3GP HVM

HIDRO-STANICE

PRESSURE BOOSTING

Units with three vertical multistage pumps with stainless steel hydraulic parts.

PUMP FEATURES

FIELD OF USE

- Maximum working pressure: 10 bar
- Maximum temperature of the liquid: 90°C

MATERIALS

- Cast iron pump body
- External casing, impellers, intermediate stage, seal housing disc and shaft in AISI 304
- Mechanical seal in Carbon/Ceramic/NBR

TECHNICAL DATA

- T.E.F.C. 2 pole motor
- Class of insulation F
- IP55 Protection rating
- 230V ±10%, 50Hz single phase voltage, 230/400V ±10%, 50Hz three phase voltage
- Permanent capacitor inserted and thermo-amperometric protection with automatic reset incorporated for the single phase motor
- Circuit breaker protection under user's responsibility for the three phase version

TYPICAL APPLICATIONS

The base of the group is in galvanised steel as are the manifolds. The discharge manifold is set-up to gather any three vertical type membrane reservoirs. Three pressure switches, the electric control panel and a pressure gauge are mounted on it. On suction, each electric pump has an isolating valve and a non-return valve, with the possibility of connection to an air supply unit and has another isolating valve in discharge mode.

Protection and control panel with CE mark

- IMQ and VDE marked components
- Very low voltage auxiliary circuit
- Motor switch-on and switch-off are controlled by two pressure switches
- The connection to a float of minimum pressure pressure switch is possible in order to prevent functioning in conditions when there is no suction water
- A device is present that inverts the insertion order of the pumps at every start-up
- Three-phase power supply 400V, 50 Hz
- Direct start-up
- power circuit protection fuse
- Auxiliary circuit protection fuse
- Protection rating IP 55
- Line general isolating switch with door lock
- Aut. switch. - 0 - man. switches for each pump
- Circuit breaker protection reset
- LED indicator:
  - network presence
  - motor running
  - level alarm
  - motor in protection mode (for three phase version only)
- Alarm output set-up
- On request, special version control panels can be used

FUNCTIONING PRINCIPLES

The withdrawal or however the escape of water from the system with the pumps at a standstill, causes the pressure to drop and the consequent closure of the pressure switch contact with highest calibration, which determines start-up of the first electric pump. If the outlet discharge exceeds the flow rate of a pump, the pressure continues to drop until it causes the closure of the contact of the second pressure switch and the start-up of the second pump. The end of the distribution of the reduction of the outlet discharge leads to the pressure in the system rising, with opening of the pressure switch contacts and staggered pumps stops. The inversion of the ignition order of the two motors reduces the number of hourly start-ups of the individual pumps and consequently allows a homogenous use of the same. By connecting a float or minimum pressure pressure switch to the control panel (whether for withdrawal from the primary collection reservoir or from the hydraulic circuit), the most frequent cause of electric pump breakdown is prevented: the lack of water at suction.

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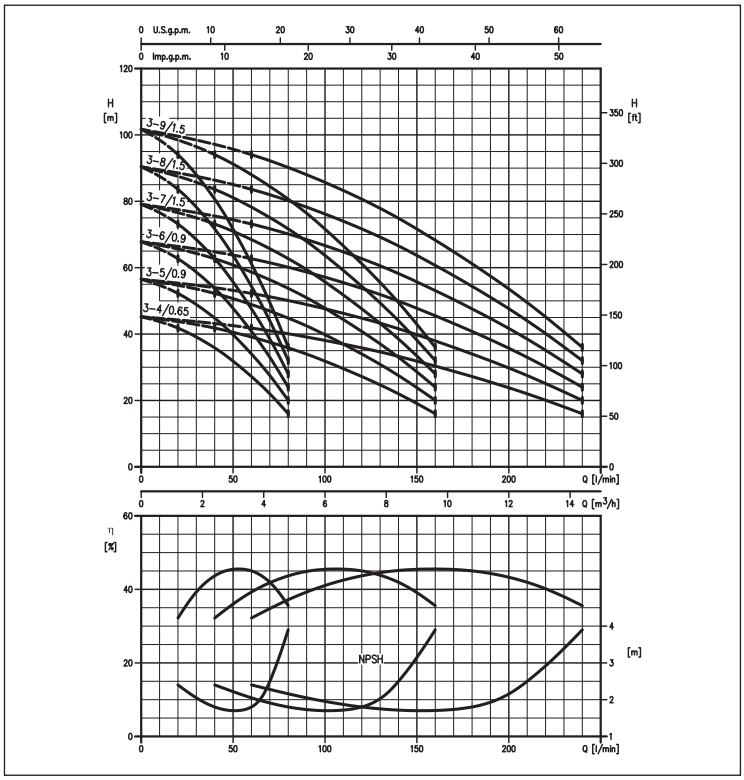
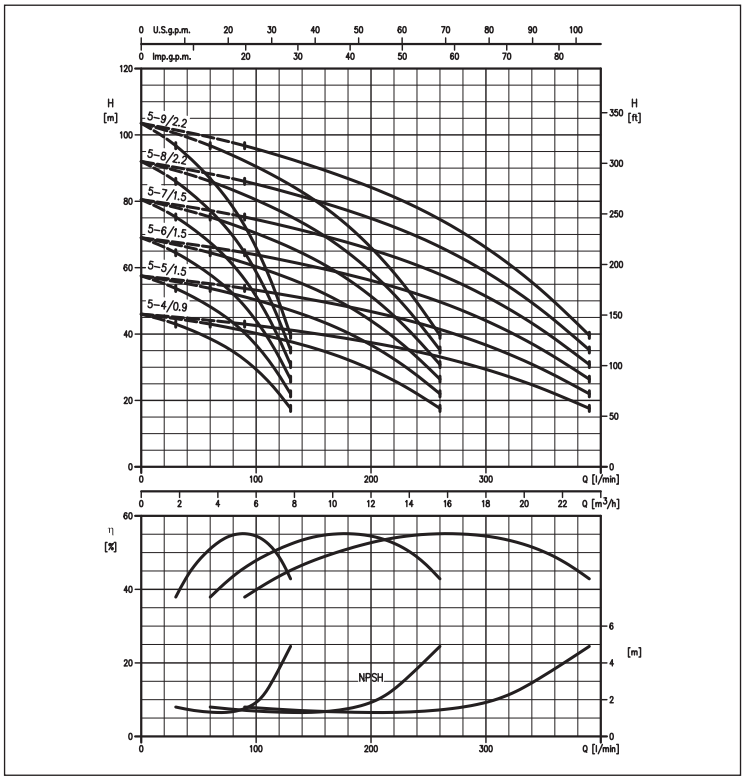
3GP HVM 3 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



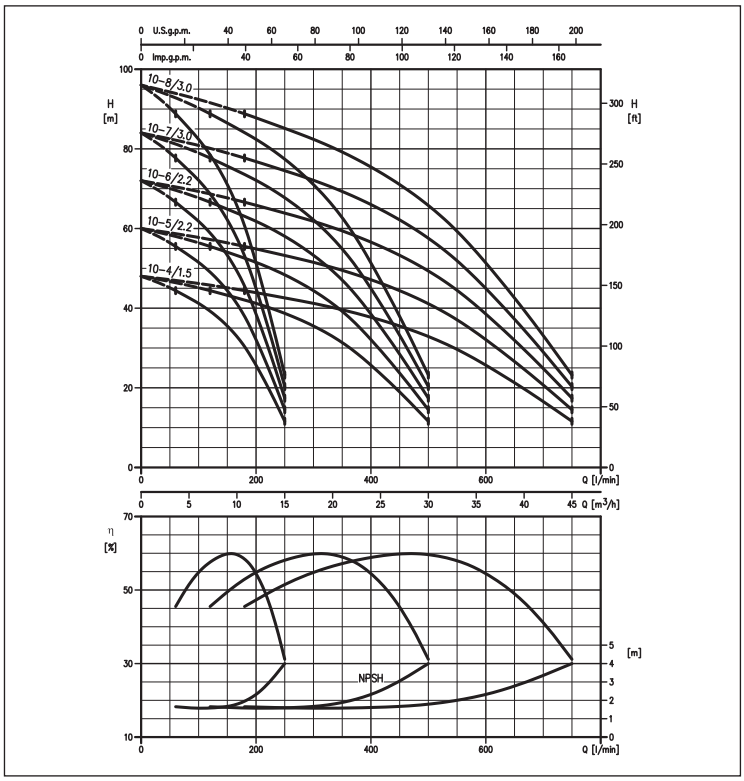
3GP HVM 5 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



3GP HVM A 10 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



3GP HVM

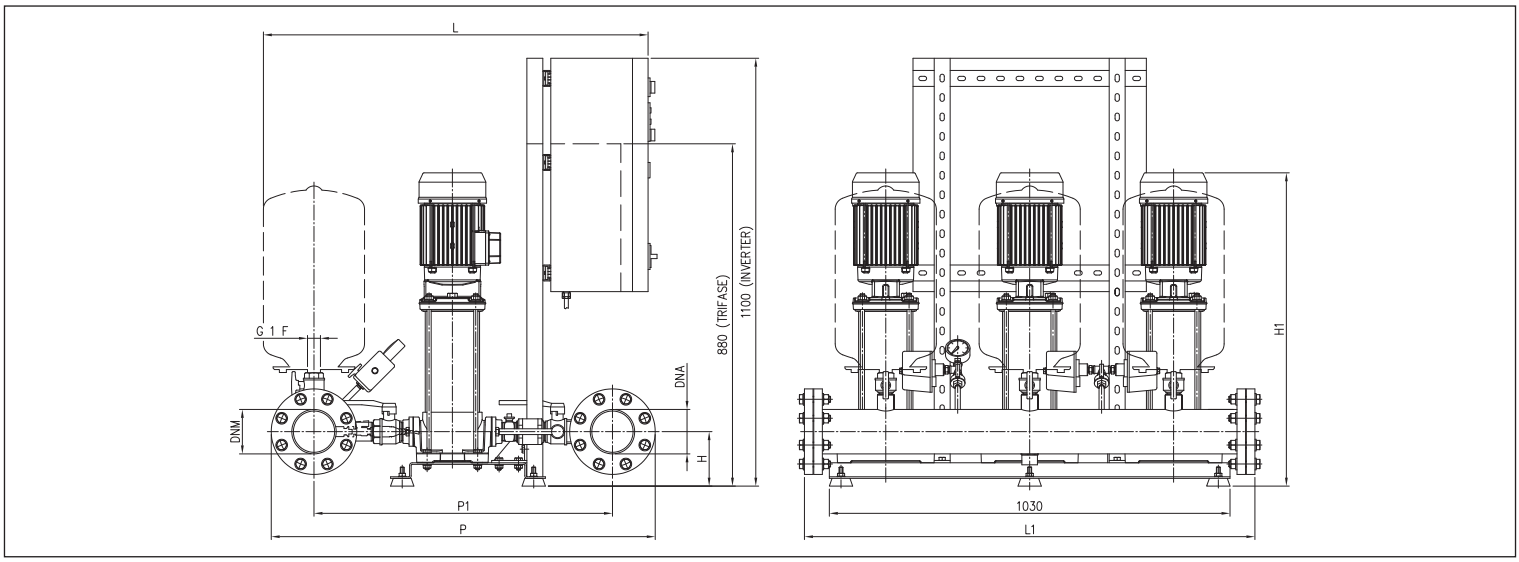
HIDRO-STANICE

PRESSURE BOOSTING

PERFORMANCE TABLE AND ELECTRIC DATA OF THE TWO PUMPS FUNCTIONING SIMULTANEOUSLY

Model Three phase 400V	[kW]	Max. abs. [A] 400V Three phase	Q=Flow rate l/min	60	90	135	180	240	300	390	480	600	750
			m³/h	3,6	5,4	8,1	10,8	14,4	18	23,4	28,8	36	45
			H=Head [m]										
HVM 3-4N/0.65	0,65+0,65+0,65	4,8		42	39,1	34	27,2	16	-	-	-	-	-
HVM 3-5N/0.9	0,9+0,9+0,9	7,8		52,5	49	42,5	34	20	-	-	-	-	-
HVM 3-6N/0.9	0,9+0,9+0,9	7,8		62,5	58,5	51	41	24	-	-	-	-	-
HVM 3-7N/1.5	1,5+1,5+1,5	10,2		73	68,5	59,5	47,5	28	-	-	-	-	-
HVM 3-8N/1.5	1,5+1,5+1,5	10,2		83,5	78	68	54,5	32	-	-	-	-	-
HVM 3-9N/1.5	1,5+1,5+1,5	10,2		94	88	76,5	61	36	-	-	-	-	-
HVM 5-4N/0.9	0,9+0,9+0,9	7,8		-	43	41	38,6	34,7	29,4	17,6	-	-	-
HVM 5-5N/1.5	1,5+1,5+1,5	10,2		-	54	51	48,5	43,5	36,7	22	-	-	-
HVM 5-6N/1.5	1,5+1,5+1,5	10,2		-	64,5	61,5	58	52	44	26,4	-	-	-
HVM 5-7N/1.5	1,5+1,5+1,5	10,2		-	75,5	71,5	67,5	61	51,5	30,8	-	-	-
HVM 5-8N/2.2	2,2+2,2+2,2	13,8		-	86	82	77	69,5	58,5	35,2	-	-	-
HVM 5-9N/2.2	2,2+2,2+2,2	13,8		-	97	92	87	78	66	39,6	-	-	-
HVM 10-4N/1.5	1,5+1,5+1,5	10,2		-	-	-	44,5	43	41	38,1	34	25,7	11,6
HVM 10-5N/2.2	2,2+2,2+2,2	13,8		-	-	-	55,5	53,5	51,5	47,5	42,5	32,1	14,5
HVM 10-6N/2.2	2,2+2,2+2,2	13,8		-	-	-	66,5	64,5	62	57	51	38,5	17,4
HVM 10-7N/3	3,0+3,0+3,0	18,9		-	-	-	77,5	75	72	66,5	59,5	45	20,3
HVM 10-8N/3	3,0+3,0+3,0	18,9		-	-	-	89	85,5	82,5	76	68	51,5	23,2

DIMENSIONS



DIMENSIONS TABLE

Model	Dimensions [mm] L	H	H1	P	P1	L1	DNA-DNM	Weight [kg]
3GP HVM 3-4N/0.65	890	110	550	935	710	1050	DN65	133,0
3GP HVM 3-5N/0.9	890	110	570	935	710	1050	DN65	139,0
3GP HVM 3-6N/0.9	890	110	595	935	710	1050	DN65	143,0
3GP HVM 3-7N/1.5	890	110	655	935	710	1050	DN65	152,0
3GP HVM 3-8N/1.5	890	110	680	935	710	1050	DN65	154,0
3GP HVM 3-9N/1.5	890	110	705	935	710	1050	DN65	156,0
3GP HVM 5-4N/0.9	855	110	550	835	650	1050	DN65	138,0
3GP HVM 5-5N/1.5	855	110	610	835	650	1050	DN65	147,0
3GP HVM 5-6N/1.5	855	110	635	835	650	1050	DN65	150,0
3GP HVM 5-7N/1.5	855	110	655	835	650	1050	DN65	153,0
3GP HVM 5-8N/2.2	855	110	695	835	650	1050	DN65	159,0
3GP HVM 5-9N/2.2	855	110	720	835	650	1050	DN65	160,0
3GP HVM 10-4N/1.5	920	140	640	1005	765	1160	DN100	187,0
3GP HVM 10-5N/2.2	920	140	680	1005	765	1160	DN100	195,0
3GP HVM 10-6N/2.2	920	140	710	1005	765	1160	DN100	196,0
3GP HVM 10-7N/3.0	920	140	775	1005	765	1160	DN100	209,0
3GP HVM 10-8N/3.0	920	140	805	1005	765	1160	DN100	212,0