round)		1Ph		3Ph	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
FVS-010-02	269	10,6	222	8,7	217	8,5	249	9,8	273	10,7	113	4,4	140	5,5	145	5,7	18,6	41	13,2	29	15,0	33	9,1	20	8,2	18
FVS-010-03	287	11,3	242	9,5	232	9,1	267	10,5	291	11,5	113	4,4	140	5,5	145	5,7	19,0	42	14,1	31	15,9	35	10,0	22	9,1	20
FVS-010-04	305	12,0	267	10,5	252	9,9	285	11,2	309	12,2	113	4,4	140	5,5	145	5,7	20,0	44	15,0	33	16,3	36	11,8	26	14,1	31
FVS-010-05	323	12,7	284	11,2	264	10,4	303	11,9	327	12,9	118	4,6	160	6,3	145	5,7	20,9	46	15,4	34	17,2	38	15,0	33	14,1	31
FVS-010-06	341	13,4	284	11,2	264	10,4	321	12,6	345	13,6	118	4,6	160	6,3	145	5,7	21,3	47	16,3	36	17,7	39	15,0	33	14,1	31
FVS-010-07	359	14,1	294	11,6	295	11,6	339	13,3	363	14,3	136	5,4	187	7,4	163	6,4	22,7	50	17,2	38	19,0	42	20,0	44	20,0	44
FVS-010-08	377	14,8	320	12,6	295	11,6	357	14,1	381	15,0	136	5,4	187	7,4	163	6,4	23,1	51	18,1	40	19,5	43	24,0	53	24,0	53
FVS-010-09	395	15,6	320	12,6	295	11,6	375	14,8	399	15,7	136	5,4	187	7,4	163	6,4	24,0	53	18,6	41	20,4	45	24,0	53	24,0	53
FVS-010-10	413	16,3	320	12,6	295	11,6	393	15,5	417	16,4	136	5,4	187	7,4	163	6,4	24,5	54	19,5	43	20,9	46	24,0	53	24,0	53
FVS-010-11	431	17,0	320	12,6	295	11,6	411	16,2	435	17,1	136	5,4	187	7,4	163	6,4	25,4	56	20,0	44	21,8	48	24,0	53	24,0	53
FVS-010-12	449	17,7	320	12,6	295	11,6	465	18,3	489	19,3	136	5,4	187	7,4	163	6,4	25,9	57	20,9	46	22,7	50	24,0	53	24,0	53
FVS-010-13	485	19,1	-	-	320	12,6	483	19,0	507	20,0	136	5,4	187	7,4	163	6,4	26,8	59	21,8	48	23,1	51	-	-	24,0	53
FVS-010-15	521	20,5	-	-	320	12,6	501	19,7	525	20,7	136	5,4	187	7,4	163	6,4	28,1	62	23,1	51	24,5	54	-	-	24,0	53
FVS-010-18	575	22,6	-	-	354	13,9	555	21,9	579	22,8	136	5,4	187	7,4	163	6,4	30,4	67	24,9	55	26,8	59	-	-	27,7	61

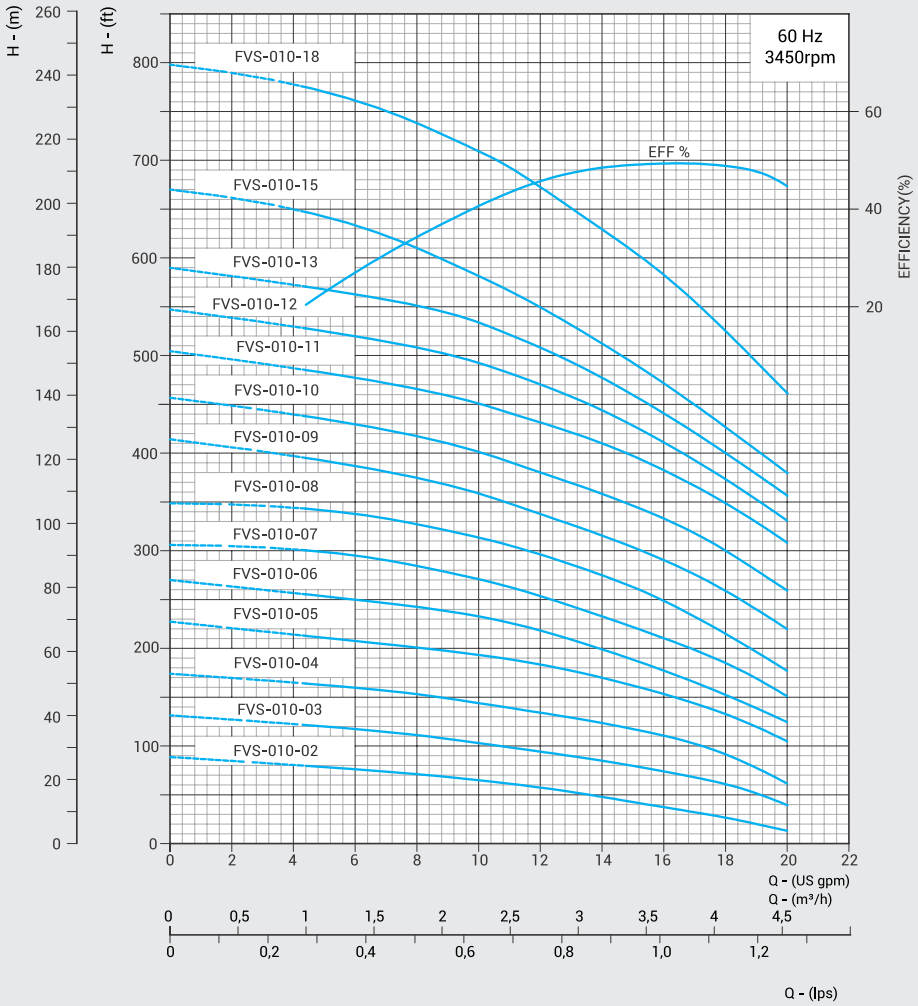
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 10 gpm

FV-010



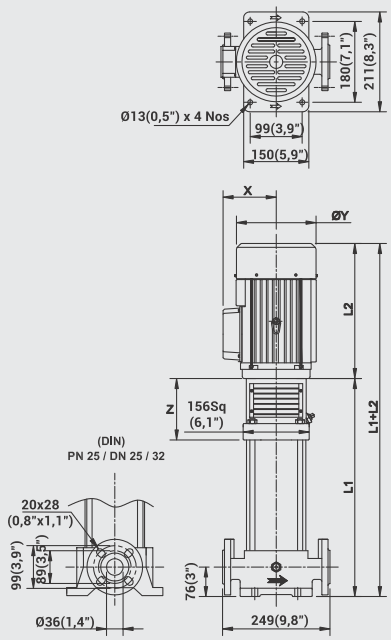
PERFORMANCE TABLE

PIPE SIZE : DN 25 / 32

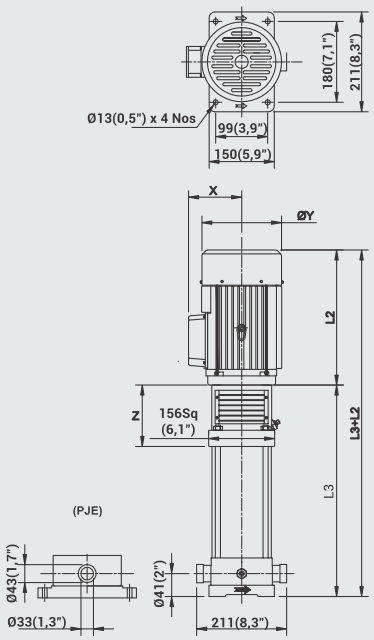
PUMP MODEL	MOTOR POWER			DISCHARGE						
			m³/h	0	0.9	1.8	2.3	2.7	3.6	4.5
	kW	HP	US gpm	0	4	8	10	12	16	20
FVS-010-02	0,37	0,5		89	80	72	65	57	38	13
FVS-010-03	0,55	0,75		132	123	111	102	95	75	40
FVS-010-04	0,75	1,0		174	165	153	144	135	110	62
FVS-010-05	1,1	1,5		227	215	201	192	184	153	105
FVS-010-06	1,1	1,5		270	257	243	231	218	177	125
FVS-010-07	1,5	2,0		306	301	285	270	254	210	151
FVS-010-08	2,2	3,0		348	345	327	313	296	249	178
FVS-010-09	2,2	3,0		414	397	375	360	338	290	220
FVS-010-10	2,2	3,0		457	440	418	400	380	333	260
FVS-010-11	2,2	3,0		505	487	466	450	432	382	308
FVS-010-12	2,2	3,0		547	530	508	491	470	411	331
FVS-010-13	3	4,0		590	573	551	533	508	441	357
FVS-010-15	3	4,0		670	650	610	580	550	472	380
FVS-010-18	4	5,5		798	778	739	710	672	583	461

Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
The given performance is same for Type - C, S, N
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

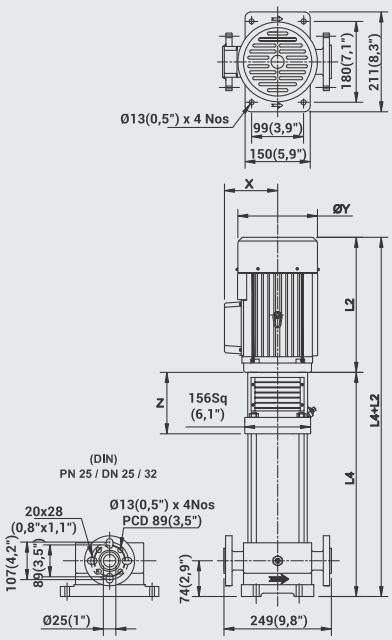
FVC (ROUND FLANGE)



FVS & N (PJE)



FVS & N (ROUND FLANGE)

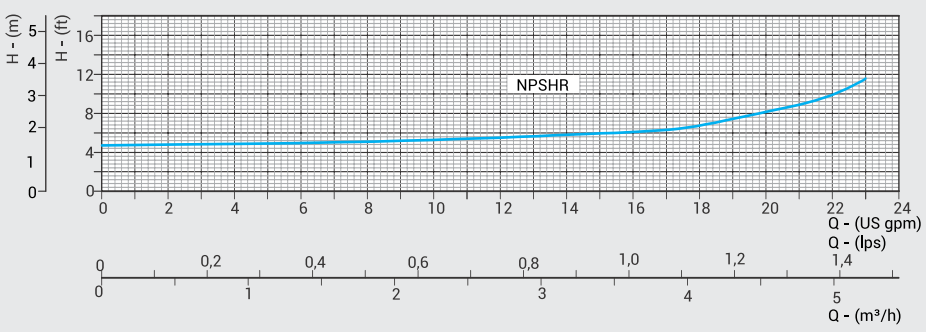


All Dimensions are in mm & Inches

DIMENSIONS & WEIGHT

PUMP MODEL	L1 FVC		APPROX. DIMENSIONS (mm / Inch)														APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)									
			L2				L3 FVS/N(PJE)		L4 FVS/N		X		Y (Ø)		Z		PUMP						MOTOR			
			1Ph		3Ph												FVC (Round)		FVS/N (PJE)		FVS/N (Round)		1Ph		3Ph	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
FVS-015-02	269	10,6	222	8,7	217	8,5	249	9,8	273	10,7	113	4,4	140	5,5	145	5,7	18,6	41	13,2	29	15,0	33	9,1	20	8,2	18
FVS-015-03	287	11,3	222	8,7	217	8,5	267	10,5	291	11,5	113	4,4	140	5,5	145	5,7	19,0	42	14,1	31	15,4	34	10,0	22	9,1	20
FVS-015-04	305	12,0	242	9,5	232	9,1	285	11,2	309	12,2	113	4,4	140	5,5	145	5,7	19,5	43	14,5	32	16,3	36	10,0	22	9,1	20
FVS-015-05	323	12,7	267	10,5	252	9,9	303	11,9	327	12,9	113	4,4	140	5,5	145	5,7	20,4	45	15,0	33	16,8	37	11,8	26	14,1	31
FVS-015-06	341	13,4	284	11,2	264	10,4	321	12,6	345	13,6	118	4,6	160	6,3	145	5,7	20,9	46	15,9	35	17,2	38	15,0	33	14,1	31
FVS-015-07	359	14,1	284	11,2	264	10,4	339	13,3	363	14,3	118	4,6	160	6,3	145	5,7	21,3	47	16,3	36	17,7	39	15,0	33	14,1	31
FVS-015-08	377	14,8	284	11,2	264	10,4	357	14,1	381	15,0	118	4,6	160	6,3	145	5,7	22,2	49	16,8	37	18,6	41	15,0	33	14,1	31
FVS-015-09	395	15,6	294	11,6	295	11,6	375	14,8	399	15,7	136	5,4	187	7,4	163	6,4	23,1	51	18,1	40	19,5	43	20,0	44	20,0	44
FVS-015-10	413	16,3	294	11,6	295	11,6	393	15,5	417	16,4	136	5,4	187	7,4	163	6,4	23,6	52	18,6	41	20,4	45	20,0	44	20,0	44
FVS-015-11	431	17,0	294	11,6	295	11,6	411	16,2	435	17,1	136	5,4	187	7,4	163	6,4	24,5	54	19,0	42	20,9	46	20,0	44	20,0	44
FVS-015-12	449	17,7	320	12,6	295	11,6	429	16,9	453	17,8	136	5,4	187	7,4	163	6,4	24,9	55	20,0	44	21,3	47	24,0	53	20,0	44
FVS-015-13	467	18,4	320	12,6	295	11,6	447	17,6	471	18,5	136	5,4	187	7,4	163	6,4	25,4	56	20,4	45	22,2	49	24,0	53	20,0	44
FVS-015-15	503	19,8	320	12,6	295	11,6	483	19,0	507	20,0	136	5,4	187	7,4	163	6,4	26,8	59	21,8	48	23,1	51	24,0	53	20,0	44
FVS-015-17	557	21,9	320	12,6	295	11,6	537	21,1	561	22,1	136	5,4	187	7,4	163	6,4	28,1	62	22,7	50	24,5	54	24,0	53	20,0	44
FVS-015-19	593	23,3	-	-	320	12,6	573	22,6	597	23,5	136	5,4	187	7,4	163	6,4	29,0	64	24,0	53	25,4	56	-	-	24,0	53
FVS-015-21	629	24,8	-	-	320	12,6	609	24,0	633	24,9	136	5,4	187	7,4	163	6,4	30,4	67	25,4	56	26,8	59	-	-	24,0	53
FVS-015-23	665	26,2	-	-	320	12,6	645	25,4	669	26,3	136	5,4	187	7,4	163	6,4	31,7	70	26,3	58	28,1	62	-	-	24,0	53
FVS-015-25	701	27,6	-	-	320	12,6	681	26,8	705	27,8	136	5,4	187	7,4	163	6,4	32,7	72	27,7	61	29,0	64	-	-	24,0	53

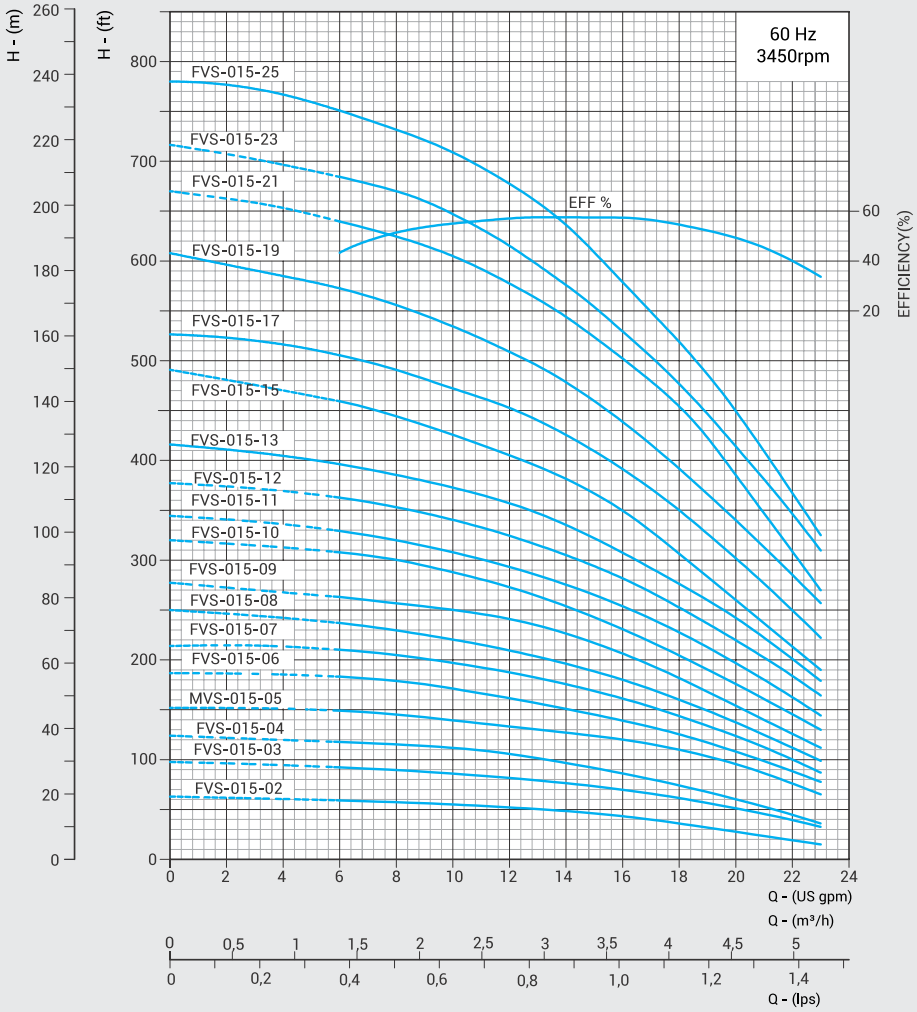
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 15 gpm

FV-015



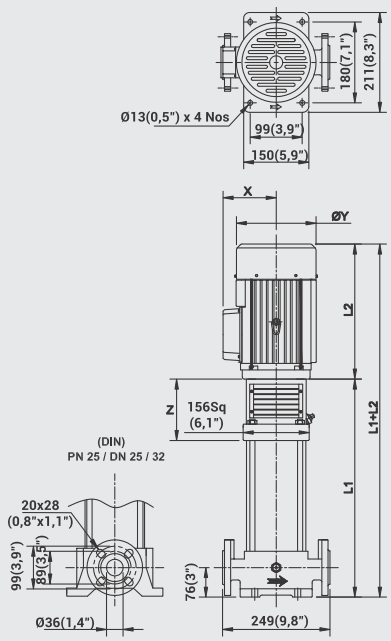
PERFORMANCE TABLE

PIPE SIZE : DN 25 / 32

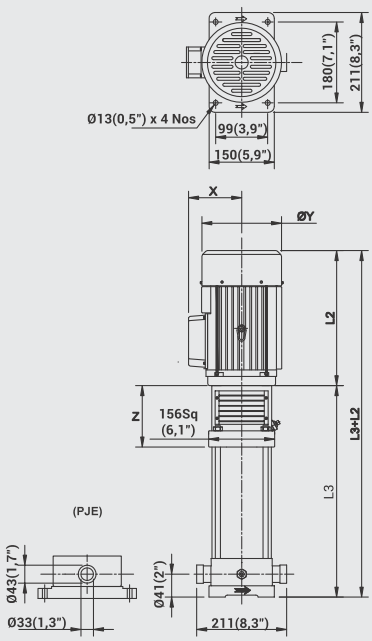
PUMP MODEL	MOTOR POWER			DISCHARGE					
			m³/h	0	1,4	2,3	3,4	4,1	5,2
	kW	HP	US gpm	0	6	10	15	18	23
FVS-015-02	0,37	0,50	TOTAL MANOMETRIC HEAD IN FEET	62	60	55	47	35	15
FVS-015-03	0,55	0,75		98	92	85	72	60	30
FVS-015-04	0,55	0,75		125	118	111	91	75	35
FVS-015-05	0,75	1,0		151	150	140	122	110	65
FVS-015-06	1,1	1,5		188	182	170	145	125	79
FVS-015-07	1,1	1,5		212	210	198	170	145	89
FVS-015-08	1,1	1,5		250	238	220	190	160	100
FVS-015-09	1,5	2,0		278	262	250	219	180	112
FVS-015-10	1,5	2,0		320	308	290	242	205	130
FVS-015-11	1,5	2,0		345	330	308	265	226	145
FVS-015-12	2,2	3,0		378	362	340	295	250	165
FVS-015-13	2,2	3,0		416	395	372	321	275	180
FVS-015-15	2,2	3,0		490	460	426	368	308	190
FVS-015-17	2,2	3,0		528	505	470	410	350	223
FVS-015-19	3,0	4,0		608	572	535	460	390	255
FVS-015-21	3,0	4,0		670	640	605	522	450	270
FVS-015-23	3,0	4,0		718	685	645	551	475	310
FVS-015-25	3,0	4,0		780	750	710	608	520	325

Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
The given performance is same for Type - C, S, N
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

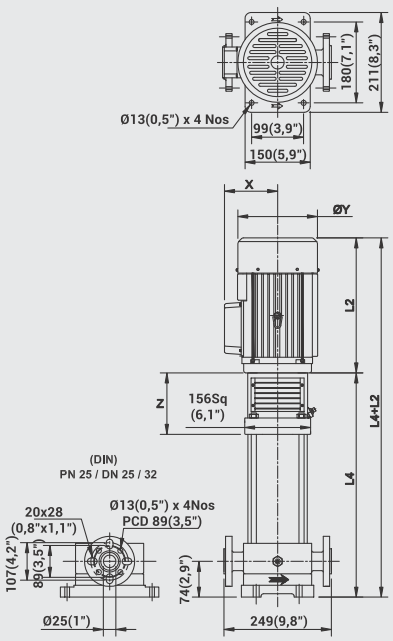
FVC (ROUND FLANGE)



FVS & N (PJE)



FVS & N (ROUND FLANGE)

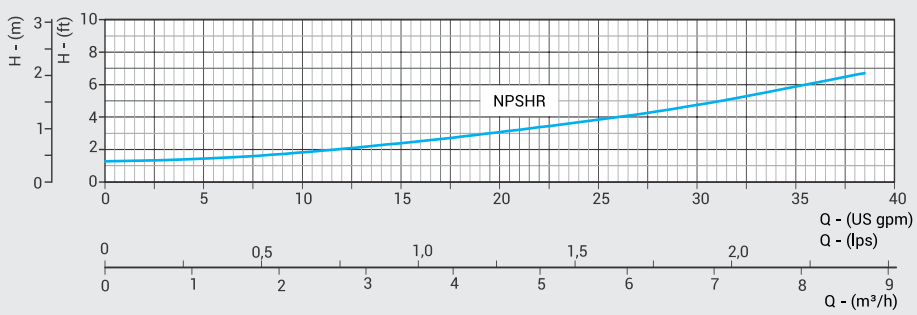


All Dimensions are in mm & Inches

DIMENSIONS & WEIGHT

PUMP MODEL	APPROX. DIMENSIONS (mm / Inch)																APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)									
	L1 FVC		L2				L3 FVS/N(PJE)		L4 MVS/N		X		Y (Ø)		Z		PUMP						MOTOR			
			1Ph		3Ph												FVC (Round)		FVS/N (PJE)		FVS/N (Round)		1Ph		3Ph	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
FVS-020-01	287	11,3	222	8,7	217	8,5	267	10,5	291	11,5	113	4,4	140	5,5	145	5,7	21,8	48	16,8	37	18,1	40	9,1	20	8,2	18
FVS-020-02	287	11,3	267	10,5	252	9,9	294	11,6	318	12,5	113	4,4	140	5,5	145	5,7	22,7	50	17,2	38	19,0	42	11,8	26	14,1	31
FVS-020-03	314	12,4	267	10,5	252	9,9	321	12,6	345	13,6	113	4,4	140	5,5	145	5,7	23,1	51	18,1	40	19,5	43	11,8	26	14,1	31
FVS-020-04	341	13,4	295	11,6	295	11,6	348	13,7	372	14,6	118	4,6	187	7,4	163	6,4	24,5	54	19,0	42	20,9	46	20,0	44	20,0	44
FVS-020-05	368	14,5	320	12,6	295	11,6	375	14,8	399	15,7	118	4,6	187	7,4	163	6,4	24,9	55	20,0	44	21,8	48	24,0	53	20,0	44
FVS-020-06	395	15,6	320	12,6	295	11,6	402	15,8	426	16,8	136	5,4	187	7,4	163	6,4	25,9	57	20,9	46	22,2	49	24,0	53	20,0	44
FVS-020-07	440	17,3	-	-	320	12,6	447	17,6	471	18,5	136	5,4	187	7,4	163	6,4	26,8	59	21,3	47	23,1	51	-	-	21,3	47
FVS-020-08	467	18,4	-	-	320	12,6	474	18,7	498	19,6	136	5,4	187	7,4	163	6,4	27,2	60	22,2	49	23,6	52	-	-	21,3	47
FVS-020-10	521	20,5	-	-	354	13,9	528	20,8	552	21,7	136	5,4	187	7,4	163	6,4	28,6	63	23,6	52	24,9	55	-	-	27,7	61
FVS-020-12	575	22,6	-	-	354	13,9	582	22,9	606	23,9	136	5,4	187	7,4	163	6,4	29,9	66	24,9	55	26,3	58	-	-	27,7	61
FVS-020-14	629	24,8	-	-	385	15,2	636	25,0	660	26,0	204	8,0	204	8,0	197	7,8	32,7	72	27,2	60	29,0	64	-	-	41,3	91
FVS-020-16	683	26,9	-	-	385	15,2	690	27,2	714	28,1	204	8,0	204	8,0	197	7,8	34,0	75	28,6	63	30,4	67	-	-	41,3	91

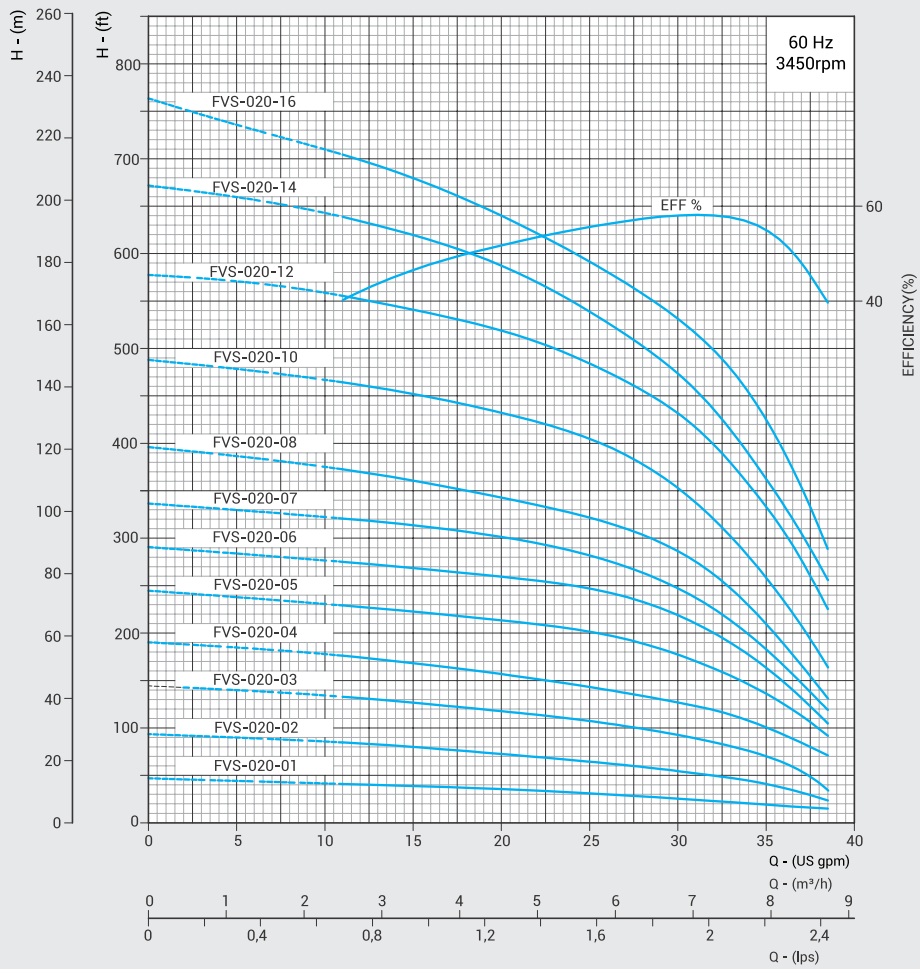
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 20 gpm

FV-020



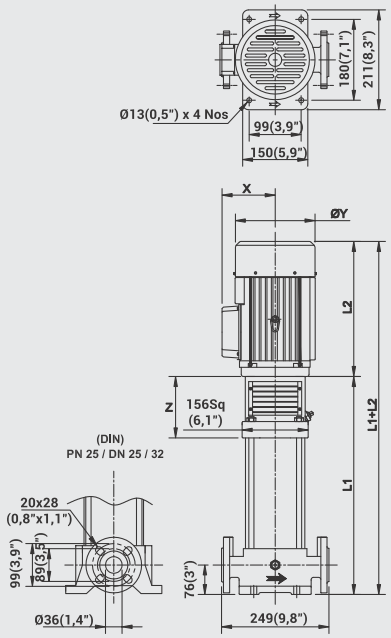
PERFORMANCE TABLE

PIPE SIZE : DN 25 / 32

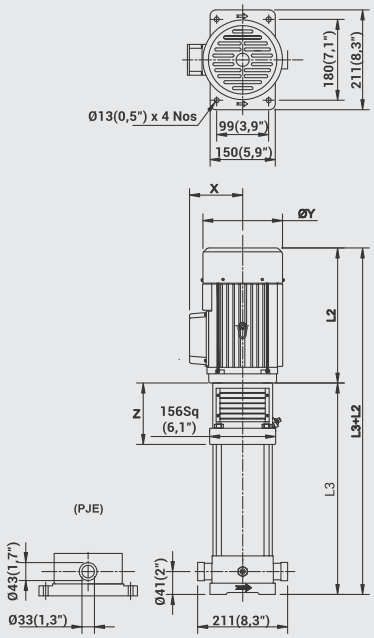
PUMP MODEL	MOTOR POWER			DISCHARGE						
			m³/h	0	2,5	3,4	4,5	5,7	8	8,6
	kW	HP	US gpm	0	11	15	20	25	35	38
FVS-020-01	0,37	0,5	TOTAL MANOMETRIC HEAD IN FEET	47	40	39	36	32	20	16
FVS-020-02	0,75	1,0		94	84	80	71	65	41	26
FVS-020-03	0,75	1,0		144	132	127	119	107,5	70	42
FVS-020-04	1,5	2,0		190	178	168	158	144	100	75
FVS020-05	2,2	3,0		245	230	223	202	202	137	99
FVS-020-06	2,2	3,0		290	276	268,5	260	247	163	113
FVS-020-07	3	4,0		337	320	314	301	282	182	128
FVS-020-08	3	4,0		395	372	360	341	322	210	143
FVS-020-10	4	5,5		488	465	452	432	405	259	180
FVS-020-12	4	5,5		579	555	541	520	484	333	243
FVS-020-14	5,5	7,5		671	640	620	589	539	362	272
FVS-020-16	5,5	7,5		763	705	680	640	592	425	310

Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
The given performance is same for Type - C, S, N
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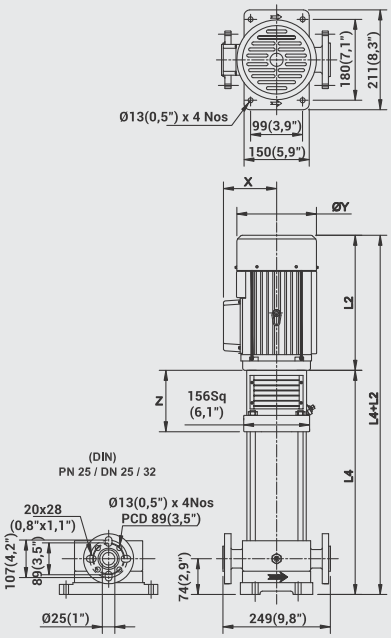
FVC (ROUND FLANGE)



FVS & N (PJE)



FVS & N (ROUND FLANGE)

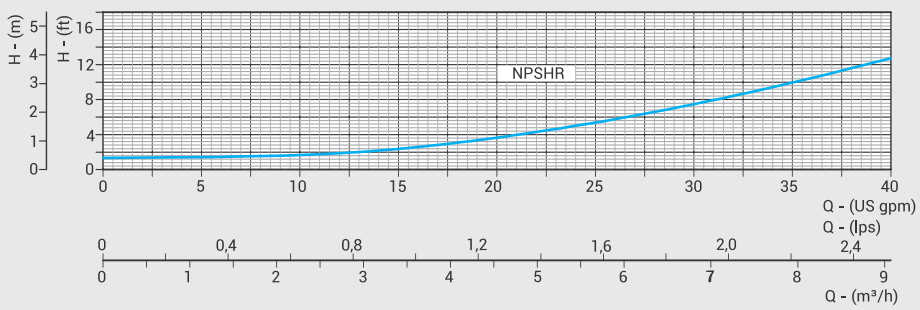


All Dimensions are in mm & Inches

DIMENSIONS & WEIGHT

PUMP MODEL	L1 FVC		APPROX. DIMENSIONS (mm / Inch)														APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)									
			L2				L3 FVS/N(PJE)		L4 FVS/N		X		Y (Ø)		Z		PUMP				MOTOR				
			1Ph		3Ph												FVC (Round)		FVS/N (PJE)		FVS/N(Round)		1Ph		3Ph	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
FVS-025-02	287	11,3	242	9,5	232	9,1	267	10,5	291	11,5	113	4,4	140	5,5	145	5,7	22,7	50	17,2	38	19,0	42	10,0	22	9,1	20
FVS-025-03	314	12,4	284	11,2	264	10,4	294	11,6	318	12,5	118	4,6	160	6,3	145	5,7	23,6	52	18,1	40	20,0	44	15,0	33	14,1	31
FVS-025-04	341	13,4	284	11,2	264	10,4	321	12,6	345	13,6	118	4,6	160	6,3	145	5,7	24,5	54	19,0	42	20,9	46	15,0	33	14,1	31
FVS-025-05	368	14,5	294	11,6	295	11,6	348	13,7	372	14,6	136	5,4	187	7,4	163	6,4	25,9	57	20,4	45	22,2	49	20,0	44	20,0	44
FVS-025-06	395	15,6	320	12,6	295	11,6	375	14,8	399	15,7	136	5,4	187	7,4	163	6,4	26,8	59	21,3	47	23,1	51	24,0	53	20,0	44
FVS-025-07	422	16,6	320	12,6	295	11,6	402	15,8	426	16,8	136	5,4	187	7,4	163	6,4	27,7	61	22,2	49	24,0	53	24,0	53	20,0	44
FVS-025-08	449	17,7	320	12,6	295	11,6	429	16,9	453	17,8	136	5,4	187	7,4	163	6,4	28,6	63	23,1	51	24,9	55	24,0	53	20,0	44
FVS-025-09	494	19,4	320	12,6	295	11,6	474	18,7	498	19,6	136	5,4	187	7,4	163	6,4	29,5	65	24,0	53	25,9	57	24,0	53	20,0	44
FVS-025-10	521	20,5	-	-	320	12,6	501	19,7	525	20,7	136	5,4	187	7,4	163	6,4	30,4	67	24,9	55	26,8	59	-	-	24,0	53
FVS-025-11	548	21,6	-	-	320	12,6	528	20,8	552	21,7	136	5,4	187	7,4	163	6,4	31,3	69	25,9	57	27,7	61	-	-	24,0	53
FVS-025-12	575	22,6	-	-	320	12,6	555	21,9	579	22,8	136	5,4	187	7,4	163	6,4	32,2	71	26,8	59	28,6	63	-	-	24,0	53
FVS-025-13	602	23,7	-	-	340	13,4	582	22,9	606	23,9	136	5,4	187	7,4	163	6,4	32,7	72	27,7	61	29,5	65	-	-	27,7	61
FVS-025-14	629	24,8	-	-	340	13,4	609	24,0	633	24,9	136	5,4	187	7,4	163	6,4	33,6	74	28,6	63	30,4	67	-	-	27,7	61
FVS-025-15	656	25,8	-	-	340	13,4	636	25,0	660	26,0	136	5,4	187	7,4	163	6,4	34,5	76	29,5	65	31,3	69	-	-	27,7	61
FVS-025-16	683	26,9	-	-	340	13,4	663	26,1	687	27,0	136	5,4	187	7,4	163	6,4	35,4	78	30,4	67	32,2	71	-	-	27,7	61
FVS-025-18	737	29,0	-	-	385	15,2	717	28,2	741	29,2	204	8,0	257	10,1	197	7,8	38,5	85	33,1	73	34,9	77	-	-	41,3	91
FVS-025-20	791	31,1	-	-	385	15,2	771	30,4	795	31,3	204	8,0	257	10,1	197	7,8	40,4	89	34,9	77	36,7	81	-	-	41,3	91
FVS-025-22	845	33,3	-	-	385	15,2	825	32,5	849	33,4	204	8,0	257	10,1	197	7,8	42,2	93	36,7	81	38,5	85	-	-	41,3	91
FVS-025-24	899	35,4	-	-	424	16,7	879	34,6	903	35,6	204	8,0	257	10,1	197	7,8	43,5	96	38,5	85	40,4	89	-	-	47,6	105

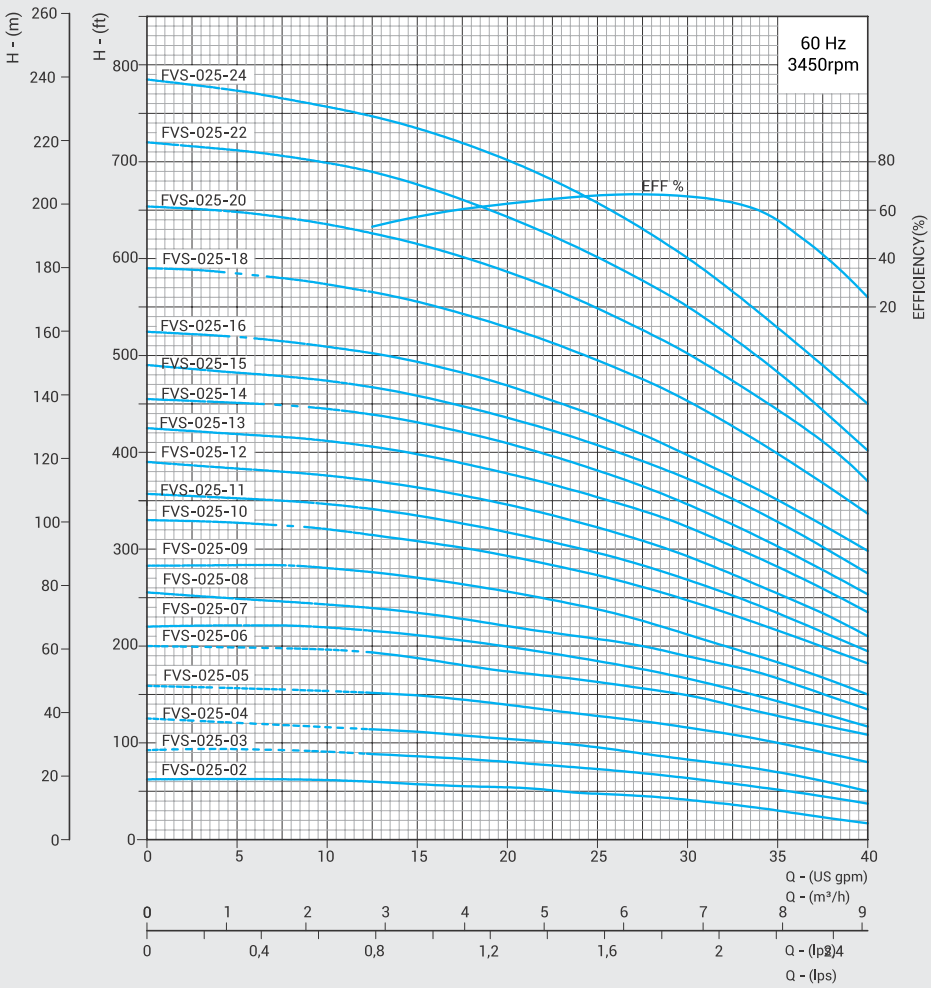
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 25 gpm

FV-025

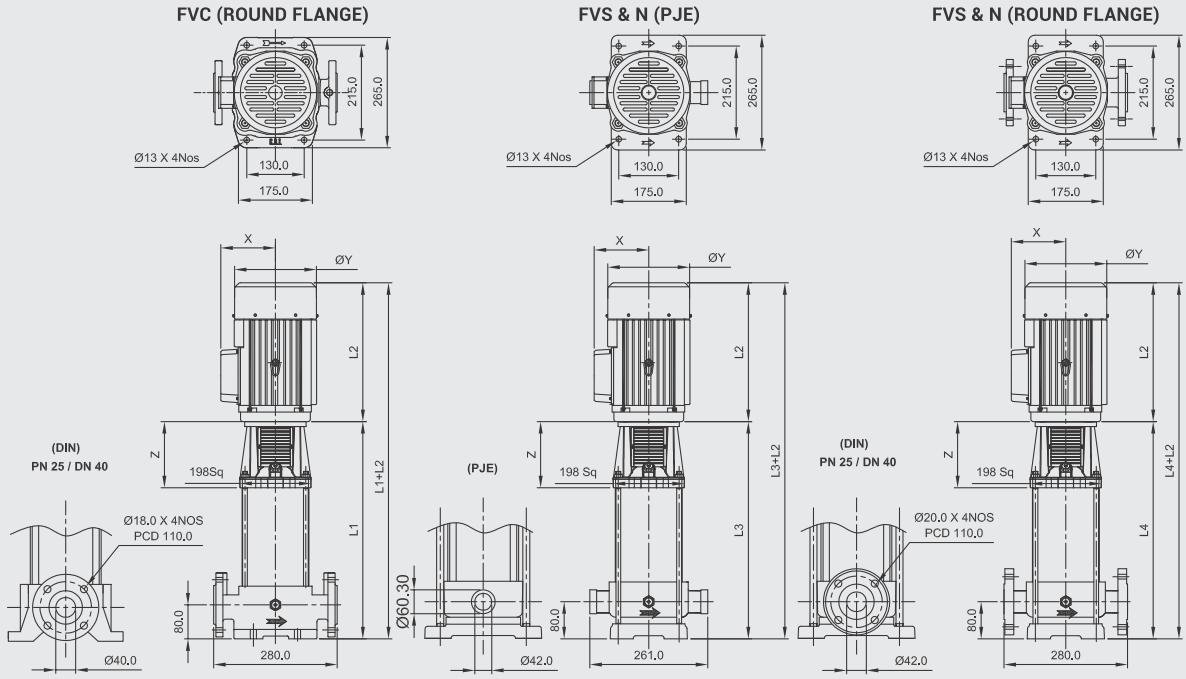


PERFORMANCE TABLE

PIPE SIZE : DN 25 / 32

PUMP MODEL	MOTOR POWER		DISCHARGE						
			m³/h	0	2,8	4,6	5,7	6,8	8	9,1
	kW	HP	US gpm	0	12.5	20	25	30	35	40
FVS-025-02	0,55	0,75	TOTAL MANOMETRIC HEAD IN FEET	62	60	54	48	41	30	18
FVS-025-03	1,1	1,5		92	89	80	73	64	51	38
FVS-025-04	1,1	1,5		125	114	104	95	82	70	50
FVS-025-05	1,5	2,0		159	156	140	129	116	100	80
FVS-025-06	2,2	3,0		200	193	174	162	150	129	109
FVS-025-07	2,2	3,0		220	216	200	185	166	142	118
FVS-025-08	2,2	3,0		255	240	220	208	190	166	135
FVS-025-09	2,2	3,0		288	277	256	239	211	182	150
FVS-025-10	3,0	4,0		330	315	292	273	248	217	182
FVS-025-11	3,0	4,0		358	340	319	296	269	234	195
FVS-025-12	3,0	4,0		390	370	347	322	292	254	210
FVS-025-13	4,0	5,5		424	407	379	353	322	280	235
FVS-025-14	4,0	5,5		455	440	410	380	345	302	253
FVS-025-15	4,0	5,5		490	468	435	408	372	329	275
FVS-025-16	4,0	5,5		525	502	470	439	398	350	300
FVS-025-18	5,5	7,5		590	567	530	495	453	400	339
FVS-025-20	5,5	7,5		653	632	587	549	501	445	370
FVS-025-22	5,5	7,5		720	690	642	600	550	482	400
FVS-025-24	7,5	10		785	748	701	658	600	530	450

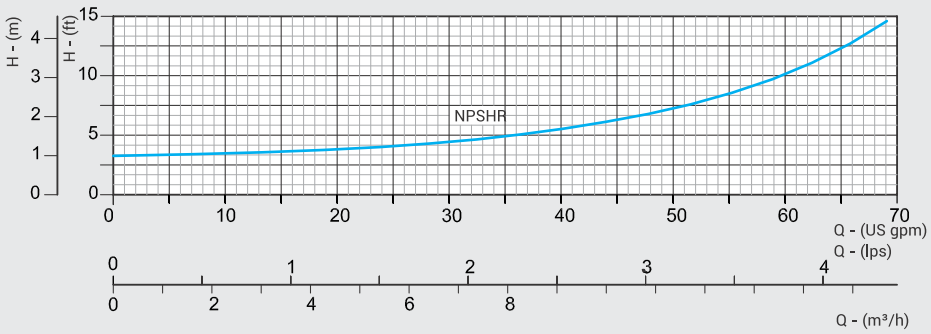
Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
The given performance is same for Type - C, S, N
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.



DIMENSIONS & WEIGHT

PUMP MODEL	L1 FVC		APPROX. DIMENSIONS (mm / Inch)														APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)									
			L2				L3 FVS/N(PJE)		L4 FVS/N		X		Y (Ø)		Z		PUMP						MOTOR			
			1Ph		3Ph												FVC (Round)		FVS/N (PJE)		FVS/N(Round)		1Ph		3Ph	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
FVS-050-01	308	12	242	9,4	232	9	312	12,1	312	12,1	111,5	4,3	138	5,4	173	6,7	32,5	71,5	27,5	60,5	28,5	62,7	11	24,2	10	22
FVS-050-02	338	13,1	284	11	265	10,3	342	13,3	342	13,3	120	4,6	138	5,4	173	6,7	33,5	73,7	28,5	62,7	29,5	64,9	13,5	29,7	13	28,6
FVS-050-03	382	14,8	315	12,2	311	12,1	386	15	386	15	131	5,1	176	6,9	187	7,2	34,5	75,9	29,5	64,9	30,5	67,1	20	44	17,5	38,5
FVS-050-04	412	16	315	12,2	311	12,1	416	16,2	416	16,2	131	5,1	176	6,9	187	7,4	35,5	78,1	30,5	67,1	31,5	69,3	20	44	17,5	38,5
FVS-050-05	445	17,3	-	-	350	13,6	449	17,5	449	17,5	135	5,2	197	7,7	190	7,4	36,5	80,5	31,5	69,3	32,5	71,5	-	-	27,5	60,5
FVS-050-06	475	18,5	-	-	350	13,6	479	18,6	479	18,6	135	5,2	197	7,7	190	8,4	37,5	82,5	32,5	71,5	33,5	78,1	-	-	27,5	60,5
FVS-050-07	531	20,7	-	-	385	13,6	535	20,8	535	20,8	205	7,9	257	10	216	8,4	40,5	88	35,5	78,1	36,5	80,5	-	-	49	107,8
FVS-050-08	561	21,8	-	-	385	13,6	565	22	565	22	205	7,9	257	10	216	8,4	41,5	91,3	36,5	80,5	37,5	82,5	-	-	49	107,8
FVS-050-09	591	23	-	-	385	13,6	595	23,2	595	23,2	205	7,9	257	10	216	8,4	42,5	93,5	37,5	82,5	38,5	84,7	-	-	49	107,8
FVS-050-10	621	24,2	-	-	385	13,6	625	24,3	625	24,3	205	7,9	257	10	216	8,4	43,5	95,7	38,5	84,7	39,5	86,9	-	-	49	111,1
FVS-050-12	681	26,5	-	-	424	16,5	685	26,7	685	26,7	205	7,9	257	10	216	8,4	44,5	97,9	39,5	86,9	40,5	128,7	-	-	50,5	235,4
FVS-050-14	830	32,3	-	-	500,5	19,5	834	32,5	834	32,5	261	10,1	314	12,2	305	11,8	63,5	139,7	58,5	128,7	59,5	133,1	-	-	107	235,4
FVS-050-16	890	34,7	-	-	500,5	19,5	894	34,8	894	34,8	261	10,1	314	12,2	305	11,8	65,5	144,1	60,5	133,1	61,5	135,3	-	-	107	235,4
FVS-050-17	920	35,8	-	-	500,5	19,5	924	36	924	36	261	10,1	314	12,2	305	11,8	66,5	146,3	61,5	135,3	62,5	137,5	-	-	107	235,4

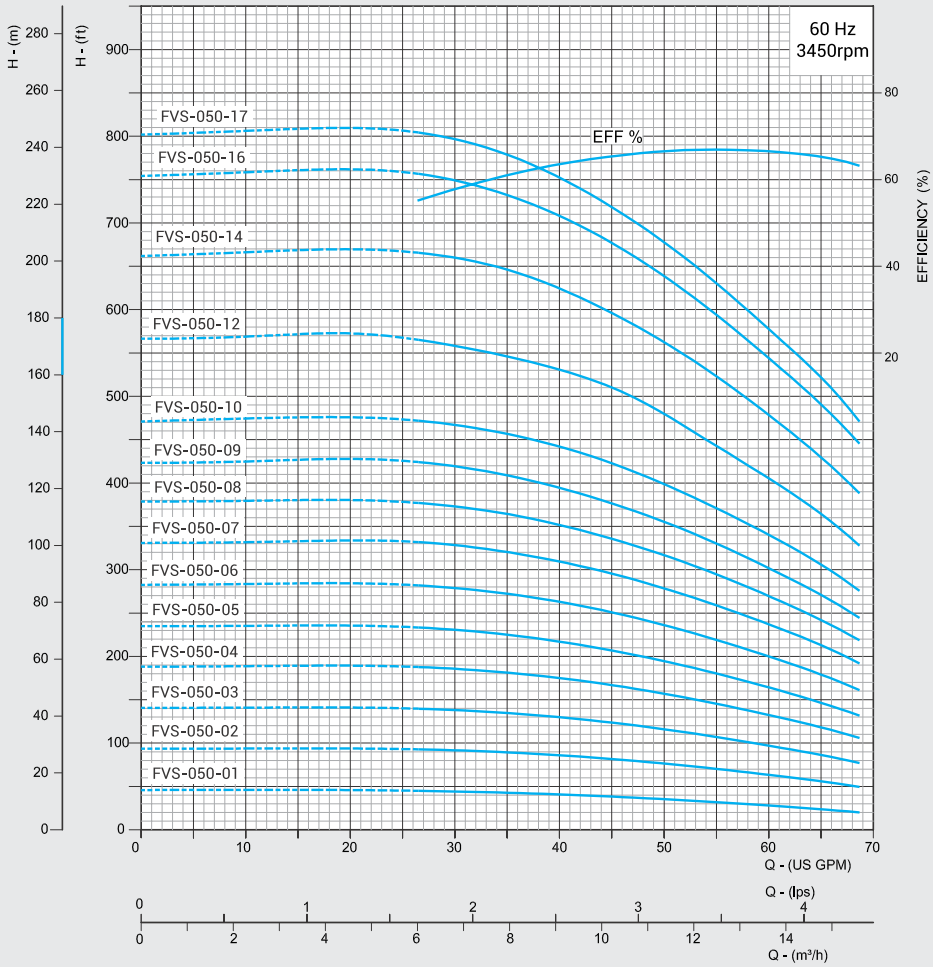
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 50 gpm

FV-050



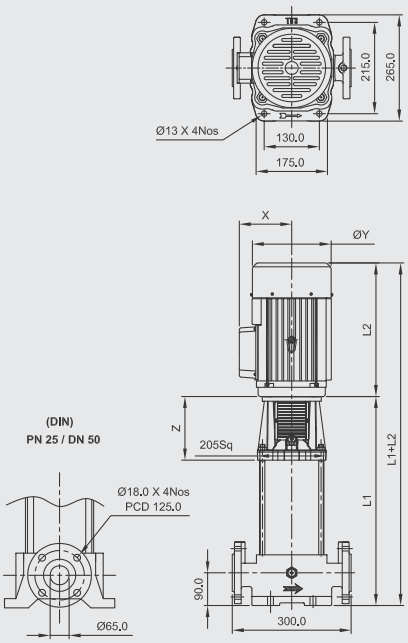
PERFORMANCE TABLE

PIPE SIZE : DN 40

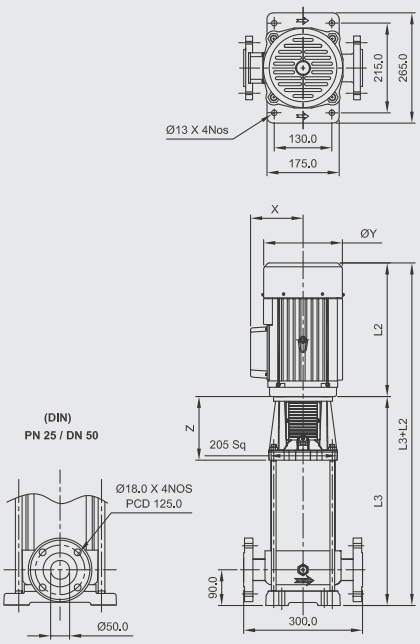
PUMP MODEL	MOTOR POWER		DISCHARGE								
			m³/h	0	2,3	4,5	6,8	9,1	11,4	13,6	15,7
	kW	HP	US gpm	0	10	20	30	40	50	60	69
FVS-050-01	0,55	0,75	TOTAL MANOMETRIC HEAD IN FEET	45	45	44,5	43	39,5	34	26,7	18,5
FVS-050-02	1,1	1,5		92,5	92,5	92	90	84	74	60,5	46,5
FVS-050-03	2,2	3,0		140	140	139,5	139	130	116,5	98	71,5
FVS-050-04	2,2	3,0		187	187	186,5	183	172	152	128	101,5
FVS-050-05	4,0	5,5		235	235	234,5	231	217,5	194	163	131
FVS-050-06	4,0	5,5		280	280	279,5	276,5	258,5	231	194	155
FVS-050-07	5,5	7,5		327	327	326,5	319	299,5	267	223	178
FVS-050-08	5,5	7,5		373,5	373	372	369,5	348	311	262	210
FVS-050-09	5,5	7,5		421	421	420	413	388	346,5	293	233,7
FVS-050-10	5,5	7,5		466,5	466,5	466	457	429	387	321	257,5
FVS-050-12	7,5	10		559	559	558	544	510	455	383	306
FVS-050-14	11	15		650	546	645	628	588	523	436	348
FVS-050-16	11	15		747	747	746	731	687	614	516	418
FVS-050-17	11	15		792,5	793,5	793	775	725,5	650	546,5	440,5

Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
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FVC (ROUND FLANGE)



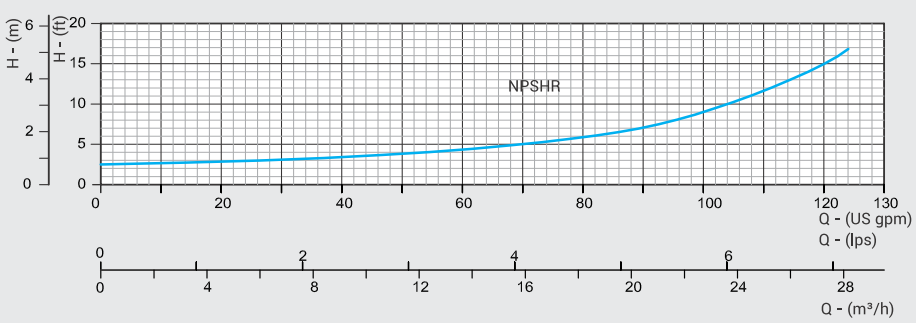
FVS & N (ROUND FLANGE)



DIMENSIONS & WEIGHT

PUMP MODEL	APPROX. DIMENSIONS (mm / Inch)														APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)							
	L1		L2				L3		X		Y (Ø)		Z		PUMP				MOTOR			
			1 Ph		3 Ph										FVC (Round)		FVS/N(Round)		1Ph		3Ph	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb	kg	lb
FVS-075-01	362	14,1	280	10,9	292	11,3	357	13,9	131	5,1	176	6,9	187	7,2	38	83,6	33	72,6	16,5	36,3	15	33
FVS-075-02	407	15,8	-	-	350	13,6	402	15,6	162	6,3	187	7,2	187	7,2	39	85,8	34	74,8	-	-	27,5	60,5
FVS-075-03	481	18,7	-	-	385	15	476	18,5	205	7,9	257	10	216	8,4	42	92,4	37	81,4	-	-	49	107,8
FVS-075-04	526	20,5	-	-	385	15	521	20,3	205	7,9	257	10	216	8,4	43	94,6	38	83,6	-	-	49	107,8
FVS-075-05	571	22,2	-	-	424	16,5	566	22	205	7,9	257	10	216	8,4	44	96,8	39	85,8	-	-	50,5	111,1
FVS-075-06	705	27,4	-	-	500,5	19,5	700	27,3	261	10,1	314	12,2	305	11,8	63	138,6	58	127,6	-	-	107	235,4
FVS-075-07	750	29,2	-	-	500,5	19,5	745	29	261	10,1	314	12,2	305	11,8	64	140,8	59	129,8	-	-	107	235,4
FVS-075-08	795	31	-	-	500,5	19,5	790	30,8	261	10,1	314	12,2	305	11,8	65	143	60	132	-	-	107	235,4
FVS-075-09	840	32,7	-	-	500,5	19,5	835	32,5	261	10,1	314	12,2	305	11,8	66	145,2	61	134	-	-	117	257,4
FVS-075-10	885	34,5	-	-	500,5	19,5	880	34,3	261	10,1	314	12,2	305	11,8	67	147,4	62	136,4	-	-	117	257,4
FVS-075-12	975	38	-	-	544,5	21,2	970	37,8	261	10,1	314	12,2	305	11,8	69	151,8	64	140,8	-	-	134	294,8

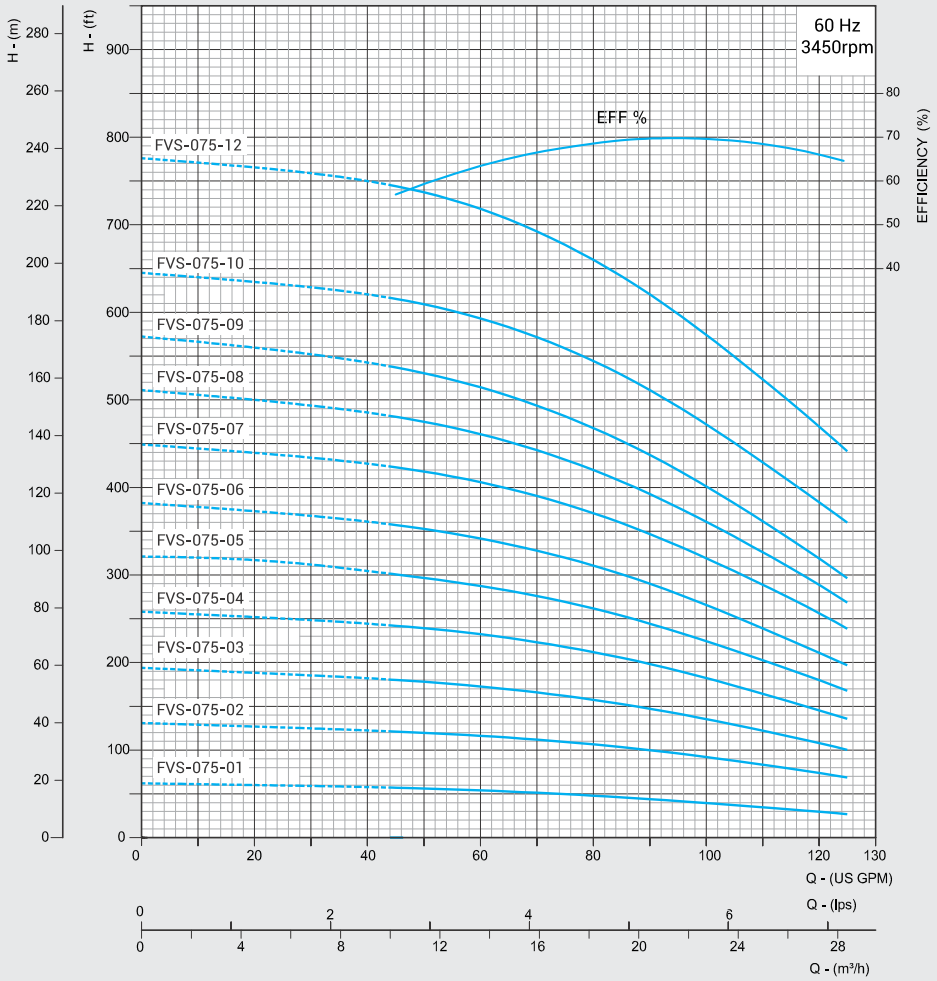
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 75 gpm

FV-075



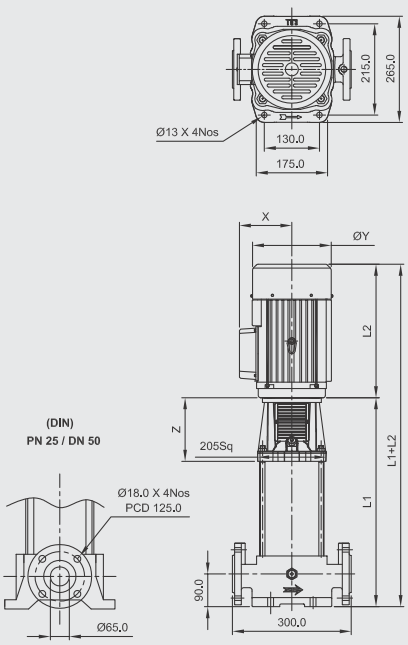
PERFORMANCE TABLE

PIPE SIZE : DN 50

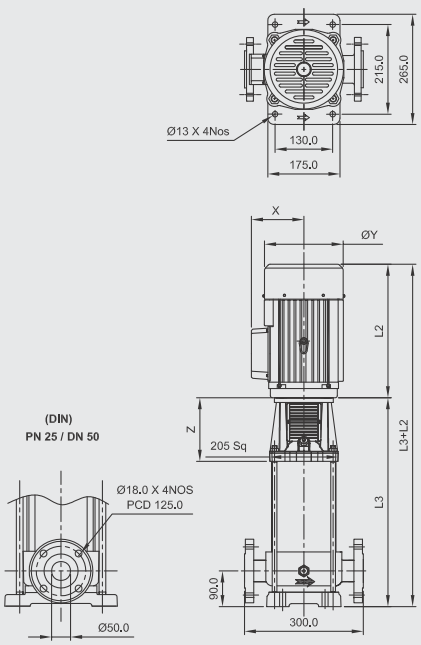
PUMP MODEL	MOTOR POWER		DISCHARGE								
			m³/h	0	4,5	9,1	13,6	18,2	22,7	27,3	28,4
	kW	HP	US gpm	0	20	40	60	80	100	120	125
FVS-075-01	1,5	2,0		62	60	58	54	48,5	40	30	27
FVS-075-02	4	5,5		131	127	123	117	107	93	74	68
FVS-075-03	5,5	7,5		194	188	183	173,5	158,5	136,5	106,5	100
FVS-075-04	5,5	7,5		258	252	245	234	213	184	145,5	136
FVS-075-05	7,5	10		321	320	304,5	289	264	226	180	168
FVS-075-06	11	15		382	373	363	343	313	268	211	197
FVS-075-07	11	15		449	440	429	408	373	321,5	257,5	238,5
FVS-075-08	11	15		511	500,5	488	464	423	364	290	268
FVS-075-09	15	20		572	560,5	545	517	471	405,5	319,5	296
FVS-075-10	15	20		645	635	624	596,5	548,5	476	383	360
FVS-075-12	18,5	25		776	766	753	722,5	664,5	579	470,5	441

Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
The given performance is same for Type - C, S, N
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FVC (ROUND FLANGE)



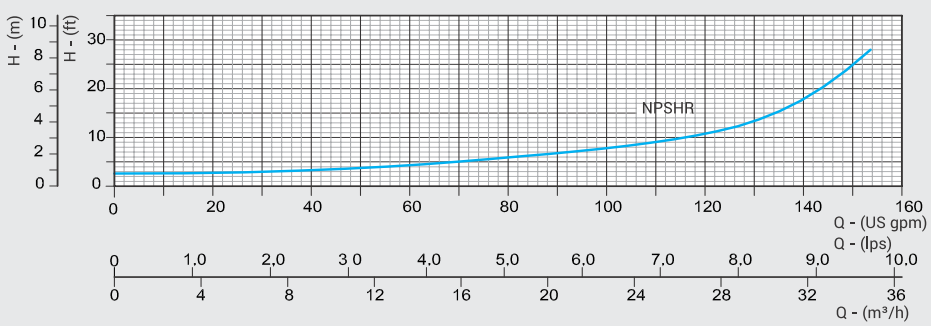
FVS & N (ROUND FLANGE)



DIMENSIONS & WEIGHT

PUMP MODEL	APPROX. DIMENSIONS (mm / Inch)														APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)							
	L1		L2				L3		X		Y (Ø)		Z		PUMP				MOTOR			
			1 Ph		3 Ph										FVC (Round)		FVS/N (Round)		1Ph		3Ph	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb	kg	lb
FVS-100-01	362	14,1	315	12,2	311	12,1	357	13,9	131	5,1	176	6,9	187	7,2	38	83,6	33	72,6	20	44	17,5	38,5
FVS-100-02	410	15,9	-	-	350	13,6	405	15,7	162	6,3	187	7,2	190	7,4	39	85,8	34	74,8	-	-	27,5	60,5
FVS-100-03	481	18,7	-	-	385	15	476	18,5	205	7,9	257	10	216	8,4	42	92,4	37	81,4	-	-	49	107,8
FVS-100-04	526	20,5	-	-	424	16,5	521	20,3	205	10,1	257	10	216	8,4	43	94,6	38	83,6	-	-	50,5	111,1
FVS-100-05	660	25,7	-	-	500,5	19,5	655	25,5	261	10,1	314	12,2	305	11,8	62	136,4	57	125,4	-	-	107	235,4
FVS-100-06	705	27,4	-	-	500,5	19,5	700	27,3	261	10,1	314	12,2	305	11,8	63	138,6	58	127,6	-	-	107	235,4
FVS-100-07	750	29,2	-	-	500,5	19,5	745	29	261	10,1	314	12,2	305	11,8	64	140,8	59	129,8	-	-	117	257,4
FVS-100-08	795	31	-	-	500,5	19,5	790	30,8	261	10,1	314	12,2	305	11,8	65	143	60	132	-	-	117	257,4
FVS-100-10	885	34,5	-	-	544,5	21,2	880	34,3	261	10,1	314	12,2	305	11,8	67	147,4	62	136,4	-	-	134	294,8

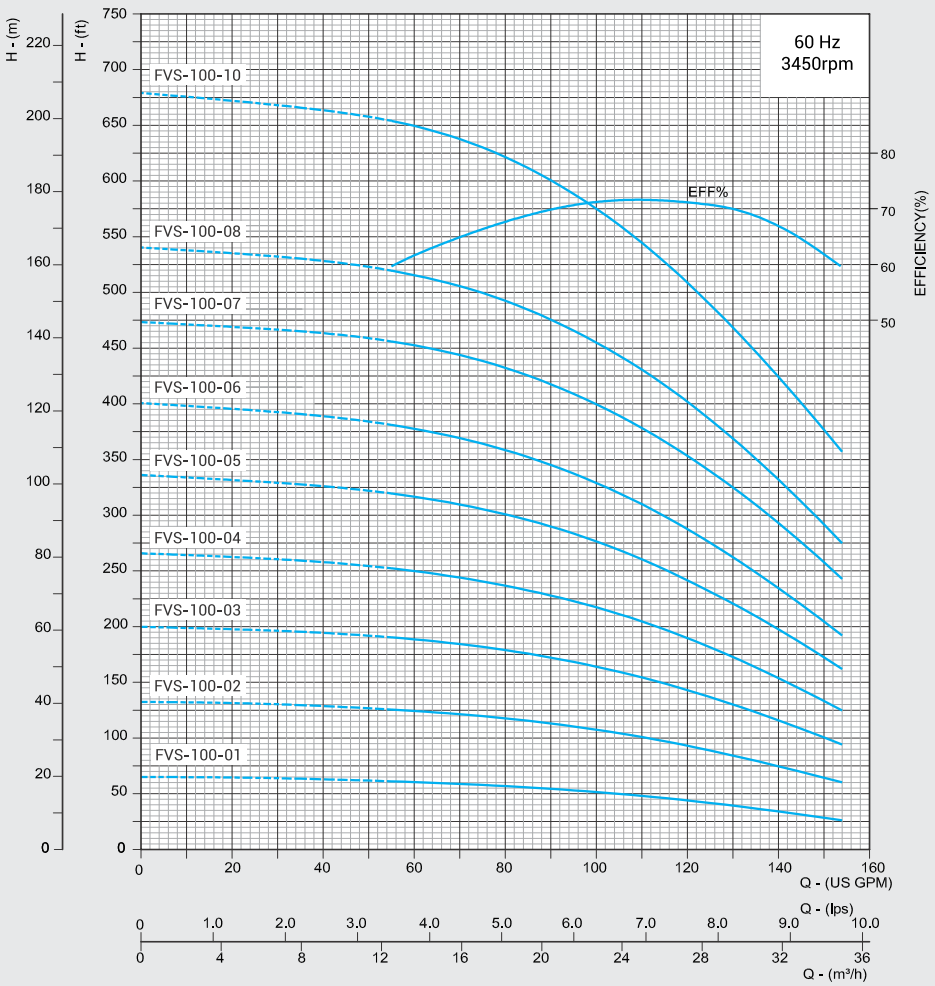
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 100 gpm

FV-100



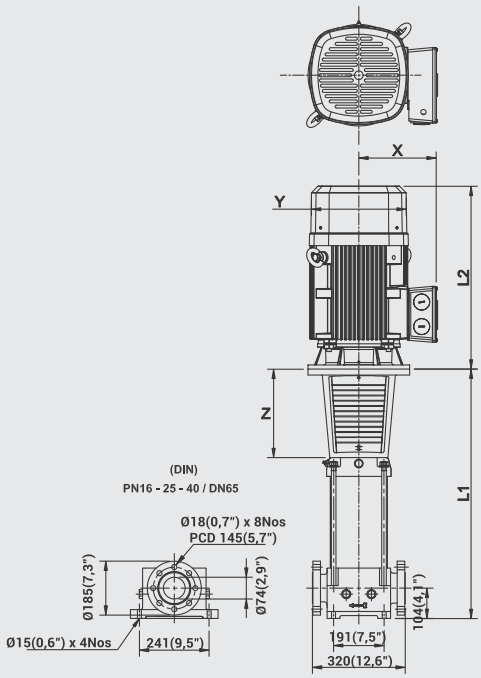
PERFORMANCE TABLE

PIPE SIZE : DN 50

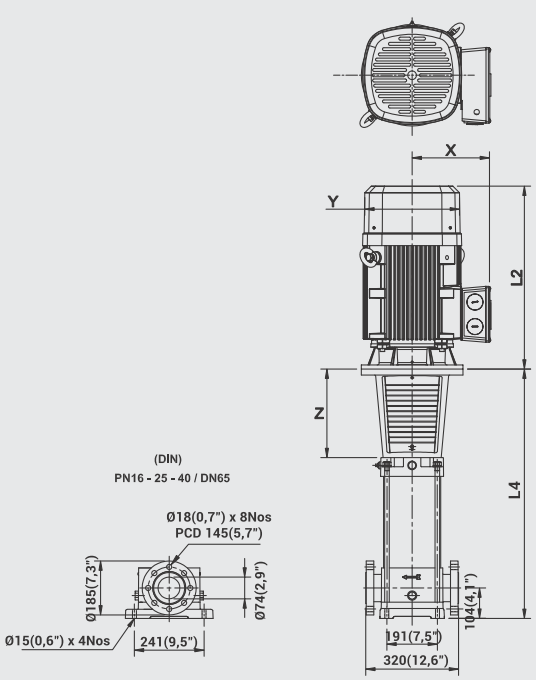
PUMP MODEL	MOTOR POWER		DISCHARGE								
			m³/h	0	4,5	9,1	13,6	18,2	22,7	27,3	31,8	35,0
	kW	HP	US gpm	0	20	40	60	80	100	120	140	154
FVS-100-01	2,2	3,0	TOTAL MANOMETRIC HEAD IN FEET	65	65	63	60,5	57	52	44,5	34,5	26
FVS-100-02	4,0	5,5		132,5	132	129	124,5	118	108	94	75	60
FVS-100-03	5,5	7,5		200	198	195	189	180	165	144,5	116,5	94
FVS-100-04	7,5	10		266	263	258,5	251	237,5	218,5	191,5	155	124,5
FVS-100-05	11	15		336	332	327	318	302	278	243,5	199	162
FVS-100-06	11	15		400,5	396	390	379	360	331	290	236	192
FVS-100-07	15	20		473,5	468,5	464,5	454	434,5	401,5	356,5	296	243
FVS-100-08	15	20		540,5	535,5	530	517	495	457	406	334,5	275
FVS-100-10	18,5	25		679	672	664,5	652	624,5	578	513	427	357

Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
The given performance is same for Type - C, S, N
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

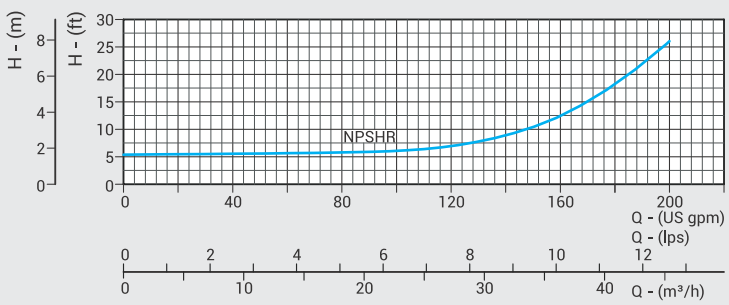


All Dimensions are in mm & Inches

DIMENSIONS & WEIGHT

PUMP MODEL	L1 & L4 FVC / S / N		APPROX. DIMENSIONS (mm / Inch)										APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)							
			L2				X		Y (Ø)		Z		PUMP				MOTOR			
			1 Ph		3 Ph								FVC (Round)		FVS/N (Round)		1Ph		3Ph	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb	kg	lb
FVS-160-01A	510	20,1	294	11,6	295	11,6	136	5,4	187	7,4	201	7,9	58,5	129	63,5	140	24	53	20,0	44
FVS-160-01	510	20,1	-	-	354	13,9	136	5,4	187	7,4	201	7,9	58,5	129	63,5	140	-	-	27,7	61
FVS-160-02B	580	22,8	-	-	385	15,2	204	8,0	257	10,1	201	7,9	61,2	135	66,2	146	-	-	41,3	91
FVS-160-02A	580	22,8	-	-	385	15,2	204	8,0	257	10,1	201	7,9	61,2	135	66,2	146	-	-	41,3	91
FVS-160-02	580	22,8	-	-	385	15,2	204	8,0	257	10,1	201	7,9	61,2	135	66,2	146	-	-	41,3	91
FVS-160-03B	650	25,6	-	-	424	16,7	204	8,0	257	10,1	201	7,9	63,5	140	68,5	151	-	-	47,6	105
FVS-160-03	650	25,6	-	-	495	19,5	223	8,8	312	12,3	305	12,0	76,2	168	81,2	179	-	-	121,5	268
FVS-160-04B	720	28,3	-	-	495	19,5	223	8,8	312	12,3	305	12,0	79,4	175	84,4	186	-	-	121,5	268
FVS-160-04	720	28,3	-	-	495	19,5	223	8,8	312	12,3	305	12,0	79,4	175	84,4	186	-	-	121,5	268
FVS-160-05B	895	35,2	-	-	495	19,5	223	8,8	312	12,3	305	12,0	82,5	182	87,5	193	-	-	130,6	288
FVS-160-05	895	35,2	-	-	495	19,5	223	8,8	312	12,3	305	12,0	82,5	182	87,5	193	-	-	130,6	288
FVS-160-06B	965	38,0	-	-	495	19,5	223	8,8	312	12,3	305	12,0	85,3	188	90,2	199	-	-	150,6	332
FVS-160-06	965	38,0	-	-	495	19,5	223	8,8	312	12,3	305	12,0	85,3	188	90,2	199	-	-	150,6	332
FVS-160-07B	1035	40,7	-	-	495	19,5	223	8,8	312	12,3	305	12,0	88,4	195	93,4	206	-	-	150,6	332
FVS-160-07	1035	40,7	-	-	630	24,8	271	10,7	340	13,4	305	12,0	88,4	195	93,4	206	-	-	179,6	396
FVS-160-08B	1105	43,5	-	-	630	24,8	271	10,7	340	13,4	305	12,0	88,4	201	96,1	206	-	-	179,6	396
FVS-160-08	1105	43,5	-	-	630	24,8	271	10,7	340	13,4	305	12,0	91,2	201	96,1	212	-	-	179,6	396
FVS-160-09B	1175	46,3	-	-	630	24,8	271	10,7	340	13,4	305	12,0	94,3	208	99,3	219	-	-	241,3	532
FVS-160-09	1175	46,3	-	-	630	24,8	271	10,7	340	13,4	305	12,0	94,3	208	99,3	219	-	-	241,3	532
FVS-160-10B	1245	49,0	-	-	630	24,8	271	10,7	340	13,4	305	12,0	97,5	215	102,5	226	-	-	241,3	532
FVS-160-10	1245	49,0	-	-	630	24,8	271	10,7	340	13,4	305	12,0	97,5	215	102,5	226	-	-	241,3	532
FVS-160-11B	1319	51,9	-	-	630	24,8	271	10,7	340	13,4	305	12,0	100,2	221	105,2	232	-	-	241,3	532

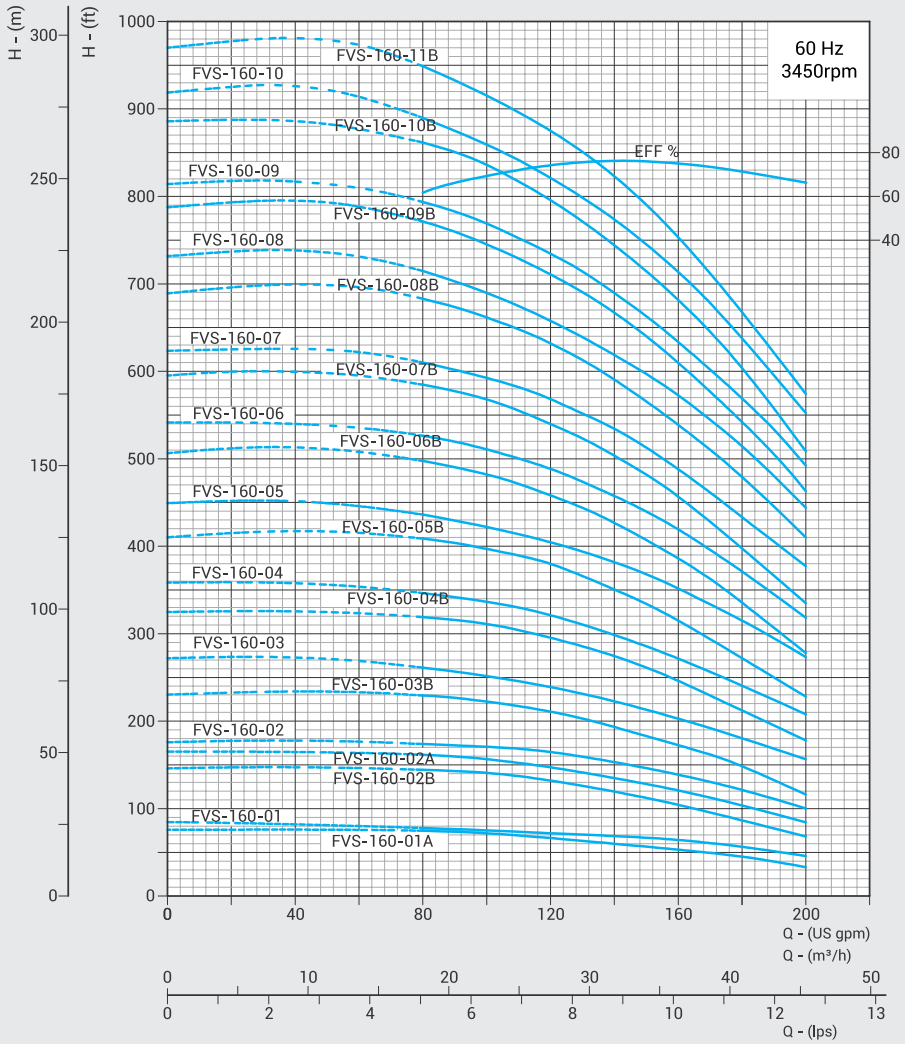
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 160 gpm

FV-160



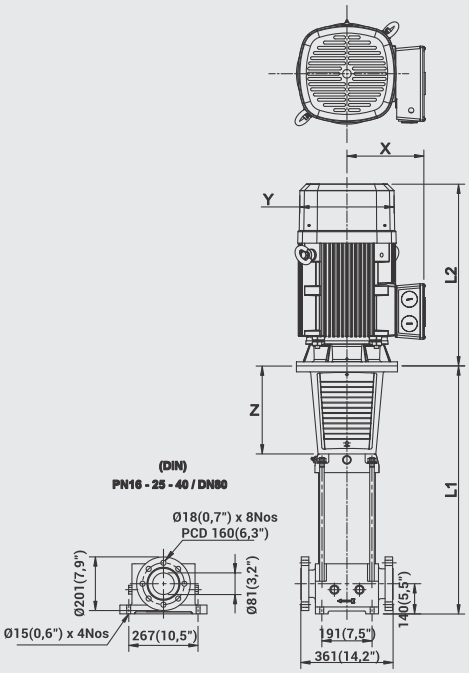
PERFORMANCE TABLE

PIPE SIZE : DN 65

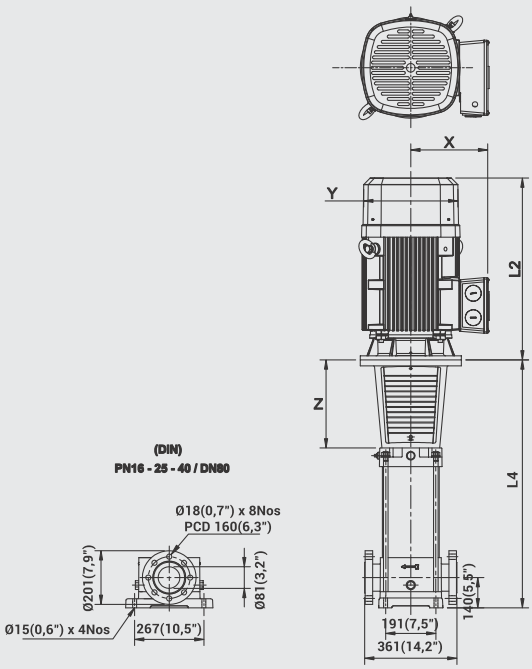
PUMP MODEL	MOTOR POWER			DISCHARGE					
			m³/h	0	18,2	27,3	36,4	40,9	45,6
	kW	HP	US gpm	0	80	120	160	180	200
FVS-160-01A	2,2	3	TOTAL MANOMETRIC HEAD IN FEET	75	74	65	52	45	32
FVS-160-01	4	5,5		85	79	71	65	58	48
FVS-160-02B	5	7,5		147	145	132	105	87	69
FVS-160-02A	5	7,5		165	160	149	120	103	85
FVS-160-02	5	7,5		175	172	165	140	121	100
FVS-160-03B	7,5	10		231	230	210	170	150	119
FVS-160-03	11	15		271	251	240	201	180	155
FVS-160-04B	11	15		325	320	295	245	211	179
FVS-160-04	11	15		359	345	321	270	240	209
FVS-160-05B	15	20		410	409	380	315	271	239
FVS-160-05	15	20		450	436	404	350	325	274
FVS-160-06B	18,5	25		508	498	459	385	345	279
FVS-160-06	18,5	25		541	527	490	420	370	319
FVS-160-07B	18,5	25		596	585	540	457	400	335
FVS-160-07	22	30		622	610	570	490	431	379
FVS-160-08B	22	30		690	687	631	540	480	410
FVS-160-08	22	30		731	715	659	572	512	442
FVS-160-09B	30	40		789	771	710	610	541	462
FVS-160-09	30	40		813	793	735	632	570	492
FVS-160-10B	30	40		885	861	795	680	601	510
FVS-160-10	30	40		920	890	820	710	640	551
FVS-160-11B	30	40		970	950	877	751	670	572

Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
The given performance is same for Type - C, S, N
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FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

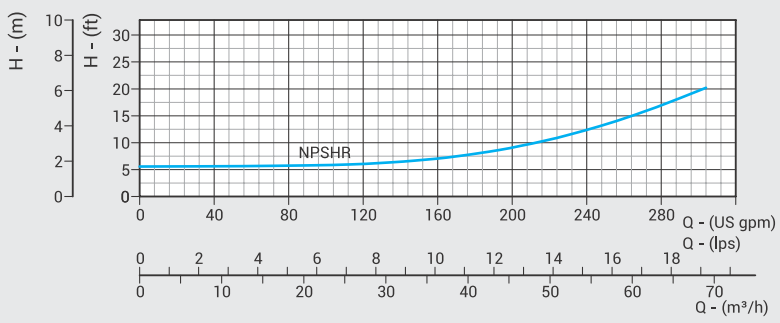


All Dimensions are in mm & Inches

DIMENSIONS & WEIGHT

PUMP MODEL	L1 & L4 FVC / S / N		APPROX. DIMENSIONS (mm / Inch)								APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)					
			L2 3 Ph		X		Y (Ø)		Z		PUMP				MOTOR 3Ph	
											FVC (Round)		FVS/N (Round)			
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb
FVS-220-01A	564	22,2	385	15,2	204	8,0	257	10,1	201	7,9	30,4	67	29,0	64	18,7	41,3
FVS-220-01	564	22,2	385	15,2	204	8,0	257	10,1	201	7,9	30,4	67	29,0	64	18,7	41,3
FVS-220-02B	644	25,4	495	19,5	223	8,8	312	12,3	305	12,0	38,1	84	36,7	81	55,3	122
FVS-220-02A	644	25,4	495	19,5	223	8,8	312	12,3	305	12,0	38,1	84	36,7	81	55,3	122
FVS-220-02	644	25,4	495	19,5	223	8,8	312	12,3	305	12,0	38,1	84	36,7	81	55,3	122
FVS-220-03B	828	32,6	495	19,5	223	8,8	312	12,3	305	12,0	40,4	89	39,0	86	59,4	131
FVS-220-03A	828	32,6	495	19,5	223	8,8	312	12,3	305	12,0	40,4	89	39,0	86	68,5	151
FVS-220-03	828	32,6	495	19,5	223	8,8	312	12,3	305	12,0	40,4	89	39,0	86	68,5	151
FVS-220-04B	908	35,7	630	24,8	271	10,7	340	13,4	305	12,0	42,2	93	40,8	90	81,6	180
FVS-220-04A	908	35,7	630	24,8	271	10,7	340	13,4	305	12,0	42,2	93	40,8	90	81,6	180
FVS-220-04	908	35,7	630	24,8	271	10,7	340	13,4	305	12,0	42,2	93	40,8	90	81,6	180
FVS-220-05B	988	38,9	630	24,8	271	10,7	340	13,4	305	12,0	44,0	97	42,6	94	109,8	242
FVS-220-05A	988	38,9	630	24,8	271	10,7	340	13,4	305	12,0	44,0	97	42,6	94	109,8	242
FVS-220-05	988	38,9	630	24,8	271	10,7	340	13,4	305	12,0	44,0	97	42,6	94	109,8	242
FVS-220-06B	1068	42,0	650	25,6	276	10,9	395	15,6	305	12,0	47,2	104	45,8	101	117,0	258
FVS-220-06	1068	42,0	650	25,6	276	10,9	395	15,6	305	12,0	47,2	104	45,8	101	117,0	258
FVS-220-07B	1148	45,2	650	25,6	276	10,9	395	15,6	305	12,0	49,4	109	48,1	106	117,0	258
FVS-220-07	1148	45,2	695	27,4	297	11,7	435	17,1	305	12,0	49,4	109	48,1	106	145,1	320
FVS-220-08A	1228	48,3	695	27,4	297	11,7	435	17,1	305	12,0	51,2	113	49,9	110	145,1	320

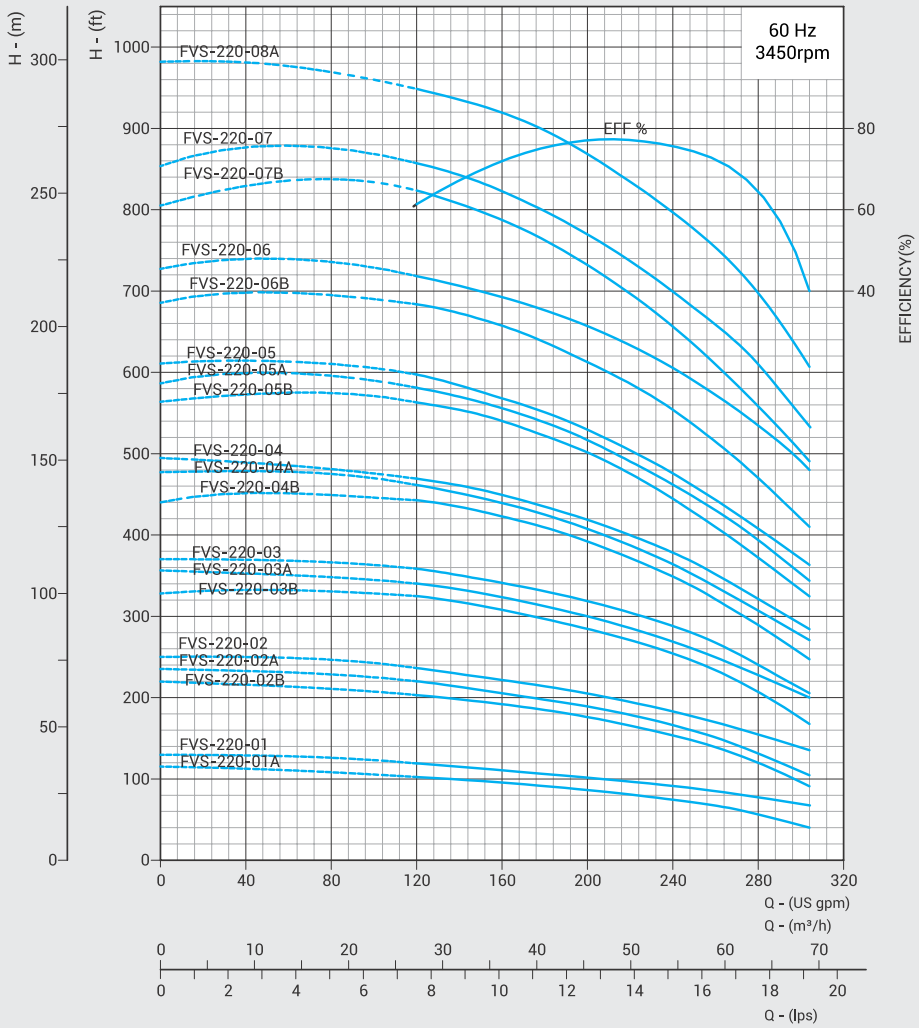
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 220 gpm

FV-220



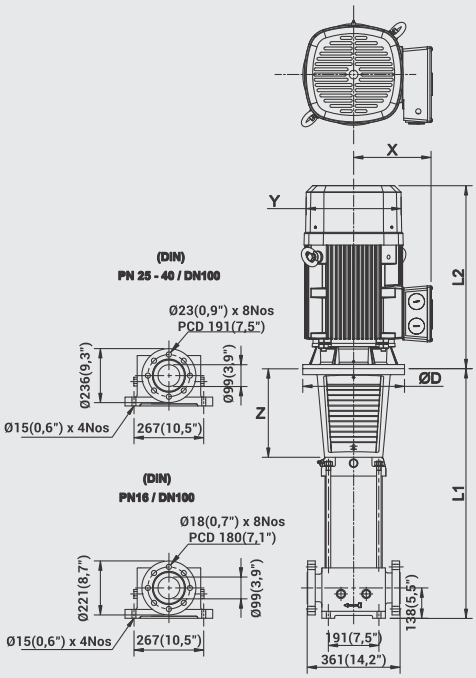
PERFORMANCE TABLE

PIPE SIZE : DN 80

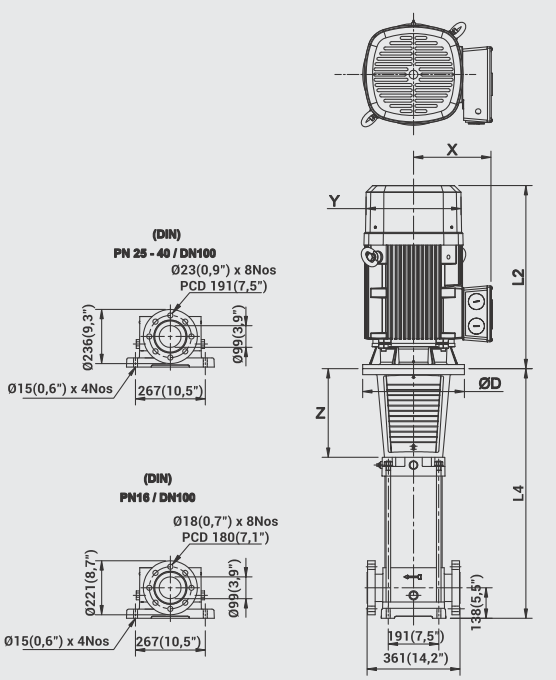
PUMP MODEL	MOTOR POWER			DISCHARGE						
			m³/h	0	23,3	36,4	45,5	50	54,6	69,1
	kW	HP	US gpm	0	120	160	200	220	240	304
FVS-220-01A	5,5	7,5	TOTAL MANOMETRIC HEAD IN FEET	116	102	97	87	80	75	40
FVS-220-01	5,5	7,5		130	120	110	101	98	91	70
FVS-220-02B	11	15		220	203	192	179	166	155	90
FVS-220-02A	11	15		237	220	205	190	180	168	105
FVS-220-02	11	15		250	237	221	205	194	182	135
FVS-220-03B	15	20		328	323	308	284	271	255	170
FVS-220-03A	18,5	25		358	340	322	300	286	270	200
FVS-220-03	18,5	25		370	359	341	320	304	290	208
FVS-220-04B	22	30		440	442	422	392	371	350	250
FVS-220-04A	22	30		479	460	440	410	390	364	270
FVS-220-04	22	30		496	470	450	420	400	380	285
FVS-220-05B	30	40		565	562	540	500	476	442	325
FVS-220-05A	30	40		587	580	555	518	491	460	345
FVS-220-05	30	40		612	598	568	530	504	478	365
FVS-220-06B	37	50		685	684	658	612	587	555	410
FVS-220-06	37	50		728	720	691	658	632	608	480
FVS-220-07B	37	50		805	823	787	730	698	658	490
FVS-220-07	45	60		855	858	822	770	739	700	537
FVS-220-08A	45	60		982	950	920	870	834	798	610

Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
The given performance is same for Type - C, S, N
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

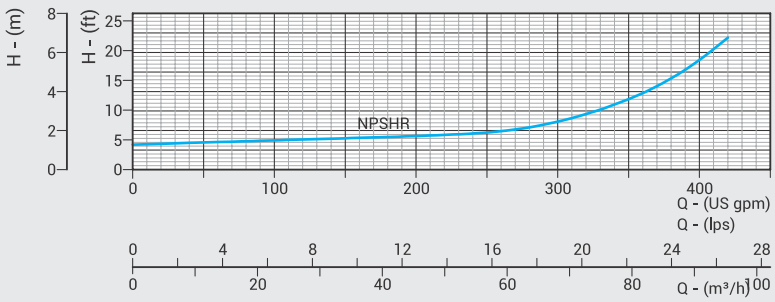


All Dimensions are in mm & Inches

DIMENSIONS & WEIGHT

PUMP MODEL	L1 & L4 FVC / S / N		APPROX. DIMENSIONS (mm / Inch)								APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)					
			L2 3 Ph		X		Y (Ø)		Z		PUMP				MOTOR	
											FVC (Round)		FVS/N (Round)		3Ph	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb
FVS-330-01A	564	22,2	424	16,7	204	8,0	257	10,1	201	7,9	97,5	215	80,3	177	41,3	91
FVS-330-01	564	22,2	495	19,5	223	8,8	312	12,3	305	12,0	97,5	215	94,3	208	121,5	268
FVS-330-02B	644	25,4	495	19,5	223	8,8	312	12,3	305	12,0	100,2	221	97,5	215	130,6	288
FVS-330-02A	644	25,4	495	19,5	223	8,8	312	12,3	305	12,0	100,2	221	97,5	215	150,6	332
FVS-330-02	644	25,4	630	24,8	271	10,7	340	13,4	305	12,0	100,2	221	97,5	215	179,6	396
FVS-330-03B	828	32,6	630	24,8	271	10,7	340	13,4	305	12,0	104,3	230	101,1	223	179,6	396
FVS-330-03A	828	32,6	630	24,8	271	10,7	340	13,4	305	12,0	104,3	230	101,1	223	241,3	532
FVS-330-03	828	32,6	630	24,8	271	10,7	340	13,4	305	12,0	104,3	230	101,1	223	241,3	532
FVS-330-04B	908	35,7	630	24,8	271	10,7	340	13,4	305	12,0	111,1	245	108,4	239	257,6	568
FVS-330-04A	908	35,7	650	25,6	276	10,9	395	15,6	305	12,0	111,1	245	108,4	239	257,6	568
FVS-330-04	908	35,7	650	25,6	276	10,9	395	15,6	305	12,0	111,1	245	108,4	239	319,3	704
FVS-330-05B	988	38,9	695	27,4	276	10,9	435	17,1	305	12,0	115,2	254	112,5	248	319,3	704

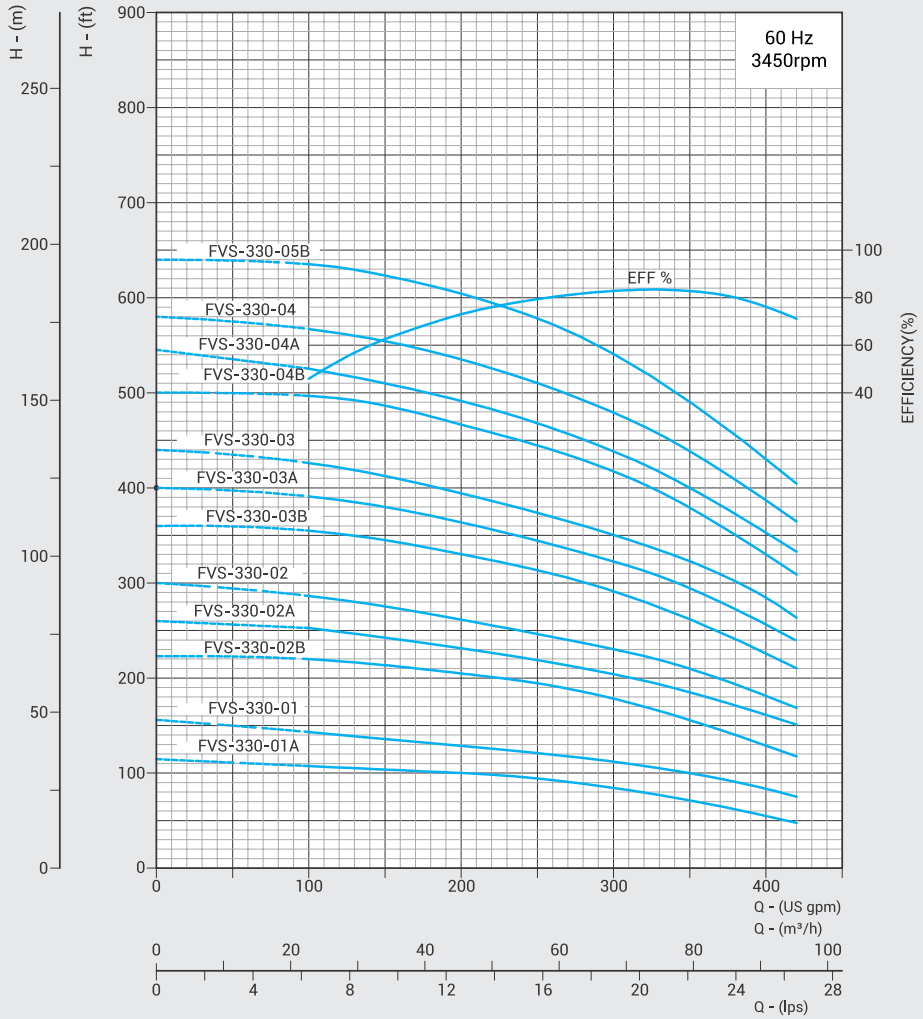
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 330 gpm

FV-330



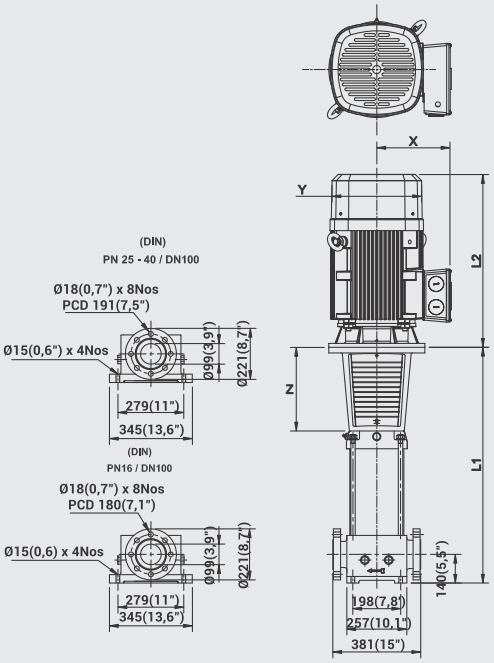
PERFORMANCE TABLE

PIPE SIZE : DN 100

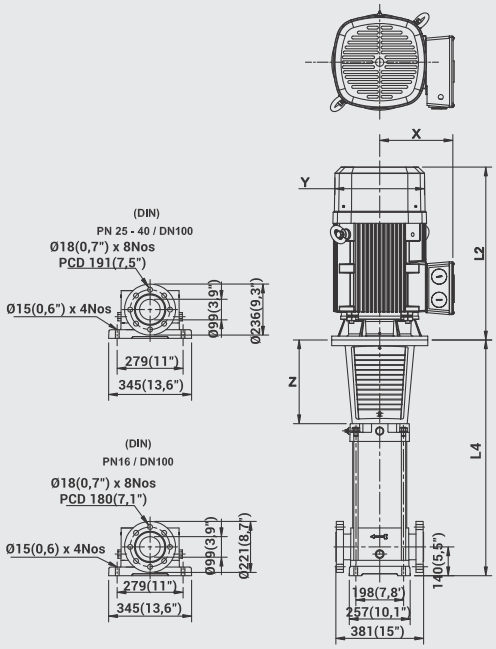
PUMP MODEL	MOTOR POWER			DISCHARGE						
			m³/h	0	22,7	45,6	68,2	75	90,9	95,6
	kW	HP	US gpm	0	100	200	300	330	400	420
FVS-330-01A	7,5	10	TOTAL MANOMETRIC HEAD IN FEET	116	108	100	88	78	55	48
FVS-330-01	11	15		157	143	128	112	105	82	78
FVS-330-02B	15	20		224	220	204	178	165	130	118
FVS-330-02A	18,5	25		260	252	234	203	193	160	150
FVS-330-02	22	30		300	284	260	230	220	180	170
FVS-330-03B	22	30		360	353	330	291	272	224	210
FVS-330-03A	30	40		400	390	363	322	309	255	240
FVS-330-03	30	40		440	426	392	350	334	284	262
FVS-330-04B	37	50		500	496	468	417	396	330	310
FVS-330-04A	37	50		546	525	494	439	419	352	332
FVS-330-04	45	60		580	565	536	480	458	384	364
FVS-330-05B	45	60		640	636	605	540	511	430	402

Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
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FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

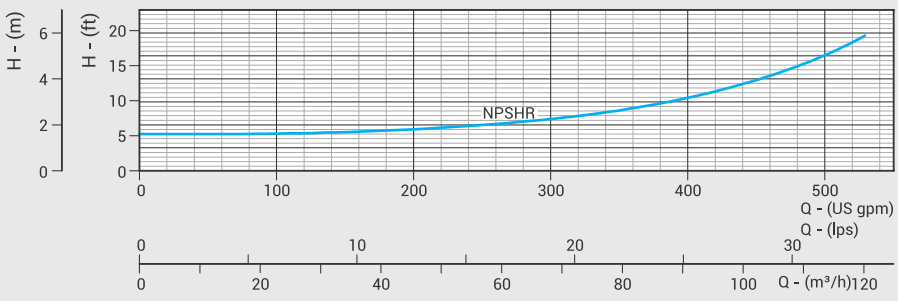


All Dimensions are in mm & Inches

DIMENSIONS & WEIGHT

PUMP MODEL	L1 & L4 FVC / S / N		APPROX. DIMENSIONS (mm / Inch)								APPROX. NETT WEIGHT WITHOUT PACKING (kg / lb)					
			L2 3 Ph		X		Y (Ø)		Z		PUMP				MOTOR	
											FVC (Round)		FVS/N (Round)		3Ph	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb	kg	lb	kg	lb
FVS-450-01A	572	22,5	495	19,5	223	8,8	312	12,3	305	12,0	42,6	94	41,7	92	55,3	122
FVS-450-01	572	22,5	495	19,5	223	8,8	312	12,3	305	12,0	42,6	94	41,7	92	59,4	131
FVS-450-02B	768	30,2	495	19,5	223	8,8	312	12,3	305	12,0	46,3	102	45,4	100	68,5	151
FVS-450-02A	768	30,2	630	24,8	271	10,7	340	13,4	305	12,0	46,3	102	45,4	100	81,6	180
FVS-450-02	768	30,2	630	24,8	271	10,7	340	13,4	305	12,0	46,3	102	45,4	100	109,8	242
FVS-450-03B	860	33,9	630	24,8	271	10,7	340	13,4	305	12,0	51,2	113	50,3	111	109,8	242
FVS-450-03A	860	33,9	650	25,6	276	10,9	395	15,6	305	12,0	51,2	113	50,3	111	117,0	258
FVS-450-03	860	33,9	650	25,6	276	10,9	395	15,6	305	12,0	51,2	113	50,3	111	117,0	258
FVS-450-04B	952	37,5	695	27,4	297	11,7	435	17,1	305	12,0	54,9	121	54,0	119	145,1	320
FVS-450-04A	952	37,5	695	27,4	297	11,7	435	17,1	305	12,0	54,9	121	54,0	119	145,1	320

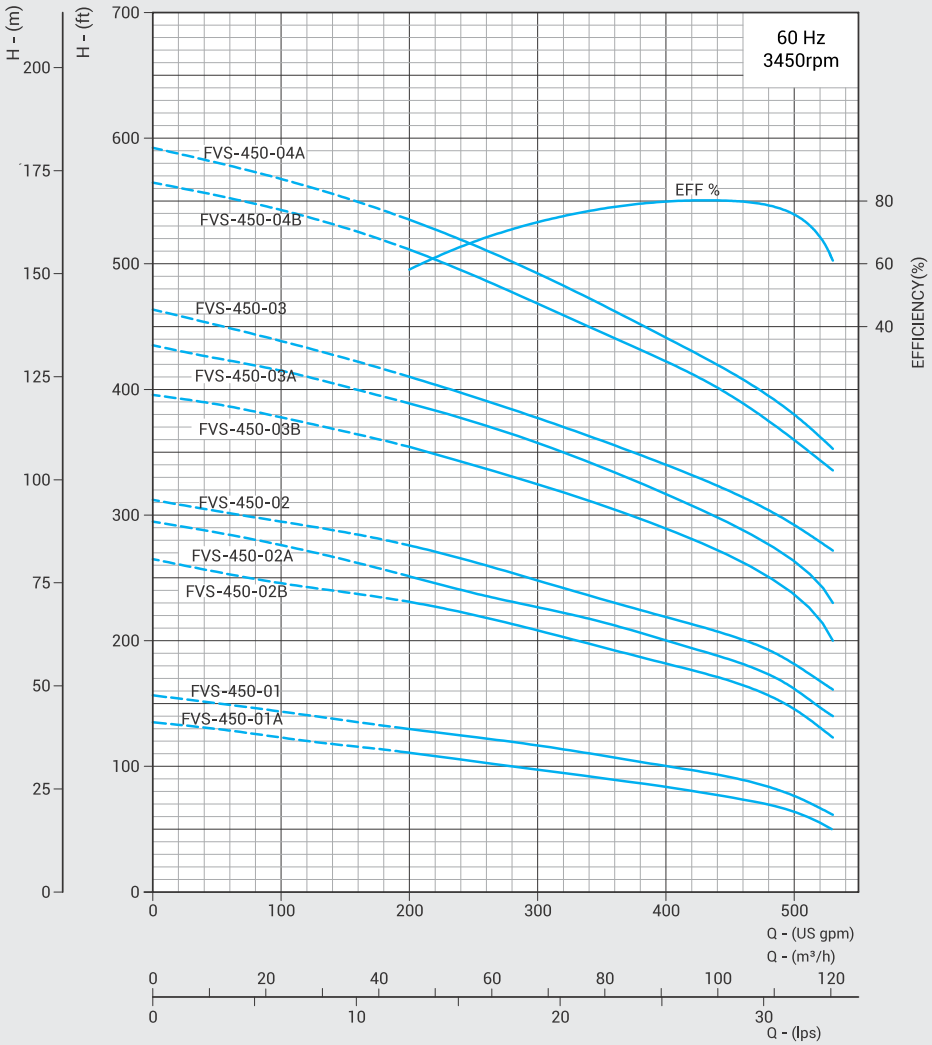
NPSHR CURVE



PERFORMANCE CURVES

NOMINAL FLOW : 450 gpm

FV-450



PERFORMANCE TABLE

PIPE SIZE : DN 100

PUMP MODEL	MOTOR POWER			DISCHARGE						
			m³/h	0	45,6	68,2	90,9	102,3	113,6	120,5
	kW	HP	US gpm	0	200	300	400	450	500	530
FVS-450-01A	11	15	TOTAL MANOMETRIC HEAD IN FEET	135	111	97	83	75	64	50
FVS-450-01	15	20		157	130	117	100	91	78	61
FVS-450-02B	18,5	25		265	231	208	182	169	146	122
FVS-450-02A	22	30		295	251	227	200	185	161	140
FVS-450-02	30	40		312	276	247	220	204	180	161
FVS-450-03B	30	40		395	354	324	290	268	238	200
FVS-450-03A	37	50		435	389	358	317	292	263	230
FVS-450-03	37	50		464	410	378	340	320	291	270
FVS-450-04B	45	60		564	511	469	423	395	360	335
FVS-450-04A	45	60		592	535	493	440	414	380	352

Replace the 3rd digit in model name as "C" for Cast Iron pump base & pump head models and "N" for AISI 316 construction.
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Zirantec

HORIZONTAL MULTISTAGE CENTRIFUGAL PUMPS

FH SERIES - 60Hz



FH SERIES

ZIRANTEC Horizontal Multistage MH series pump is non-self priming, axial suction and vertical radial delivery type with threaded ports. All wetted components like impellers, diffusers and shaft of these pumps are made of corrosion resistant AISI stainless steel and designed to deliver the best possible hydraulic efficiency. The pump and motor are connected with a single drive shaft to eliminate any transmission loss. As the shaft, Impeller, diffusers and other vital components of the pump are made up of high grade stainless Steel AISI 304/316, these pumps can be used to pump high aggressive water and quite hygienic to use in drinking water systems too. Wear resistant bearings ensure better hydraulic efficiency and noiseless operation 'O' rings and gaskets prevent leakage at the intermediate casing during high pressure. Mechanical seals of these pumps are made of ceramic and silicon carbide to ensure reliability and easy replacement. These pumps are reliable, easy toinstall and designed for high end user comfort.

ZIRANTEC Horizontal Multistage centrifugal pumps are powered by a Totally Enclosed Fan Cooled, A.C. induction motor, suitable for continuous duty. Motor stator is made of low watt loss steel laminations assembled under pressure and rigidly locked in the frame. Dynamically balanced rotor ensures vibration and noise free operation and the vacuum impregnated windings made of enameled copper wire offer excellent resistance.

Shaft of ample size made of quality steel and precisely ground is used for transmitting the rated Horsepower. Construction of motor frames and usage of quality materials result in high performance and low temperature rise thereby increasing the life cycle of the motor. Thermal over load protector (motor protector) is incorporated in single phase motors. These pumps require an adequate motor protection control panel.

FEATURES

- High Operating efficiency
- Precise parts for hygiene
- Good suction lift and operating pressure
- Dynamically balanced rotating parts
- Balanced and rigid construction
- Available M.O.C. Type S, L & N
- Inbuilt thermal overload protector in all single phase pumps.

APPLICATIONS

- Residential & Industrial Pressure Boosting
- Small farms
- Washing systems
- Industrial water supply
- Reverse
- Osmosis systems
- Food processing industries
- Golf course.

MODEL IDENTIFICATION CODE

F X X - XXX - XX X - (H)

- F: Fips Centrifugal Pump
- X: Type / Pole
  H - Horizontal / 2 pole
- X: Type of Materials of Construction (M.O.C)
  Impeller / Diffuser / Pump Casing & Bracket / Pump Base
  S = AISI 304 / AISI 304 / Cast Iron / M.S
  L = AISI 304 / AISI 304 / Cast Steel 304 / M.S
  N = AISI 316 / AISI 316 / Cast Steel 316 / M.S
- XXX: Nominal Flow (in US-gpm)
  Ex. 26 - 26 gpm
- XX: No of Impellers
- X: 1 = Single Phase - PSC
  2 = Single Phase - CSCR
  3 = Three Phase - DOL
  6 = Three Phase - SD
- (H): This digit is applicable only for high head models

Zirantec

TECHNICAL DATA

Power Range	: 0.40 HP to 4.0 HP
Speed	: 3450 rpm
Degree of protection	: IP 54 / IP 55
Insulation class	: B / F
Versions	: Single Phase 220 / 230V, 60Hz, A.C. Supply (Permanent Split Capacitor-PSC) Incorporated with thermal protector. Three Phase 220 / 380 / 460V 60Hz
Sealing	: Mechanical seal
Direction of rotation	: Counter clockwise viewed from driving end
Type of Duty	: S1 (continuous)
Nom. Suc. x Del. Size:	1" x 1" ; 1½" x 1¼"

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 ■ Standard : Sic / Sic / HNBR ■ Optional : Sic / Sic / EPDM
Base Plate	Mild Steel

CHARACTERISTICS OF PUMPED LIQUIDS

a) Temperature	194°F (max.)
b) Permissible amount of sand	42 lb / 1000 gal (max.)
c) Chlorine ion density	500 ppm (max.)
d) Allowable solids	3000 ppm (max.)
e) Specific gravity	1.004 (max.)
f) Hardness (Drinking water)	300 (max.)
g) Viscosity	1.75 x 10^{-6} m^2 / Sec. (max.)
h) Turbidity	50 ppm silica scale (max.)
i) pH	6.5 to 8.5

OPERATING LIMITS

Maximum Liquid Temperature : 194° F

Maximum Ambient Temperature : 104° F

Maximum Operating Pressure : 0.55 Mpa (5.5 bar)

Max. Operating Pressure	1 mpa (10bar)	0.6 mpa (6bar)
MH-13 & 26	32°F to 104°F	105°F to 194°F
MH-40 & 60	32°F to 131°F	131°F to 194°F

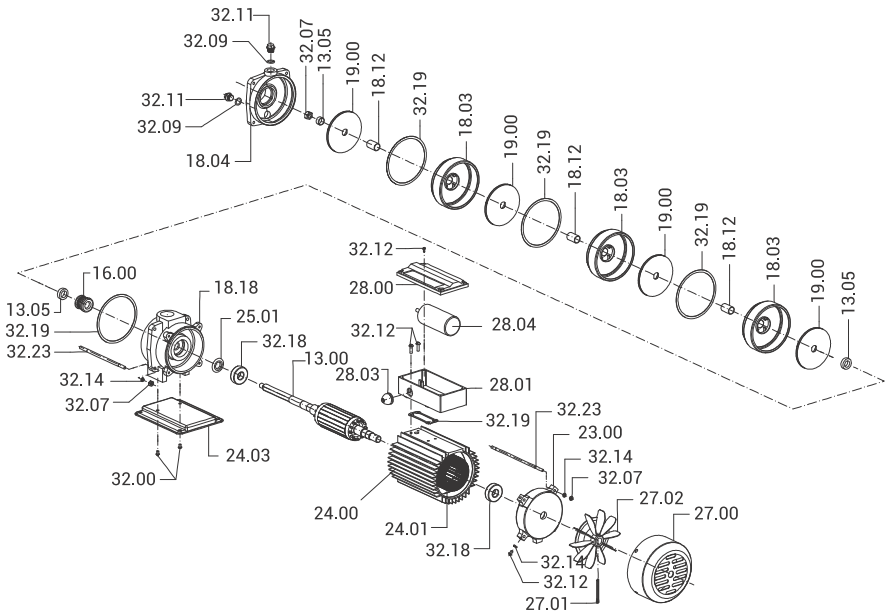
Max. Inlet pressure : Limited by max. operating pressure.

PERFORMANCE CURVE CONDITIONS

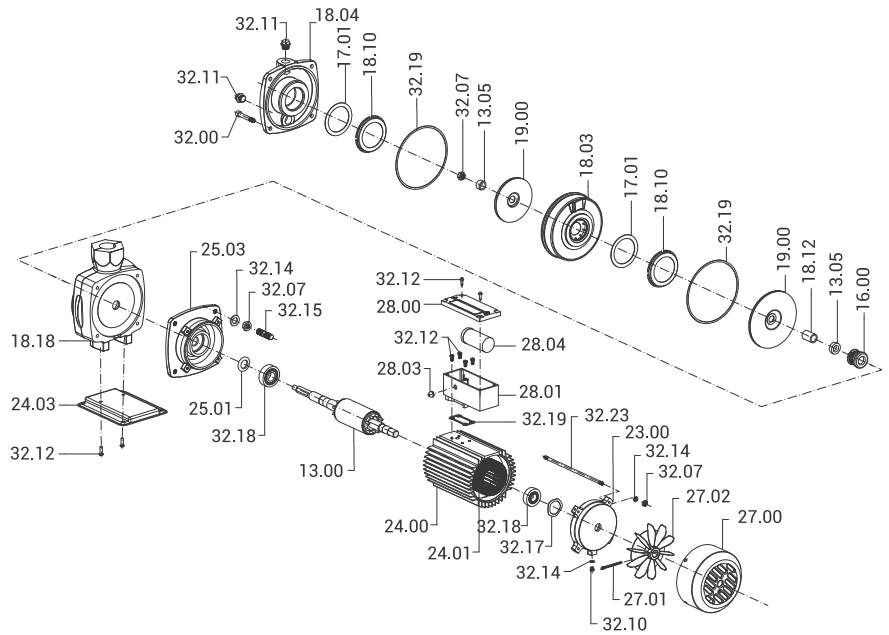
- The conditions below apply to the curves shown on the following pages.
- Curve tolerance are according to ISO 9906, Grade 3B.
- The performance are taken at rated voltage & speed that are only indicative.
- Actual discharge depends on availability of water in well / tank, height of water column from the suction pipe end.
- The measurements were made with airless water at 68°F. When pumping liquids with a density higher than of water, motors with correspondingly higher outputs must be used.
- The bold curves indicate the recommended performance range.
- Pipe fiction losses have not been included in the performance curves & performance tables.

EXPLODED VIEW

FH - 13 & 26 gpm



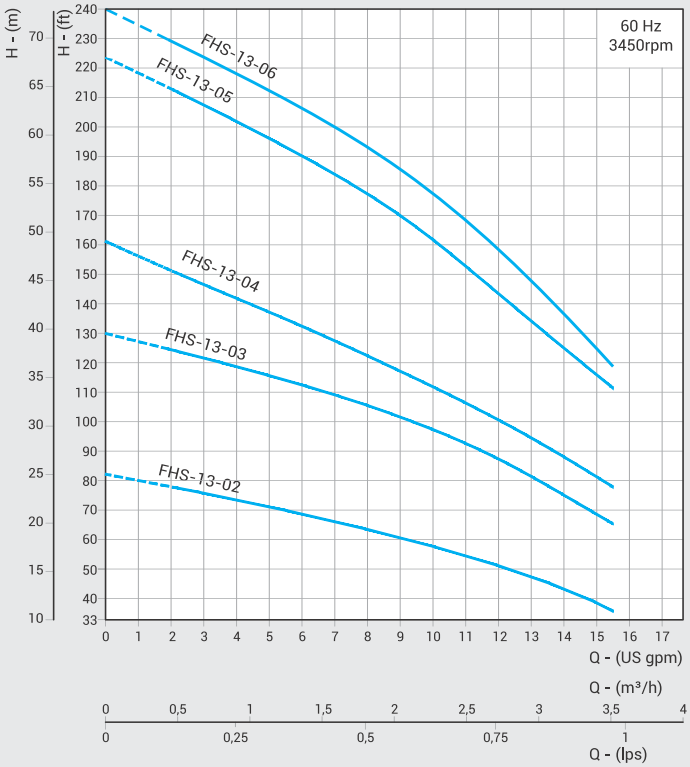
FH - 40 & 60 gpm



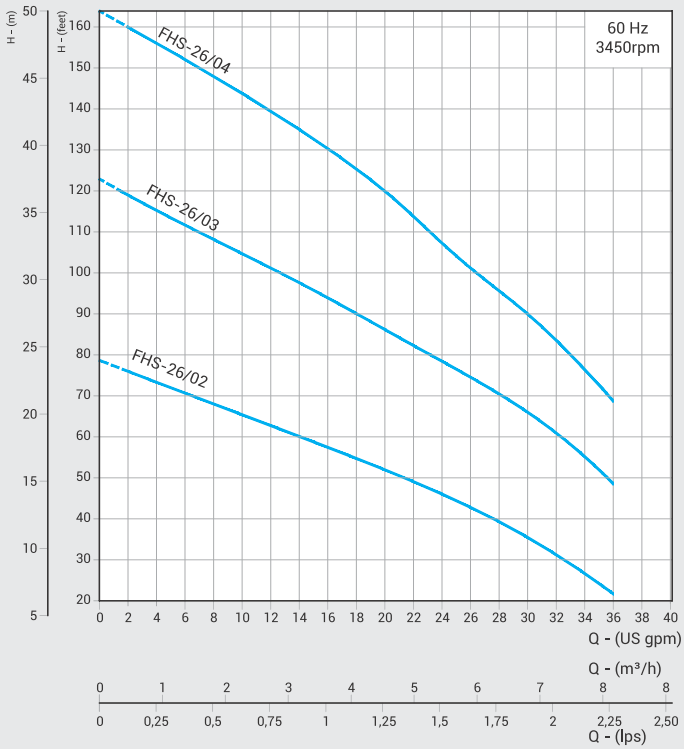
Part Name	Part No.
Rotor	13,00
Sleeve	13,05
Mechanical Seal	16,00
Wearing Ring	17,01
Chamber	18,03
Casing cover	18,04
Wearing Ring Retainer	18,10
Spacer	18,12
Chamber-Delivery	18,18
Impeller	19,00
Rear Cover	23,00
Motor Frame	24,00
Wound Stator	24,01
Base Plate	24,03
Deflector	25,01
Bracket	25,03
Cooling Fan Cover	27,00
Cooling Fan	27,02
Terminal Box Top	28,00
Terminal Box Bottom	28,01
Wiring Gland	28,03
Capacitor	28,04
Bolt	32,00
Nut	32,07
"O" Ring	32,09
Cooling Fan Split Pin	32,10
Drain Plug	32,11
Screw	32,12
Spring Washer	32,14
Stud	32,15
Wave Washer	32,17
Bearing	32,18
Gasket	32,19
Tie Rod	32,23

PERFORMANCE CURVES

FHS-13



FHS-26



PERFORMANCE TABLE

DN : 1" x 1"

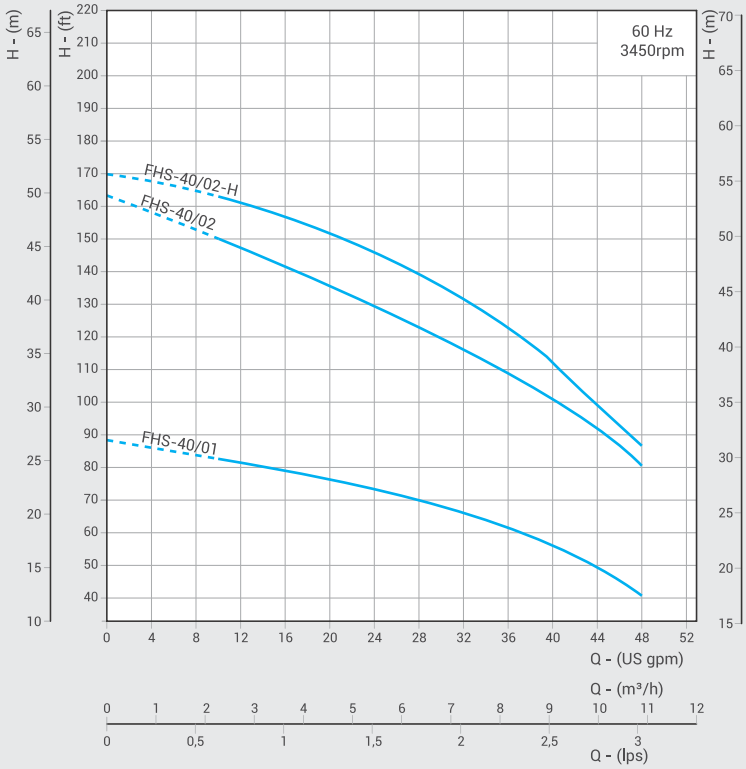
PUMP MODEL	MOTOR POWER - P2			DISCHARGE					
			gpm	0	4	7	10	13	15,5
	kW	HP	m³/h	0	0,9	1,6	2,3	3	3,5
FHS-13-02	0,3	0,4	TOTAL MANOMETRIC HEAD IN FEET	82	74	66	57	47	35
FHS-13-03	0,37	0,5		130	118	109	97	81	64
FHS-13-04	0,55	0,75		161	142	127	112	94	78
FHS-13-05	0,75	1		223	202	184	161	134	111
FHS-13-06	0,9	1,2		240	217	200	177	148	118

PUMP MODEL	MOTOR POWER - P2			DISCHARGE						
			gpm	0	8	14	20	26	32	36
	kW	HP	m³/h	0	1,8	3,2	4,5	5,9	7,3	8,2
FHS-26/02	0,55	0,75		79	68	60	52	43	31	21
FHS-26/03	0,75	1		123	108	97	86	75	61	49
FHS-26/04	1,1	1,5		164	148	135	120	101	84	69

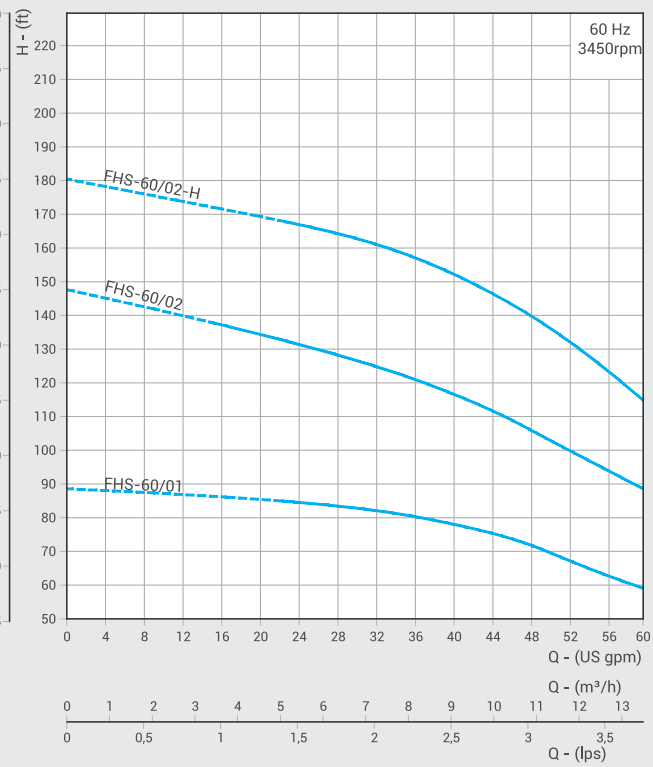
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PERFORMANCE CURVES

FHS-40



FHS-40



PERFORMANCE TABLE

DN : 1,5" x 1,25"

PUMP MODEL	MOTOR POWER - P2			DISCHARGE					
			gpm	0	12	24	32	40	48
	kW	HP	m³/h	0	2,7	5,5	7,3	9,1	10,9
FHS-40/01	0,75	1,0	TOTAL MANOMETRIC HEAD IN FEET	89	81	73,5	66	56	40
FHS-40/02	1,1	1,5		164	147	130	116	101	80
FHS-40/02-H	1,5	2,0		171	161	146	132	112	87

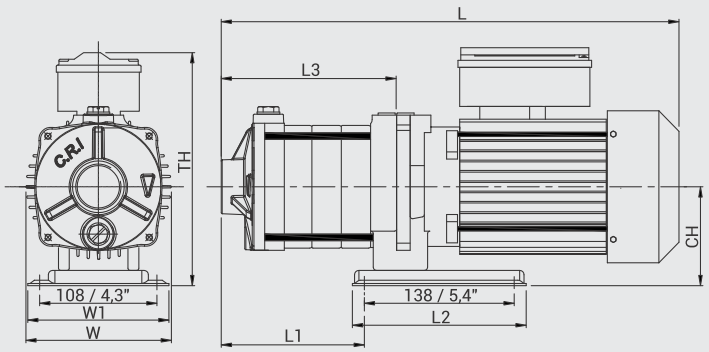
DN : 1,5" x 1,5"

PUMP MODEL	MOTOR POWER - P2			DISCHARGE					
			gpm	0	16	24	36	48	60
	kW	HP	m³/h	0	3,6	5,5	8,2	10,9	13,6
FHS-60/01	1,1	1,5	TOTAL MANOMETRIC HEAD IN FEET	89	86	84	80	72	58
FHS-60/02	2,2	3,0		148	137	132	121	106	88
FHS-60/02-H	3	4,0		181	171	167	157	140	115

Zirantec

DIMENSIONAL & WEIGHT DETAILS

FHS - 13 & 26



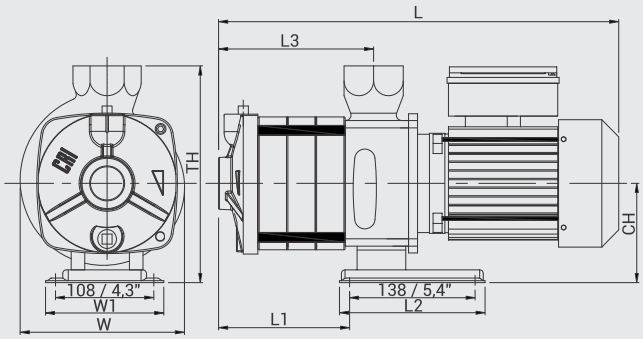
* All Dimensions are in mm & Inches.

DIMENSIONS & WEIGHT

Model	L				L1		L2		L3		W		W1		TH		CH		Approx. Weight	
	1Ph		3Ph																	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb
FHS-13/02	335	13,2	325	12,8	70	2,8	160	6,3	99	3,9	134	5,3	130	5,1	215	8,5	90	3,5	13	29
FHS-13/03	363	14,3	343	13,5	89	3,5	160	6,3	118	4,6	134	5,3	130	5,1	215	8,5	90	3,5	14	31
FHS-13/04	362	14,3	362	14,3	108	4,3	160	6,3	137	5,4	134	5,3	130	5,1	215	8,5	90	3,5	15	33
FHS-13/05	415	16,3	400	15,7	127	5,0	160	6,3	156	6,1	134	5,3	130	5,1	215	8,5	90	3,5	16	35
FHS-13/06	409	16,1	419	16,5	146	5,7	160	6,3	175	6,9	134	5,3	130	5,1	215	8,5	90	3,5	17	37

Model	L				L1		L2		L3		W		W1		TH		CH		Approx. Weight	
	1Ph		3Ph																	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb
FHS-26/02	354	13,9	333	13,1	79	3,1	160	6,3	108	4,3	134	5,3	130	5,1	215	8,5	90	3,5	13	29
FHS-26/03	396	15,6	401	15,8	107	4,2	160	6,3	135	5,3	134	5,3	130	5,1	215	8,5	90	3,5	15	33
FHS-26/04	444	17,5	424	16,7	135	5,3	160	6,3	162	6,4	134	5,3	130	5,1	215	8,5	90	3,5	16	35

FHS - 40 & 60



* All Dimensions are in mm & Inches.

DIMENSIONS & WEIGHT

Model	L				L1		L2		L3		W		W1		TH		CH		Approx. Weight	
	1Ph		3Ph																	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb
FHS-40/01	369	14,5	349	13,7	52	2,0	160	6,3	72	2,8	181	7,1	130	5,1	238	9,8	109	4,3	17	37
FHS-40/02	409	16,1	424	16,7	82	3,2	160	6,3	102,5	4,0	181	7,1	130	5,1	238	9,8	109	4,3	21	46
FHS-40/02H	409	16,1	409	16,1	82	3,2	160	6,3	102,5	4,0	181	7,1	130	5,1	238	9,8	109	4,3	21,5	47

Model	L				L1		L2		L3		W		W1		TH		CH		Approx. Weight	
	1Ph		3Ph																	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	kg	lb
FHS-60/01	379	14,9	394	15,5	52	2,0	160	6,3	72	2,8	181	7,1	130	5,1	238	9,4	109	4,3	19	42
FHS-60/02	424	16,7	424	16,7	82	3,2	160	6,3	102,5	4,0	181	7,1	130	5,1	238	9,4	109	4,3	21,5	47
FHS-60/02H	465	18,3	465	18,3	82	3,2	160	6,3	102,5	4,0	181	7,1	130	5,1	238	9,4	109	4,3	30	66

NOTES



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