

Multistage Centrifugal Pumps

FV & FH - SERIES 50Hz

 **Zirantec**



www.zirantec.com



FABBRICA ITALIANA POMPE SOMMERGIBILI S.r.l



ZIRANTEC products are manufactured by well qualified and experienced Italian Pump Engineers in state of the art manufacturing facilities in Italy

CERTIFICATION



ZIRANTEC Pumps & Motors are from the house of **Fabbrika Italiana Pompe Sommergibili S.r.l.** a four decades old Italian company of high repute, offering complete waste water solutions around the world. Its current product portfolio includes world class Waste Water Pumps of various types, Multistage Centrifugal Pressure Booster Pumps, Borehole Submersible Pumps & Motors, End Suction Centrifugal Pumps, Industrial Pumps for various applications.

Founded as early as 1978 in Rozzano, South of Milan, Italy by Mr.Orfeo Agostini, the company has witnessed steady growth and market expansion continuously ever since. In these four decades of existence, the company has carved a niche for itself in the waste water and sewage pump market in Italy and other countries. Its products are employed in Municipal, Domestic and Industrial applications. The Company is well known for the unique and robust designs of its products and their workmanship. Due to its superior quality ZIRANTEC products are also exported to many European, African and Asian countries.

ZIRANTEC's products are conceived, designed and manufactured by well qualified and experienced Italian Pump Engineers in state of the art manufacturing facilities in Italy. These manufacturing plants are accredited with UNI EN ISO 9001:2008 Certification.

Over the years, the company has metamorphosed and ventured into manufacturing of high quality water pumps, for domestic, agricultural and industrial applications. In the due process, Fabbrika Italiana Pompe Sommergibili S.r.l. has shed its image of an exclusive sewage and waste water pumps manufacturer to a complete pump production company with an ability to manufacture diverse kinds of pumps for different applications.

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Vertical Multistage Pumps





GENERAL

FV SERIES - 50 Hz

ZIRANTEC VERTICAL MULTISTAGE PUMPS - FV SERIES

The ZIRANTEC vertical multistage centrifugal pumps are non-self-priming with inline suction and discharge ports on the same level. The inline construction provides a smooth flow of liquid through the entire system. The vertical inline pump is ideal for applications where space is an issue as its horizontal alternative can take up to 2-3 times more space. These pumps are specially designed for high pressure applications where no suction lift is required. All wetted parts are made of corrosion resistant stainless steel which offers best hydraulic efficiency and durability. All pumps are fitted with maintenance free cartridge mechanical seal for safe handling, easy service and access. ZIRANTEC pumps have wider choice to suit any kind of high pressure requirements in its category. These pumps are being supplied with DIN flanges(Round and PJE) as standard option and other type also can be supplied against specific requirement.

The ZIRANTEC vertical multistage pumps are offered with ZIRANTEC energy efficient motors to give better efficiency and life. All single phase motors are fitted with thermal overload protector to safe guard the winding while overloading and extreme operating conditions. These pumps are supplied with high efficient IE2 motors in 3 Phase; IE3 motors also can be supplied on request.

PERFORMANCE CURVE CONDITIONS

- The conditions below apply to the curves shown on this entire catalogue.
- Curve tolerance are according to ISO 9906, Grade 2B.
- 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 20°C. 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 ZIRANTEC can also offer complete pressure boosting system with single or multiple pumps, VFD controller, manifold, pressure gauge, pressure switch, pressure tank etc with single and multi-pump options.

FEATURES

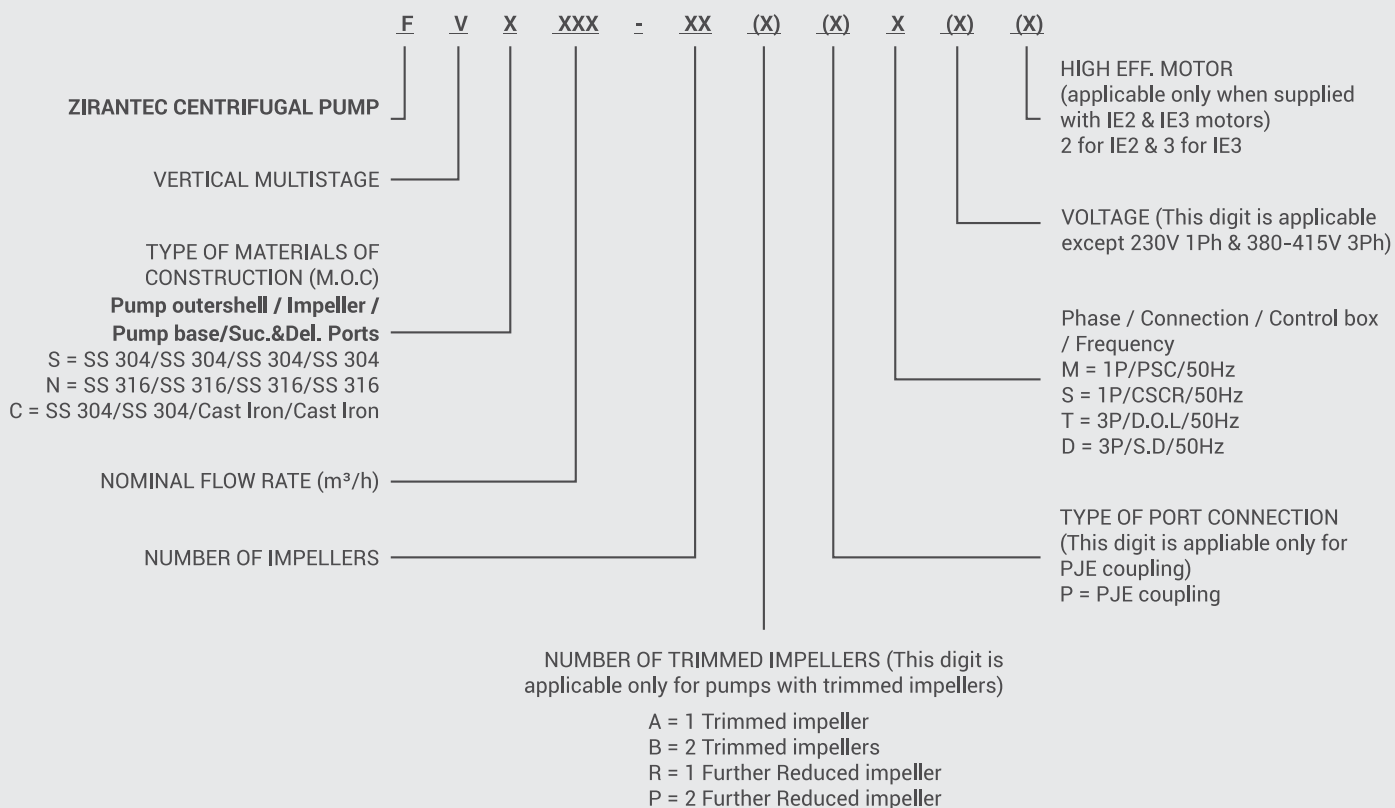
- Mechanical seal can be replaced in the installed position without removing pump from the system
- Different type of flange options against specific requirement
- Optional customized pressure boosting systems
- Inbuilt thermal overload protector for single phase motors

APPLICATIONS

- Pressure boosting systems
- Fire fighting systems
- Industrial washing systems
- Sprinkler irrigation systems
- High pressure pumping application in water treatment plant and boiler plant
- Utility water supply in industries

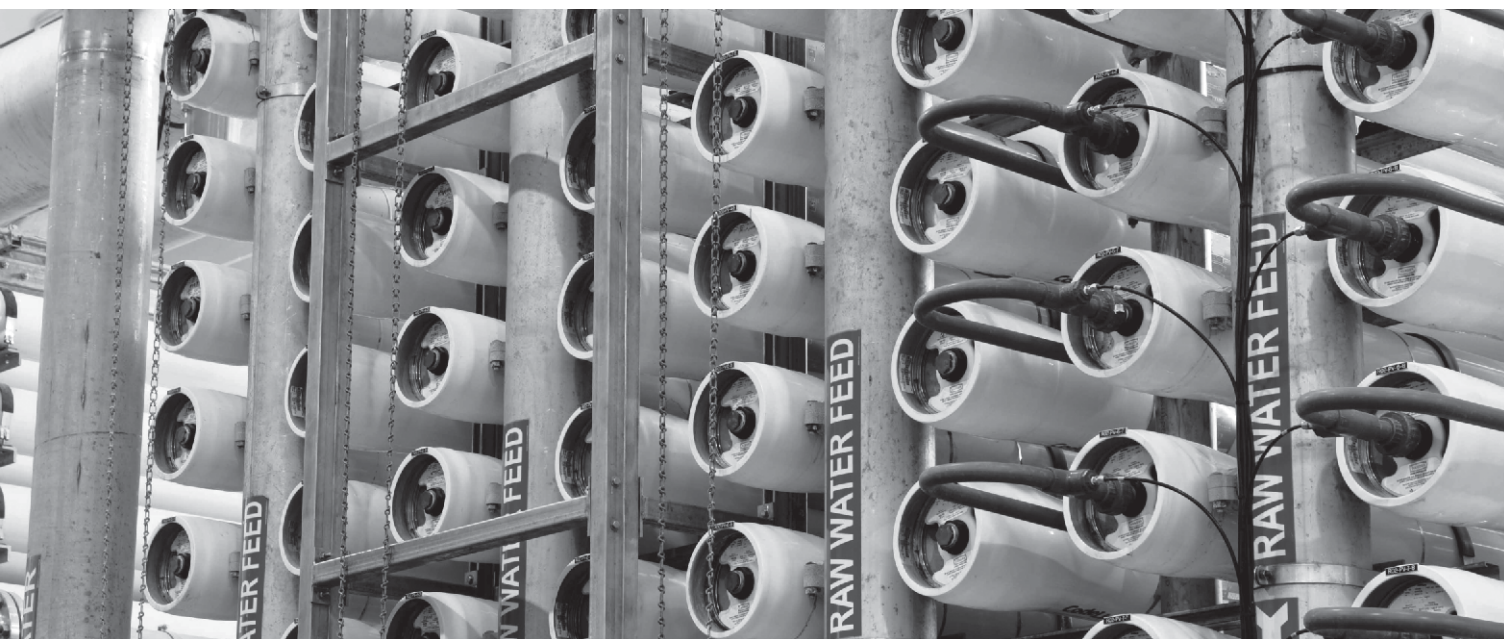
IMPORTANT NOTES

MODEL IDENTIFICATION CODE



VERTICAL MULTISTAGE PUMP SET

PUMP MODEL / CODE
F V X XXX - XX X / FVS05-02T



TECHNICAL SPECIFICATIONS

Power Range	0,5 to 150 HP
Speed	2900 rpm
Degree of protection	IP 55 (Optional IP44 / IP54)
Insulation class	'F' (Optional 'B')
Versions	Single Phase 230V, 50Hz, A.C. Supply (0,37 - 2,2kW) (Permanent Split Capacitor-PSC & CSCR) Incorporated with thermal over load protector. Three Phase 380-415V, 50Hz, A.C. Supply (0,37 - 110kW)
Sealing	Mechanical seal - Cartridge type
Direction of rotation	Anti-clockwise viewed from driving end
Type of Duty	S1 (continuous)
Flange type	Round / PJE
Flange Standard	DIN
Pipe Connection	DN 25, DN 32, DN 40, DN 50, DN 65, DN 80, DN 100, DN 125 & DN 150

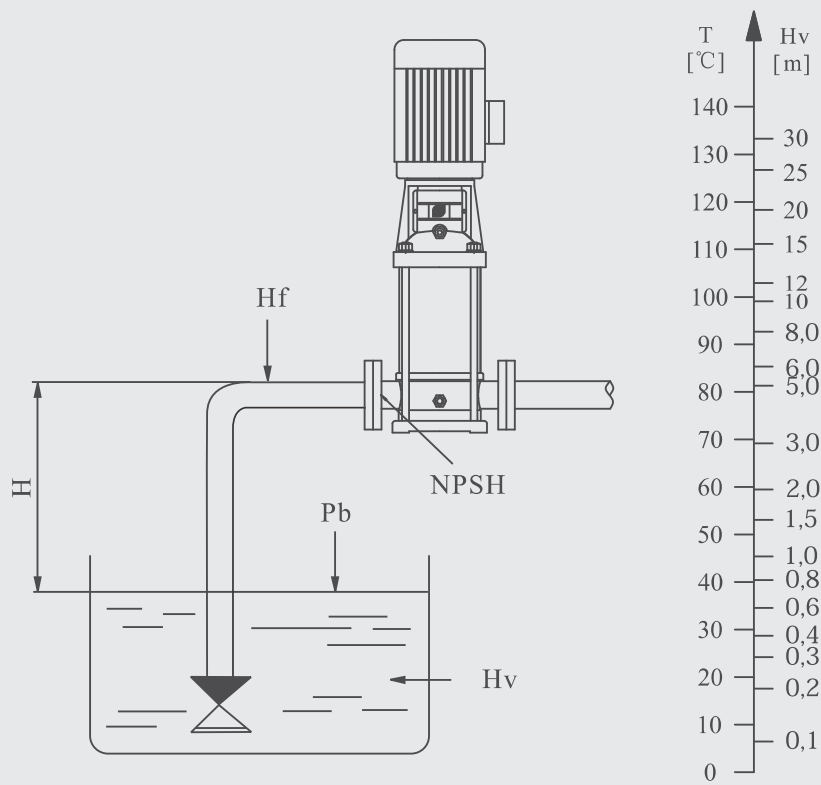
OPERATION LIMITS

Maximum Suction Lift	upto 3 m
Maximum Liquid Temperature	- 15°C to + 120°C
Maximum Ambient Temperature	40°C
Maximum Operating Pressure Range	32 Bar

PERFORMANCE RANGE

Maximum Nominal Flow	200 m ³ /h
Maximum Head	320 m

INLET PRESSURE



MAXIMUM INLET PRESSURE

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

MINIMUM INLET PRESSURE

In case that the pressure in pump is lower than 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 :

$$H = P_b \times 10,2 - NPSH - H_f - H_v - H_s$$

H : Maximum suction head (m)

P_b : Atmosphere pressure (bar)

In a closed system, P_b means system pressure (bar)

$NPSH$: Net positive suction head (m)

It can be read from the point of Max.flow rate shown on NPSH curve.

H_f : Pipeline loss at the inlet (m)

It is in accordance with pipeline possible Max.flow.

H_v : Stream pressure (m)

It depends on liquid temperature and system pressure value.

H_s : Safety margin (m)

Minimum 0,5m delivery head

If the calculated result H is negative, 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:

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

MATERIALS OF CONTRUCTION

Part Name	Part No.	Type - C	Type - S	Type - N
Pump Outer Shell	29,06	SS 304	SS 304	SS 316
Pump Head	30,00	C.I	Upto 16m³/h - C.I Above 32m³/h - SS 304	Upto 16m³/h - C.I Above 32m³/h - SS 316
Pump Head Cover	30,07	NA	SS 304*	SS 316*
Pump Head Stool (Only for 32m³/h & above)	30,01	C.I / D.I	C.I / D.I	C.I / D.I
Pump Base	29,01	C.I / D.I	SS 304	SS 316
Base Plate	24,03	NA	C.I / D.I	C.I / D.I
Impeller	19,00	SS 304	SS 304	SS 316
** Mechanical Seal	16,00	SiC / SiC / FKM	SiC / SiC / FKM	SiC / SiC / FKM
*** Bush	12,03	SiC / SiC	SiC / SiC	SiC / SiC
Diffuser (Chamber)	18,07	SS 304	SS 304	SS 316
Pump Shaft	22,00	SS 304 / 431	SS 304 / 431	SS 316/329
Wearing Ring	17,01	Teflon	Teflon	Teflon
Flange	29,04	C.I	SS 304	SS 316
Neck Ring	19,01	SS 304	SS 304	SS 316
"O" Ring	32,09	EPDM / FKM	EPDM / FKM	EPDM / FKM
Coupling	22,01	M.S / C.I / D.I	M.S / C.I / D.I	M.S / C.I / D.I
Split Cone	19,02	SS 304	SS 304	SS 316
Split Cone Nut	19,03	SS 304	SS 304	SS 316

* Provided only upto 16m³/h

** Optional Mechanical Seal MOCs

TC / TC / FKM

SiC / SiC / EPDM

TC / CARBON / EPDM

TC / TC / EPDM

*** Optional Bush MOC

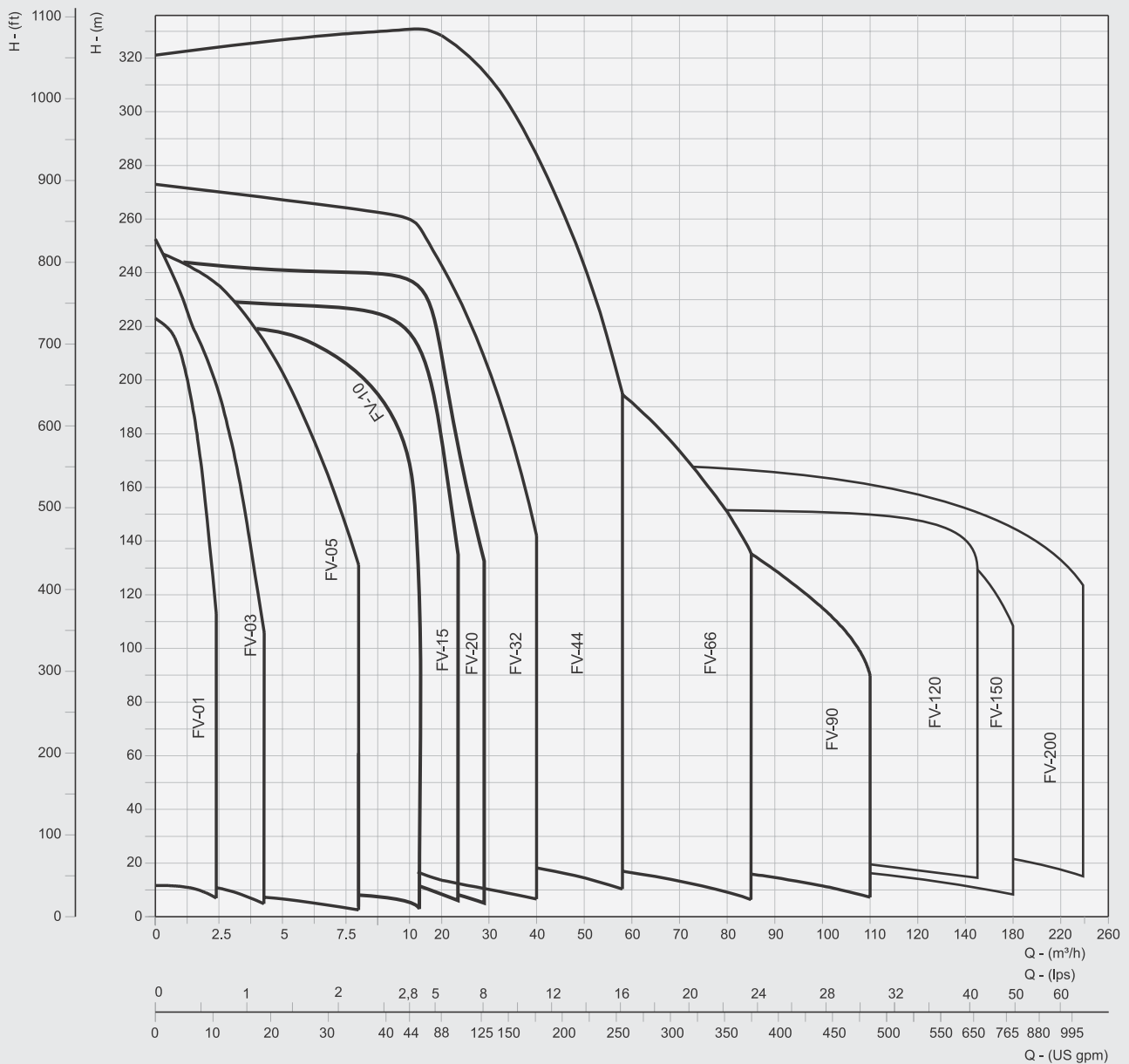
TC / TC

Applicable for 120m³/hr and above

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



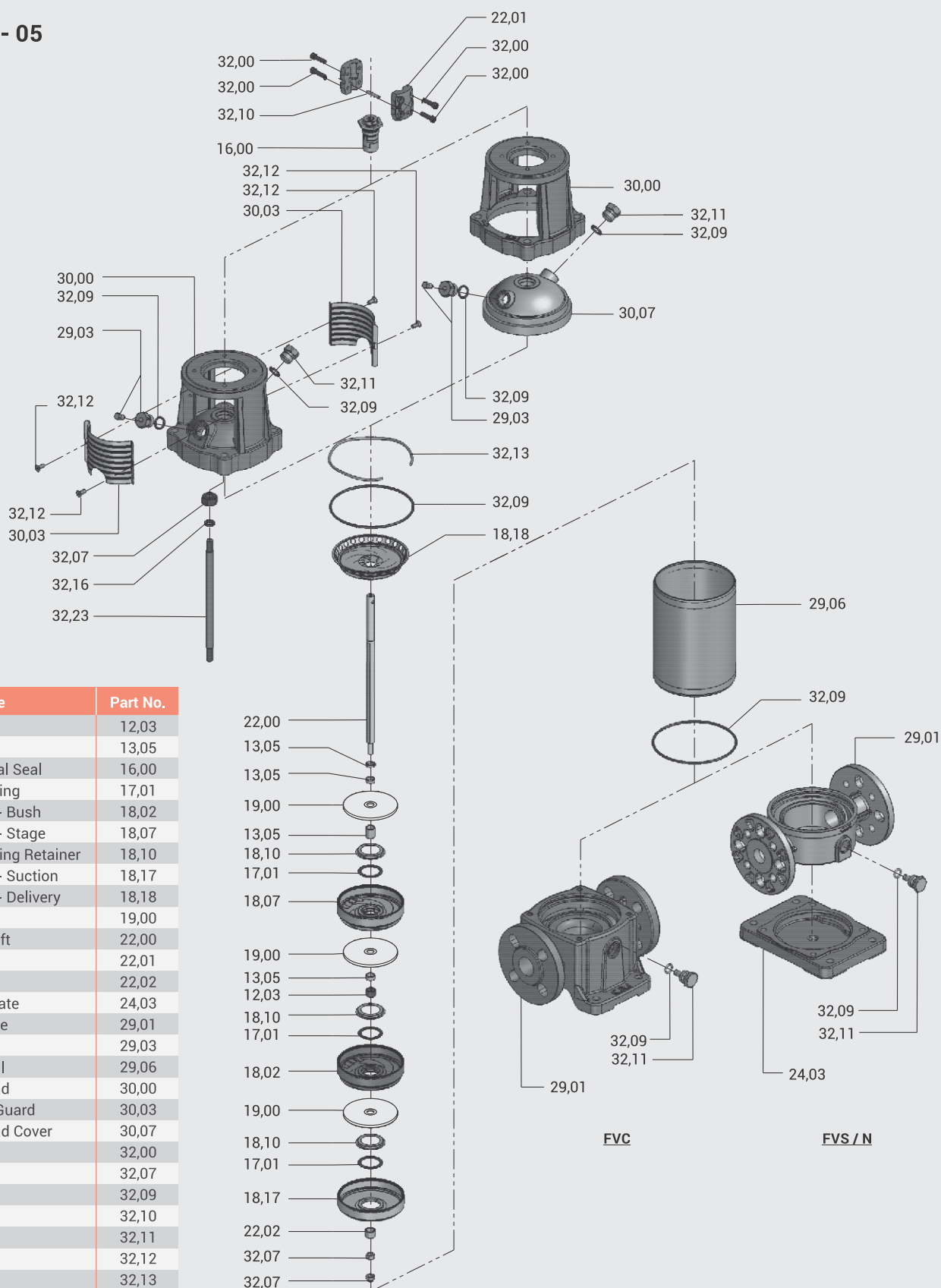
GROUP PERFORMANCE CURVE



CURVE CONDITIONS

| Curve tolerance are according to ISO 9906 | 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 20°C 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 pipe connection threads are given as per BSP standard | The main scales of the performance curve are "meter" and "m³/h", which have been given for head and flow respectively | The performance curves are common for all type of materials of construction.

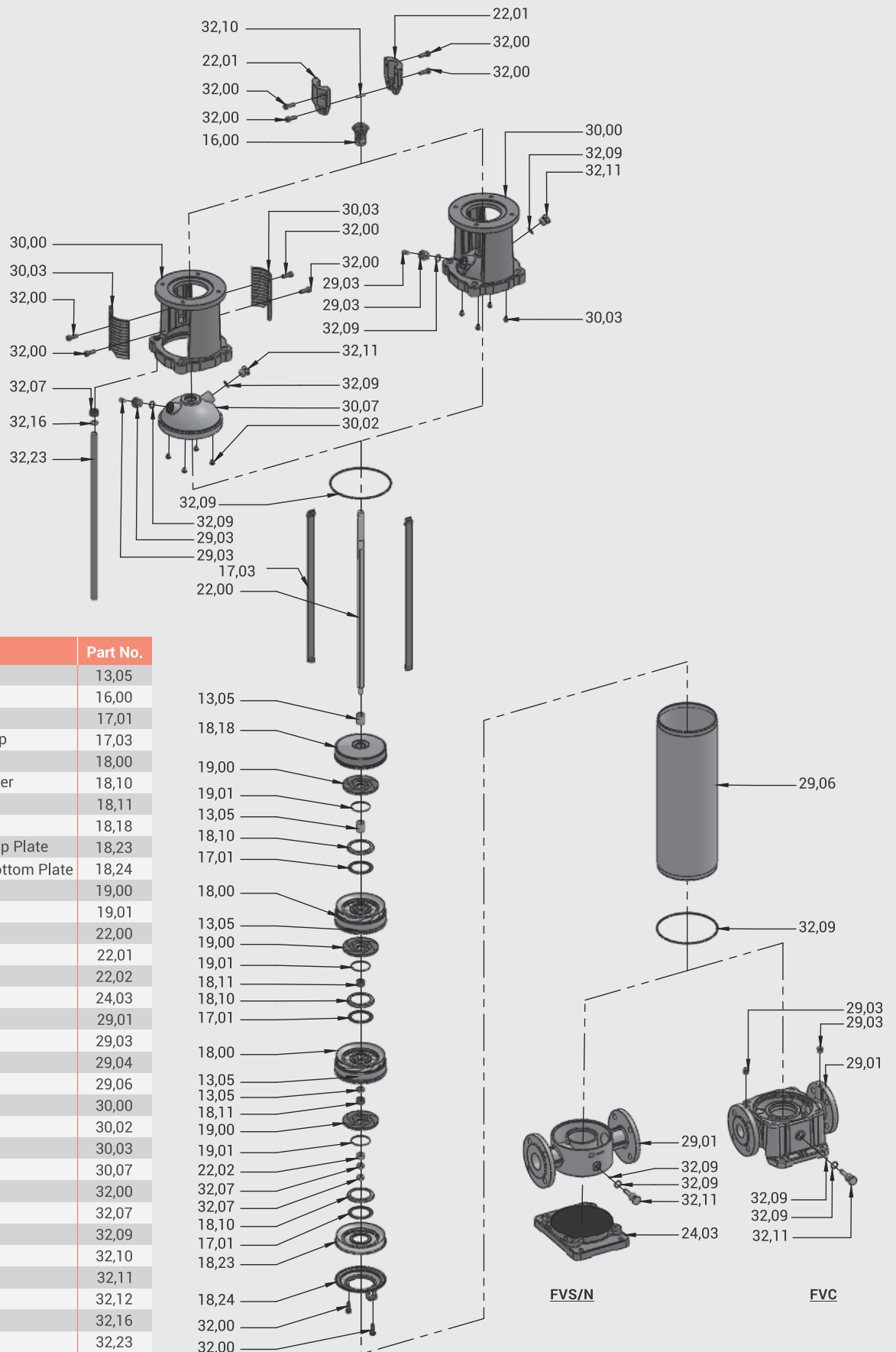
FV 01 - 05



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

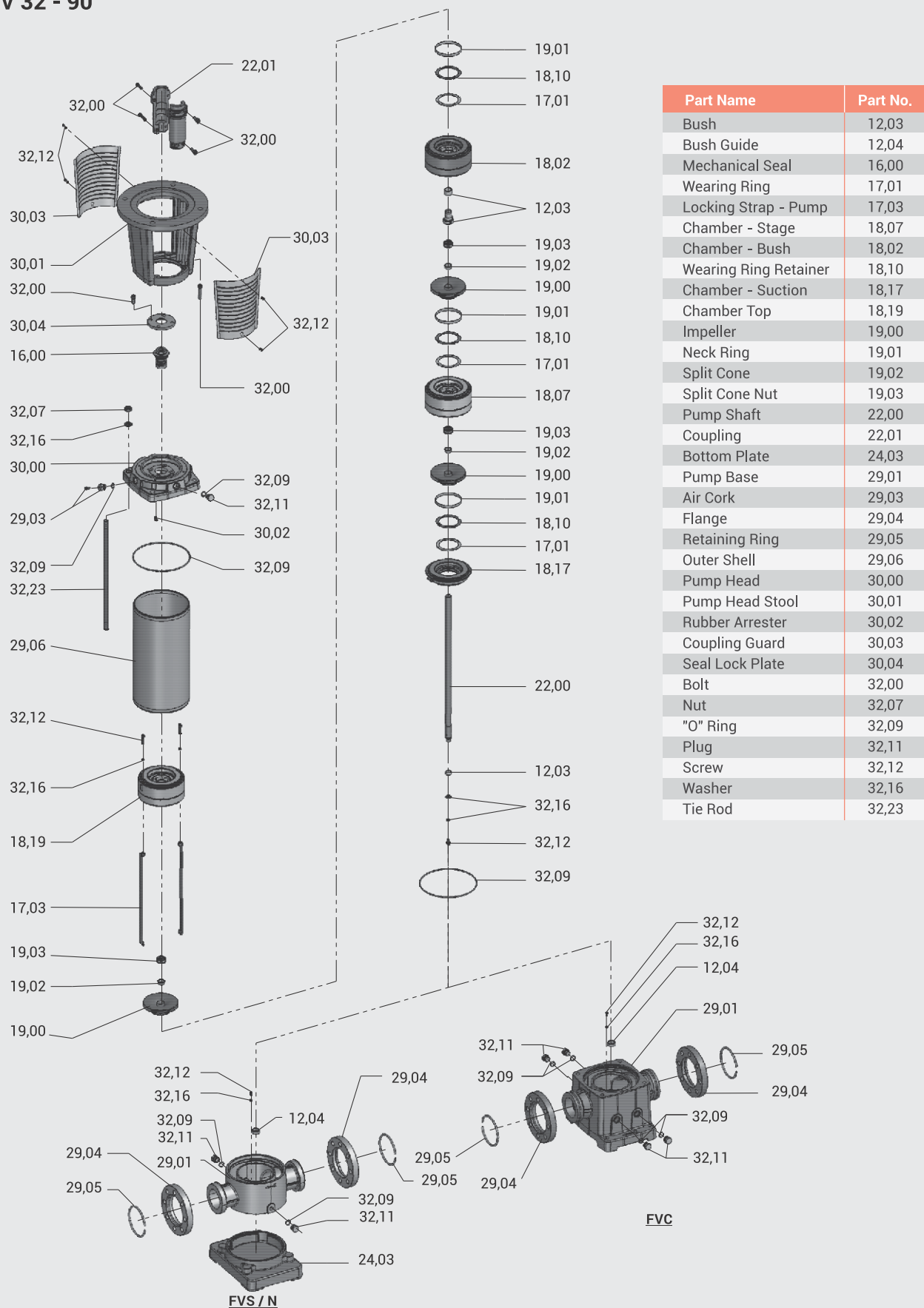
EXPLODED VIEW

FV 10 - 20



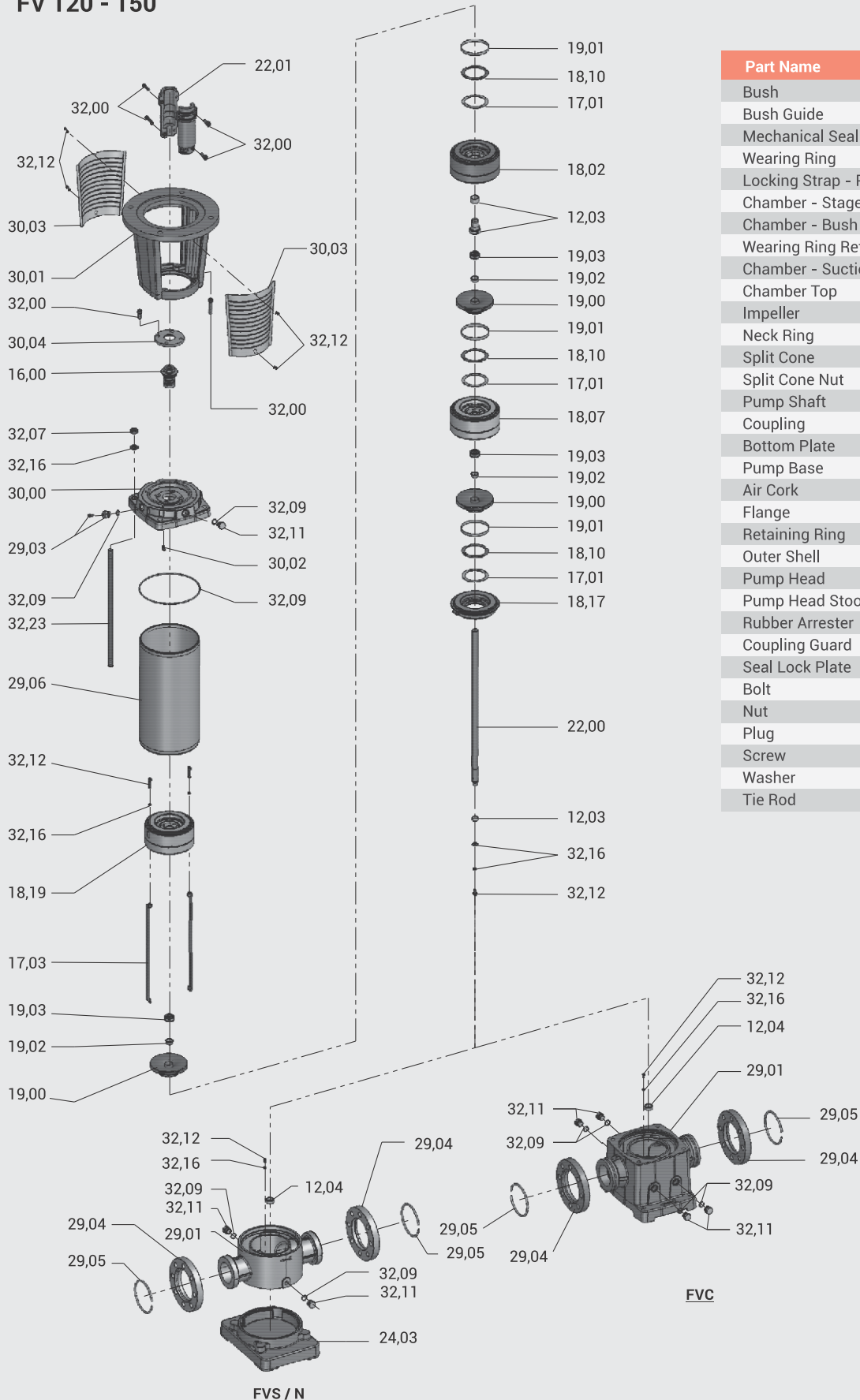
EXPLODED VIEW

FV 32 - 90



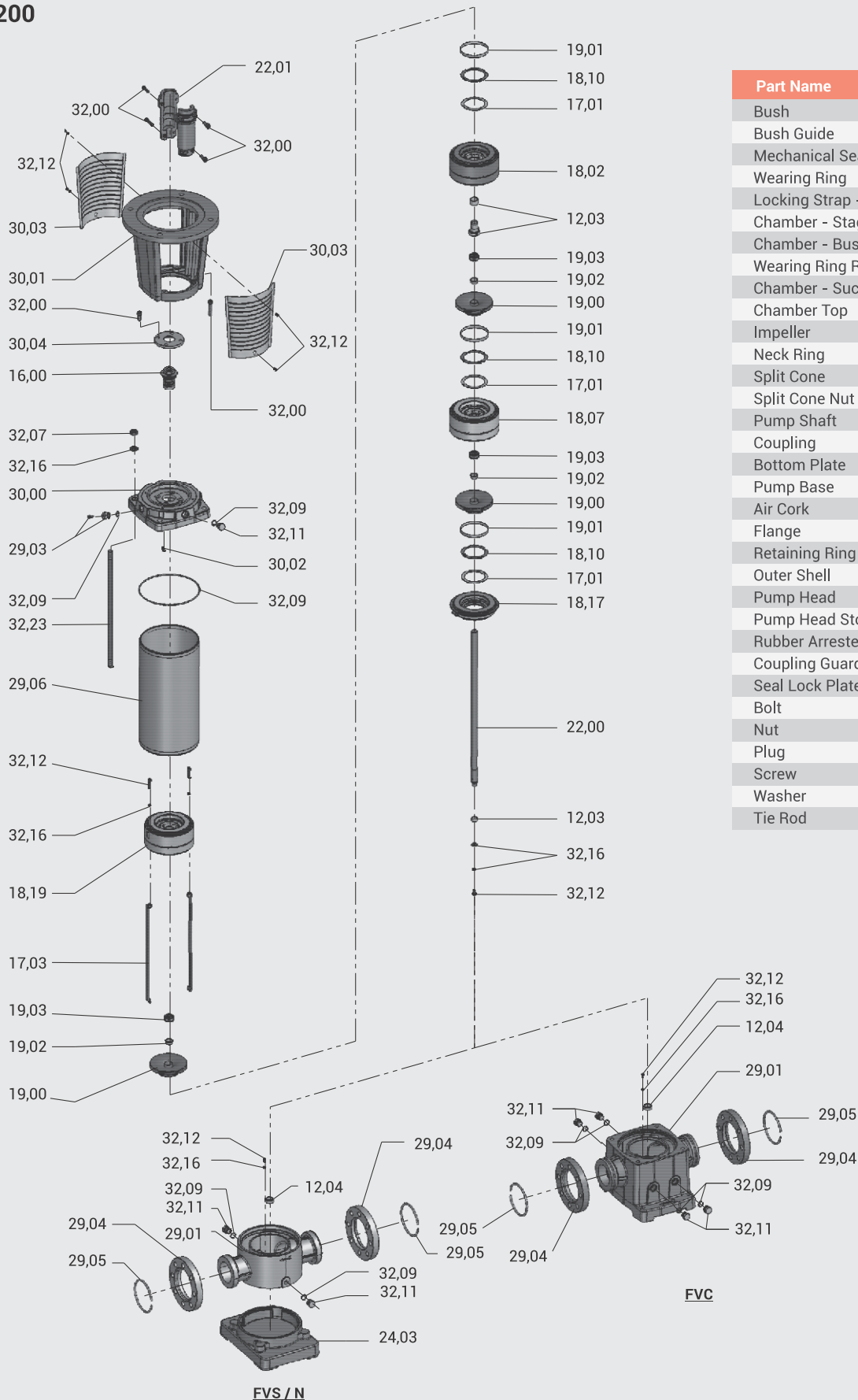
EXPLODED VIEW

FV 120 - 150



EXPLODED VIEW

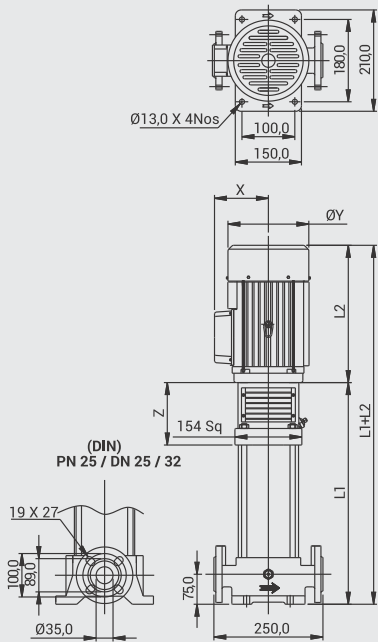
FV 200



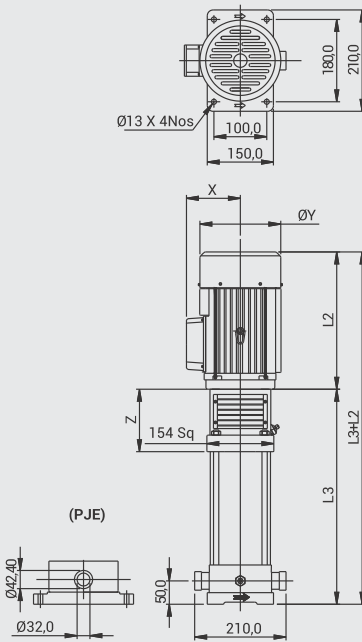
Part Name	Part No.
Bush	12,03
Bush Guide	12,04
Mechanical Seal	16,00
Wearing Ring	17,01
Locking Strap - Pump	17,03
Chamber - Stage	18,07
Chamber - Bush	18,02
Wearing Ring Retainer	18,10
Chamber - Suction	18,17
Chamber Top	18,19
Impeller	19,00
Neck Ring	19,01
Split Cone	19,02
Split Cone Nut	19,03
Pump 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 Arrestor	30,02
Coupling Guard	30,03
Seal Lock Plate	30,04
Bolt	32,00
Nut	32,07
Plug	32,11
Screw	32,12
Washer	32,16
Tie Rod	32,23

FV-01

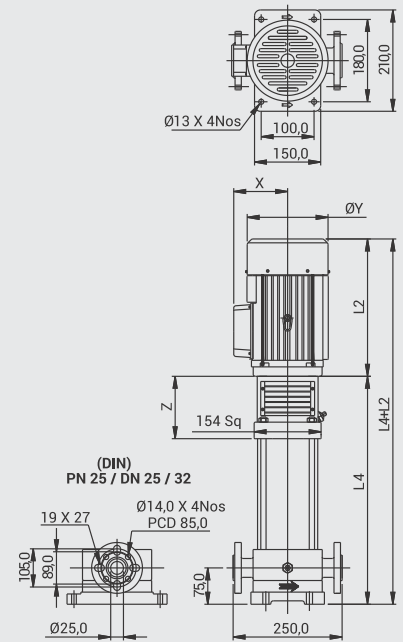
FVC (ROUND FLANGE)



FVS & N (PJE)



FVS & N (ROUND FLANGE)

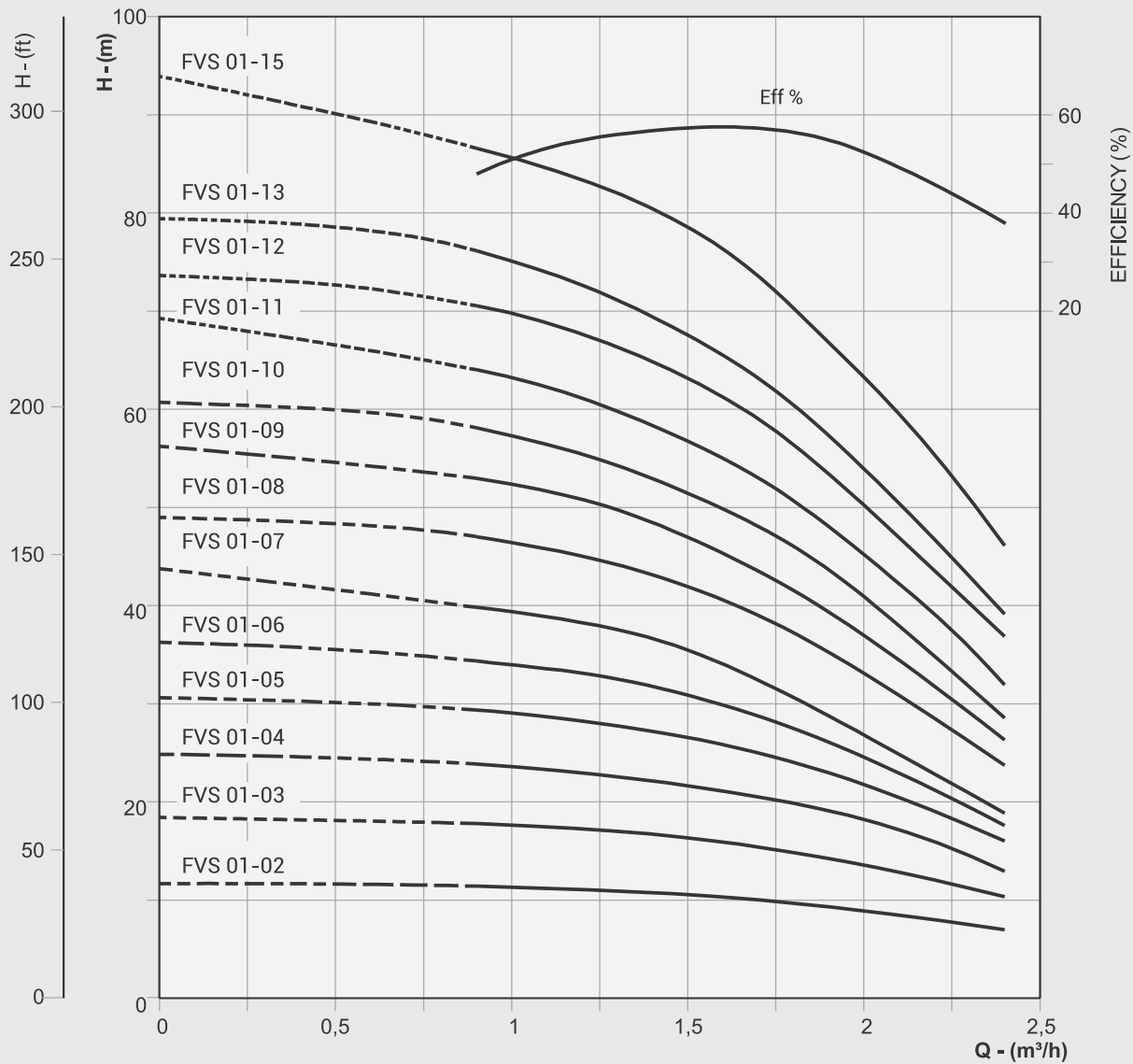


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)									APPROX NETT WEIGHT WITHOUT PACKING IN kg				
	kW	HP	L1	L2		L3	L4	X		ØY	Z	PUMP			MOTOR	
				1Ph	3Ph			1Ph	3Ph			FVC (R)	FVS & N (P)	FVS & N (R)	1Ph	3Ph
FVS 01-02	0,37	0,5	269	222	217	249	273	122	118	138	145	18,6	13,4	15,0	9	8
FVS 01-03	0,37	0,5	287	222	217	267	291	122	118	138	145	19,2	14,0	15,6	9	8
FVS 01-04	0,37	0,5	305	222	217	285	309	122	118	138	145	19,8	14,6	16,2	9	8
FVS 01-05	0,37	0,5	323	222	217	303	327	122	118	138	145	20,4	15,2	16,8	9	8
FVS 01-06	0,37	0,5	341	222	217	321	345	122	118	138	145	21,0	15,8	17,4	9	8
FVS 01-07	0,37	0,5	359	222	217	339	363	122	118	138	145	21,6	16,4	18,0	9	8
FVS 01-08	0,55	0,75	377	242	232	357	381	122	118	138	145	22,2	17,0	18,6	10	9
FVS 01-09	0,55	0,75	395	242	232	375	399	122	118	138	145	22,8	17,6	19,2	10	9
FVS 01-10	0,55	0,75	413	242	232	393	417	122	118	138	145	23,4	18,2	19,8	10	9
FVS 01-11	0,55	0,75	431	242	232	411	435	122	118	138	145	24,0	18,8	20,4	10	9
FVS 01-12	0,75	1	449	267	252	429	453	122	118	138	145	24,6	19,4	21,0	12	14
FVS 01-13	0,75	1	467	267	252	447	471	122	118	138	145	25,2	20,0	21,6	12	14
FVS 01-15	0,75	1	503	267	252	483	507	122	118	138	145	26,4	21,2	22,8	12	14

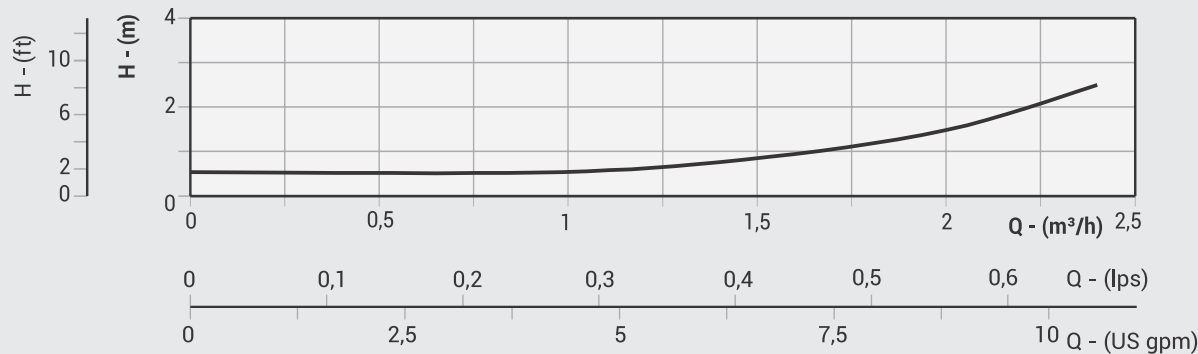
PERFORMANCE CURVES

NOMINAL
FLOW : 1m³/h

FV-01



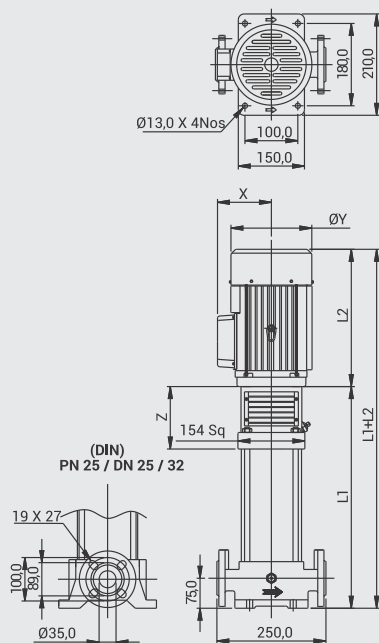
NPSHR CURVE



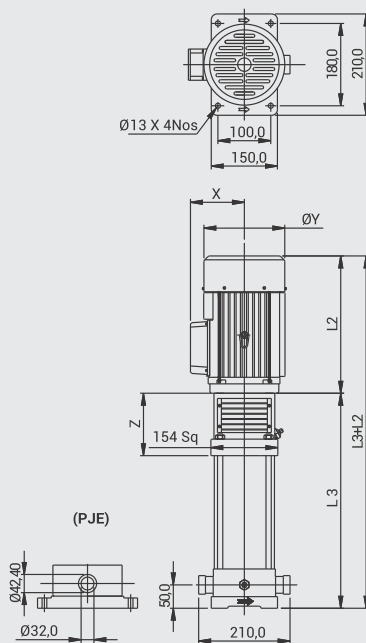
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FV-01

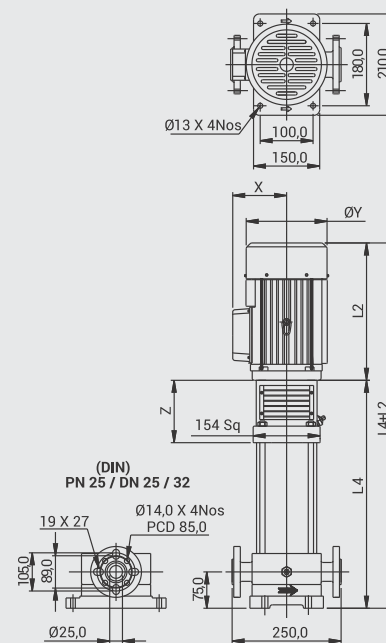
FVC (ROUND FLANGE)



FVS & N (PJE)



FVS & N (ROUND FLANGE)

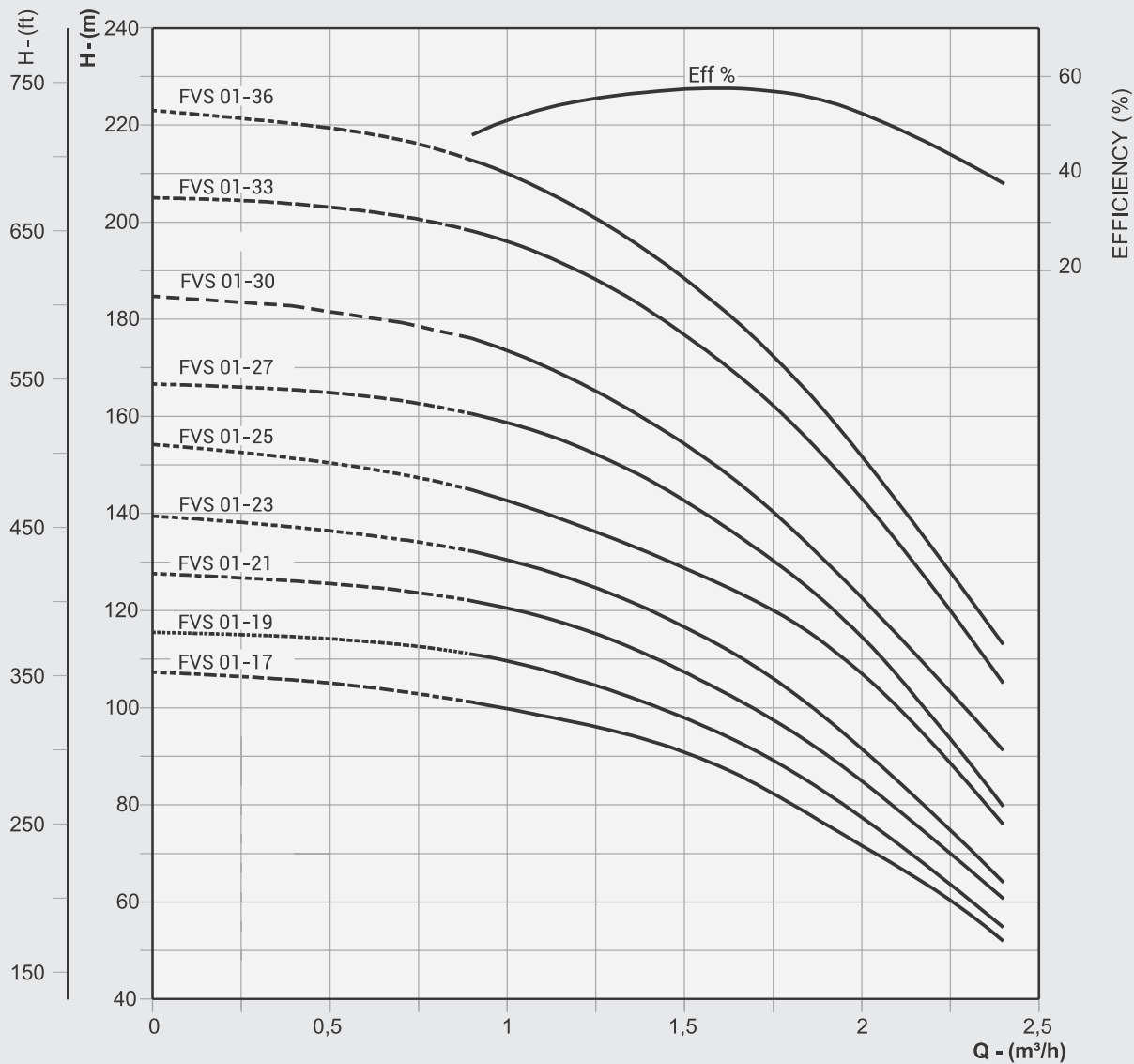


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)									APPROX NETT WEIGHT WITHOUT PACKING IN kg				
	kW	HP	L1	L2		L3	L4	X		ØY	Z	PUMP			MOTOR	
				1Ph	3Ph			1Ph	3Ph			FVC (R)	FVS & N (P)	FVS & N (R)	1Ph	3Ph
FVS 01-17	1,1	1,5	539	284	284	519	543	124	128	159	145	28	22	24	13,5	13
FVS 01-19	1,1	1,5	575	284	284	555	579	124	128	159	145	29	24	25	13,5	13
FVS 01-21	1,1	1,5	611	284	284	591	615	124	128	159	145	30	25	26	13,5	13
FVS 01-23	1,1	1,5	647	284	284	627	651	124	128	159	145	31	26	28	13,5	13
FVS 01-25	1,5	2	701	294	295	681	705	128	128	187	163	32	27	29	16,5	15
FVS 01-27	1,5	2	737	294	295	717	741	128	128	187	163	34	28	30	16,5	15
FVS 01-30	1,5	2	791	294	295	771	795	128	128	187	163	35	30	32	16,5	15
FVS 01-33	2,2	3	845	320	305	825	849	136	136	187	163	37	32	34	24	17,5
FVS 01-36	2,2	3	899	320	305	879	903	136	136	187	163	39	34	35	24	17,5

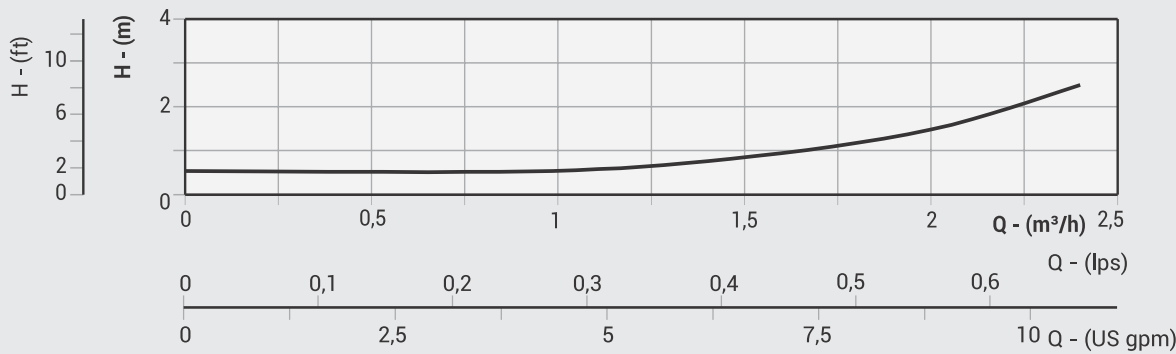
PERFORMANCE CURVES

NOMINAL
FLOW : 1m³/h

FV-01



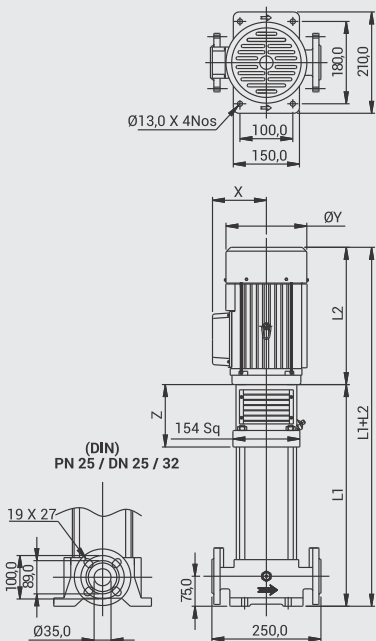
NPSHR CURVE



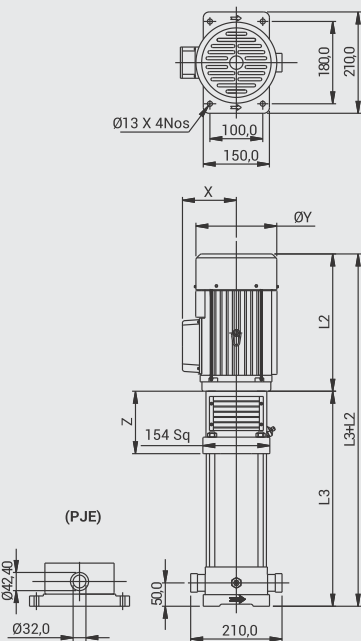
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FV-03

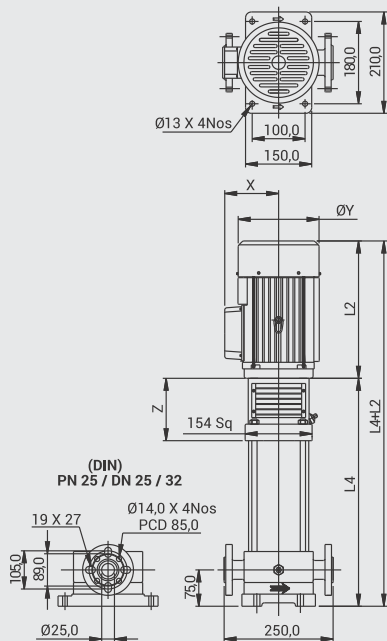
FVC (ROUND FLANGE)



FVS & N (PJE)



FVS & N (ROUND FLANGE)

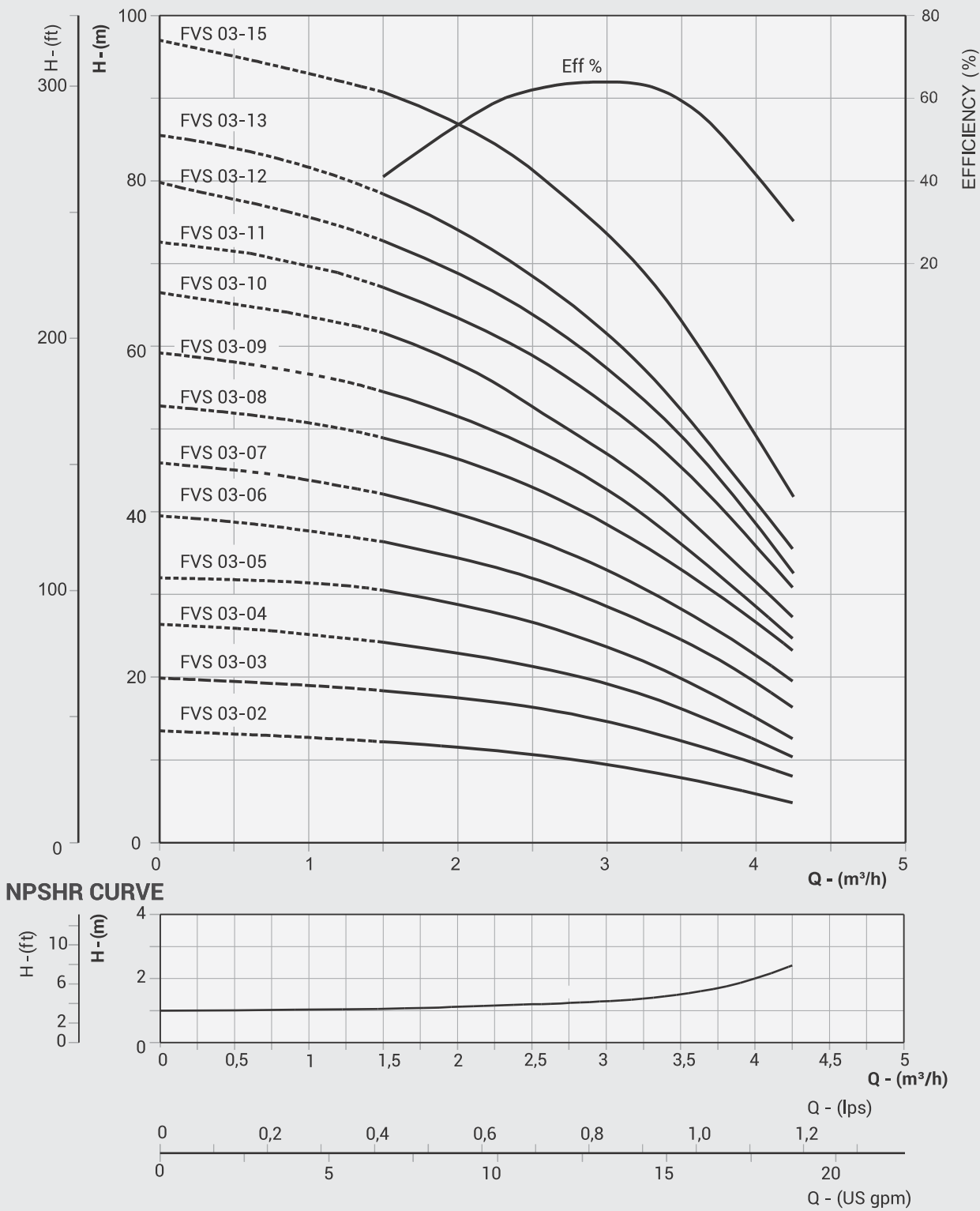


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)									APPROX NETT WEIGHT WITHOUT PACKING IN kg				
	kW	HP	L1	L2		L3	L4	X		ØY	Z	PUMP			MOTOR	
				1Ph	3Ph			1Ph	3Ph			FVC (R)	FVS & N (P)	FVS & N (R)	1Ph	3Ph
FVS 03-02	0,37	0,5	269	222	217	249	273	122	118	138	145	18,6	13,4	15,0	9	8
FVS 03-03	0,37	0,5	287	222	217	267	291	122	118	138	145	19,2	14,0	15,6	9	8
FVS 03-04	0,37	0,5	305	222	217	285	309	122	118	138	145	19,8	14,6	16,2	9	8
FVS 03-05	0,37	0,5	323	222	217	303	327	122	118	138	145	20,4	15,2	16,8	9	8
FVS 03-06	0,55	0,75	341	242	232	321	345	122	118	138	145	21,0	15,8	17,4	10	9
FVS 03-07	0,55	0,75	359	242	232	339	363	122	118	138	145	21,6	16,4	18,0	10	9
FVS 03-08	0,75	1	377	267	252	357	381	122	118	138	145	22,2	17,0	18,6	12	14
FVS 03-09	0,75	1	395	267	252	375	399	122	118	138	145	22,8	17,6	19,2	12	14
FVS 03-10	0,75	1	413	267	252	393	417	122	118	138	145	23,4	18,2	19,8	12	14
FVS 03-11	1,1	1,5	431	284	284	411	435	124	128	159	145	24,0	18,8	20,4	13,5	13
FVS 03-12	1,1	1,5	449	284	284	429	453	124	128	159	145	24,6	19,4	21,0	13,5	13
FVS 03-13	1,1	1,5	467	284	284	447	471	124	128	159	145	25,2	20,0	21,6	13,5	13
FVS 03-15	1,1	1,5	503	284	284	483	507	124	128	159	145	26,4	21,2	22,8	13,5	13

PERFORMANCE CURVES

NOMINAL FLOW : 3m³/h

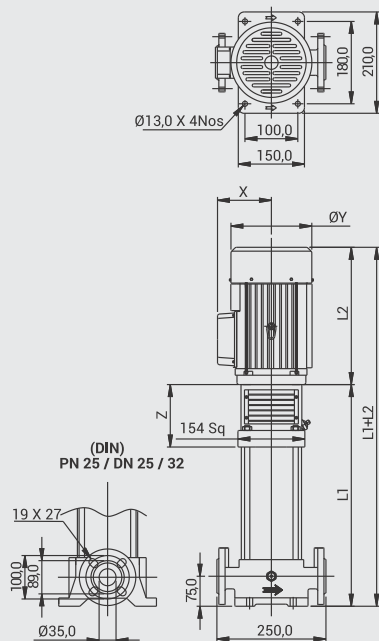
FV-03



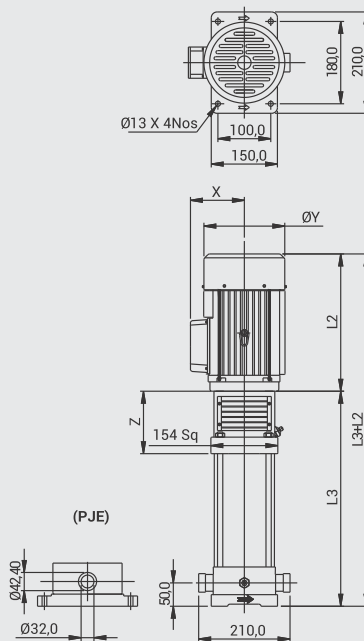
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FV-03

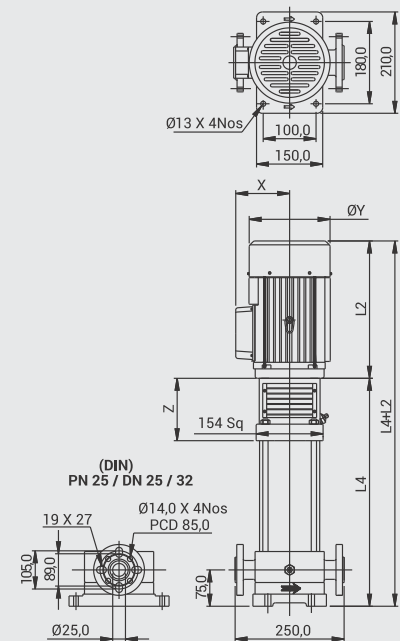
FVC (ROUND FLANGE)



FVS & N (PJE)



FVS & N (ROUND FLANGE)

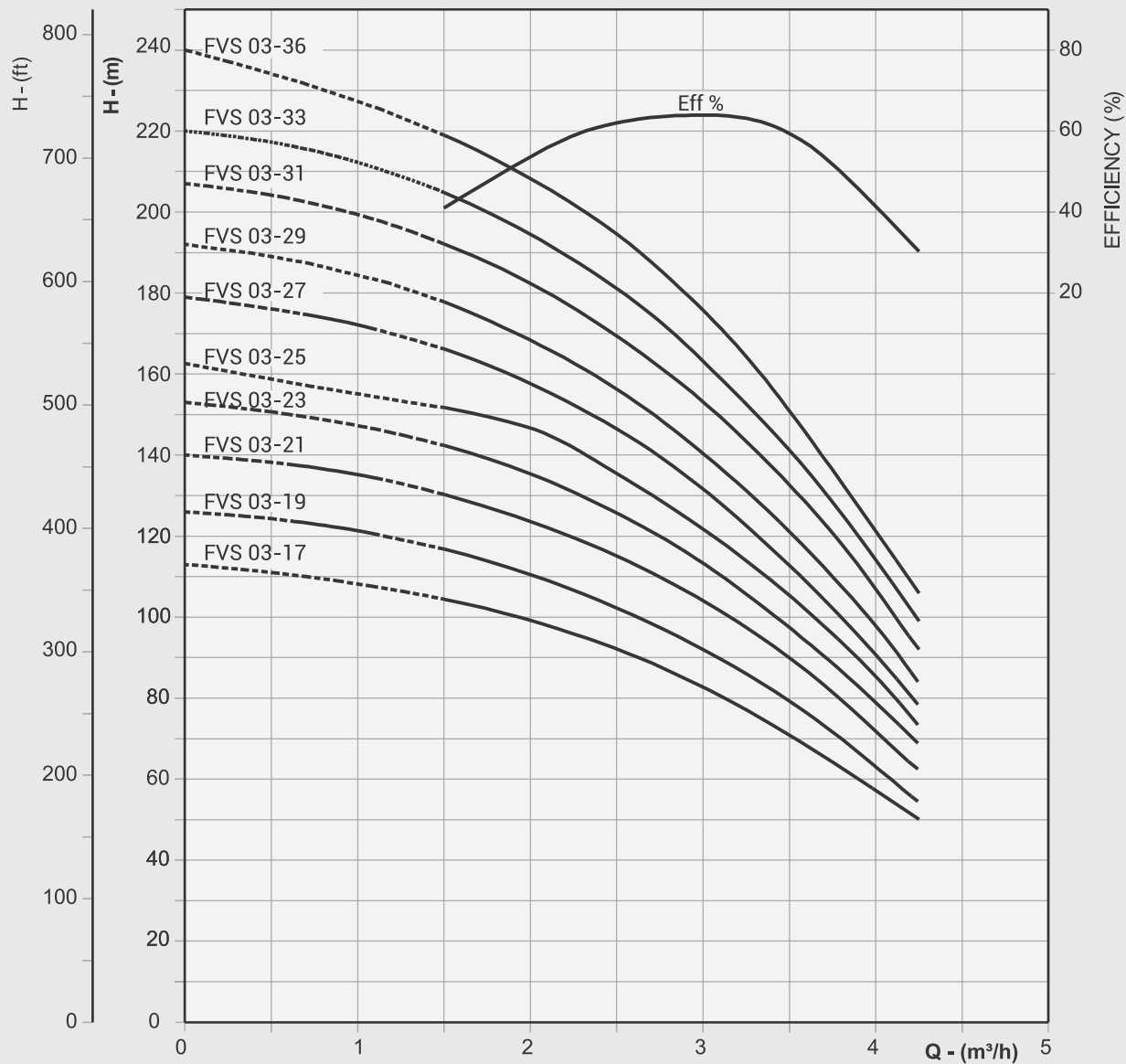


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)									APPROX NETT WEIGHT WITHOUT PACKING IN kg				
			L1	L2		L3	L4	X		ØY	Z	PUMP			MOTOR	
	kW	HP		1Ph	3Ph			1Ph	3Ph			FVC (R)	FVS & N (P)	FVS & N (R)	1Ph	3Ph
FVS 03-17	1,5	2	557	294	295	537	561	128	128	187	163	28	22	24	16,5	15
FVS 03-19	1,5	2	593	294	295	573	597	128	128	187	163	29	24	25	16,5	15
FVS 03-21	2,2	3	629	320	305	609	633	136	136	187	163	30	25	26	20	17,5
FVS 03-23	2,2	3	665	320	305	645	669	136	136	187	163	31	26	28	20	17,5
FVS 03-25	2,2	3	701	320	305	681	705	136	136	187	163	32	27	29	20	17,5
FVS 03-27	2,2	3	737	320	305	717	741	136	136	187	163	34	28	30	20	17,5
FVS 03-29	2,2	3	773	320	305	753	777	136	136	187	163	35	30	31	20	17,5
FVS 03-31	3	4	809	-	320	789	813	-	136	187	163	36	32	33	-	24,5
FVS 03-33	3	4	845	-	320	825	849	-	136	187	163	37	32	34	-	24,5
FVS 03-36	3	4	899	-	320	879	903	-	136	187	163	39	34	35	-	24,5

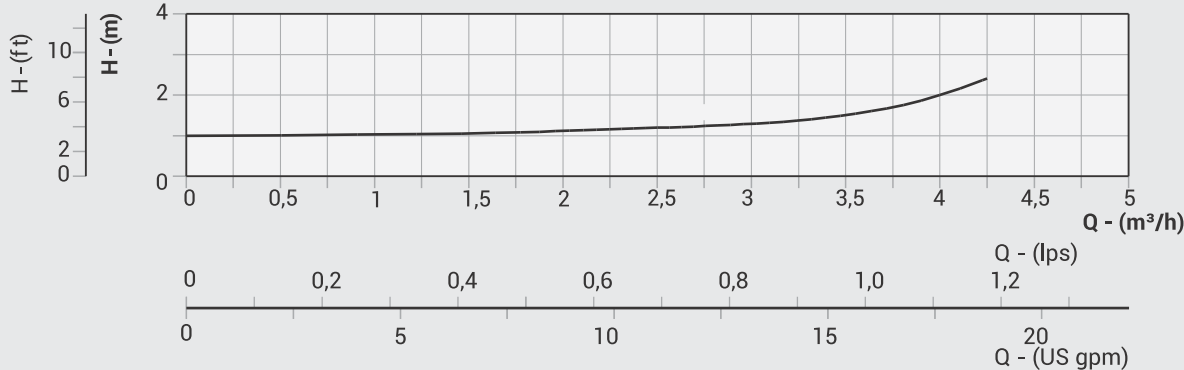
PERFORMANCE CURVES

NOMINAL FLOW : 3m³/h

FV-03



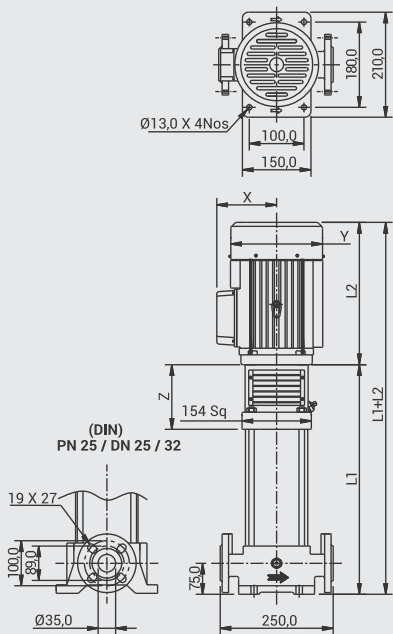
NPSHR CURVE



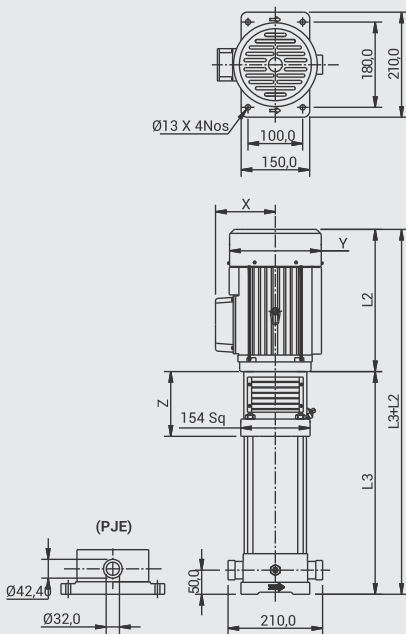
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-05

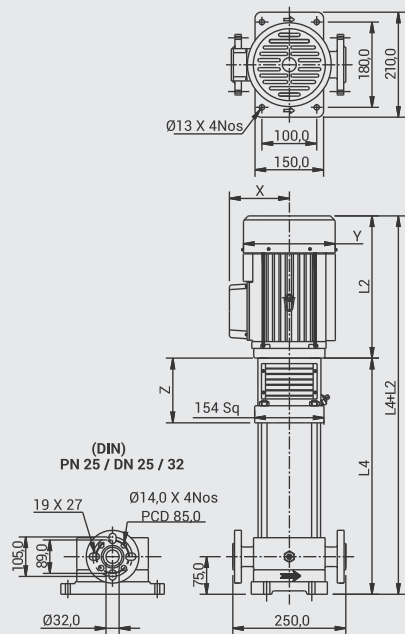
FVC (ROUND FLANGE)



FVS & N (PJE)



FVS & N (ROUND FLANGE)

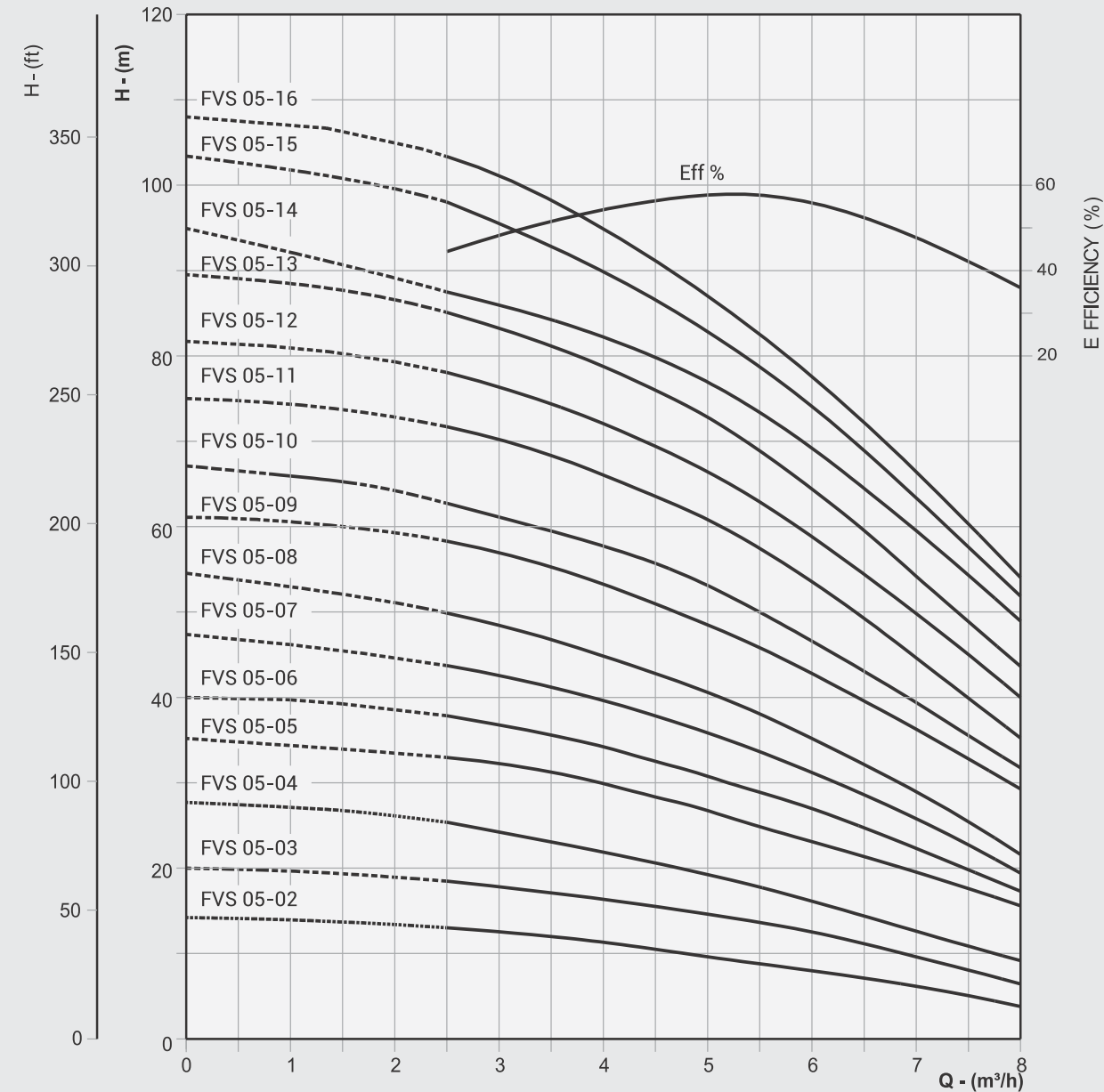


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)									APPROX NETT WEIGHT WITHOUT PACKING IN kg				
			L1	L2		L3	L4	X		ØY	Z	PUMP			MOTOR	
	kW	HP		1Ph	3Ph			1Ph	3Ph			FVC (R)	FVS & N (P)	FVS & N (R)	1Ph	3Ph
FVS 05-02	0,37	0,5	287	222	217	267	291	122	118	138	145	22,6	17,4	19,0	9	8
FVS 05-03	0,55	0,75	314	242	232	294	318	122	118	138	145	23,5	18,3	19,9	10	9
FVS 05-04	0,55	0,75	341	242	232	321	345	122	118	138	145	24,4	19,2	20,8	10	9
FVS 05-05	0,75	1	368	267	252	348	372	122	118	138	145	25,3	20,1	21,7	12	14
FVS 05-06	1,1	1,5	395	284	284	375	399	124	128	159	145	26,2	21,0	22,6	13,5	13
FVS 05-07	1,1	1,5	422	284	284	402	426	124	128	159	145	27,1	21,9	23,5	13,5	13
FVS 05-08	1,1	1,5	449	284	284	429	453	124	128	159	145	28,0	22,8	24,4	13,5	13
FVS 05-09	1,5	2	494	294	295	474	498	128	128	187	163	28,9	23,7	25,3	16,5	15
FVS 05-10	1,5	2	521	294	295	501	525	128	128	187	163	29,8	24,6	26,2	16,5	15
FVS 05-11	2,2	3	548	320	305	528	552	136	136	187	163	30,7	25,5	27,1	20	17,5
FVS 05-12	2,2	3	575	320	305	555	579	136	136	187	163	31,6	26,4	28,0	20	17,5
FVS 05-13	2,2	3	602	320	305	582	606	136	136	187	163	32,5	27,3	28,9	20	17,5
FVS 05-14	2,2	3	629	320	305	609	633	136	136	187	163	33,4	28,2	29,8	20	17,5
FVS 05-15	2,2	3	656	320	305	636	660	136	136	187	163	34,3	29,1	30,7	20	17,5
FVS 05-16	2,2	3	683	320	305	663	687	136	136	187	163	35,2	30,0	31,6	20	17,5

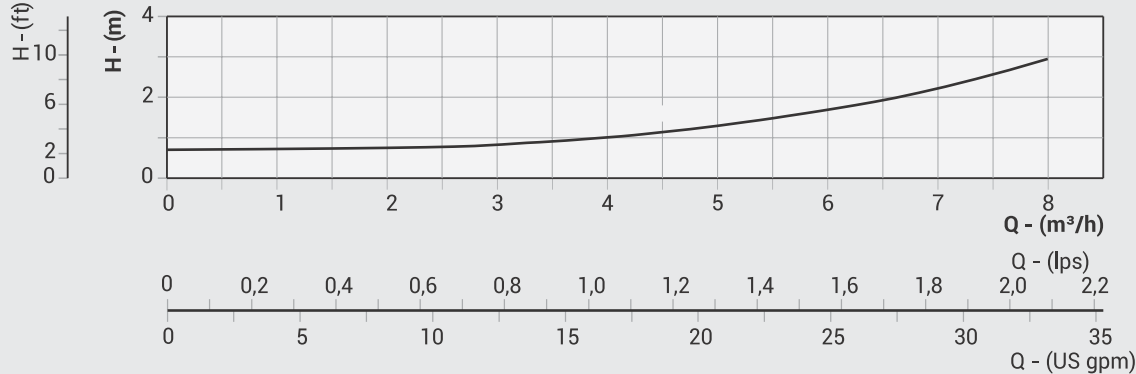
PERFORMANCE CURVES

NOMINAL FLOW : 5m³/h

FV-05



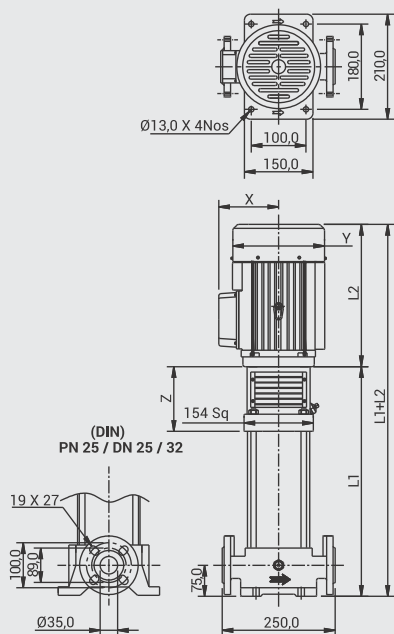
NPSHR CURVE



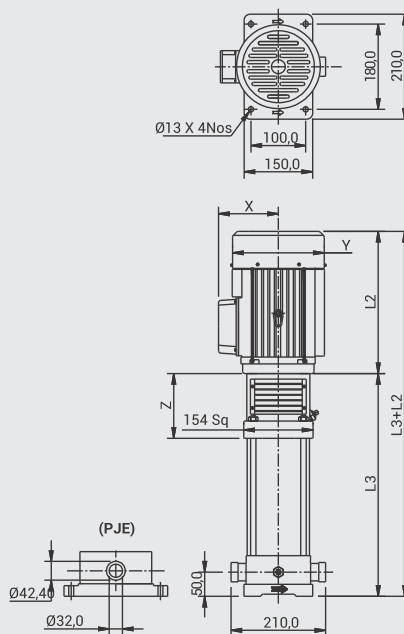
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-05

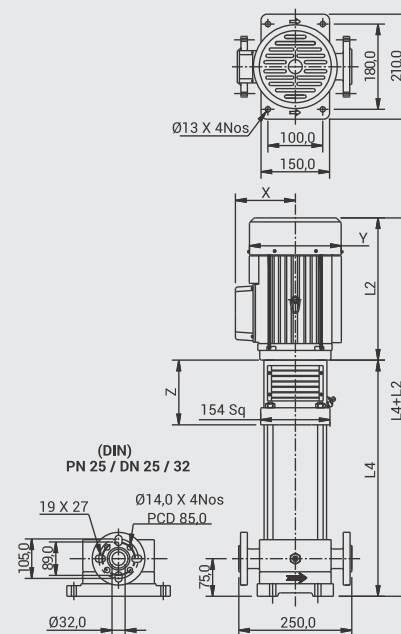
FVC (ROUND FLANGE)



FVS & N (PJE)



FVS & N (ROUND FLANGE)

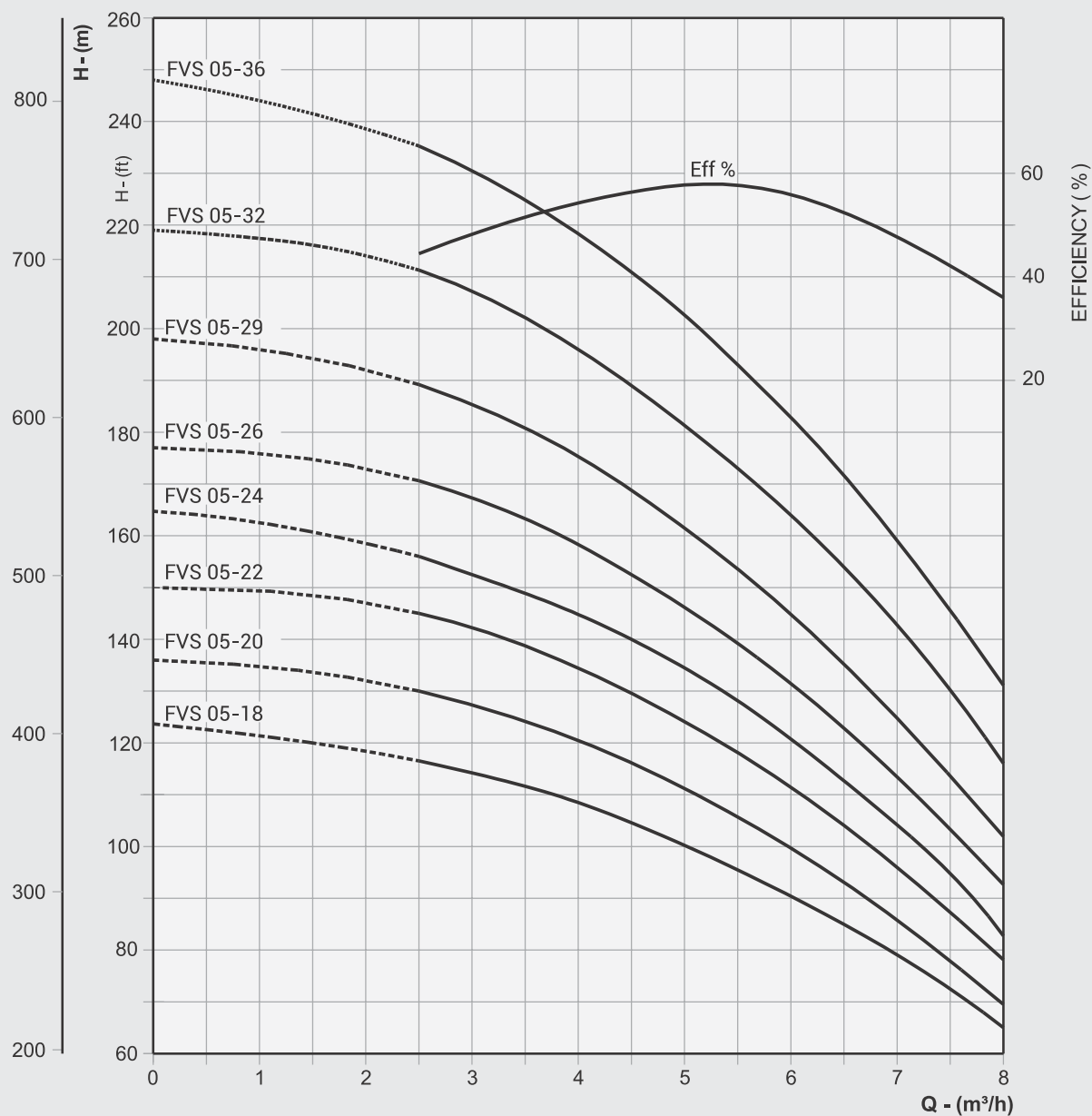


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)									APPROX NETT WEIGHT WITHOUT PACKING IN kg				
			L1	L2		L3	L4	X		ØY	Z	PUMP			MOTOR	
	kW	HP		1Ph	3Ph			1Ph	3Ph			FVC (R)	FVS & N (P)	FVS & N (R)	1Ph	3Ph
FVS 05-18	3	4	737	-	320	717	741	-	136	187	163	37	32	33	-	24,5
FVS 05-20	3	4	791	-	320	771	795	-	136	187	163	39	34	35	-	24,5
FVS 05-22	4	5,5	845	-	354	825	849	-	136	187	163	41	35	37	-	27,5
FVS 05-24	4	5,5	899	-	354	879	903	-	136	187	163	42	37	39	-	27,5
FVS 05-26	4	5,5	953	-	354	933	957	-	136	187	163	44	39	41	-	27,5
FVS 05-29	4	5,5	1034	-	354	1014	1038	-	136	187	163	46	42	43	-	27,5
FVS 05-32	5,5	7,5	1149	-	385	1129	1153	-	204	257	197	49	44	46	-	49
FVS 05-36	5,5	7,5	1257	-	385	1237	1261	-	204	257	197	52	48	50	-	49

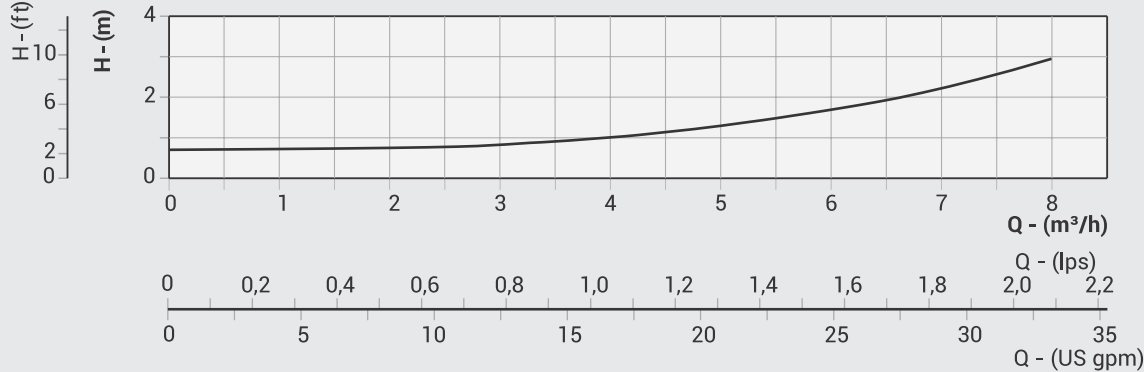
PERFORMANCE CURVES

NOMINAL FLOW : 5m³/h

FV-05



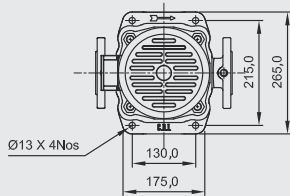
NPSHR CURVE



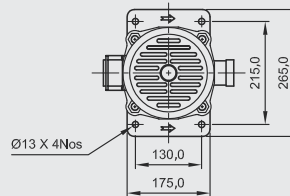
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FV-10

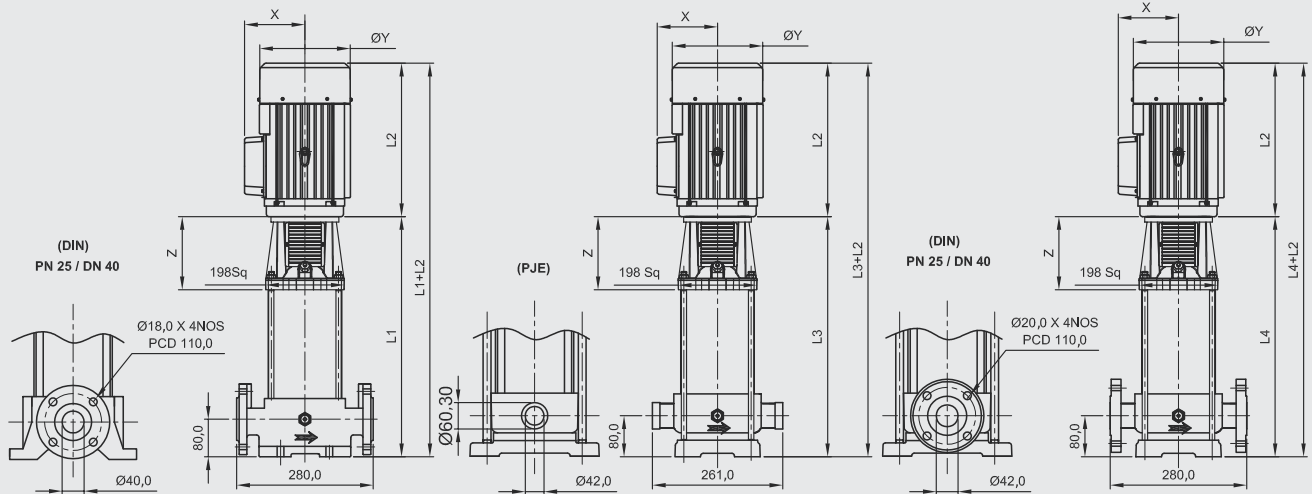
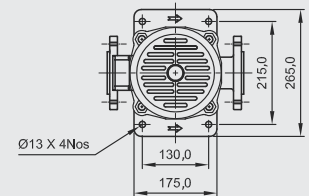
FVC (ROUND FLANGE)



FVC & N (PJE)



FVS & N (ROUND FLANGE)

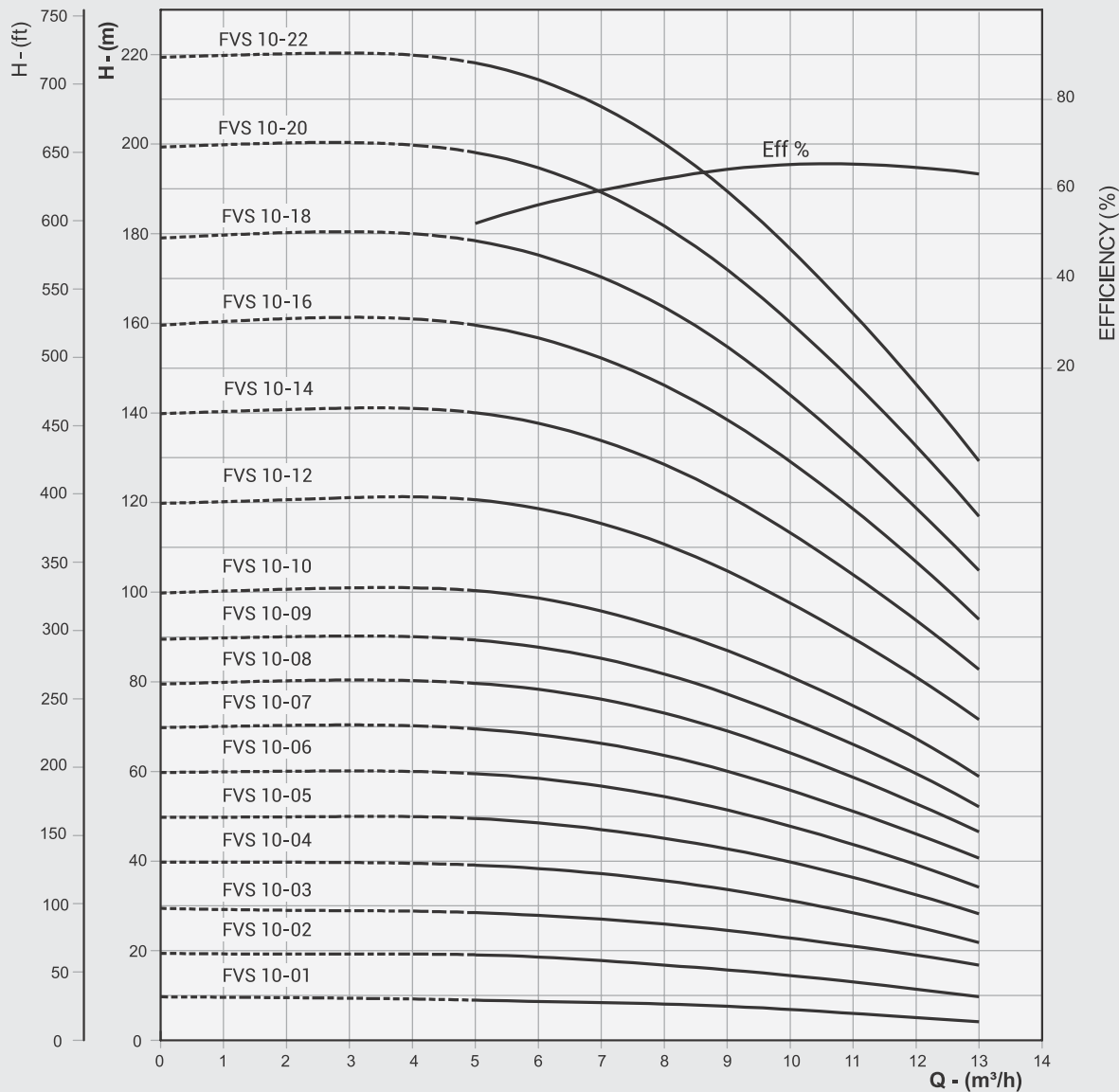


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)									APPROX NETT WEIGHT WITHOUT PACKING IN kg				
			L1	L2		L3	L4	X		ØY	Z	PUMP			MOTOR	
	kW	HP		1Ph	3Ph			1Ph	3Ph			FVC (R)	FVS & N (P)	FVS & N (R)	1Ph	3Ph
FVS 10-01	0,37	0,5	3,8	222	217	312	321	132,5	118,5	Ø138	173	32,5	27,5	28,5	9,0	8,0
FVS 10-02	0,75	1,0	338	267	252	342	342	147	116	Ø138	173	33,5	28,5	29,5	12,0	14,0
FVS 10-03	1,1	1,5	368	284	265	372	372	141	120	Ø160	173	34,5	29,5	30,5	13,5	13,0
FVS 10-04	1,5	2,0	413	280	292	417	417	144	131	Ø176	187	35,5	30,5	31,5	16,5	15,0
FVS 10-05	2,2	3,0	443	315	311	447	447	144	131	Ø176	187	36,5	31,5	32,5	20,0	17,5
FVS 10-06	2,2	3,0	473	315	311	477	477	144	131	Ø176	187	37,5	32,5	33,5	20,0	17,5
FVS 10-07	3,0	4,0	506	-	324	510	510	-	144	Ø197	190	38,5	33,5	34,5	-	24,5
FVS 10-08	3,0	4,0	536	-	324	540	540	-	144	Ø197	190	39,5	34,5	35,5	-	24,5
FVS 10-09	3,0	4,0	566	-	324	570	570	-	144	Ø197	190	40,5	35,5	36,5	-	24,5
FVS 10-10	4,0	5,5	596	-	350	600	600	-	135	Ø187	190	41,5	36,5	37,5	-	27,5
FVS 10-12	4,0	5,5	656	-	350	660	660	-	135	Ø187	190	43,5	38,5	39,5	-	27,5
FVS 10-14	5,5	7,5	742	-	385	746	746	-	205	Ø257	216	49,5	44,5	45,5	-	49,0
FVS 10-16	5,5	7,5	802	-	385	806	806	-	205	Ø257	216	51,5	46,5	47,5	-	49,0
FVS 10-18	7,5	10,0	862	-	424	866	866	-	205	Ø257	216	53,5	48,5	49,5	-	50,5
FVS 10-20	7,5	10,0	922	-	424	926	926	-	205	Ø257	216	55,5	50,5	51,5	-	50,5
FVS 10-22	7,5	10,0	982	-	424	986	986	-	205	Ø257	216	57,5	52,5	53,5	-	50,5

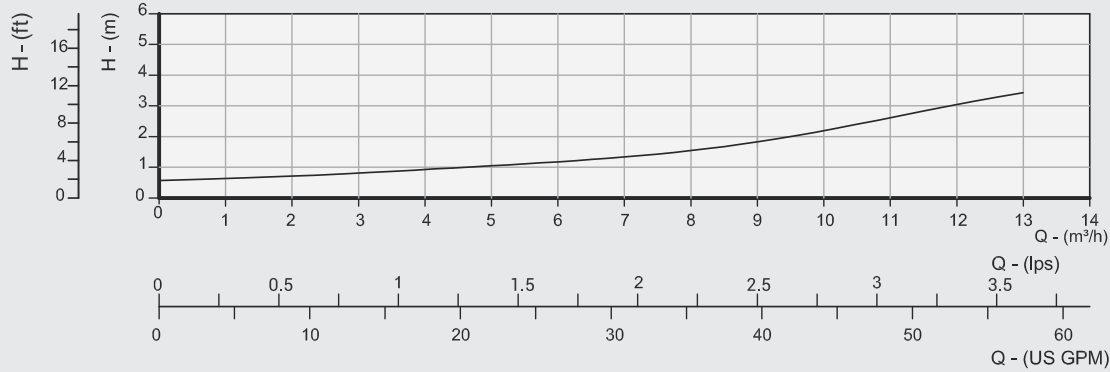
PERFORMANCE CURVES

NOMINAL FLOW : 10m³/h

FV-10



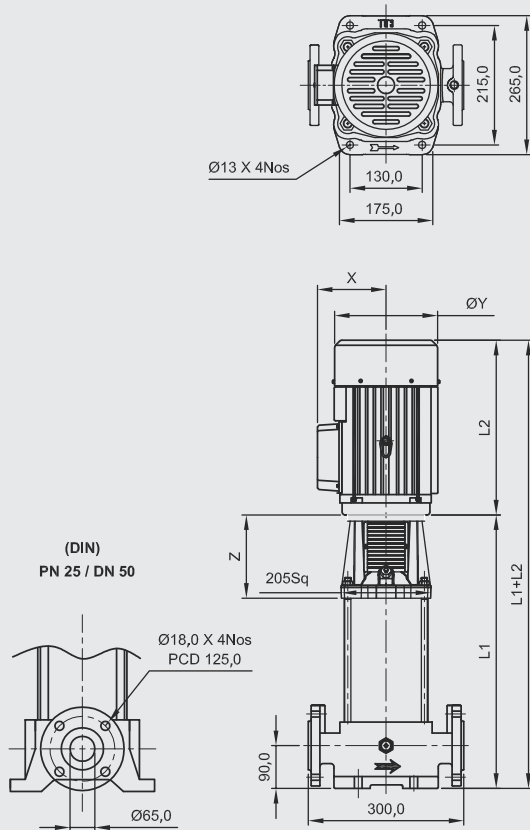
NPSHR CURVE



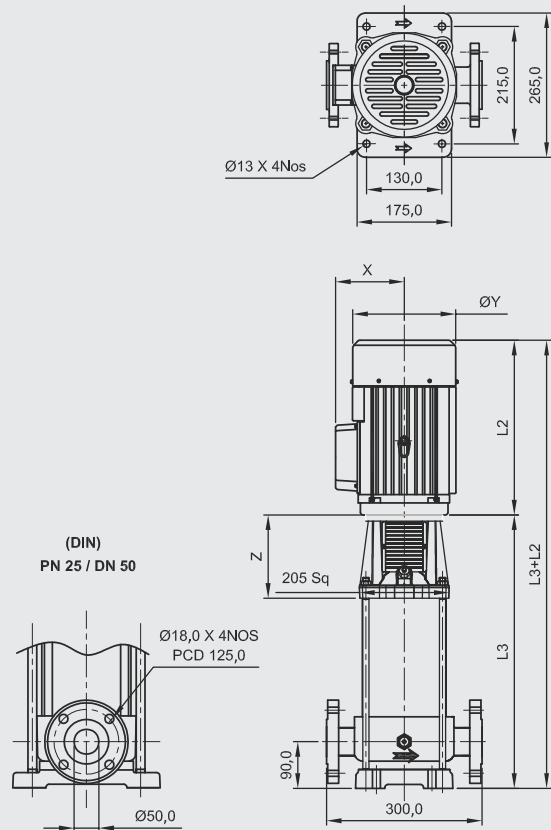
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-15

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

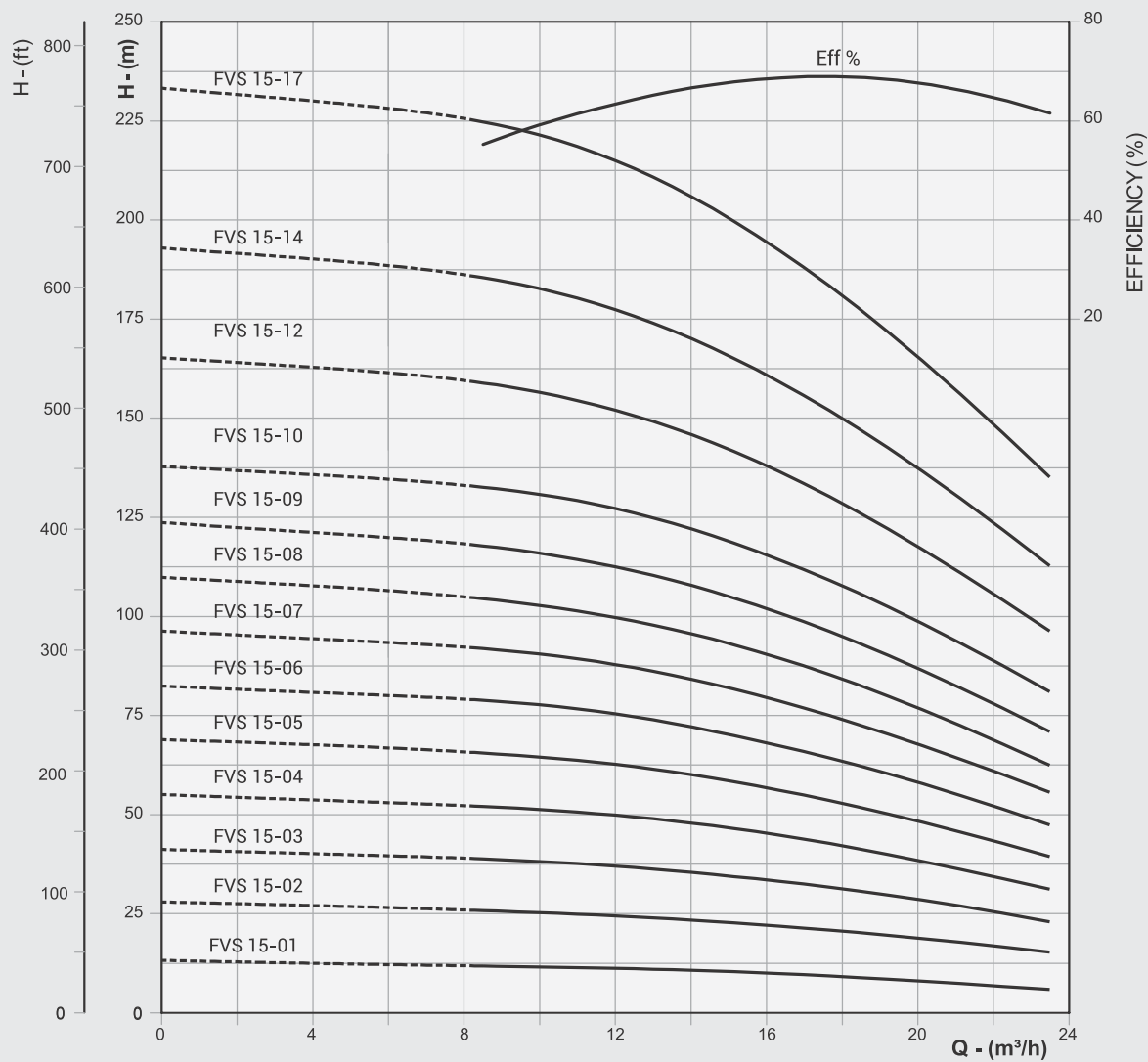


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)								APPROX NETT WEIGHT WITHOUT PACKING IN kg			
	kW	HP	L1	L3	L2		X		ØY	Z	PUMP		MOTOR	
			MVC (R)	MVS & N (R)	1Ph	3Ph	1Ph	3Ph			FVC (R)	FVS & N (R)	1Ph	3Ph
FVS 15-01	1,1	1,5	348	343	284	265	141	120	Ø160	173	38,0	33,0	13,5	13,0
FVS 15-02	2,2	3,0	407	402	315	311	144	131	Ø170	187	39,0	34,0	20,0	17,5
FVS 15-03	3,0	4,0	455	450	-	324	-	144	Ø197	190	40,0	35,0	-	24,5
FVS 15-04	4,0	5,5	500	495	-	350	-	162	Ø187	190	41,0	36,0	-	27,5
FVS 15-05	4,0	5,5	545	540	-	350	-	162	Ø187	190	42,0	37,0	-	27,5
FVS 15-06	5,5	7,5	616	611	-	385	-	205	Ø257	216	46,0	41,0	-	49,0
FVS 15-07	5,5	7,5	661	656	-	385	-	205	Ø257	216	47,0	42,0	-	49,0
FVS 15-08	7,5	10,0	706	701	-	424	-	205	Ø257	216	48,0	43,0	-	50,5
FVS 15-09	7,5	10,0	751	746	-	424	-	205	Ø257	216	49,0	44,0	-	50,5
FVS 15-10	11,0	15,0	885	880	-	500,5	-	261	Ø314	305	68,0	63,0	-	107,0
FVS 15-12	11,0	15,0	975	970	-	500,5	-	261	Ø314	305	70,0	65,0	-	107,0
FVS 15-14	11,0	15,0	1065	1060	-	500,5	-	261	Ø314	305	72,0	67,0	-	107,0
FVS 15-17	15,0	20,0	1200	1195	-	500,5	-	261	Ø314	305	75,0	70,0	-	117,0

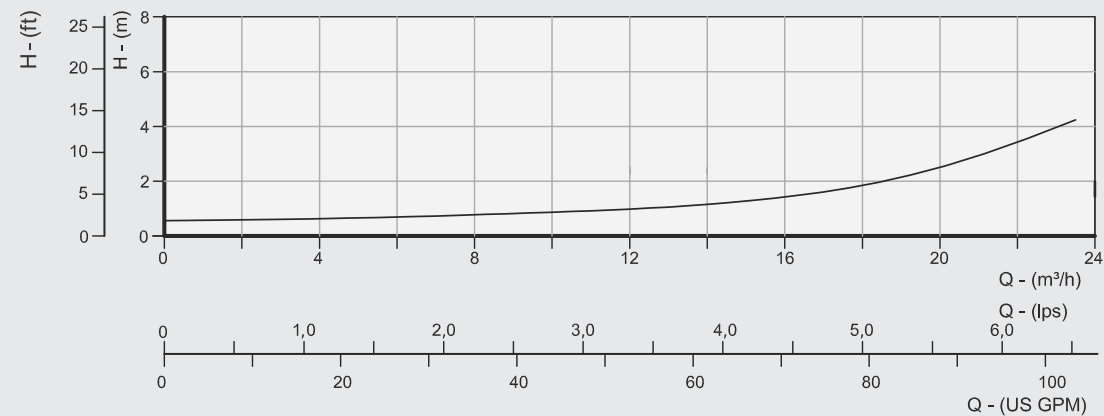
PERFORMANCE CURVES

NOMINAL FLOW : 15m³/h

FV-15



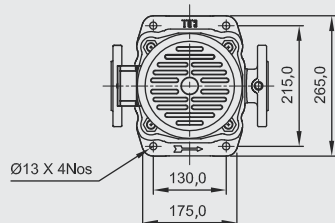
NPSHR CURVE



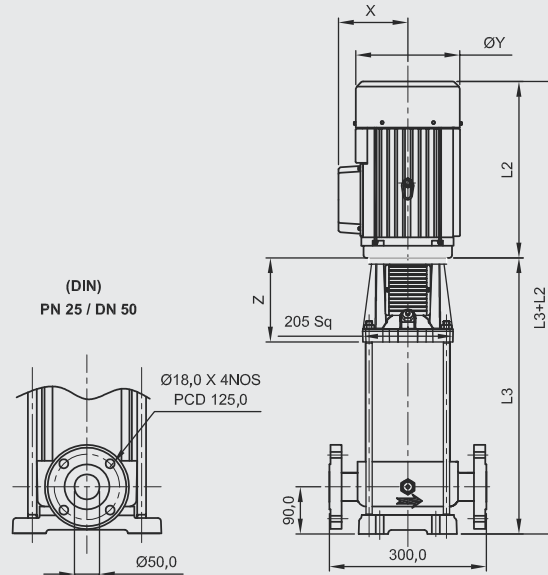
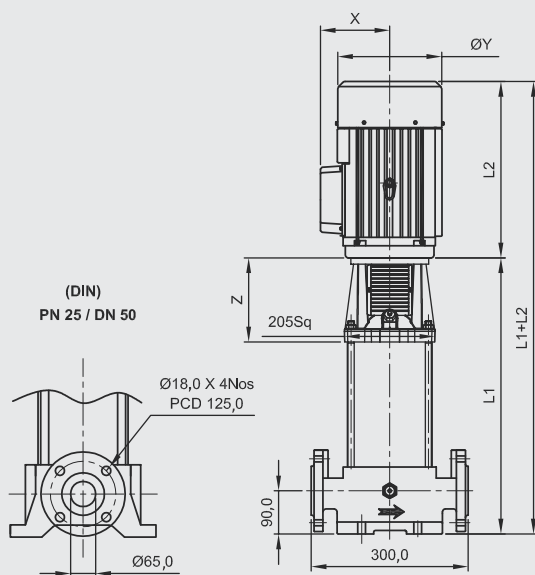
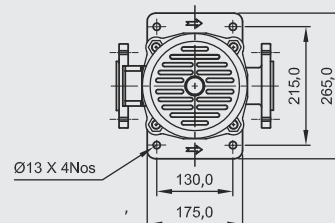
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-20

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

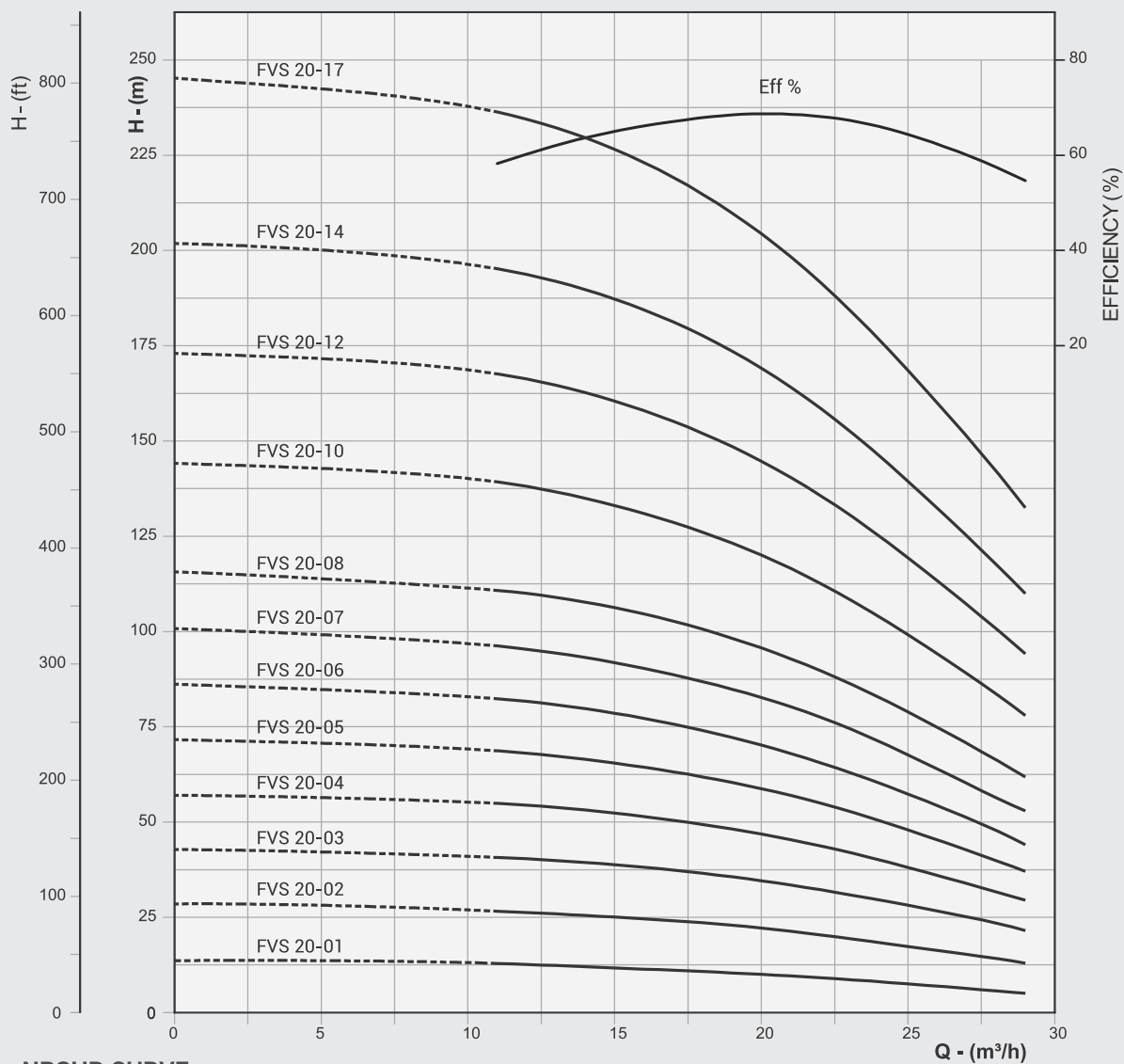


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)								APPROX NETT WEIGHT WITHOUT PACKING IN kg			
	kW	HP	L1	L3	L2		X		ØY	Z	PUMP		MOTOR	
			MVC (R)	MVS & N (R)	1Ph	3Ph	1Ph	3Ph			FVC (R)	FVS & N (R)	1Ph	3Ph
FVS 20-01	1,1	1,5	348	343	284	265	141	120	Ø160	173	38	33	13,5	13
FVS 20-02	2,2	3	407	402	315	311	144	131	Ø176	187	39	34	20	17,5
FVS 20-03	4	5,5	455	447	-	350	-	135	Ø187	190	40	35	-	27,5
FVS 20-04	5,5	7,5	529	521	-	385	-	205	Ø257	216	45	40	-	49
FVS 20-05	5,5	7,5	574	566	-	385	-	205	Ø257	216	46	41	-	49
FVS 20-06	7,5	10	619	611	-	424	-	205	Ø257	216	47	42	-	50,5
FVS 20-07	7,5	10	664	656	-	424	-	205	Ø257	216	48	43	-	50,5
FVS 20-08	11	15	798	790	-	500,5	-	261	Ø314	305	67	62	-	107
FVS 20-10	11	15	932	924	-	500,5	-	261	Ø314	305	69	64	-	107
FVS 20-12	15	20	1066	1058	-	500,5	-	261	Ø314	305	71	66	-	117
FVS 20-14	15	20	1200	1192	-	500,5	-	261	Ø314	305	73	68	-	117
FVS 20-17	18,5	25	1334	1326	-	500,5	-	261	Ø314	305	76	71	-	134

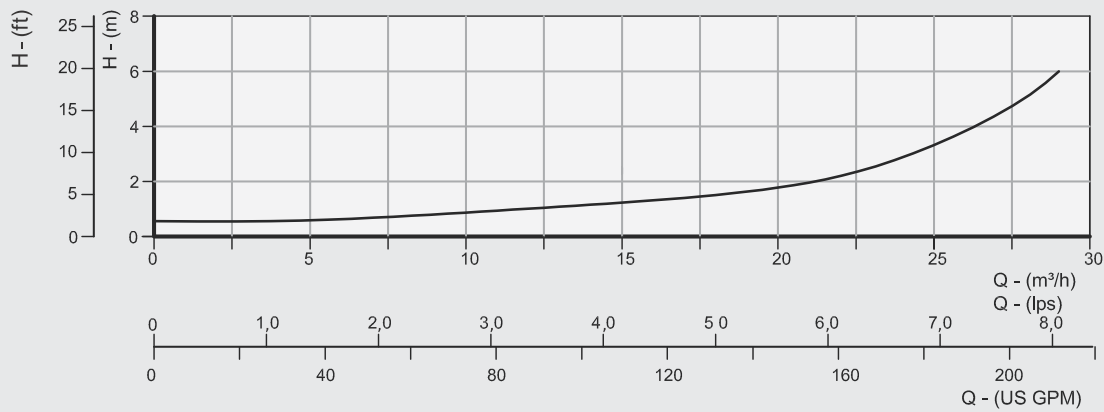
PERFORMANCE CURVES

NOMINAL FLOW : 20m³/h

FV-20



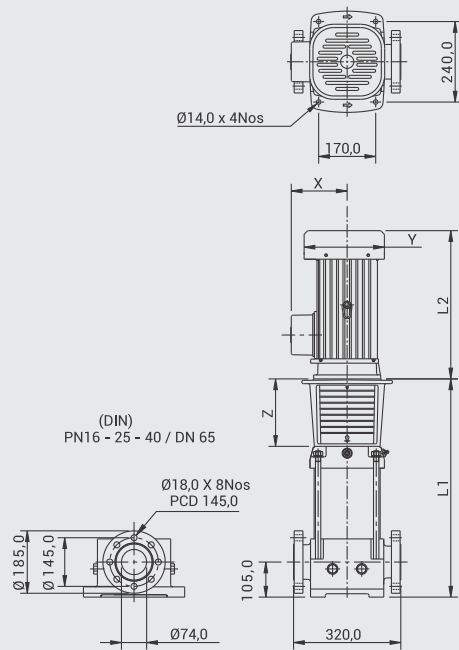
NPSHR CURVE



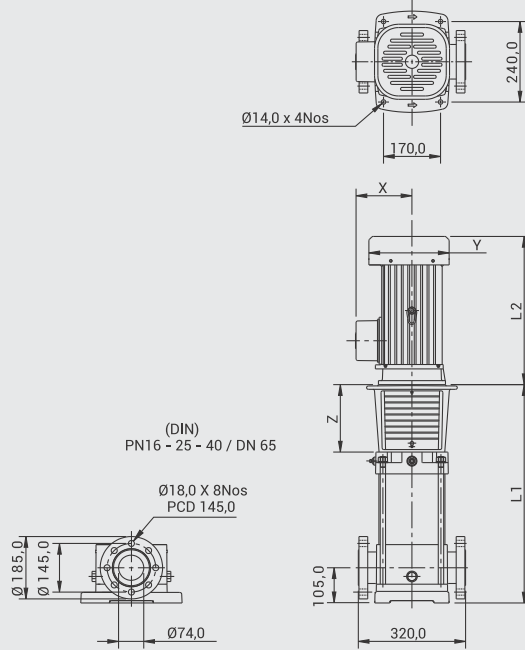
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-32

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

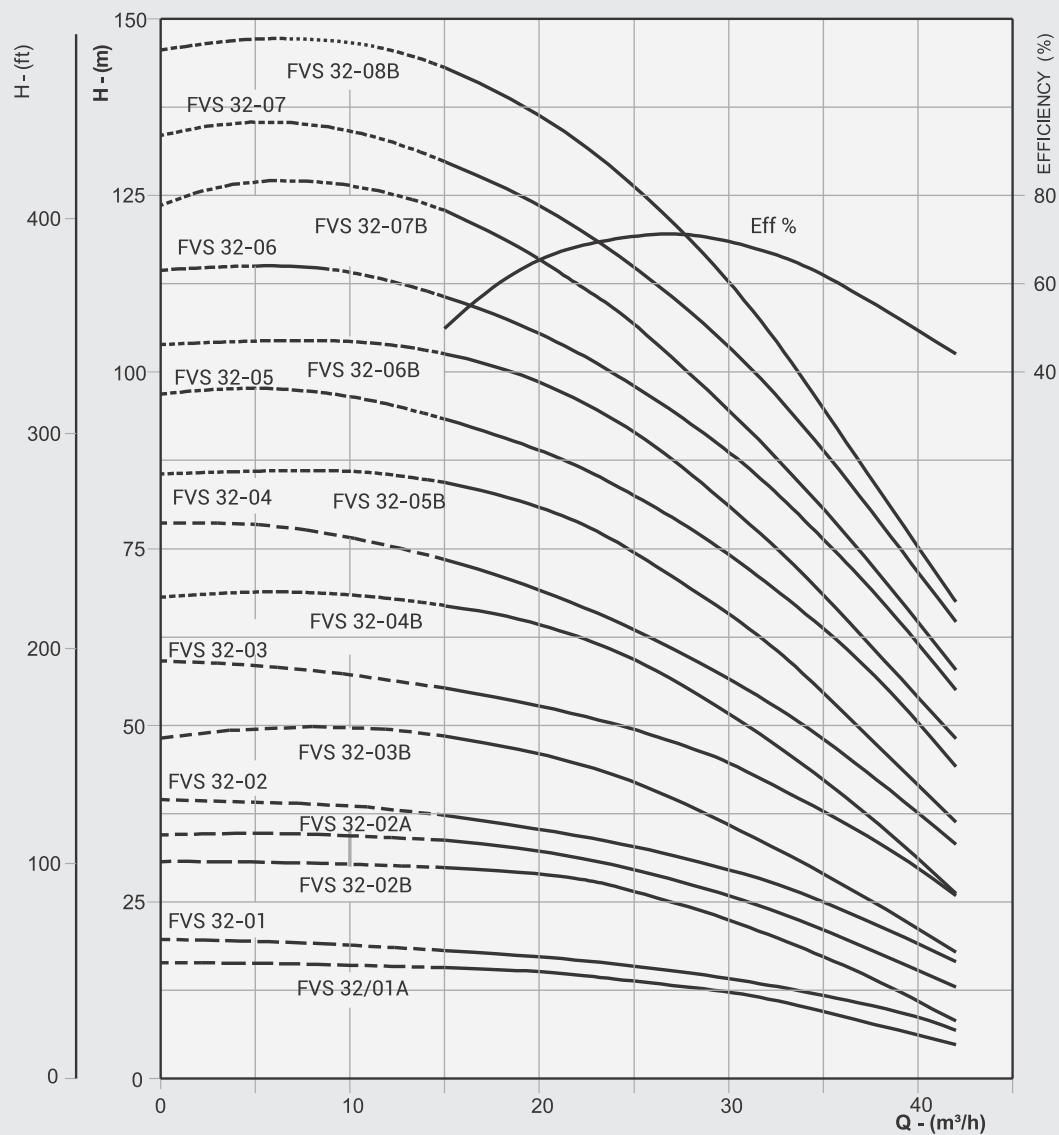


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)							APPROX NETT WEIGHT WITHOUT PACKING IN kg			
	kW	HP	L1	L2		X		ØY	Z	PUMP		MOTOR	
				1Ph	3Ph	1Ph	3Ph			FVC (R)	FVS & N (P)	1Ph	3Ph
FVS 32-01A	1,5	2	510	294	295	128	128	187	201	59	64	16,5	15
FVS 32-01	2,2	3	510	320	305	136	136	187	201	59	64	20	17,5
FVS 32-02B	3	4	580	-	320	-	136	187	201	62	67	-	24,5
FVS 32-02A	4	5,5	580	-	354	-	136	187	201	62	67	-	27,5
FVS 32-02	4	5,5	580	-	354	-	136	187	201	62	67	-	27,5
FVS 32-03B	5,5	7,5	650	-	385	-	204	257	201	64	69	-	49
FVS 32-03	5,5	7,5	650	-	385	-	204	257	201	64	69	-	48
FVS 32-04B	7,5	10	720	-	424	-	204	257	201	67	72	-	50,5
FVS 32-04	7,5	10	720	-	424	-	204	257	201	67	72	-	50,5
FVS 32-05B	11	15	895	-	495	-	223	312	305	83	88	-	107
FVS 32-05	11	15	895	-	495	-	223	312	305	83	88	-	107
FVS 32-06B	11	15	965	-	495	-	223	312	305	86	91	-	107
FVS 32-06	11	15	965	-	495	-	223	312	305	86	91	-	107
FVS 32-07B	15	20	1035	-	495	-	223	312	305	89	94	-	117
FVS 32-07	15	20	1035	-	495	-	223	312	305	89	94	-	117
FVS 32-08B	15	20	1105	-	495	-	223	312	305	92	97	-	117

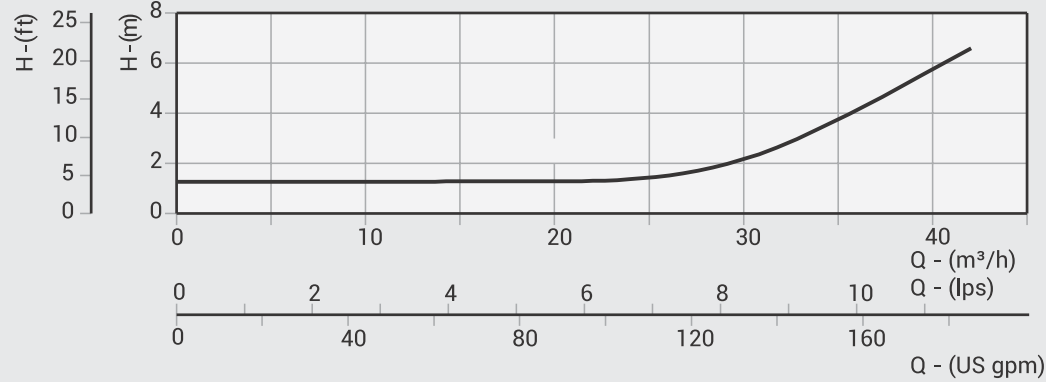
PERFORMANCE CURVES

NOMINAL FLOW : 32m³/h

FV-32



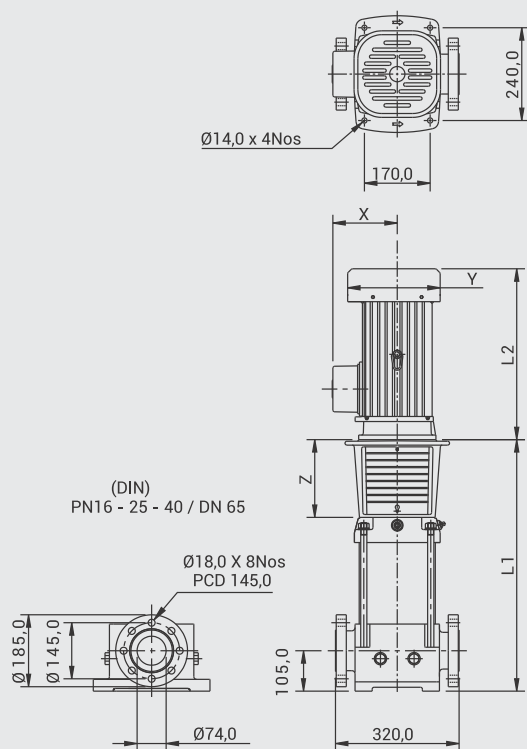
NPSHR CURVE



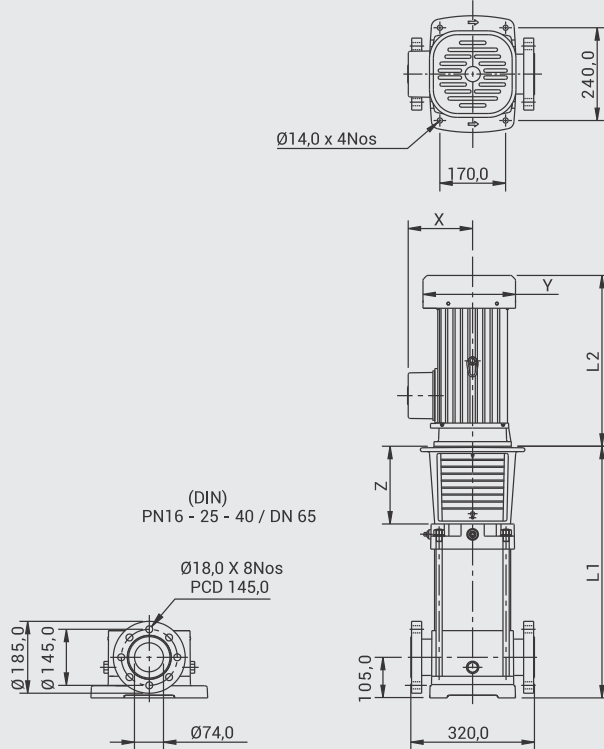
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-32

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

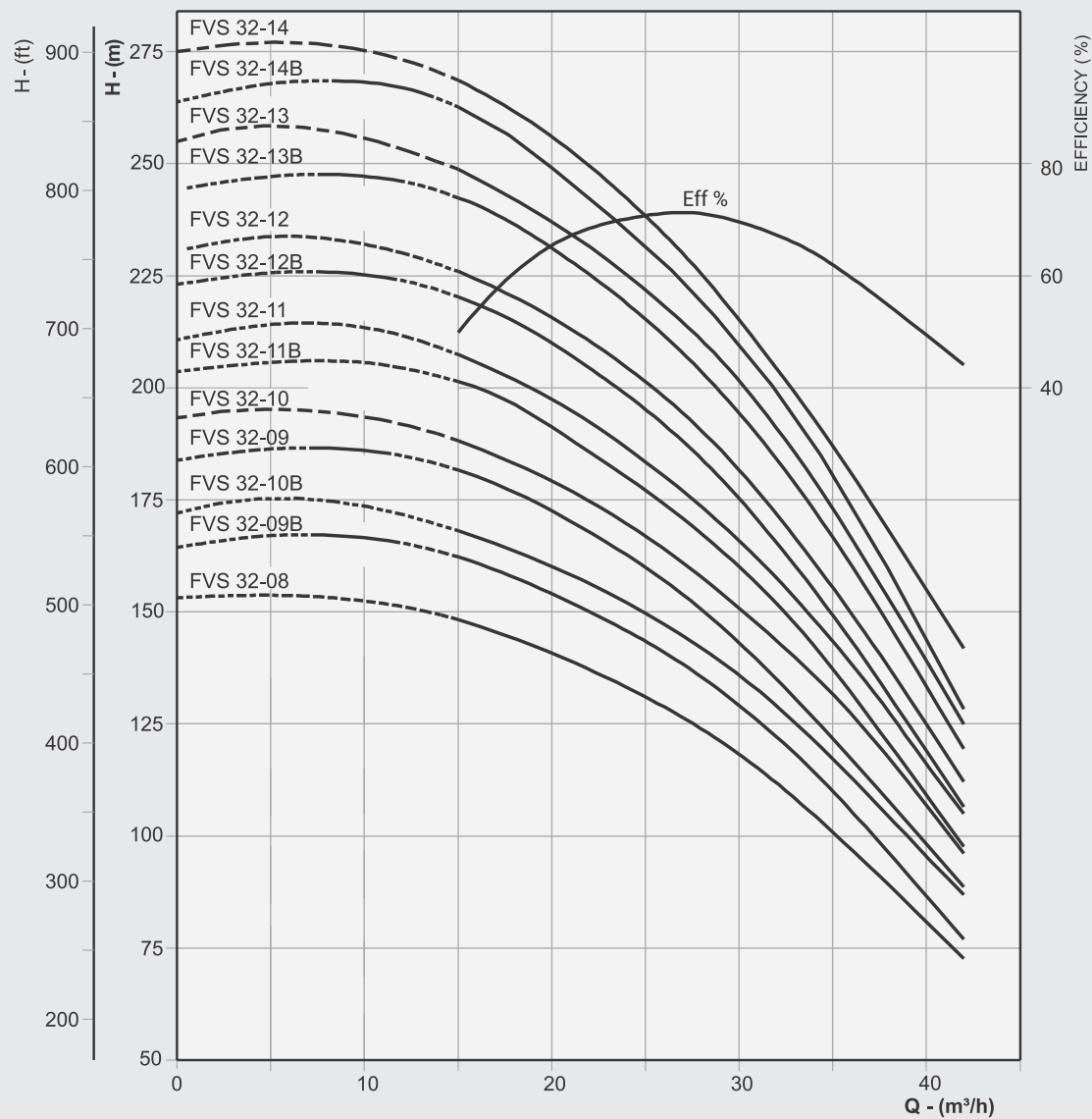


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)							APPROX NETT WEIGHT WITHOUT PACKING IN kg			
	kW	HP	L1	L2		X		ØY	Z	PUMP		MOTOR	
				1Ph	3Ph	1Ph	3Ph			FVC (R)	FVS & N (P)	1Ph	3Ph
FVS 32-08	15	20	1105	-	495	-	223	312	305	92	97	-	117
FVS 32-09B	18,5	25	1175	-	495	-	223	312	305	95	100	-	134
FVS 32-09	18,5	25	1175	-	495	-	223	312	305	95	100	-	134
FVS 32-10B	18,5	25	1245	-	495	-	223	312	305	98	103	-	134
FVS 32-10	18,5	25	1245	-	495	-	223	312	305	98	103	-	134
FVS 32-11B	22	30	1315	-	630	-	271	sq340	305	101	106	-	180
FVS 32-11	22	30	1315	-	630	-	271	sq340	305	101	106	-	180
FVS 32-12B	22	30	1385	-	630	-	271	sq340	305	104	109	-	180
FVS 32-12	22	30	1385	-	630	-	271	sq340	305	104	109	-	180
FVS 32-13B	30	40	1455	-	630	-	271	sq340	305	108	113	-	242
FVS 32-13	30	40	1455	-	630	-	271	sq340	305	108	113	-	242
FVS 32-14B	30	40	1575	-	630	-	271	sq340	305	111	116	-	242
FVS 32-14	30	40	1575	-	630	-	271	sq340	305	111	116	-	242

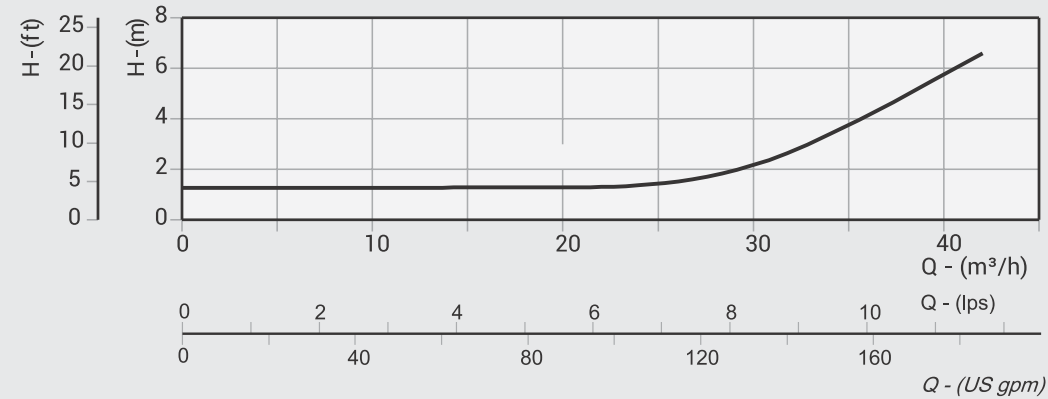
PERFORMANCE CURVES

NOMINAL FLOW : 32m³/h

FV-32



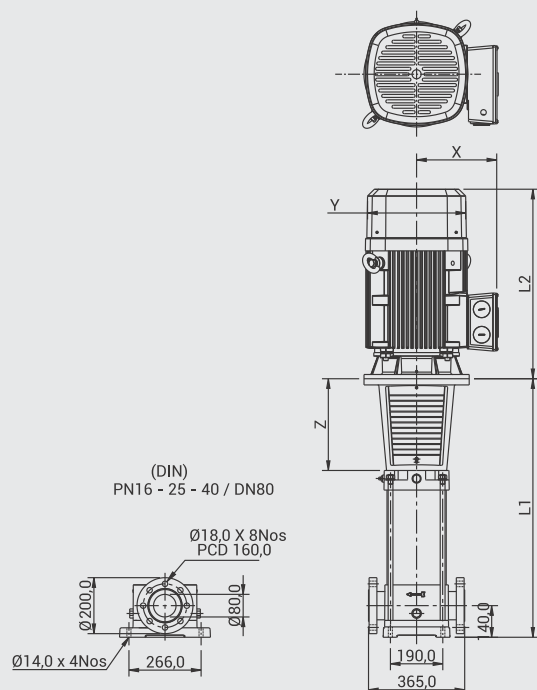
NPSHR CURVE



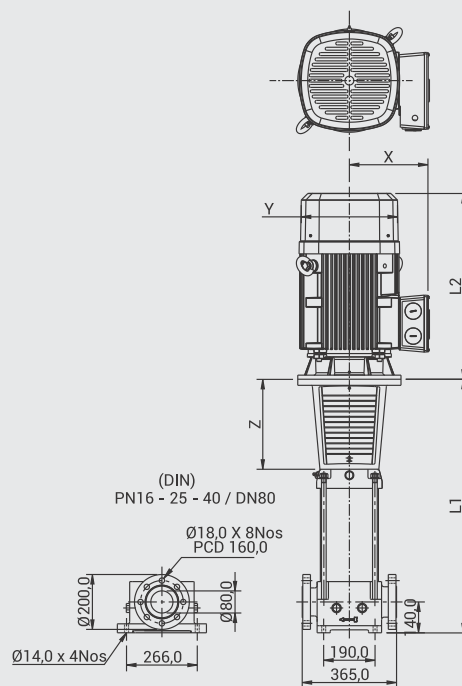
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-44

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

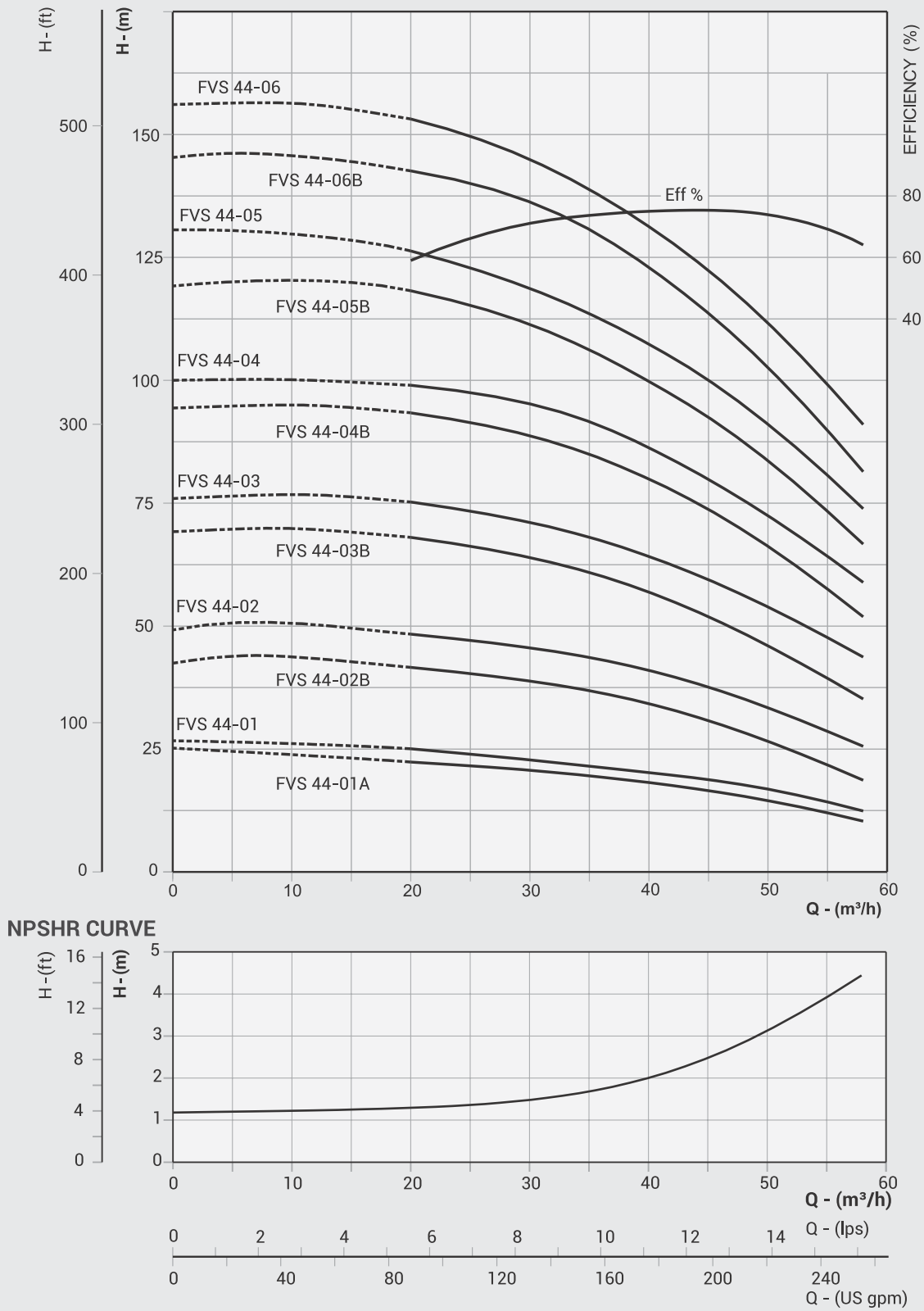


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)							APPROX NETT WEIGHT WITHOUT PACKING IN kg			
	kW	HP	L1	L2		X		ØY	Z	PUMP		MOTOR	
				1Ph	3Ph	1Ph	3Ph			FVC (R)	FVS & N (P)	1Ph	3Ph
FVS 44-01A	3	4	564	-	320	-	136	187	201	67	64	-	24,5
FVS 44-01	4	5,5	564	-	354	-	136	187	201	67	64	-	27,5
FVS 44-02B	5,5	7,5	644	-	385	-	204	257	201	71	68	-	49
FVS 44-02	7,5	10	644	-	424	-	204	257	201	71	68	-	50,5
FVS 44-03B	11	15	828	-	495	-	223	312	305	89	86	-	107
FVS 44-03	11	15	828	-	495	-	223	312	305	89	86	-	107
FVS 44-04B	15	20	908	-	495	-	223	312	305	93	90	-	117
FVS 44-04	15	20	908	-	495	-	223	312	305	93	90	-	117
FVS 44-05B	18,5	25	988	-	495	-	223	312	305	97	94	-	134
FVS 44-05	18,5	25	988	-	495	-	223	312	305	97	94	-	134
FVS 44-06B	22	30	1068	-	630	-	271	sq340	305	101	98	-	180
FVS 44-06	22	30	1068	-	630	-	271	sq340	305	101	98	-	180

PERFORMANCE CURVES

NOMINAL FLOW : 44m³/h

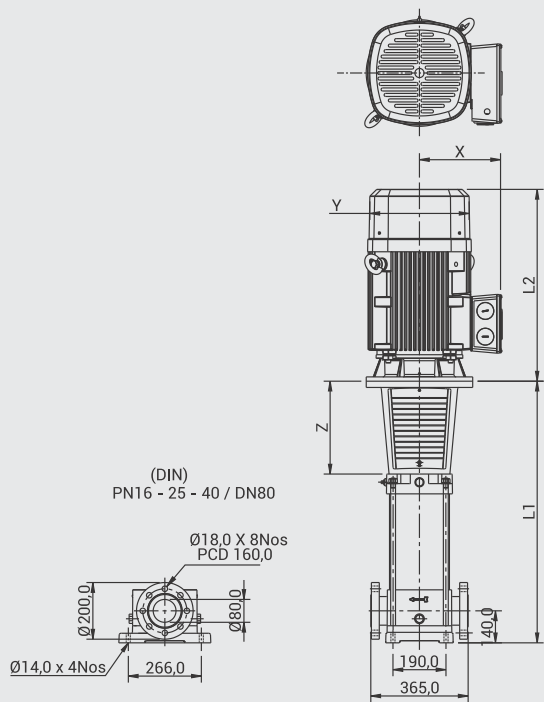
FV-44



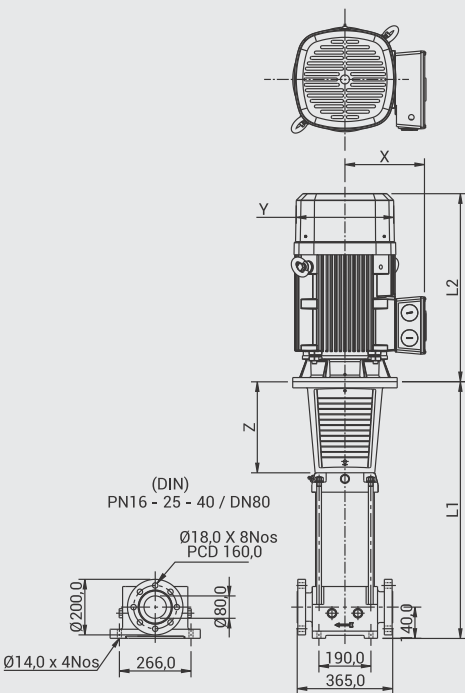
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-44

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

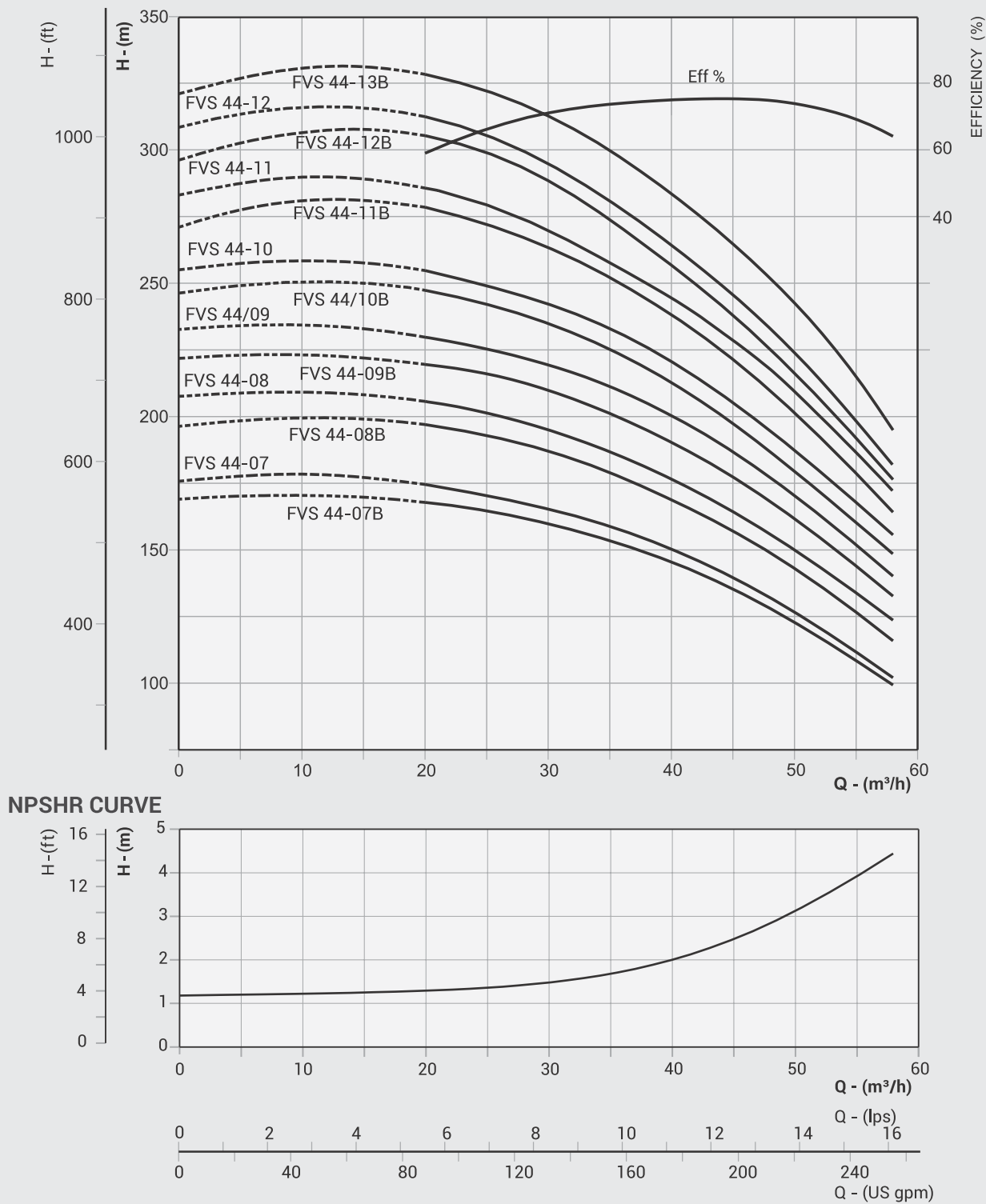


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)							APPROX NETT WEIGHT WITHOUT PACKING IN kg			
	kW	HP	L1	L2		X		ØY	Z	PUMP		MOTOR	
				1Ph	3Ph	1Ph	3Ph			FVC (R)	FVS & N (P)	1Ph	3Ph
FVS 44-07B	30	40	1148	-	630	-	271	sq340	305	106	103	-	242
FVS 44-07	30	40	1148	-	630	-	271	sq340	305	106	103	-	242
FVS 44-08B	30	40	1228	-	630	-	271	sq340	305	110	107	-	242
FVS 44-08	30	40	1228	-	630	-	271	sq340	305	110	107	-	242
FVS 44-09B	30	40	1308	-	630	-	271	sq340	305	114	111	-	242
FVS 44-09	37	50	1308	-	650	-	276	395	305	117	114	-	258
FVS 44-10B	37	50	1388	-	650	-	276	395	305	121	118	-	258
FVS 44-10	37	50	1388	-	650	-	276	395	305	121	118	-	258
FVS 44-11B	45	60	1468	-	695	-	297	435	305	125	122	-	320
FVS 44-11	45	60	1468	-	695	-	297	435	305	125	122	-	320
FVS 44-12B	45	60	1548	-	695	-	297	435	305	129	126	-	320
FVS 44-12	45	60	1548	-	695	-	297	435	305	129	126	-	320
FVS 44-13B	45	60	1628	-	695	-	297	435	305	129	126	-	320

PERFORMANCE CURVES

NOMINAL FLOW : 44m³/h

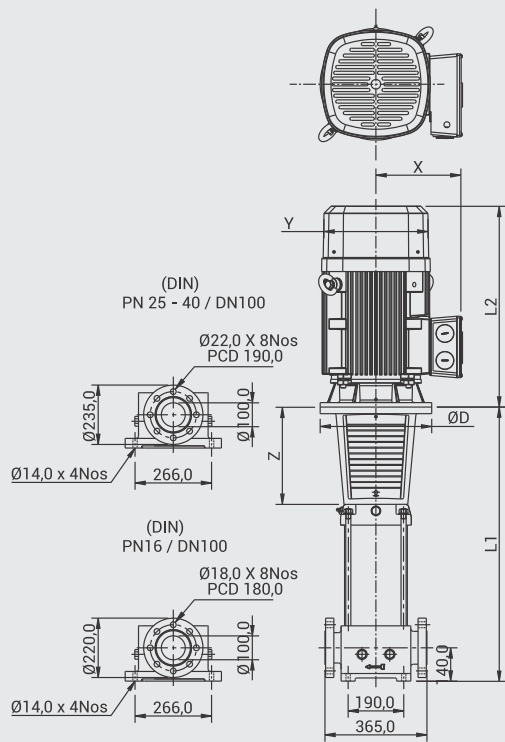
FV-44



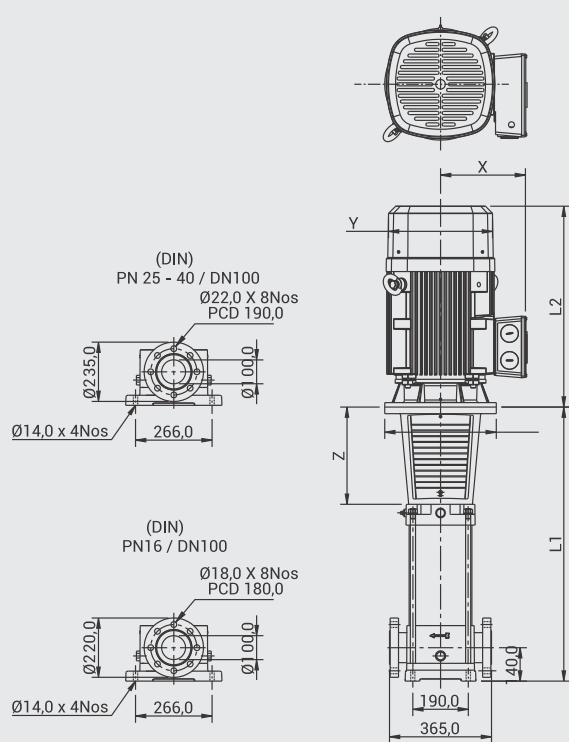
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-66

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

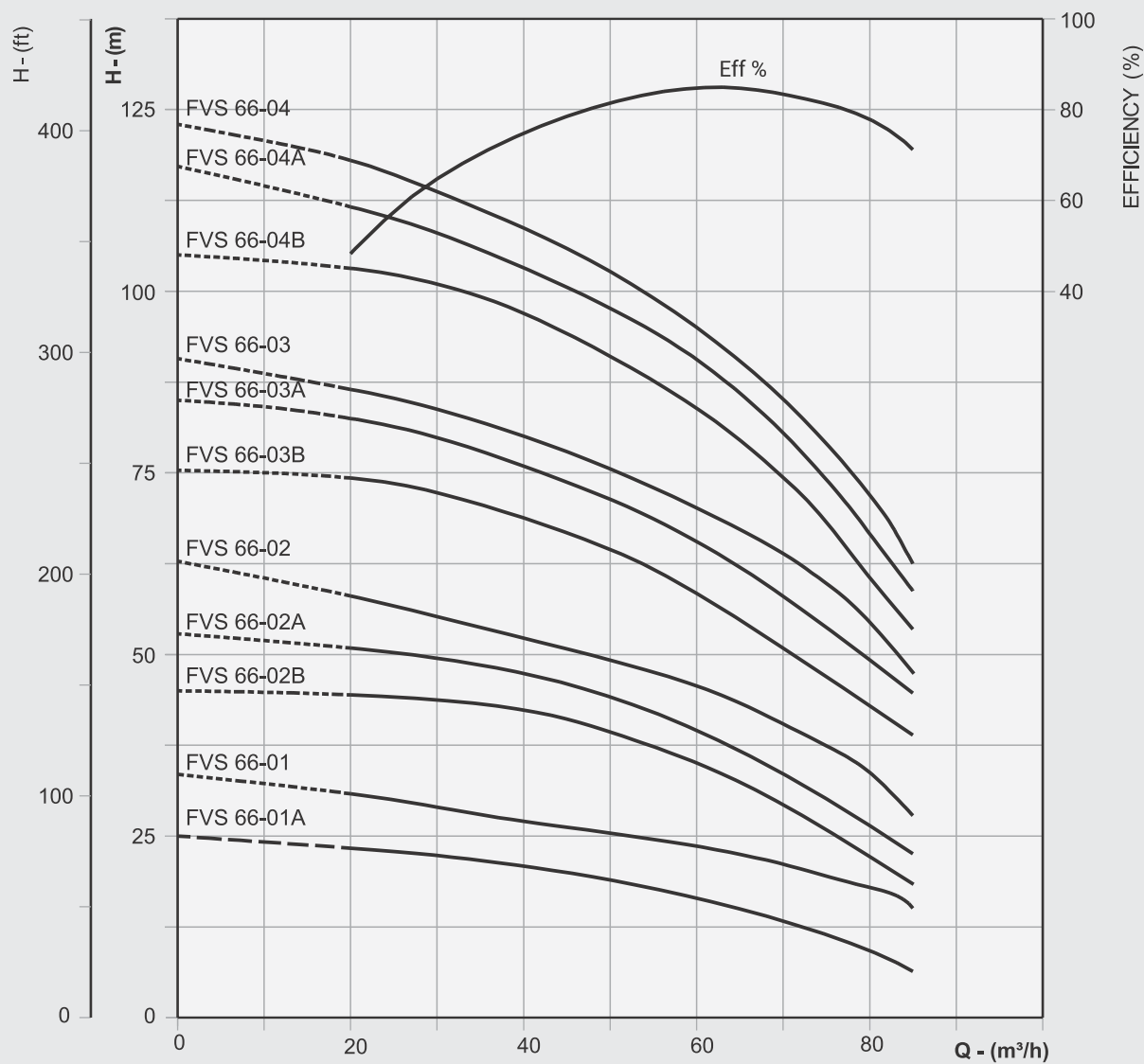


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)							APPROX NETT WEIGHT WITHOUT PACKING IN kg			
	kW	HP	L1	L2		X		ØY	Z	PUMP		MOTOR	
				1Ph	3Ph	1Ph	3Ph			FVC (R)	FVS & N (P)	1Ph	3Ph
FVS 66-01A	4	5,5	564	-	354	-	136	187	201	83	80	-	27,5
FVS 66-01	5,5	7,5	564	-	385	-	204	257	201	84	81	-	49
FVS 66-02B	7,5	10	644	-	424	-	204	257	201	87	84	-	50,5
FVS 66-02A	11	15	644	-	495	-	223	312	305	101	98	-	107
FVS 66-02	11	15	644	-	495	-	223	312	305	101	98	-	107
FVS 66-03B	15	20	828	-	495	-	223	312	305	105	102	-	117
FVS 66-03A	15	20	828	-	495	-	223	312	305	105	102	-	117
FVS 66-03	18,5	25	828	-	495	-	223	312	305	105	102	-	134
FVS 66-04B	18,5	25	908	-	495	-	223	312	305	109	106	-	134
FVS 66-04A	22	30	908	-	630	-	271	sq340	305	109	106	-	180
FVS 66-04	22	30	908	-	630	-	271	sq340	305	109	106	-	180

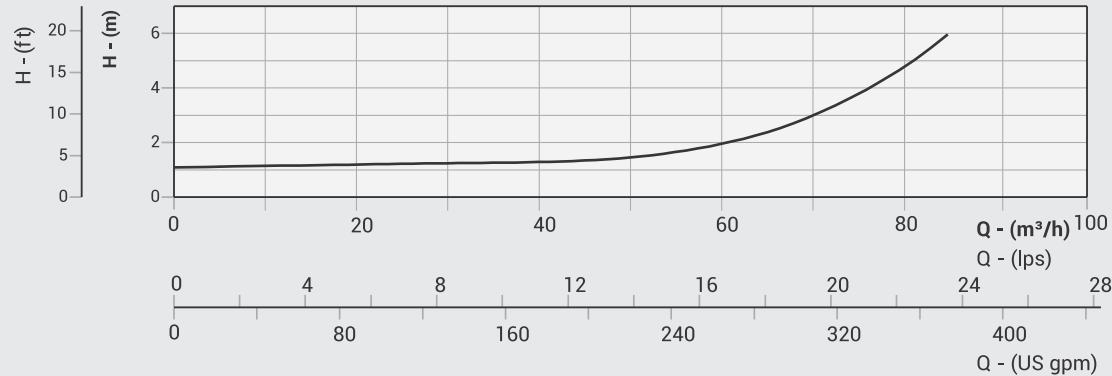
PERFORMANCE CURVES

NOMINAL FLOW : 66m³/h

FV-66



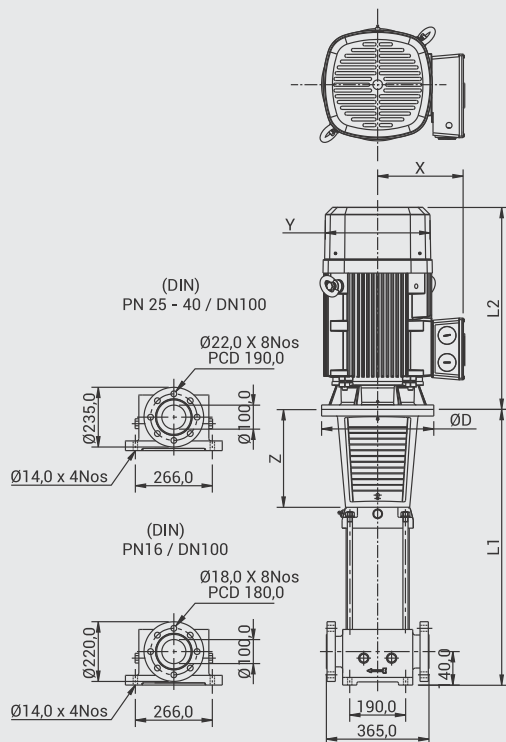
NPSHR CURVE



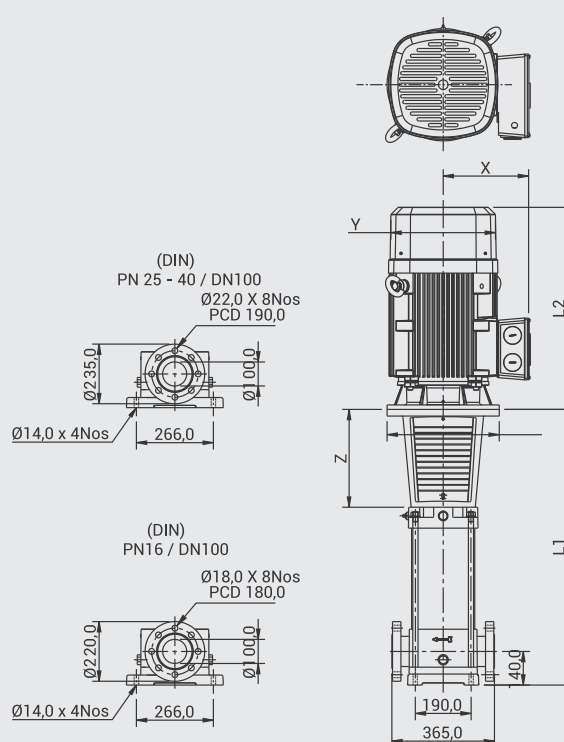
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-66

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

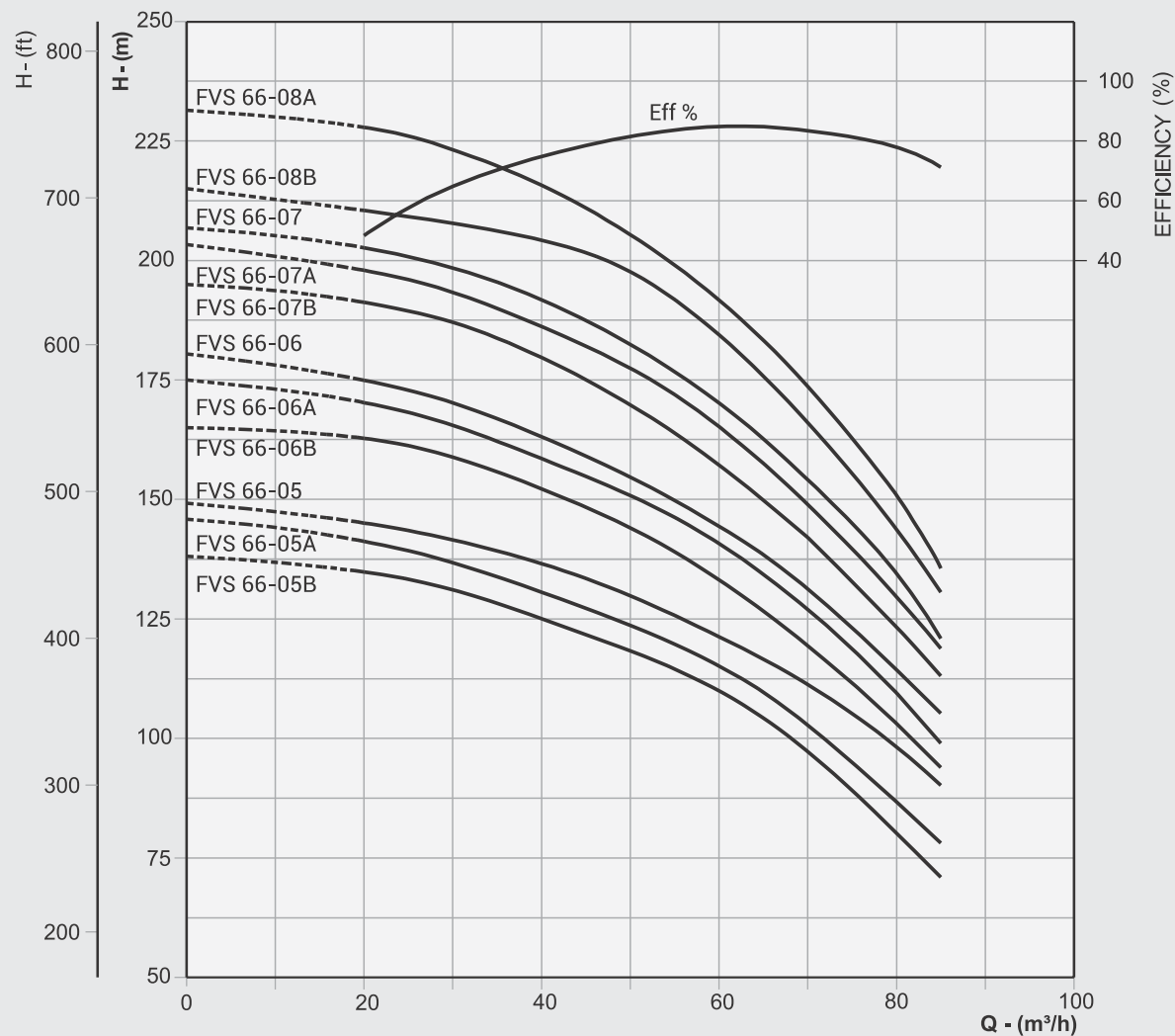


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)							APPROX NETT WEIGHT WITHOUT PACKING IN kg			
	kW	HP	L1	L2		X		ØY	Z	PUMP		MOTOR	
				1Ph	3Ph	1Ph	3Ph			FVC (R)	FVS & N (P)	1Ph	3Ph
FVS 66-05B	30	40	988	-	630	-	271	sq340	305	114	111	-	242
FVS 66-05A	30	40	988	-	630	-	271	sq340	305	114	111	-	242
FVS 66-05	30	40	988	-	630	-	271	sq340	305	114	111	-	242
FVS 66-06B	30	40	1068	-	630	-	271	sq340	305	118	115	-	242
FVS 66-06A	37	50	1068	-	650	-	276	395	305	121	118	-	258
FVS 66-06	37	50	1068	-	650	-	276	395	305	121	118	-	258
FVS 66-07B	37	50	1148	-	650	-	276	395	305	125	122	-	258
FVS 66-07A	37	50	1148	-	650	-	276	395	305	125	122	-	258
FVS 66-07	45	60	1148	-	695	-	297	435	305	125	122	-	320
FVS 66-08B	45	60	1228	-	695	-	297	435	305	129	126	-	320
FVS 66-08A	45	60	1228	-	695	-	297	435	305	129	126	-	320

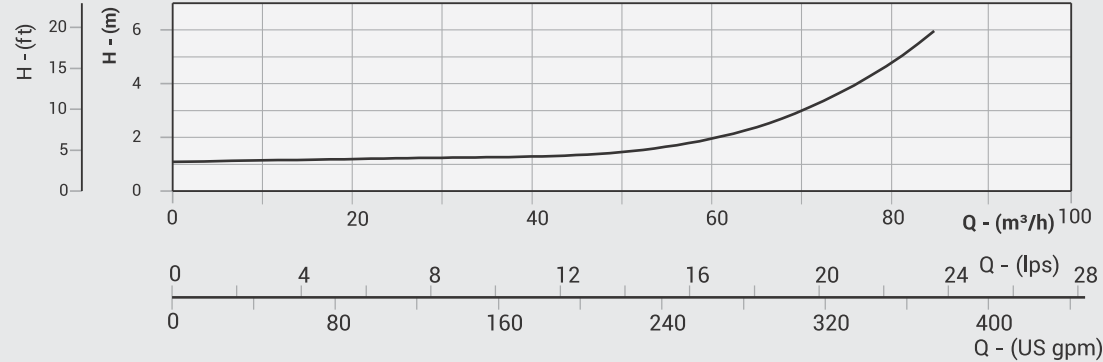
PERFORMANCE CURVES

NOMINAL FLOW : 66m³/h

FV-66



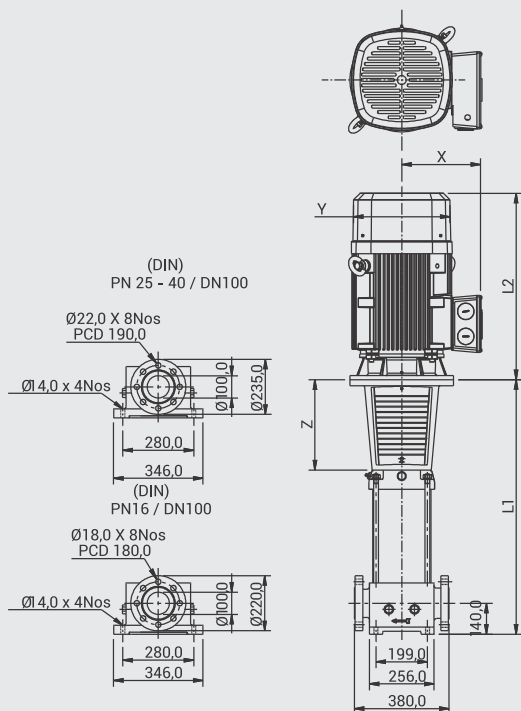
NPSHR CURVE



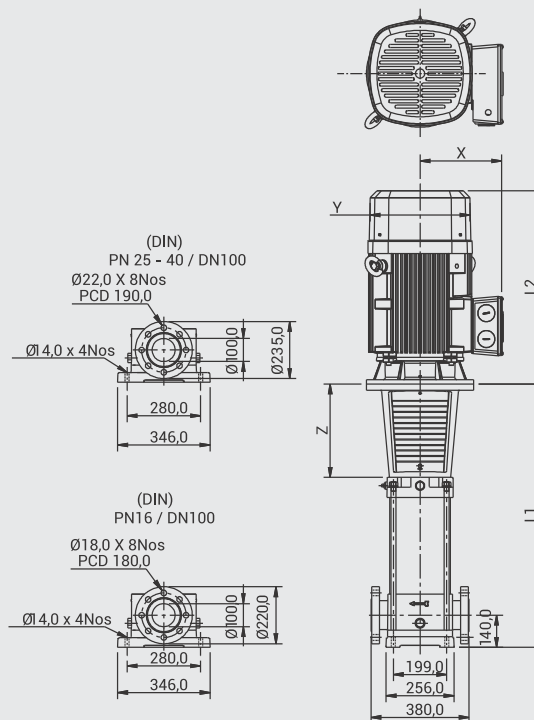
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-90

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

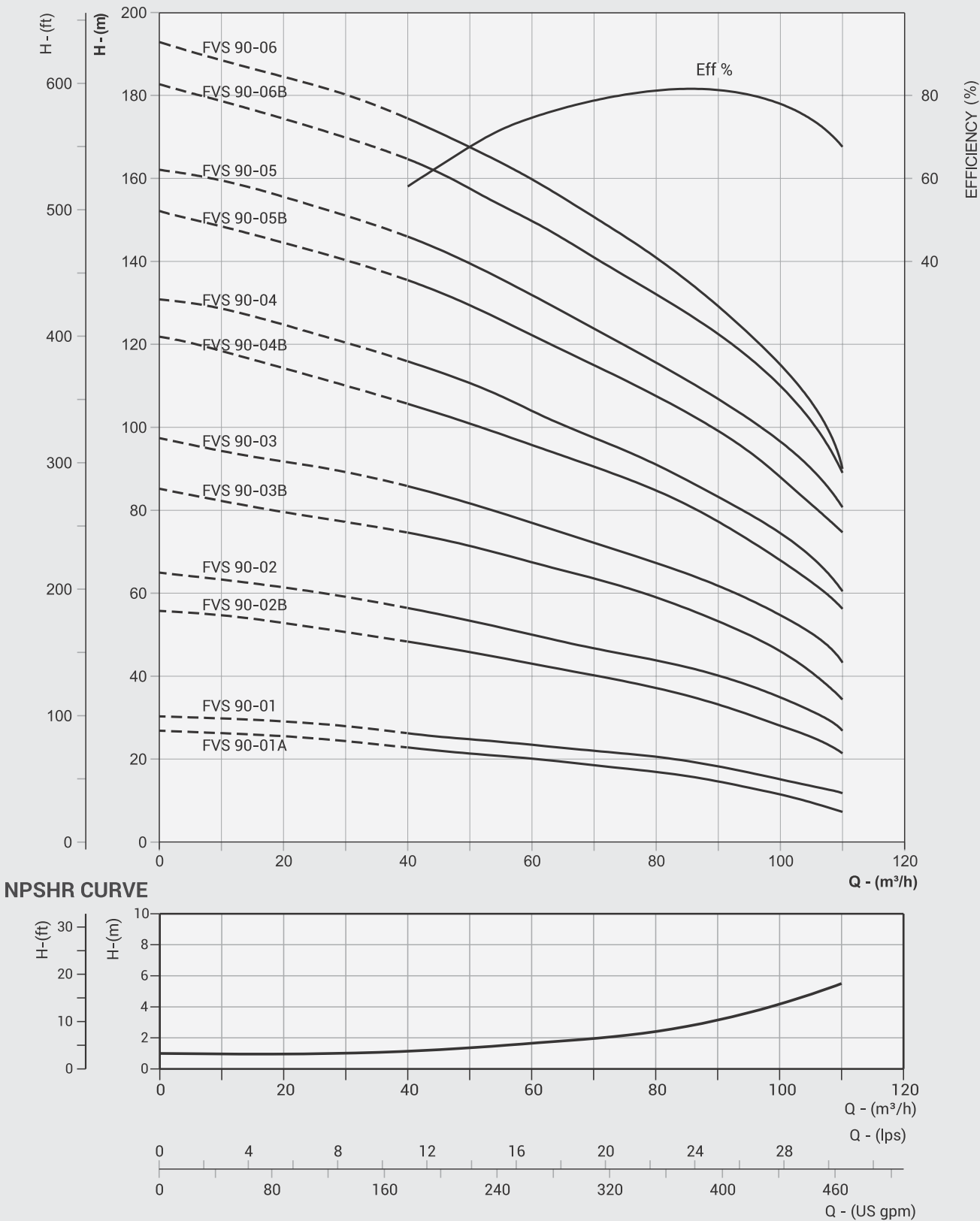


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)							APPROX NETT WEIGHT WITHOUT PACKING IN kg			
	kW	HP	L1	L2		X		ØY	Z	PUMP		MOTOR	
				1Ph	3Ph	1Ph	3Ph			FVC (R)	FVS & N (P)	1Ph	3Ph
FVS 90-01A	5,5	7,5	572	-	385	-	204	257	201	80	78	-	49
FVS 90-01	7,5	10	572	-	424	-	204	257	201	80	78	-	50,5
FVS 90-02B	11	15	768	-	495	-	223	312	305	102	100	-	107
FVS 90-02	15	20	768	-	495	-	223	312	305	102	100	-	117
FVS 90-03B	18,5	25	860	-	495	-	223	312	305	110	108	-	134
FVS 90-03	22	30	860	-	630	-	271	sq340	305	110	108	-	180
FVS 90-04B	30	40	952	-	630	-	271	sq340	305	118	116	-	242
FVS 90-04	30	40	952	-	630	-	271	sq340	305	118	116	-	242
FVS 90-05B	37	50	1044	-	650	-	276	395	305	129	127	-	258
FVS 90-05	37	50	1044	-	650	-	276	395	305	129	127	-	258
FVS 90-06B	45	60	1136	-	695	-	297	435	305	137	135	-	320
FVS 90-06	45	60	1136	-	695	-	297	435	305	137	135	-	320

PERFORMANCE CURVES

NOMINAL FLOW : 90m³/h

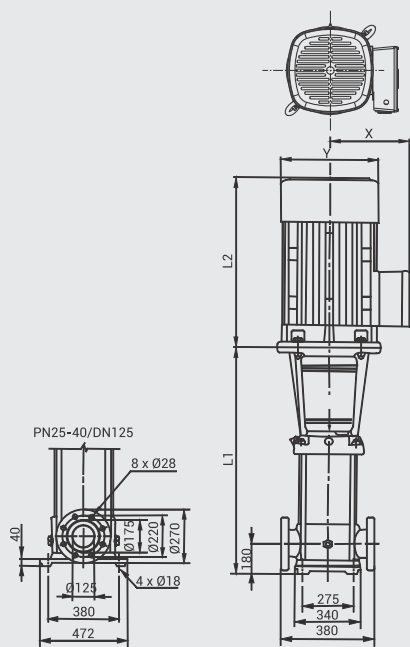
FV-90



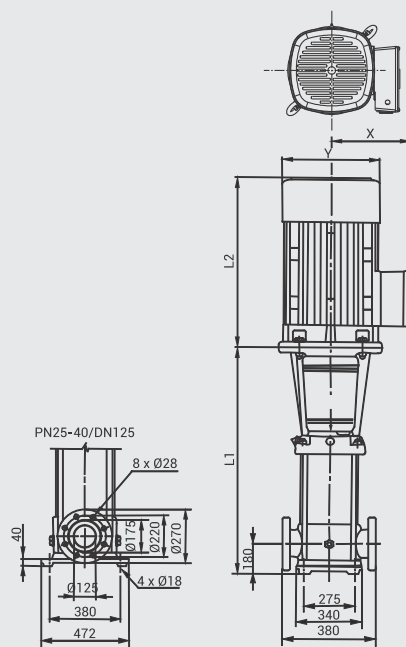
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-120

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

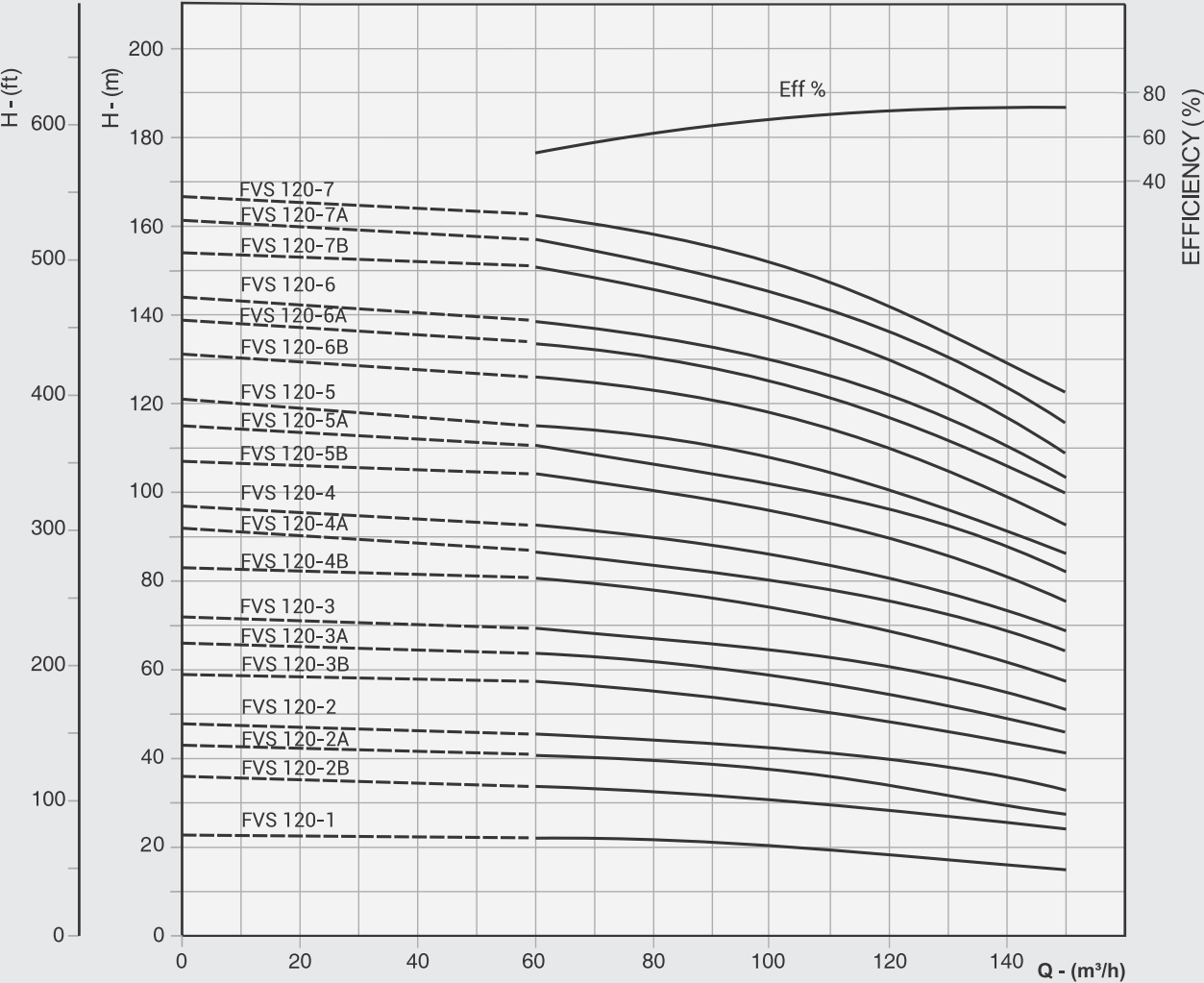


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)						APPROX NETT WEIGHT in kg
	kW	HP	L1	L2		X		ØY	
				1Ph	3Ph	1Ph	3Ph		
FVS 120-1	11	15	840	-	500	-	255	330	230
FVS 120-2B	15	20	1000	-	500	-	255	330	245
FVS 120-2A	18,5	25	1000	-	550	-	255	330	250
FVS 120-2	22	30	1000	-	575	-	285	360	285
FVS 120-3B	26	35	1160	-	575	-	285	360	326
FVS 120-3A	30	40	1160	-	650	-	310	400	360
FVS 120-3	30	40	1160	-	650	-	310	400	360
FVS 120-4B	37	50	1320	-	650	-	310	400	400
FVS 120-4A	37	50	1320	-	650	-	310	400	400
FVS 120-4	45	60	1320	-	685	-	340	460	460
FVS 120-5B	45	60	1480	-	685	-	340	460	470
FVS 120-5A	45	60	1480	-	685	-	340	460	470
FVS 120-5	55	75	1510	-	760	-	370	540	575
FVS 120-6B	55	75	1670	-	760	-	370	540	585
FVS 120-6A	55	75	1670	-	760	-	370	540	585
FVS 120-6	75	100	1830	-	845	-	410	580	705
FVS 120-7B	75	100	1830	-	845	-	410	580	715
FVS 120-7A	75	100	1830	-	845	-	410	580	715
FVS 120-7	75	100	1830	-	845	-	410	580	715

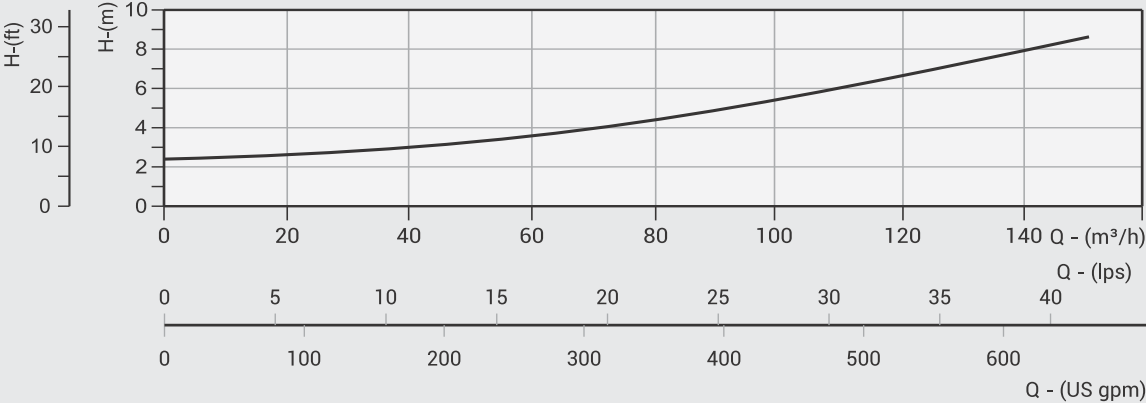
PERFORMANCE CURVES

NOMINAL FLOW : 120m³/h

FV-120

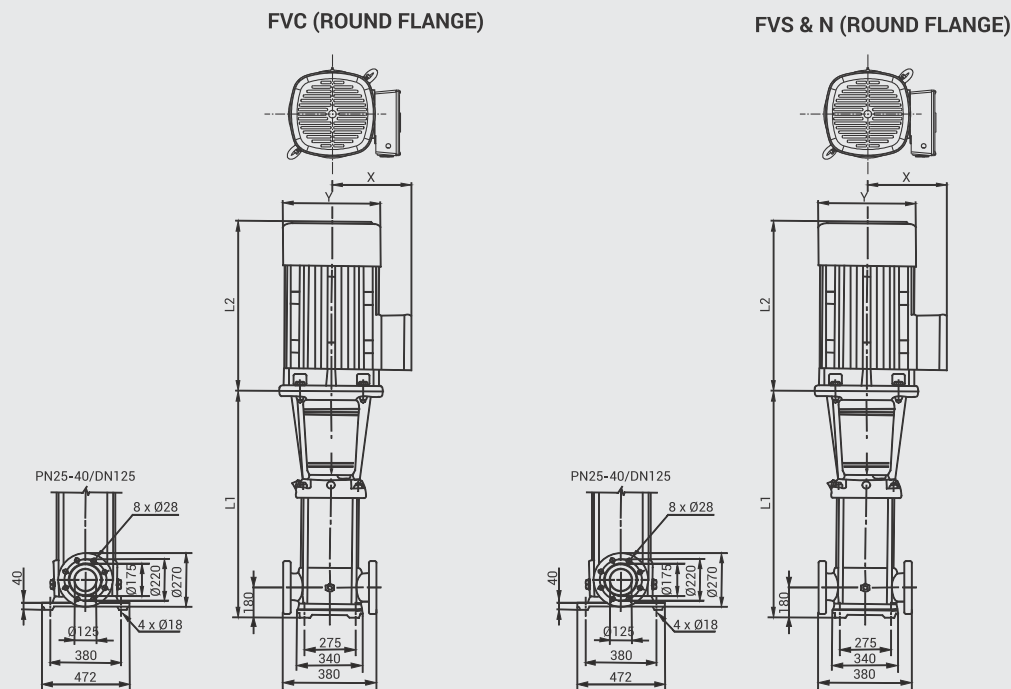


NPSHR CURVE



In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-150

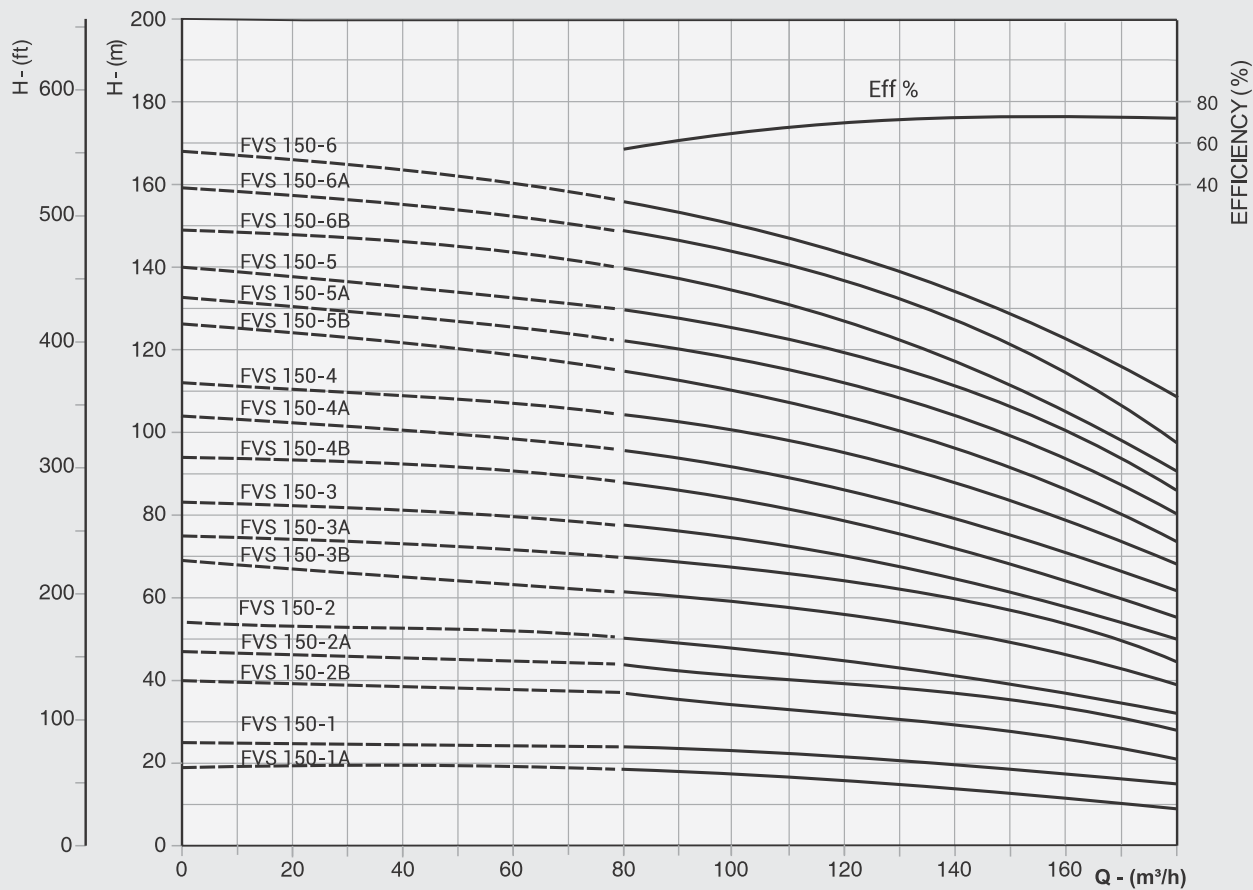


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)						APPROX NETT WEIGHT in kg
	kW	HP	L1	L2		X		ØY	
				1Ph	3Ph	1Ph	3Ph		
FVS 150-1A	11	15	840	-	500	-	255	330	230
FVS 150-1	15	20	840	-	500	-	255	330	235
FVS 150-2B	18,5	25	1000	-	550	-	255	330	250
FVS 150-2A	22	30	1000	-	575	-	285	360	295
FVS 150-2	26	35	1000	-	575	-	285	360	317
FVS 150-3B	30	40	1160	-	650	-	310	400	360
FVS 150-3A	37	50	1160	-	650	-	310	400	360
FVS 150-3	37	50	1160	-	650	-	310	400	385
FVS 150-4B	45	60	1320	-	685	-	340	460	460
FVS 150-4A	45	60	1320	-	685	-	340	460	460
FVS 150-4	55	75	1350	-	760	-	370	540	560
FVS 150-5B	55	75	1510	-	760	-	370	540	570
FVS 150-5A	75	100	1510	-	845	-	410	580	690
FVS 150-5	75	100	1510	-	845	-	410	580	690
FVS 150-6B	75	100	1670	-	845	-	410	580	700
FVS 150-6A	75	100	1670	-	845	-	410	580	700
FVS 150-6	75	100	1670	-	845	-	410	580	700

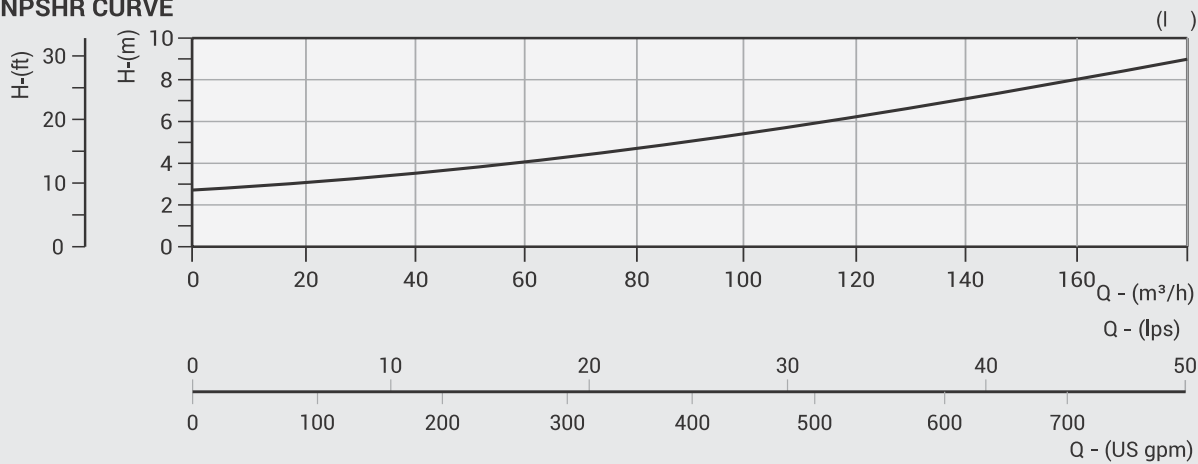
PERFORMANCE CURVES

NOMINAL FLOW : 150m³/h

FV-150



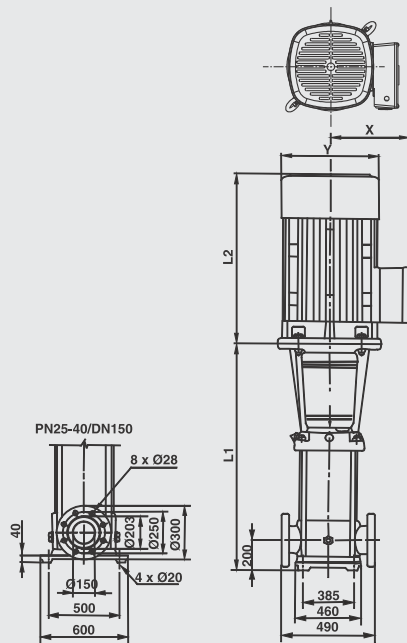
NPSHR CURVE



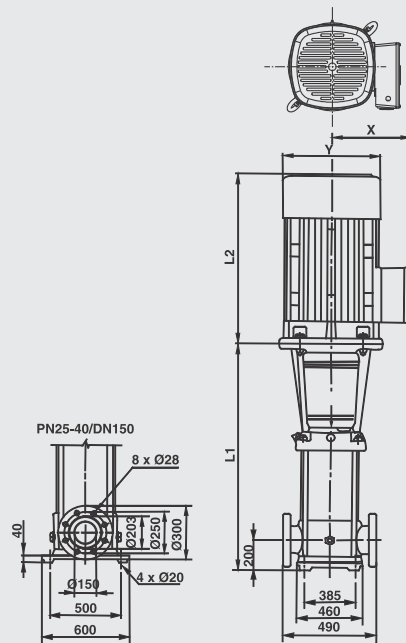
In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

FV-200

FVC (ROUND FLANGE)



FVS & N (ROUND FLANGE)

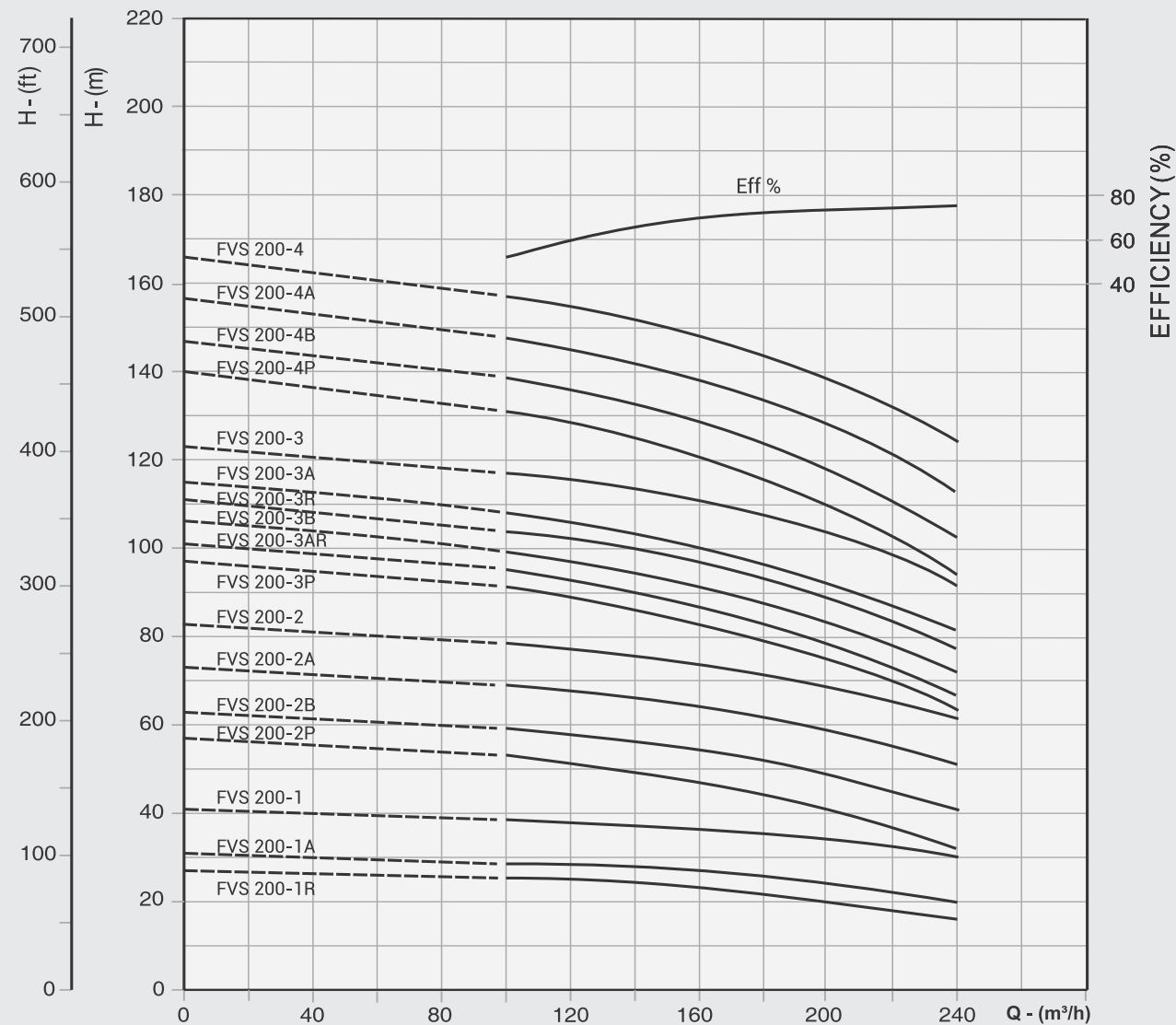


PUMP MODEL	MOTOR POWER		DIMENSIONS IN mm (APPROX)						APPROX NETT WEIGHT in kg
	kW	HP	L1	L2		X		ØY	
				1Ph	3Ph	1Ph	3Ph		
FVS 200-1R	18,5	25	907	-	550	-	330	255	311
FVS 200-1A	22	30	907	-	575	-	360	285	347
FVS 200-1	30	40	907	-	650	-	400	310	403
FVS 200-2P	37	50	1101	-	650	-	400	310	447
FVS 200-2B	45	60	1101	-	685	-	460	340	504
FVS 200-2A	55	75	1131	-	760	-	540	370	595
FVS-200-2	55	75	1131	-	760	-	540	370	595
FVS 200-3P	75	100	1325	-	845	-	580	410	748
FVS 200-3AR	75	100	1325	-	845	-	580	410	748
FVS 200-3B	75	100	1325	-	845	-	580	410	748
FVS 200-3R	75	100	1325	-	845	-	580	410	748
FVS 200-3A	75	100	1325	-	845	-	580	410	748
FVS 200-3	90	120	1325	-	895	-	580	410	817
FVS 200-4P	90	120	1519	-	895	-	580	410	830
FVS 200-4B	110	150	1519	-	1140	-	645	550	1180
FVS 200-4A	110	150	1519	-	1140	-	645	550	1180
FVS 200-4	110	150	1519	-	1140	-	645	550	1180

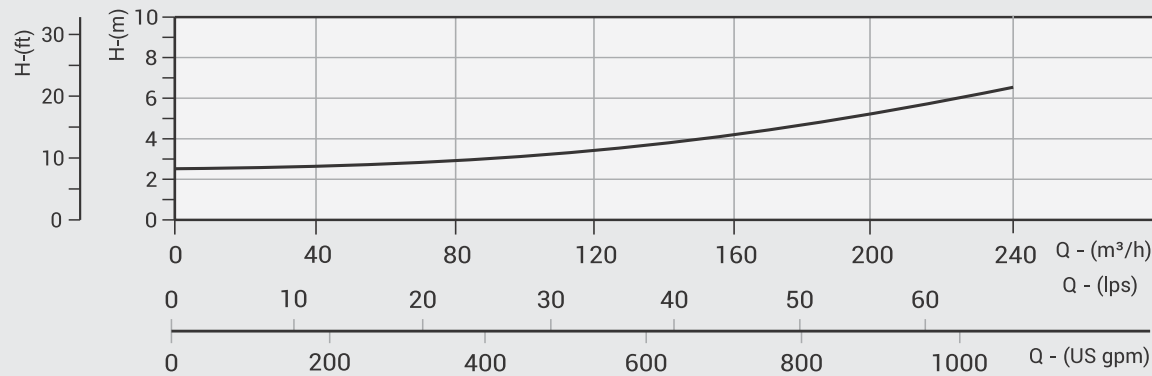
PERFORMANCE CURVES

NOMINAL FLOW : 200m³/h

FV-200

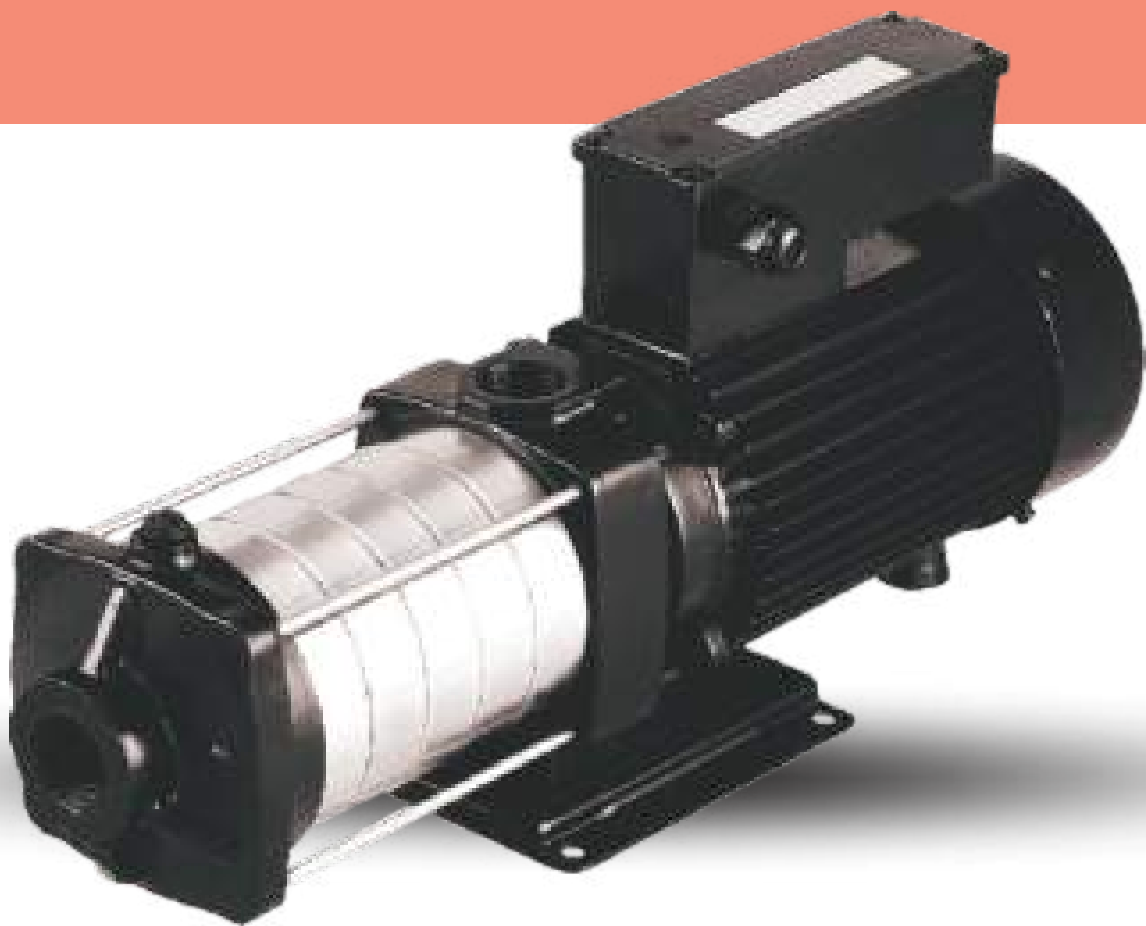


NPSHR CURVE



In view of the continuous developments the Information / Descriptions / Specifications / Illustrations are subject to change without notice.

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.

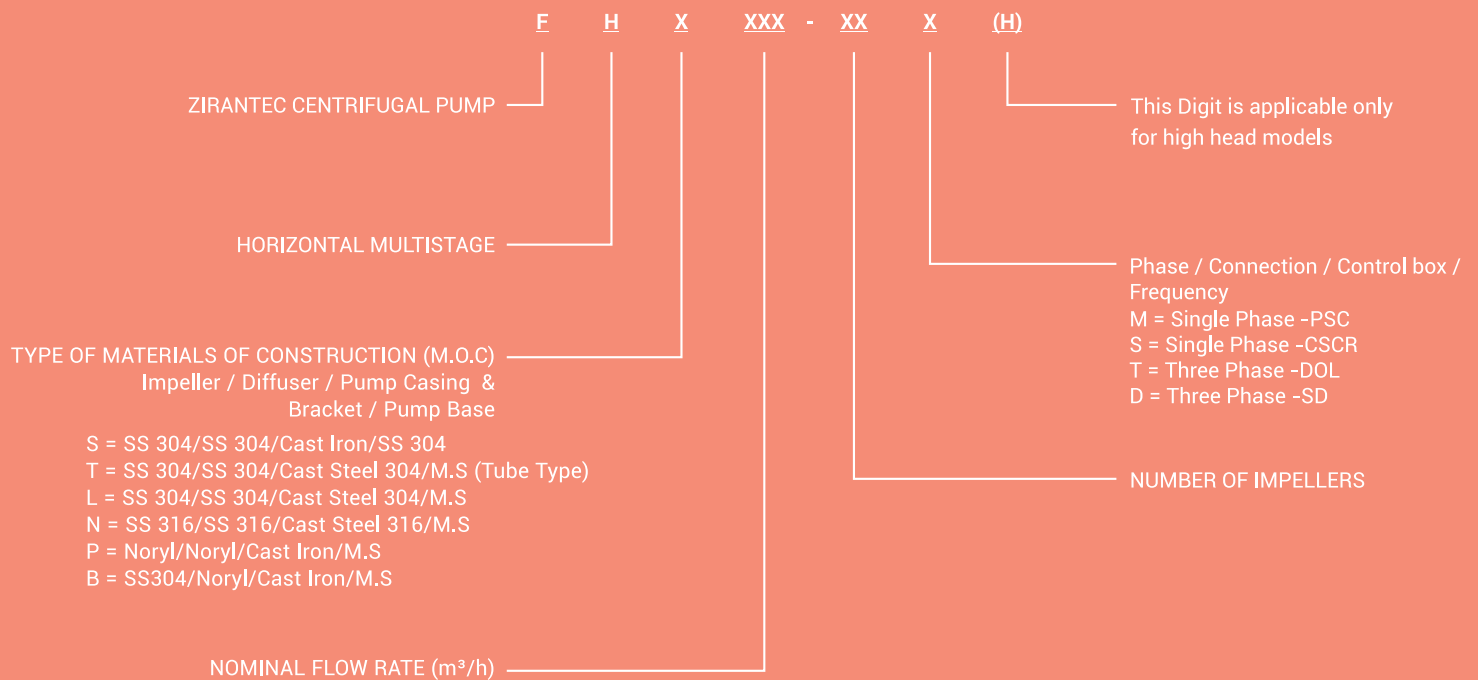
FEATURES

- 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

MODEL IDENTIFICATION CODE



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	200m³/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

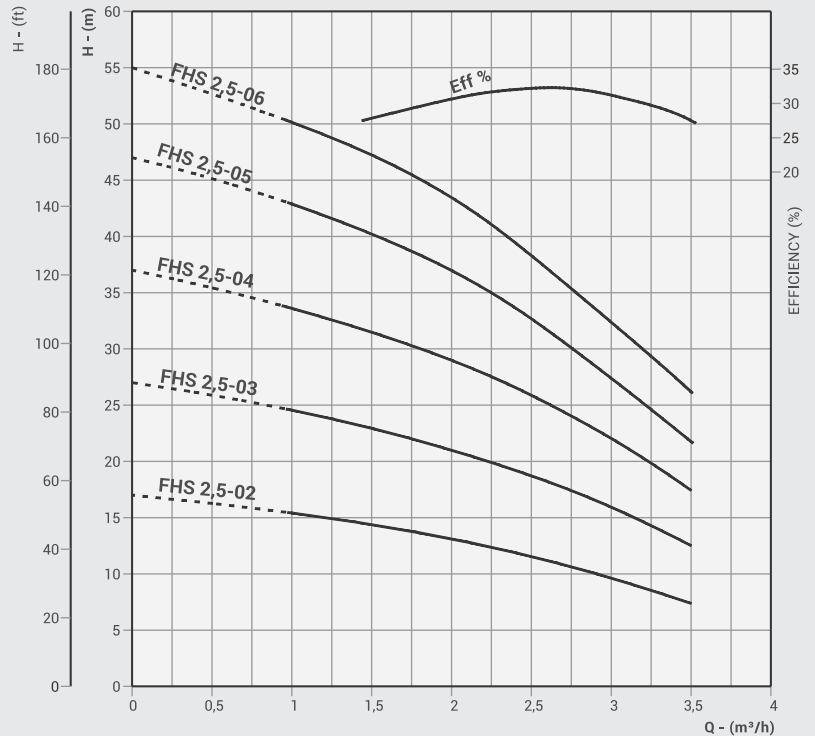
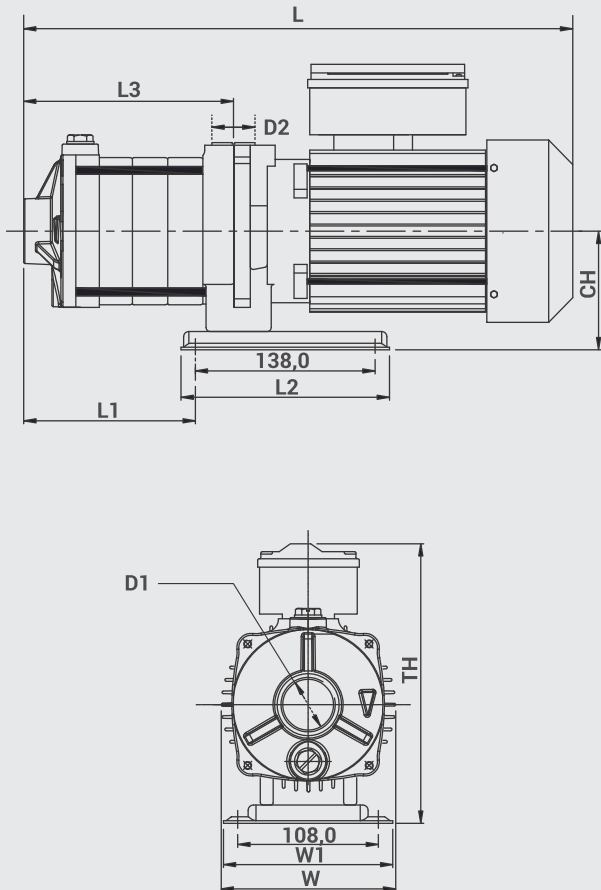
Min. Inlet pressure : As per NPSH Curve + Safety Margin 0.5 metre.

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

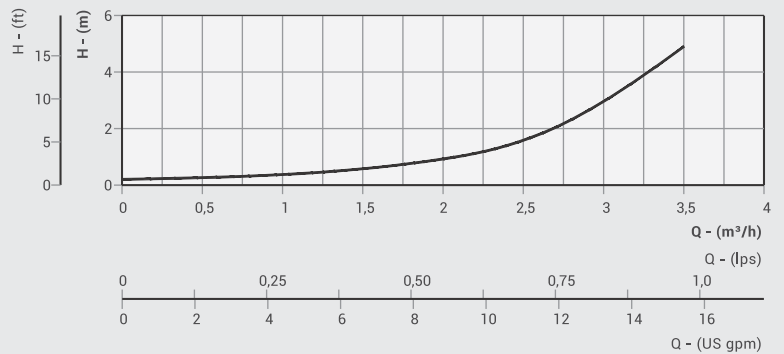
CHARACTERISTICS OF PUMPED LIQUIDS	
a) Temperature	90°C
b) Permissible amount of sand	25 gm / m³
c) Chlorine ion density	500 ppm
d) Allowable solids	3000 ppm
e) Specific gravity	1,004
f) Hardness (Drinking water)	300
g) Viscosity	1,75 x 10 ⁻⁶ m² / Sec.
h) Turbidity	50 ppm silica scale
i) pH	6,5 to 8,5

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

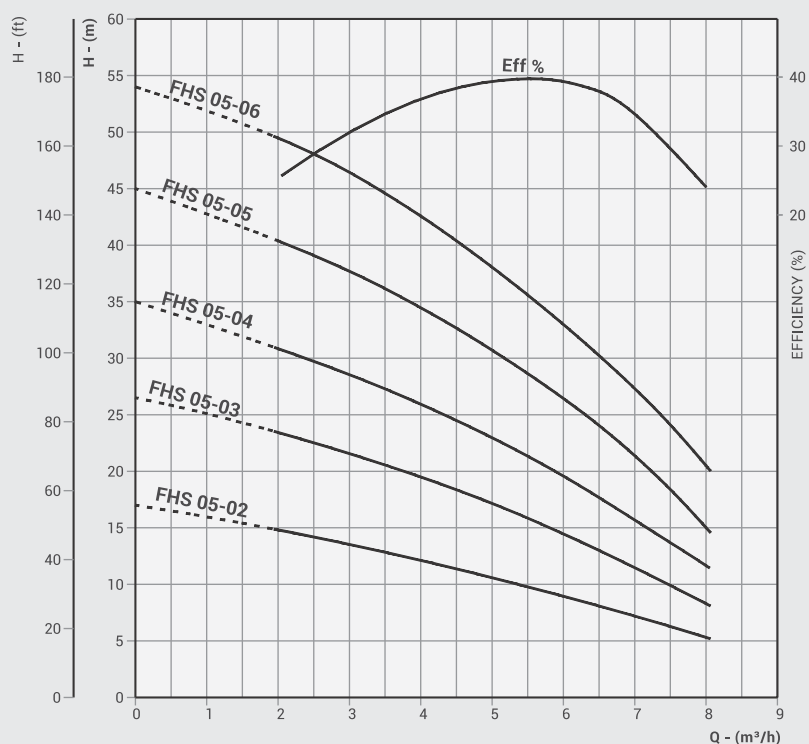
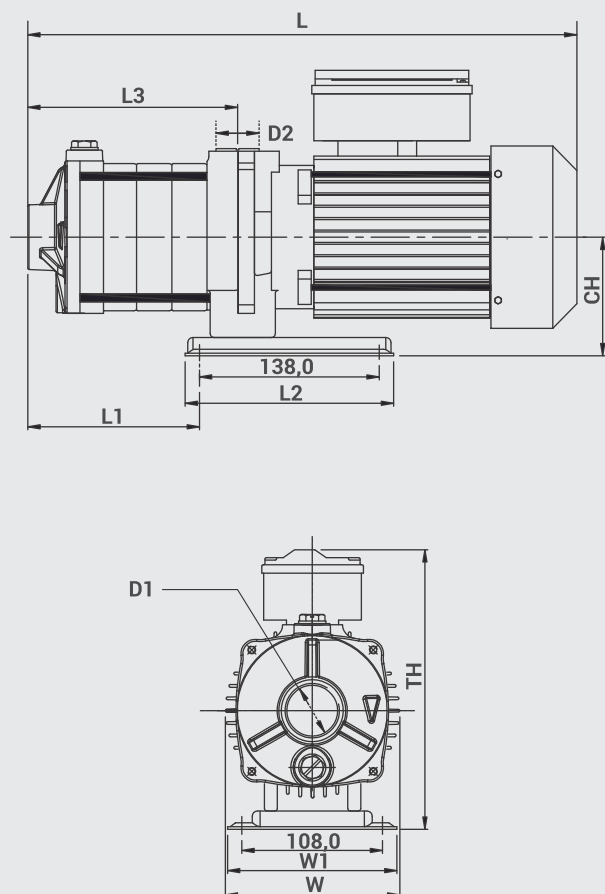
DIMENSIONAL & WEIGHT

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

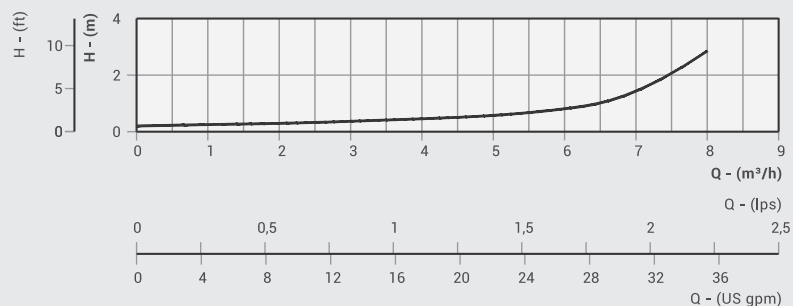
* All Dimensions are in mm.

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

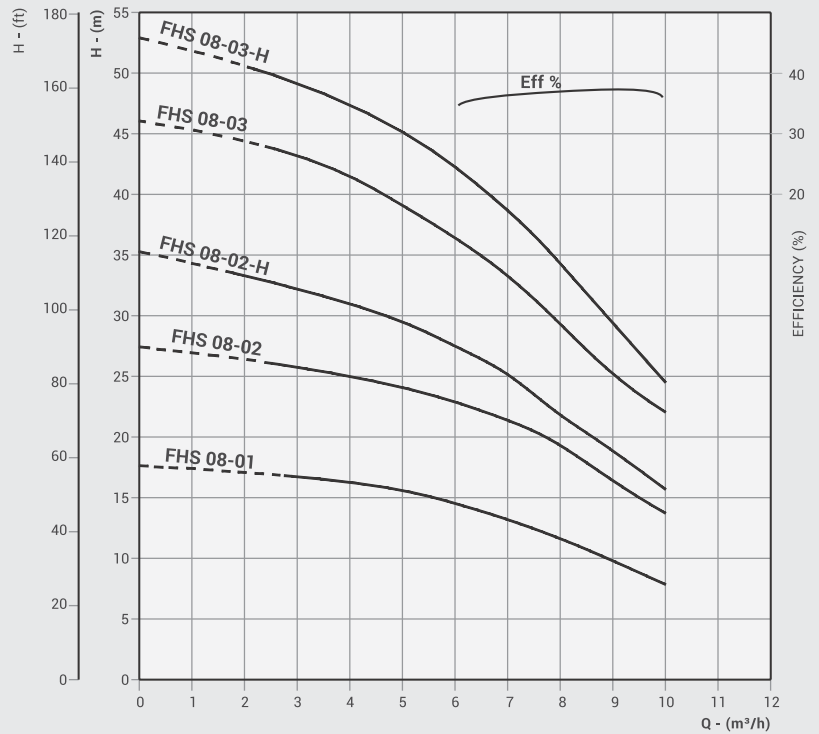
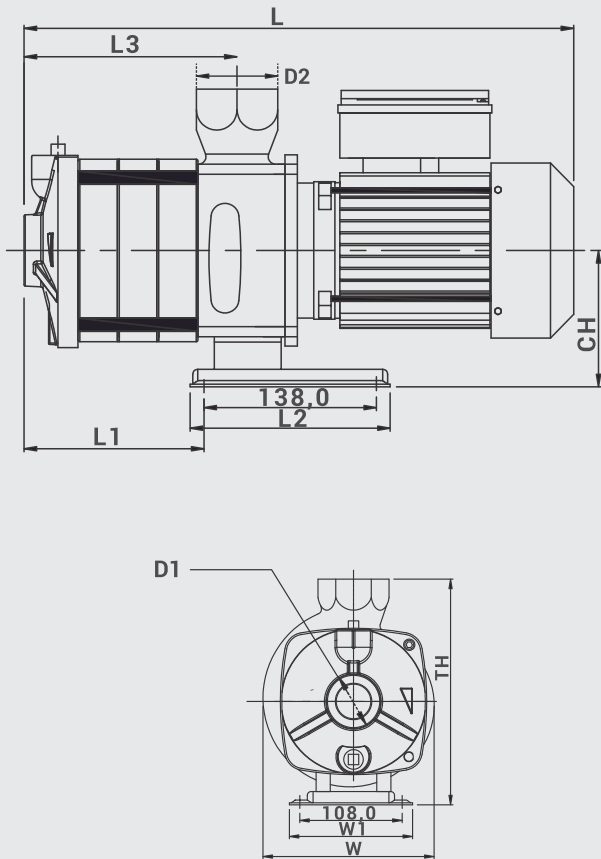
DIMENSIONAL & WEIGHT

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

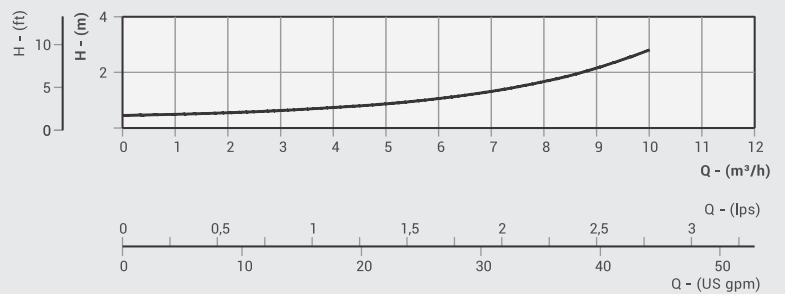
* All Dimensions are in mm.

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

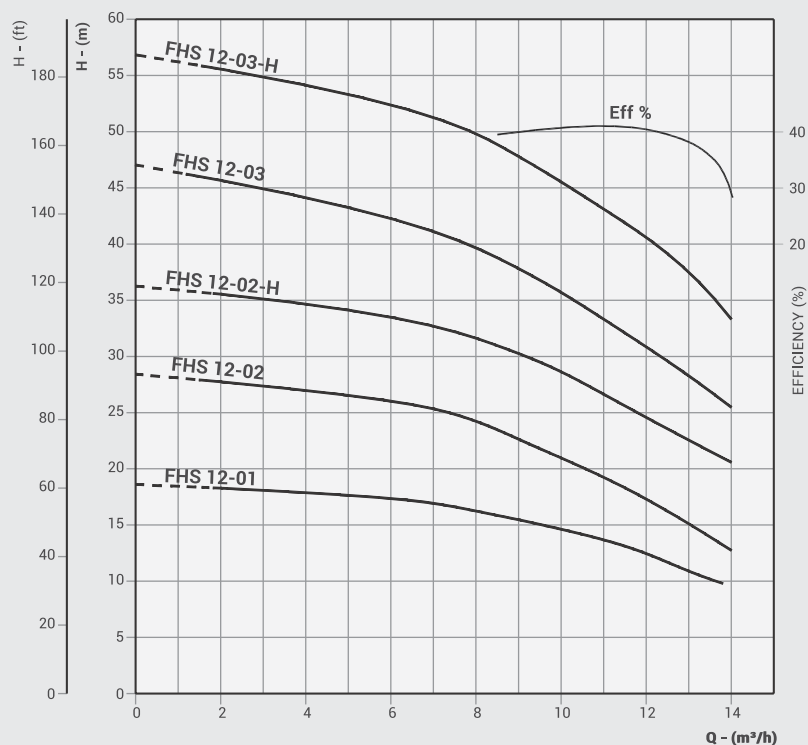
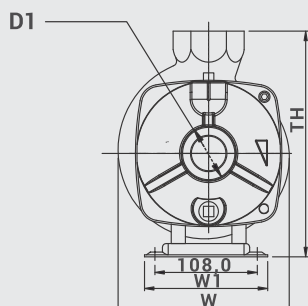
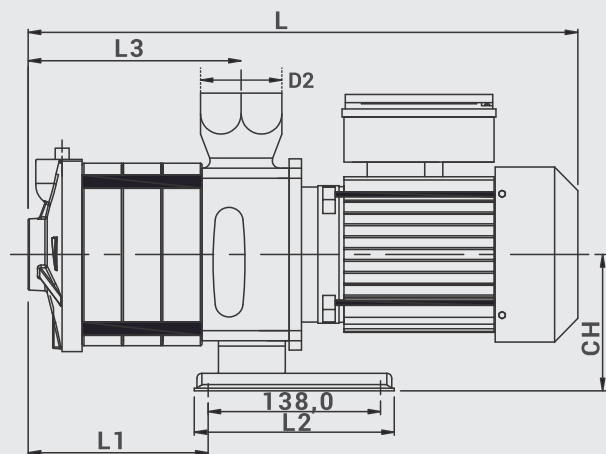
DIMENSIONAL & WEIGHT

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

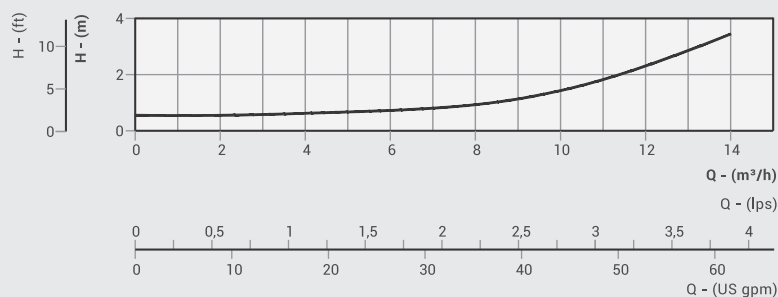
* All Dimensions are in mm.

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.

Pressure Boosting System FVHS & FHHS



FVHS & FHHS SERIES 50Hz

HYGIENIC WATER | HYDRAULIC EFFICIENCY | NOISELESS OPERATION

With an advanced vertical radial delivery type with threaded ports, all components are made of corrosive resistant AISI stainless steel. The pump is futuristically designed to eliminate transmission loss, pump high aggressive water and hygienic enough to be used for drinking purposes. Additionally, the wear resistant bearings ensure noiseless operation.

ADVANCED TECHNOLOGY | ENERGY SAVING

Zirantec's Pressure Booster Systems are built with care using advanced technology and controlling devices /equipments that ensure efficient operation and energy saving. Nowadays pressure booster system becomes an essential part of all buildings including individual houses.

BOOSTER CONTROLLER | DISPLAY SYSTEMS | CONSTANT WATER SUPPLY

The ZIRANTEC Pressure Booster Systems are reliable, easy serviceable and used in water boosting units to get trouble free service for years together. Made of corrosion resistant stainless steel, the impellers, diffusers & shaft of these hydro-pneumatic systems are incredible in hydraulic efficiency.

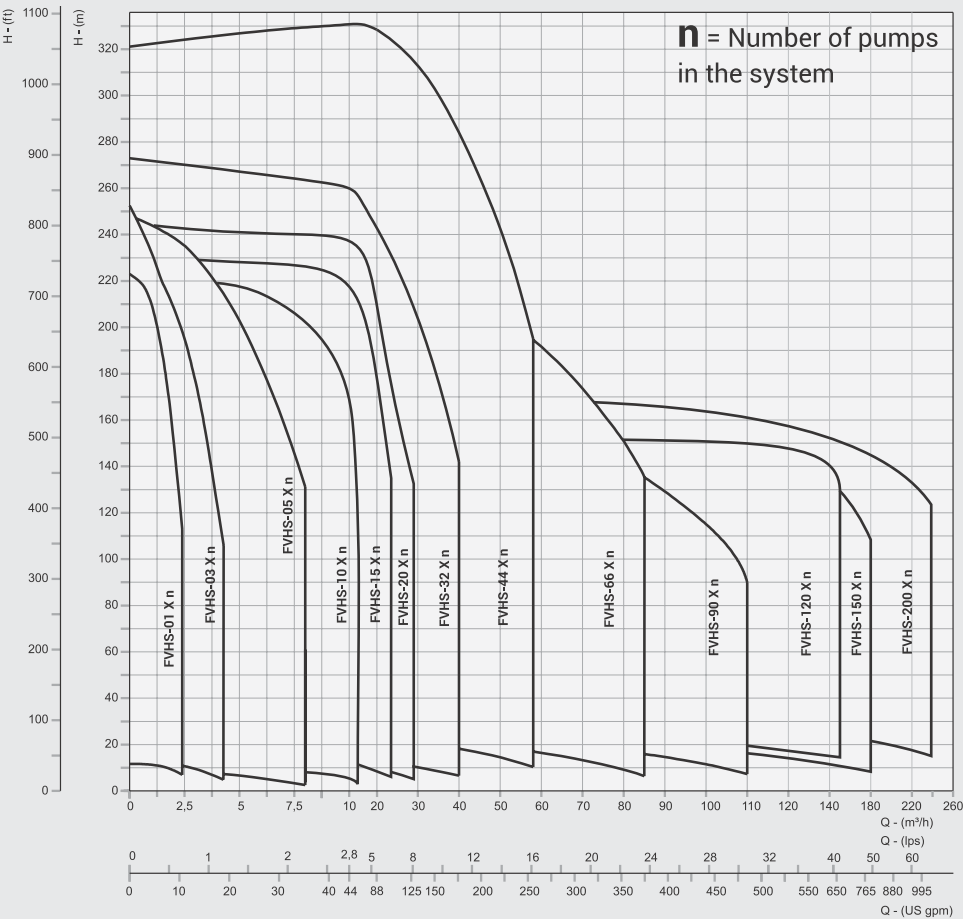
MANIFOLD SELECTION CHART FOR PRESSURE BOOSTING SYSTEM

PUMP SIZE	1" & 1¼"			1½"			2"			2½"		
No. of Pumps (In parallel connection)	2P	3P	4P	2P	3P	4P	2P	3P	4P	2P	3P	4P
Manifold size (In inches)	1½"	2"	2½"	2"	2½"	3"	3"	4"	5"	4"	5"	6"

PERFORMANCE CURVES



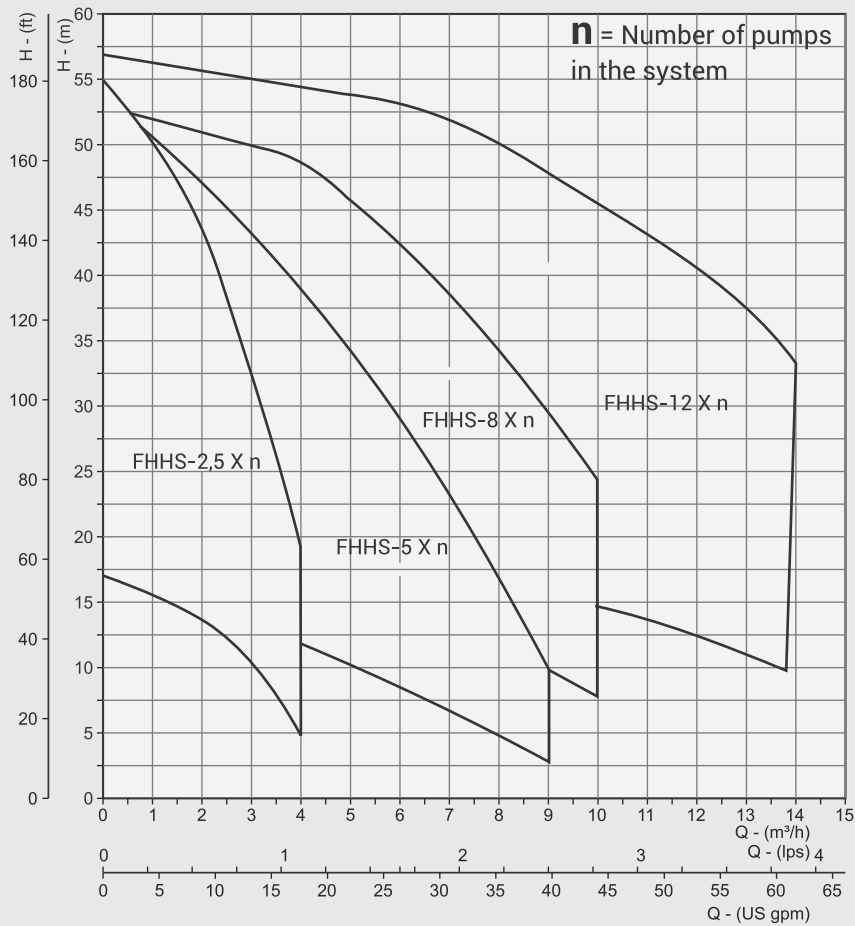
FVHS



PERFORMANCE CURVES



FHHS





Power Range	1Ph Input - 1Ph Output - 110V : 0,75 - 2,2kW - 220V : 0,75 - 4kW 1Ph Input - 3Ph Output - 220V : 0,75 - 5,5kW 3Ph Input - 3Ph Output - 380V : 0,75 - 45kW Note : other Voltage Range can also be supplied on demand
Output Voltage Range	0 to Input Voltage (Adjustable)
Frequency Range	0,1 to 400 Hz
Output Frequency Tolerance	0,1Hz
Operating Temperature	-10 to 40°C
Vibration	< 0,5G
Humidity	0,95% Relative Humidity (Non-condensing)
Display	Frequency/Current/Speed/Voltage/Pressure

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Zirantec

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