Units with two vertical multistage pumps with stainless steel hydraulic parts and standardised motor.

PUMP FEATURES

FIELD OF USE

- Maximum working pressure:
- 16 bar
- 25 bar
- 30 bar (for EVMG32 - EVMG45 only)
- Temperature of the liquid: -15°C ÷ +120°C

MATERIALS

- Lower pump body in cast iron
- External casing, seal housing disc, impellers, nozzles, shaft casing, joint cover and small elements in contact with the liquid in AISI 304
- Tie-rods and small elements not in contact with the liquid in galvanised steel
- Shaft in AISI 316
- Bearings in contact with the liquid in tungsten carbide
- Motor support and base in cast iron
- Mechanical sealing in SiC/Carbon/FPM (EVMG10-EVMG18)
- Mechanical sealing with cartridge as per standard (EVMG32-EVMG45-EVMG64)

(F= round flanges; N= oval flanges)

TECHNICAL DATA

- Self-ventilated 2 pole asynchronous motor
- Class of insulation F
- IP55 Protection rating
- Single phase voltage 230V ± 10% 50Hz (up to 2.2 kW), three phase voltage 230/400V ±10% 50Hz (up to 4 kW included), three phase voltage 400/690V ±10% (5.5 kW and above)

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 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. The electric control panel is sustained by a relative support fixed to the base.

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 three 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
- 400V, 50 Hz three phase power supply
- Start-up:
  - direct for powers up to 7.5 kW
  - delta/triangle for powers exceeding 7.5 kW
- Power circuit protection fuse
- Auxiliary circuit protection fuse
- Protection rating IP 55
- Line general isolating switch with door lock
- Aut. - 0 - man. switches for each pump
- Circuit breaker protection reset
- LED indicator:
  - network presence
  - motor running
  - level alarm
  - motor in protection mode
- 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 this pump, the pressure continues to drop until it causes the closure of the contact of the second pressure switch and any third pressure switch and the start-up of another or another two main pumps. 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 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.

SERIE “EVMG”

CARATTERISTICHE DELLA POMPA

CAMPO DI IMPIEGO
Pressione massima di esercizio:
- 16 bar
- 25 bar
- 30 bar (solo per EVM32 - EVM45)
- Temperatura del liquido: da -15°C a +120°C da -15°C a +85°C (per EVMW)

MATERIALI
- Corpo pompa inferiore, camicia esterna, disco porta tenuta, giranti, diffusori, camicia d?albero, coprigiunto e minuteria a contatto con il liquido in AISI 304 (EVM), AISI 316 (EVML) [versione "EVMG": corpo in ghisa]
- Tiranti e minuteria non a contatto con il liquido in acciaio zincato
- Albero in AISI 316
- Cuscinetti a contatto con il liquido in carburo di tungsteno
- Supporto motore e base in ghisa
- Tenuta meccanica in SiC/carbone/FPM (EVM3-EVM5-EVM10-EVM18)
- Tenuta meccanica a cartuccia di serie (EVM32-EVM45-EVM64)
  (F= flange tonde; N= flange ovali)

DATI TECNICI
- Motore asincrono 2 poli autoventilato
- Classe di isolamento F
- Grado di protezione IP55
- Tensione monofase 230V ± 10% 50Hz (fino a 2,2kW), tensione trifase 230/400V ±10% 50Hz (fino a 4kW compresi), tensione trifase 400/690V ±10% (5,5 kW e oltre) Delta conn.

APPLICAZIONI TIPICHE

Il basamento del gruppo è in acciaio zincato e così pure i collettori. Il collettore di mandata è predisposto per accogliere 3 eventuali serbatoi a membrana del tipo verticale; su di esso sono montati 3 pressostati ed un manometro. Ciascuna elettropompa ha in aspirazione una valvola sezionatrice ed una valvola di non ritorno, con possibilità di collegamento ad un alimentatore d’aria, ed è munita di altra valvola sezionatrice in mandata. Il quadro elettrico è sostenuto da apposito supporto fissato al basamento.

QUADRO DI PROTEZIONE E COMANDO CON MARCHIO CE

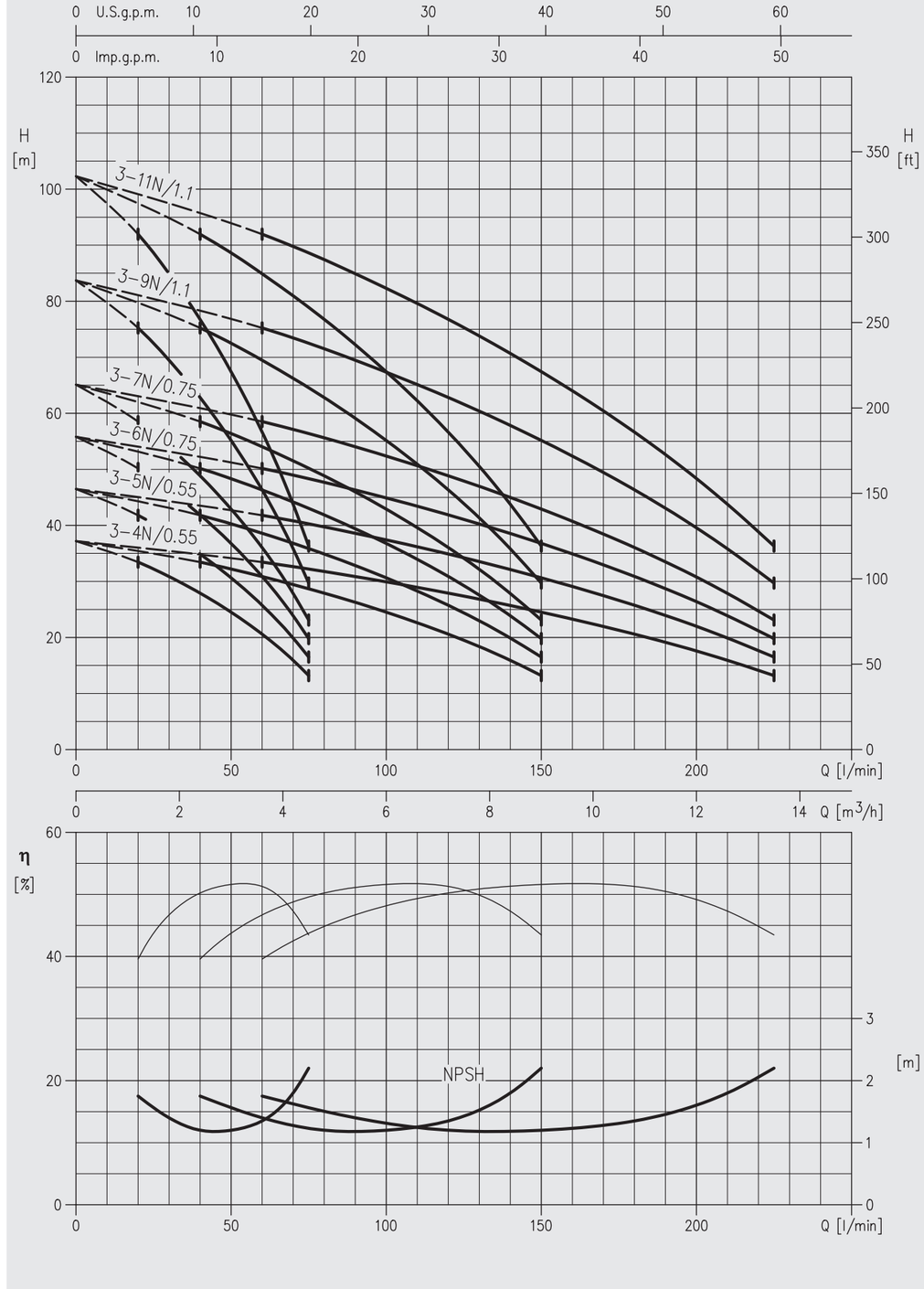
- Componenti marchiati IMQ e VDE.
- Circuito ausiliario a bassissima tensione.
- Accensione e spegnimento dei motori sono comandati da 3 pressostati.
- È possibile il collegamento a galleggianti, o pressostato di minima, per evitare il funzionamento in condizioni di mancanza d’acqua in aspirazione.
- È presente un dispositivo che inverte l’ordine di inserimento delle pompe ad ogni avvio.
- Alimentazione: - trifase 400 V, 50 Hz
- Avviamento: - diretto per potenze fino a kW 7.5
  - stella/triangolo per potenze superiori a kW 7,5.
- Fusibili di protezione circuito di potenza.
- Fusibili di protezione circuito ausiliario.
- Protezione IP 55.
- Sezionatore generale di linea con bloccaporta.
- Interruttori aut. - 0 - man. per ciascuna pompa.
- Reset protezione termica.
- Led spia: - presenza rete
  - motore in funzione
  - allarme livello
  - motore in protezione.
- Predisposizione uscita allarme.
- Su richiesta possono essere utilizzati quadri in versioni speciali.

PRINCIPI DI FUNZIONAMENTO

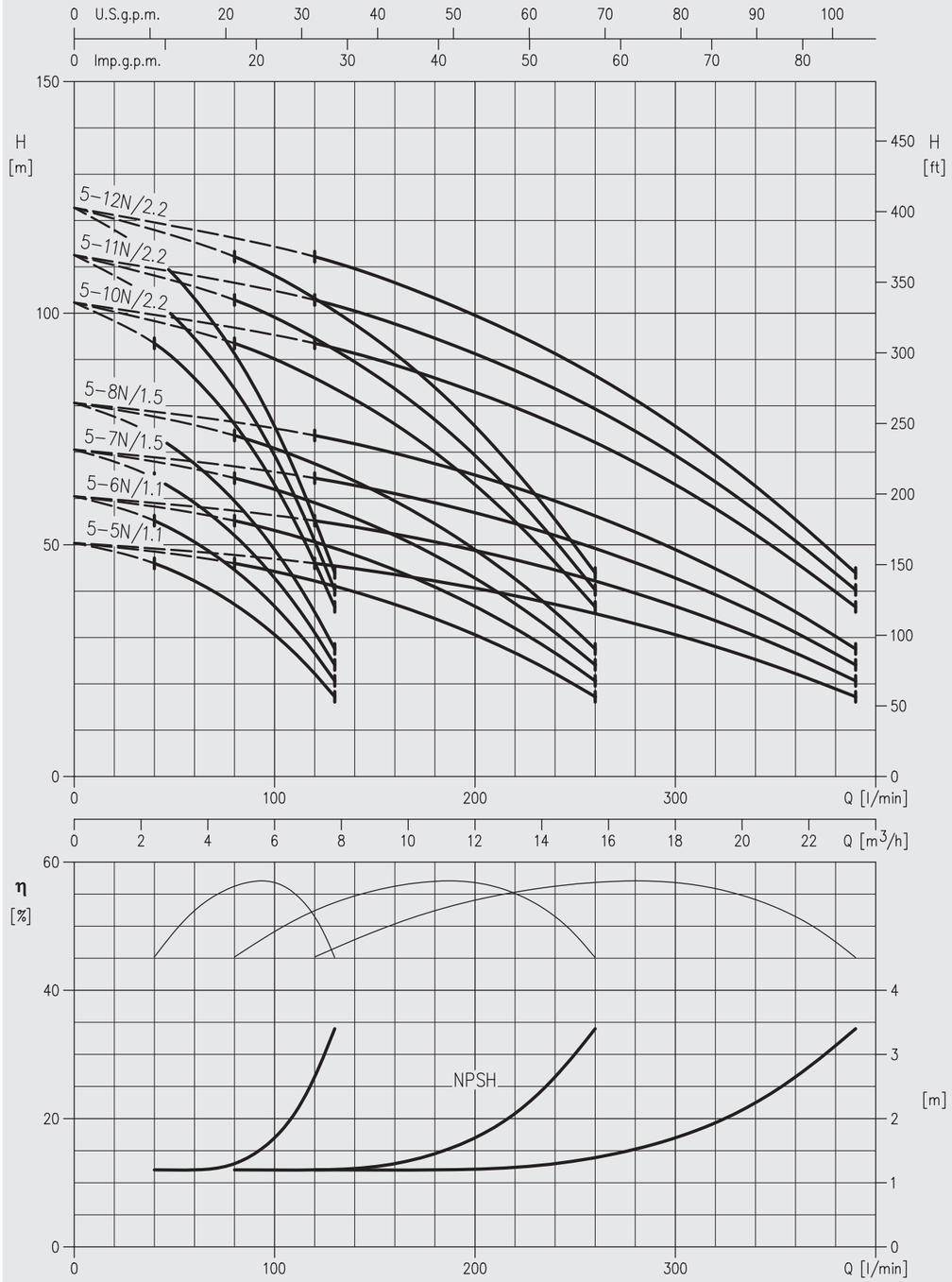
Il prelievo o comunque la fuoriuscita d’acqua dall’impianto, a pompe ferme, provoca l’abbassamento della pressione e la conseguente chiusura del contatto del pressostato con taratura più alta che determina la partenza della prima elettropompa. Se il flusso in uscita è superiore alla portata di tale pompa la pressione continua a scendere fino a causare la chiusura del contatto del secondo ed eventualmente del terzo pressostato e la partenza di un’altra o di altre due pompe principali. La fine dell’erogazione o la riduzione del flusso in uscita portano all’innalzamento della pressione nell’impianto con apertura dei contatti dei pressostati e fermata scaglionata delle pompe. L’inversione dell’ordine di accensione dei motori riduce il numero degli avviamenti orari delle singole pompe e consente un impiego omogeneo delle stesse. Collegando al quadro un galleggiante od un pressostato di minima (sia per il caso di prelievo da serbatoio di prima raccolta, sia da circuito idraulico) si evita il verificarsi della più frequente causa di guasto delle elettropompe: la mancanza d’acqua in aspirazione.

3GP EVM(G) HIDRO-STANICE

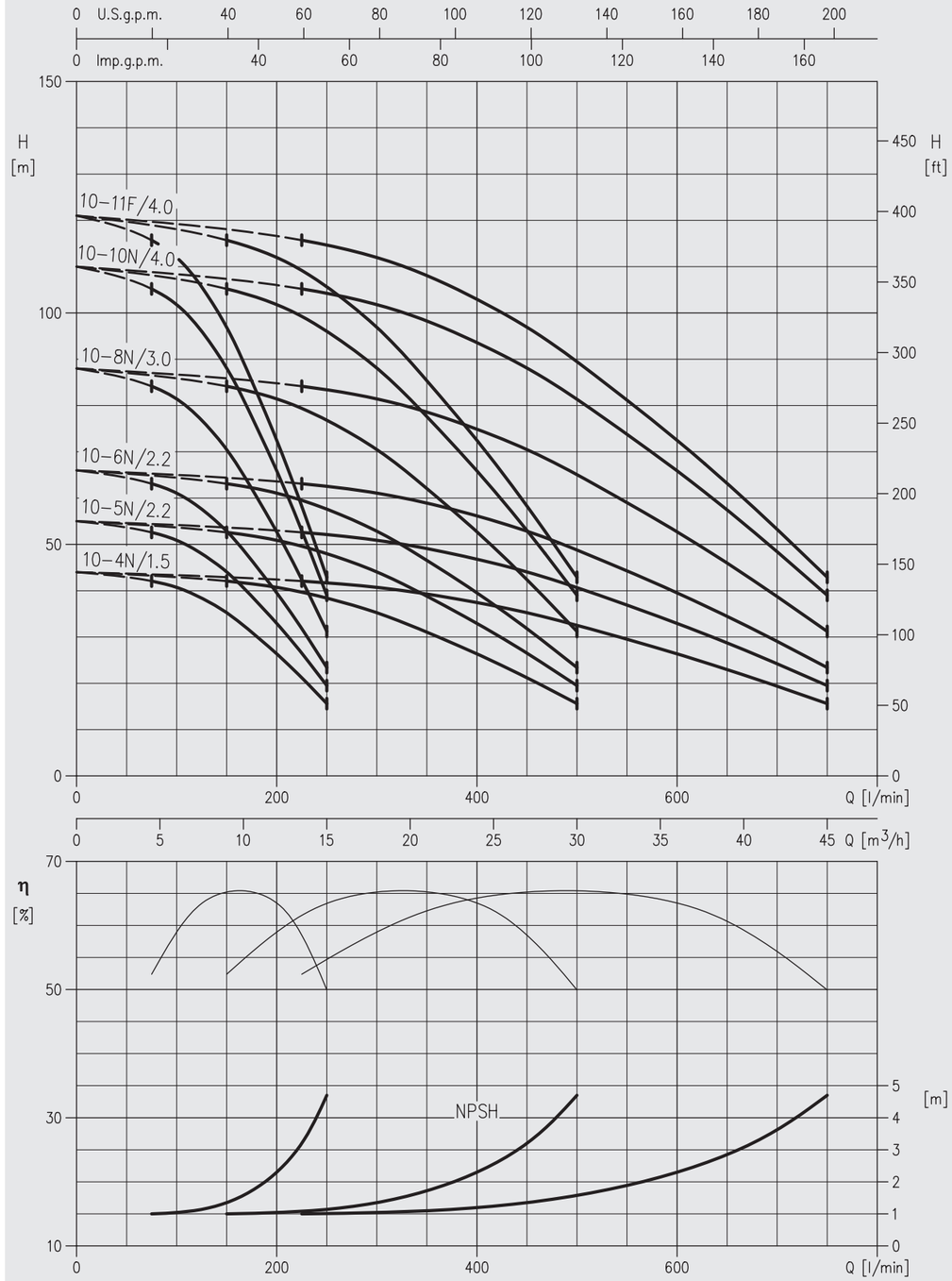
3GP EVM3



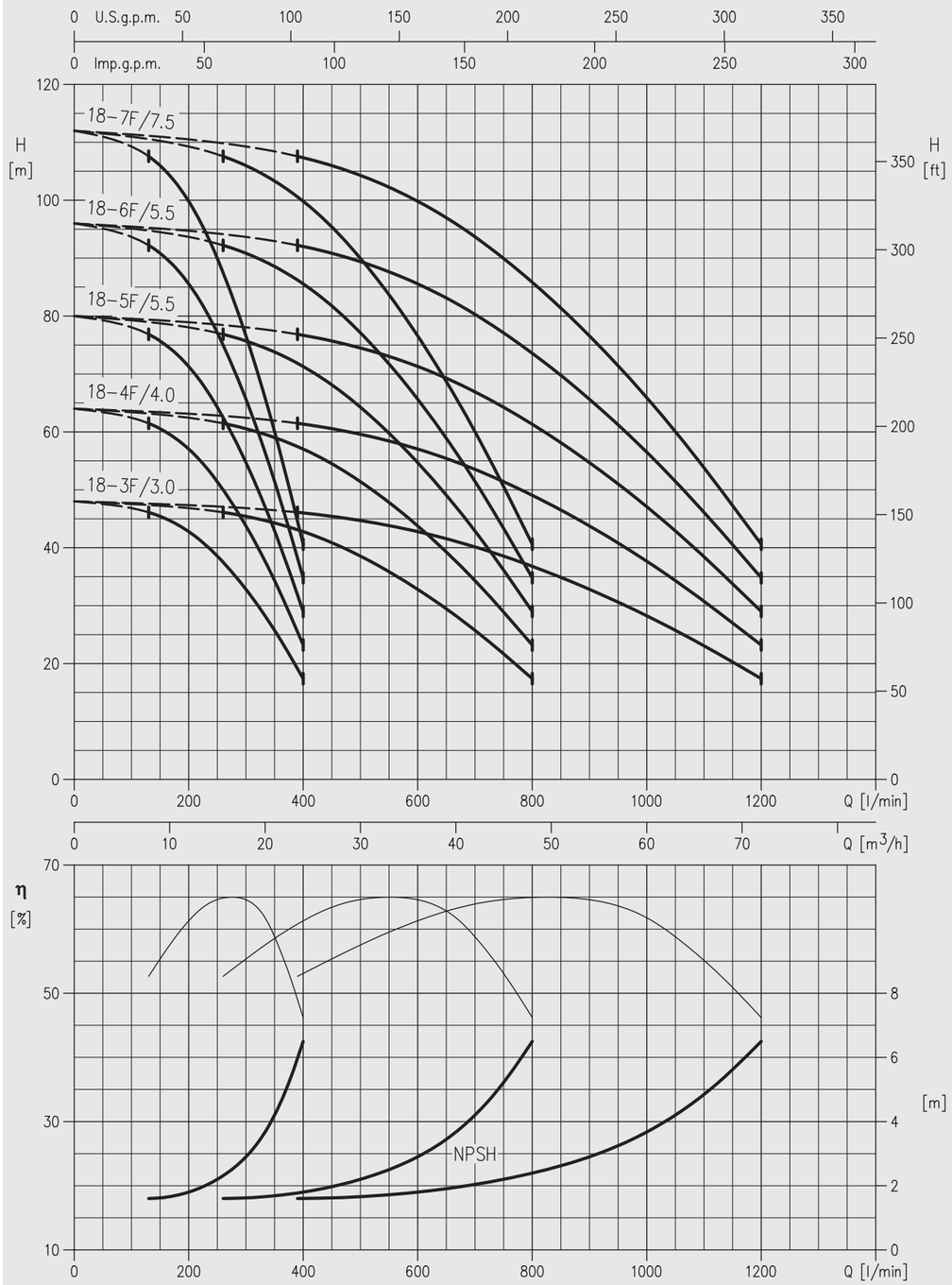
3GP EVM5



3GP EVM 10

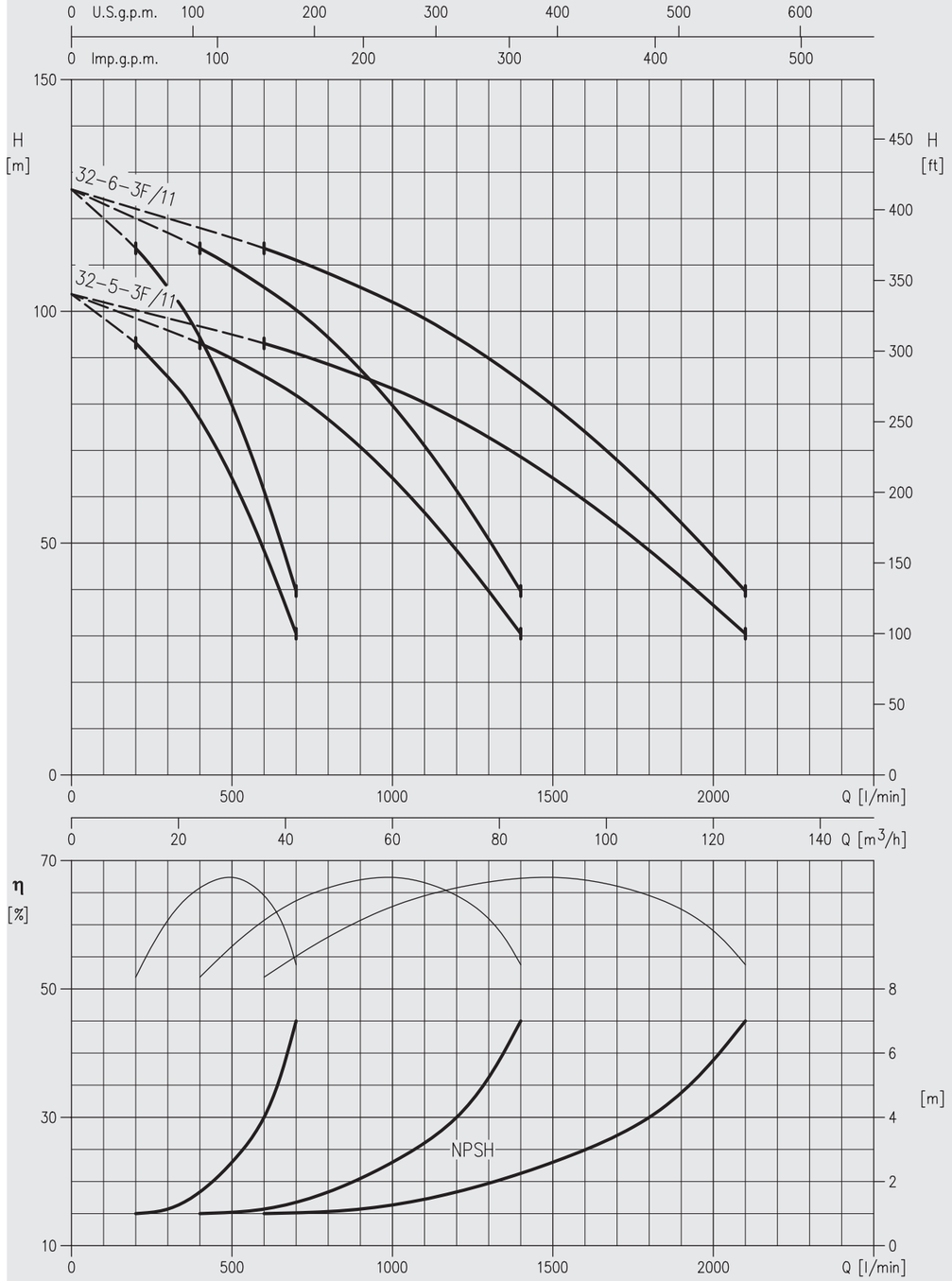


3GP EVM 18

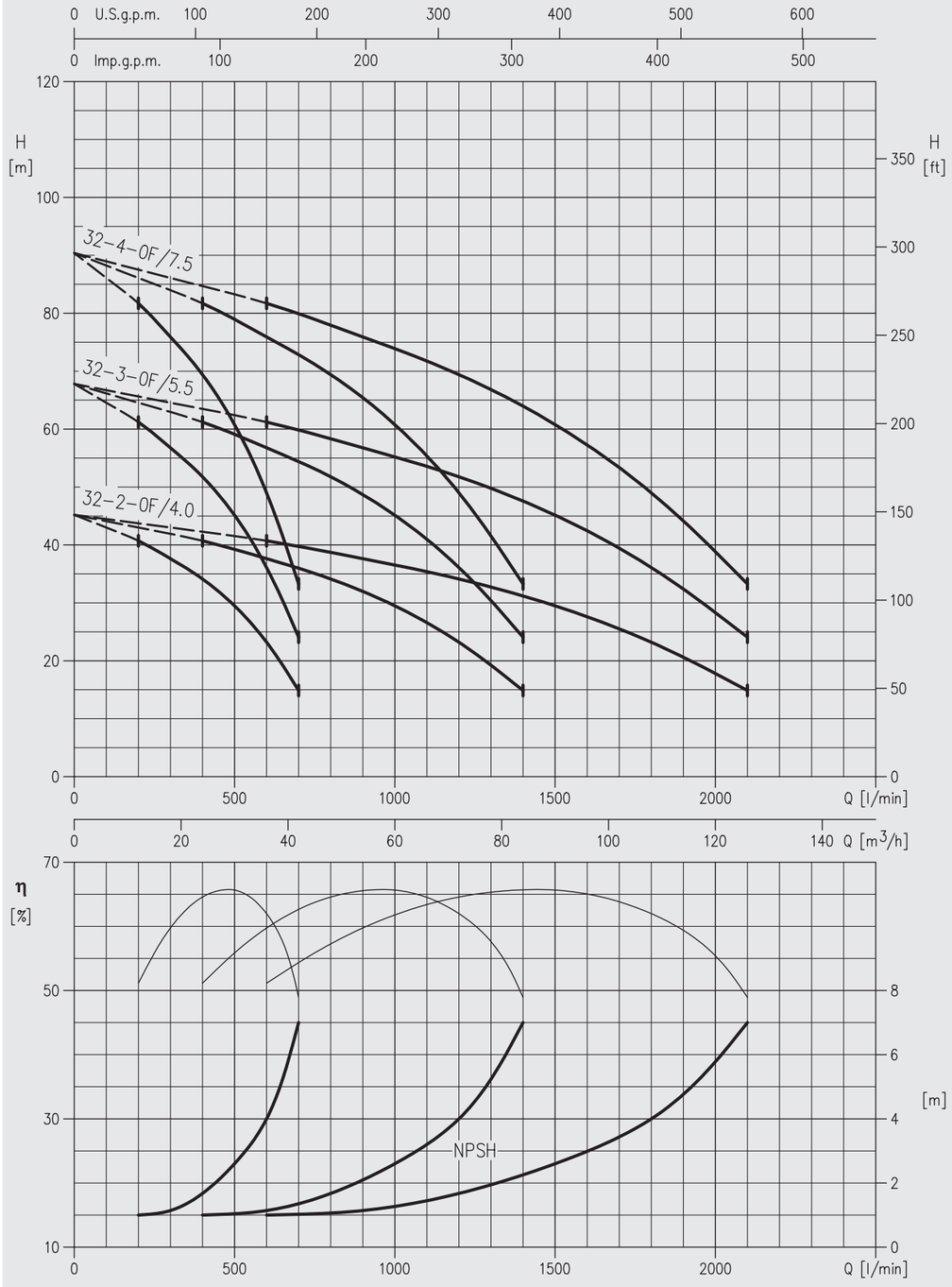


3GP EVM(G) HIDRO-STANICE

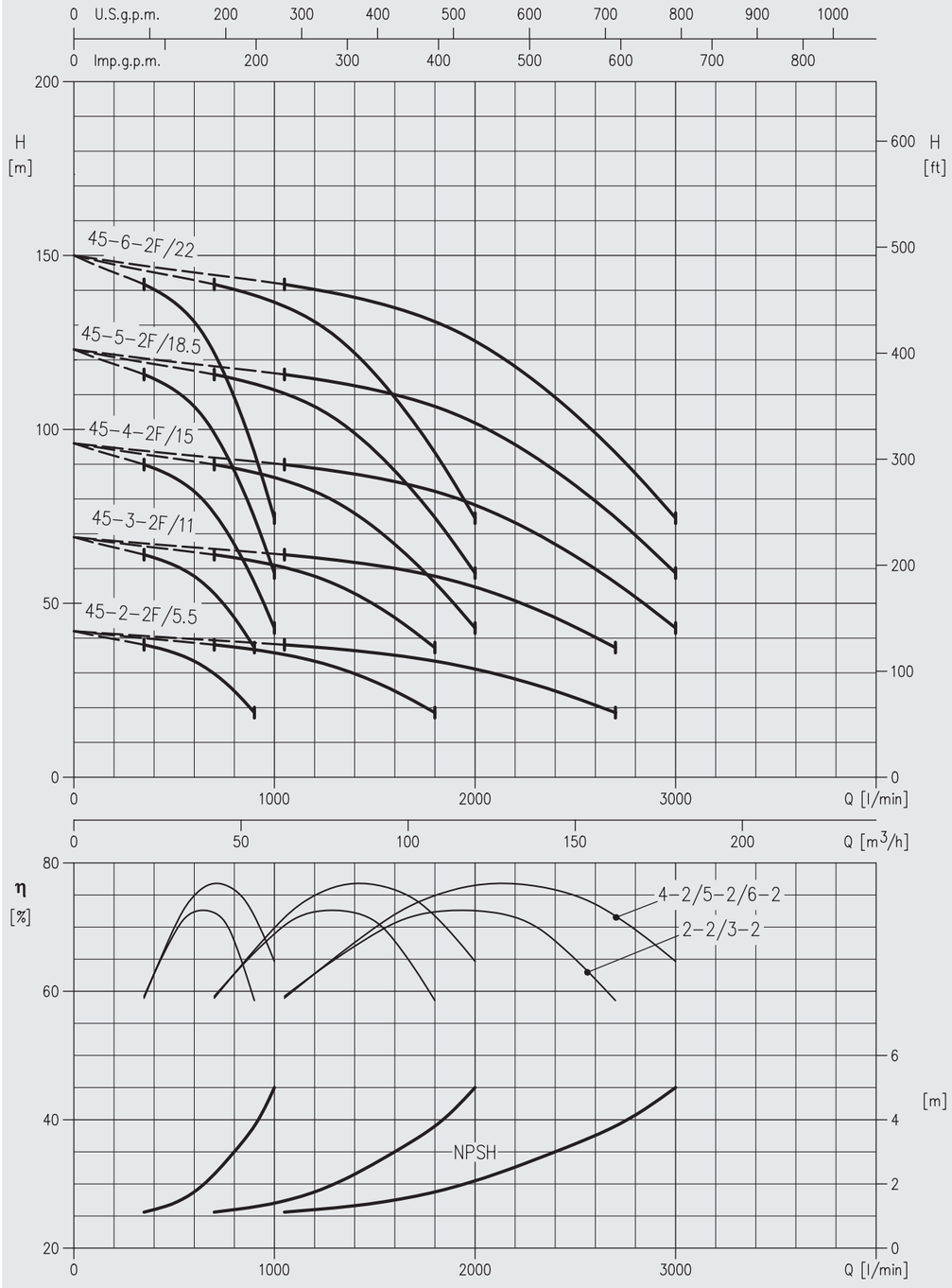
3GP EVM 32



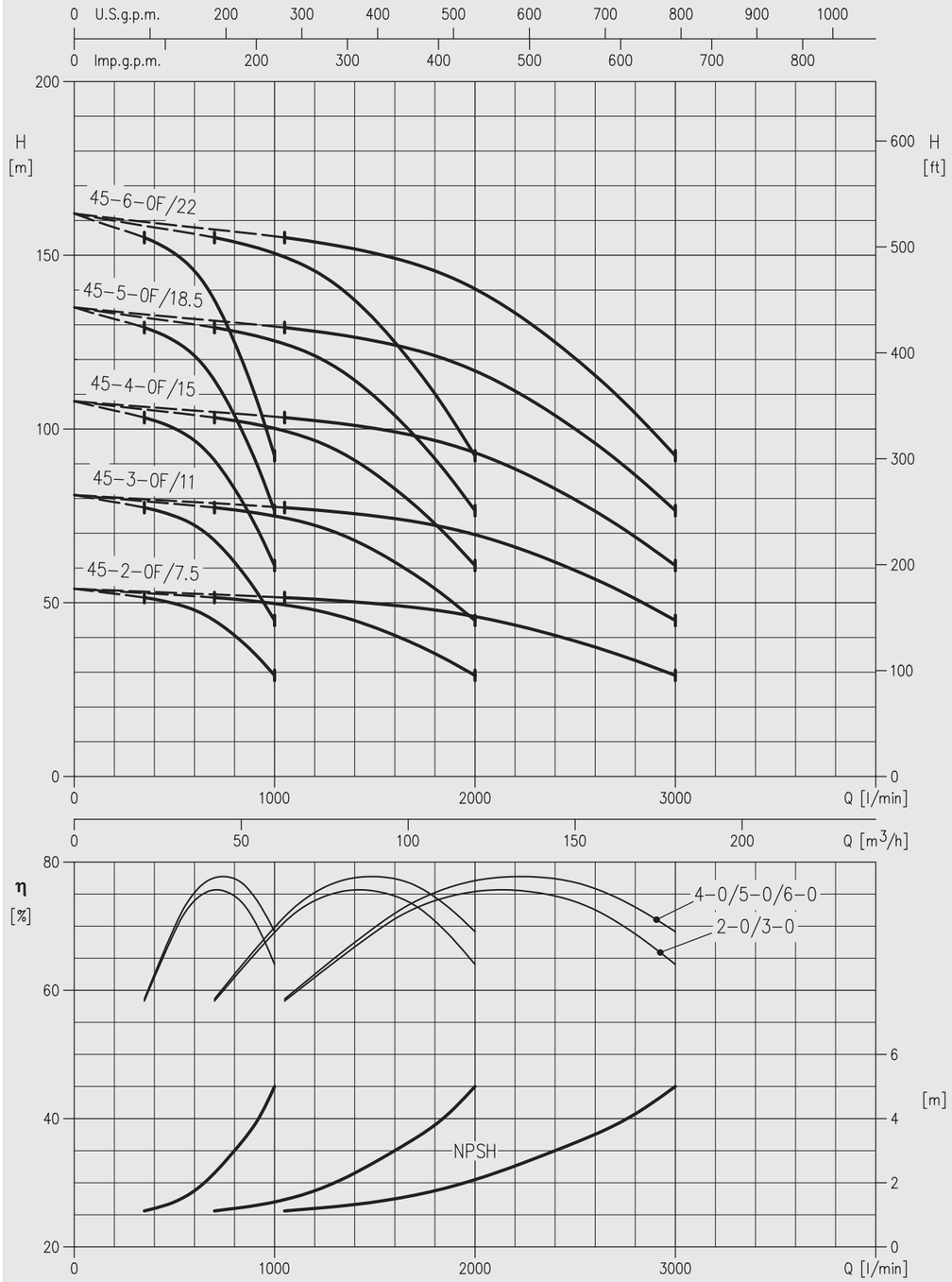
3GP EVM32



3GP EVM 45

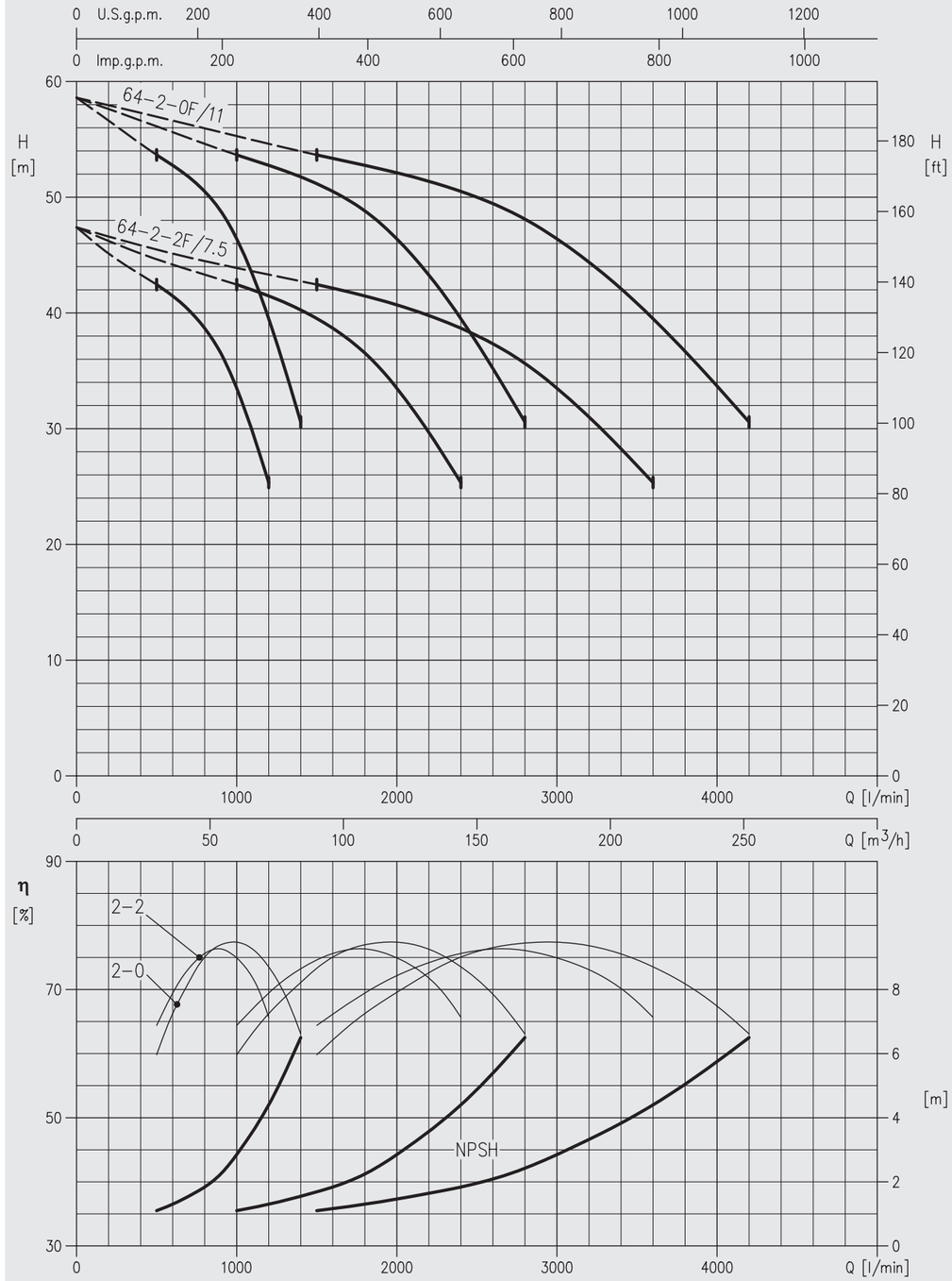


3GP EVM 45

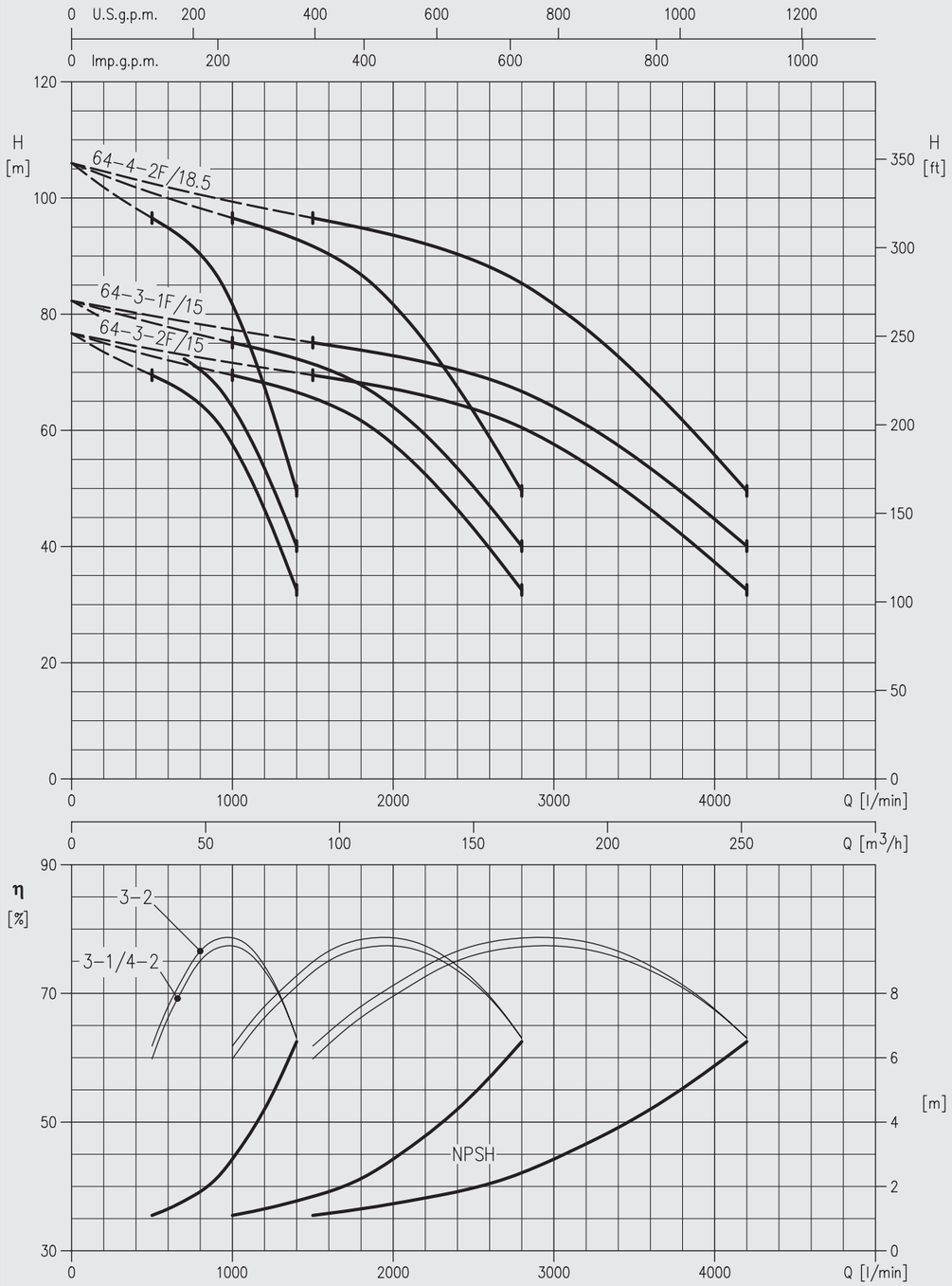


3GP EVM(G) HIDRO-STANICE

3GP EVM 64



3GP EVM64



3GP EVM(G) HIDRO-STANICE

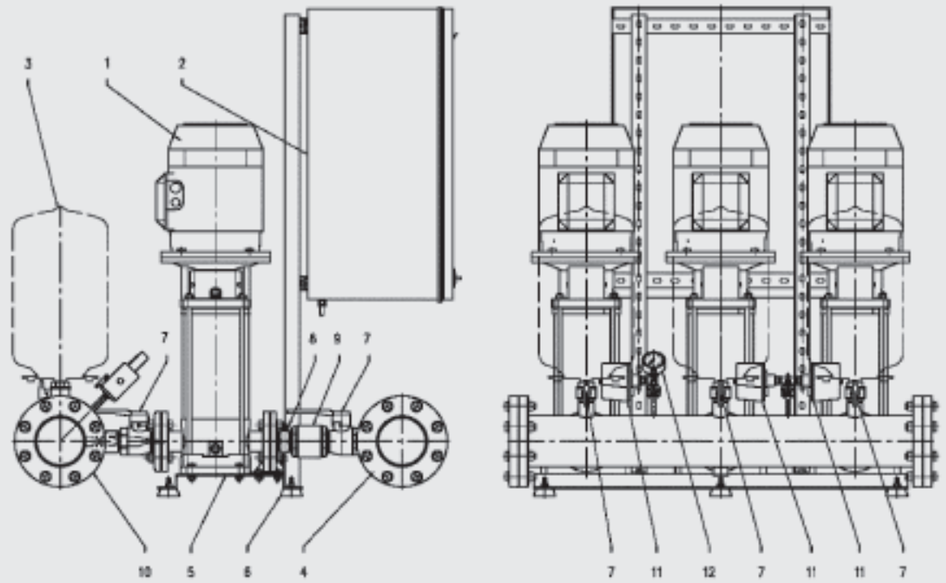
KARAKTERISTIKE HIDRO - STANICA SA TRI PARALELNO SPOJENE PUMPE

Tipo pompa Trifase	kW	Assorbimento max (A) Monofase 230 V	Assorbimento max (A) Trifase 400 V	Q=Portata l/min 0	60	120	180	225	300	390	450	600	750	900	1050	1200
				m³/h 0	3,6	7,2	10,8	13,5	18	23,4	27	36	45	54	63	72
				H=Prevalenza manometrica in m.c.a.												
3 4N/0.55	0.55+0.55+0.55	11.4	4.8	37,2	33,4	27,9	20,6	13,2	-	-	-	-	-	-	-	-
3 5N/0.55	0.55+0.55+0.55	11.4	4.8	46,5	42,0	34,9	25,8	16,5	-	-	-	-	-	-	-	-
3 6N/0.75	0.75+0.75+0.75	15.9	5.7	56,0	50,0	42,0	30,9	19,8	-	-	-	-	-	-	-	-
3 7N/0.75	0.75+0.75+0.75	15.9	5.7	65,0	58,5	49,0	36,1	23,1	-	-	-	-	-	-	-	-
3 9N/1.1	1.1+1.1+1.1	20.1	7.5	84,0	75,0	63,0	46,5	29,7	-	-	-	-	-	-	-	-
3 11N/1.1	1.1+1.1+1.1	20.1	7.5	102,0	92,0	77,0	56,5	36,3	-	-	-	-	-	-	-	-
5 5N/1.1	1.1+1.1+1.1	20.1	7.5	50,5	-	46,0	42,0	38,6	30,6	17,2	-	-	-	-	-	-
5 6N/1.1	1.1+1.1+1.1	20.1	7.5	60,5	-	55,0	50,5	46,5	36,7	20,6	-	-	-	-	-	-
5 7N/1.5	1.5+1.5+1.5	26.4	10.2	70,5	-	64,5	59,0	54,0	43,0	24,1	-	-	-	-	-	-
5 8N/1.5	1.5+1.5+1.5	26.4	10.2	80,5	-	73,5	67,5	61,5	49,0	27,5	-	-	-	-	-	-
5 10N/2.2	2.2+2.2+2.2		14.7	102,0	-	93,5	86,0	79,0	63,0	36,6	-	-	-	-	-	-
5 11N/2.2	2.2+2.2+2.2		14.7	113,0	-	103,0	94,5	86,5	69,5	40,5	-	-	-	-	-	-
5 12N/2.2	2.2+2.2+2.2		14.7	123,0	-	112,0	103,0	94,5	75,5	44,0	-	-	-	-	-	-
10 4N/1.5	1.5+1.5+1.5	26,4	10.2	44,0	-	-	-	42,0	40,5	37,8	35,2	26,4	15,6	-	-	-
10 5N/2.2	2.2+2.2+2.2		10.2	55,0	-	-	-	52,5	51,0	47,5	44,0	33,0	19,5	-	-	-
10 6N/2.2	2.2+2.2+2.2		10.2	66,0	-	-	-	63,0	61,0	57,0	53,0	39,5	23,4	-	-	-
10 8N/3.0	3+3+3		19.5	88,0	-	-	-	84,0	81,5	75,5	70,5	52,5	31,2	-	-	-
10 10N/4.0	4+4+4		25.5	110,0	-	-	-	105,0	102,0	94,5	88,0	66,0	39,0	-	-	-
10 11N/4.0	4+4+4		25.5	121,0	-	-	-	116,0	112,0	104,0	97,0	72,5	43,0	-	-	-
18 3F/3.0	3+3+3		19.5	48,0	-	-	-	-	-	46,0	45,5	43,0	38,6	32,8	25,7	17,4
18 4F/4.0	4+4+4		25.5	64,0	-	-	-	-	-	61,5	60,5	57,0	51,5	44,0	34,3	23,2
18 5F/5.5	5.5+5.5+5.5		32.4	80,0	-	-	-	-	-	77,0	75,5	71,5	64,5	54,5	43,0	29,0
18 6F/5.5	5.5+5.5+5.5		32.4	96,0	-	-	-	-	-	92,0	91,0	85,5	77,0	65,5	51,5	34,8
18 7F/7.5	7.5+7.5+7.5		42.3	112,0	-	-	-	-	-	108,0	106,0	100,0	90,0	76,5	60,0	40,5

KARAKTERISTIKE HIDRO - STANICA SA TRI PARALELNO SPOJENE PUMPE

Tipo pompa Trifase 400 V	kW	Ass. max (A) Trifase 400 V	Q=Portata l/min 0	600	1050	1500	1800	2100	2700	3000	3600	4200
			m³/h 0	36	63	90	108	126	162	180	216	252
			H=Prevalenza manometrica in m.c.a.									
32 2-0F/4.0	4+4+4	25,5	45,0	40,5	36,0	29,5	23,2	14,9	-	-	-	-
32 3-0F/5.5	5.5+5.5+5.5	32,4	68,0	61,0	54,5	45,0	36,1	24,1	-	-	-	-
32 4-0F/7.5	7.5+7.5+7.5	42,3	90,5	81,5	73,0	61,0	49,0	33,3	-	-	-	-
32 5-3F/11	11+11+11	64,5	104,0	93,0	82,0	64,0	48,5	30,5	-	-	-	-
32 6-3F/11	11+11+11	64,5	126,0	114,0	100,0	79,5	61,5	39,7	-	-	-	-
45 2-2F/5.5	5.5+5.5+5.5	32,4	42,0	-	38,1	35,8	33,4	29,8	18,6	-	-	-
45 2-0F/7.5	7.5+7.5+7.5	42,3	54,0	-	51,5	50,0	48,0	45,0	35,4	29,1	-	-
45 3-2F/11	11+11+11	64,5	69,0	-	64,0	61,0	58,0	53,0	37,3	-	-	-
45 3-0F/11	11+11+11	64,5	81,0	-	77,5	75,0	72,5	68,0	54,0	45,0	-	-
45 4-2F/15	15+15+15	85,5	96,0	-	90,0	86,0	82,0	76,0	56,0	43,0	-	-
45 4-0F/15	15+15+15	85,5	108,0	-	103,0	100,0	96,5	91,0	73,0	60,5	-	-
45 5-2F/18.5	18.5+18.5+18.5	103,5	123,0	-	116,0	111,0	107,0	99,0	74,5	58,5	-	-
45 5-0F/18.5	18.5+18.5+18.5	103,5	135,0	-	129,0	125,0	121,0	114,0	91,5	76,5	-	-
45 6-2F/22	22+22+22	123	150,0	-	142,0	137,0	131,0	122,0	93,5	74,5	-	-
45 6-0F/22	22+22+22	123	162,0	-	155,0	151,0	146,0	137,0	110,0	92,5	-	-
64 2-2F/7.5	7.5+7.5+7.5	42,3	47,5	-	-	42,5	41,5	40,5	36,5	33,5	25,3	-
64 2-0F/11	11+11+11	64,5	58,5	-	-	53,5	53,0	52,0	49,0	46,5	39,5	30,6
64 3-2F/15	15+15+15	85,5	76,5	-	-	69,5	68,0	66,5	61,5	57,5	46,5	32,5
64 3-1F/15	15+15+15	85,5	82,5	-	-	75,0	74,0	72,5	68,0	64,0	53,5	40,0
64 4-2F/18.5	18.5+18.5+18.5	103,5	106,0	-	-	96,5	95,0	93,0	87,0	81,5	67,5	49,5

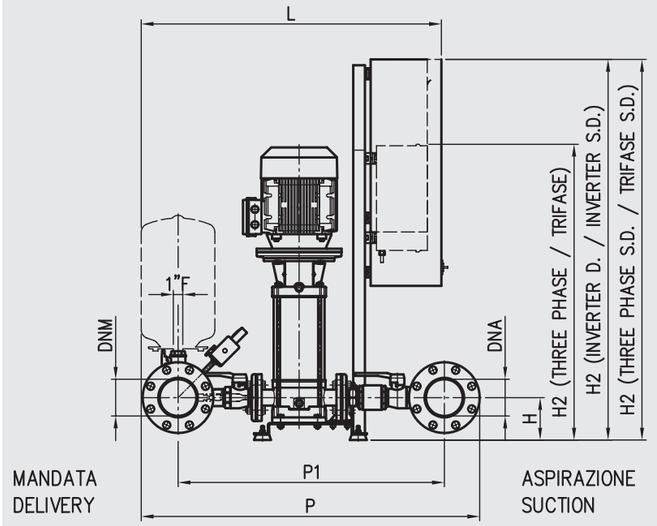
3GP EVM(G)

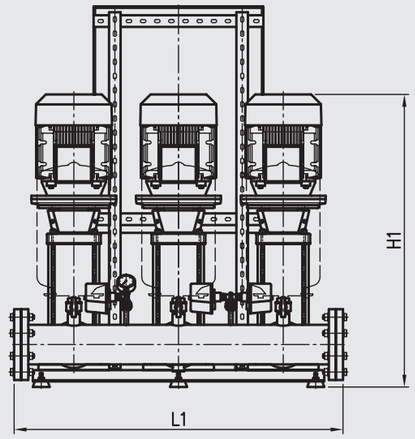


1. Elettropompe.
2. Quadro elettrico.
3. Vasi espansione (forniti su richiesta).
4. Collettore in aspirazione.
5. Base.
6. Piedini antivibranti.
7. Valvola di sezionamento.
8. Niplo aspirazione.
9. Valvola di ritegno.
10. Collettore di mandata.
11. Pressostati.
12. Manometro.

3GP EVM(G) HIDRO-STANICE

DIMENZIJE





MODELLO	L								H	H1	H2								P		P1		L1	DNA	PESO kg			
	VERSIONE ST ANDARD				VERSIONE AISI 304					D.O.L. / T.S.D.	VERSIONE STANDARD				VERSIONE AISI 304				VERSIONE STANDARD	VERSIONE AISI 304	VERSIONE STANDARD	VERSIONE AISI 304		DNM				
	D.O.L.	T.S.D.	I.D.O.L.	I.S.D.	D.O.L.	T.S.D.	I.D.O.L.	I.S.D.		I.D.O.L. / I.S.D.	D.O.L.	T.S.D.	I.D.O.L.	I.S.D.	D.O.L.	T.S.D.	I.D.O.L.	I.S.D.							D.O.L.	T.S.D.	I.D.O.L.	I.S.D.
3GP EVM3 4N/0,55	905	–	–	–	1000	–	–	–	110	560	945	–	–	–	995	–	–	–	895	1125	710	940	1050	DN65	178	–	–	–
3GP EVM3 5N/0,55	905	–	–	–	1000	–	–	–	110	580	945	–	–	–	995	–	–	–	895	1125	710	940	1050	DN65	187	–	–	–
3GP EVM3 6N/0,75	905	–	955	–	1000	–	1050	–	110	625	945	–	1045	–	995	–	1095	–	895	1125	710	940	1050	DN65	193	–	203	–
3GP EVM3 7N/0,75	905	–	955	–	1000	–	1050	–	110	650	945	–	1045	–	995	–	1095	–	895	1125	710	940	1050	DN65	195	–	205	–
3GP EVM3 9N/1,1	905	–	955	–	1000	–	1050	–	110	690	945	–	1045	–	995	–	1095	–	895	1125	710	940	1050	DN65	203	–	218	–
3GP EVM3 11N/1,1	905	–	955	–	1000	–	1050	–	110	730	945	–	1045	–	995	–	1095	–	895	1125	710	940	1050	DN65	214	–	224	–
3GP EVM5 5N/1,1	875	–	925	–	935	–	980	–	110	640	995	–	1045	–	995	–	1095	–	835	1005	650	820	1050	DN65	205	–	220	–
3GP EVM5 6N/1,1	875	–	925	–	935	–	980	–	110	670	995	–	1045	–	995	–	1095	–	835	1005	650	820	1050	DN65	205	–	215	–
3GP EVM5 7N/1,5	875	–	925	–	935	–	980	–	110	740	995	–	1045	–	995	–	1095	–	835	1005	650	820	1050	DN65	223	–	233	–
3GP EVM5 8N/1,5	875	–	925	–	935	–	980	–	110	770	995	–	1045	–	995	–	1095	–	835	1005	650	820	1050	DN65	225	–	240	–
3GP EVM5 10N/2,2	875	–	925	–	935	–	980	–	110	835	995	–	1045	–	995	–	1095	–	835	1005	650	820	1050	DN65	257	–	267	–
3GP EVM5 11N/2,2	875	–	925	–	935	–	980	–	110	865	995	–	1045	–	995	–	1095	–	835	1005	650	820	1050	DN65	267	–	277	–
3GP EVM5 12N/2,2	875	–	925	–	935	–	980	–	110	890	995	–	1045	–	995	–	1095	–	835	1005	650	820	1050	DN65	270	–	285	–
3GP EVM10 4N/1,5	940	–	985	–	1005	–	1055	–	140	730	1045	–	1095	–	1045	–	1145	–	985	1180	765	960	1160	DN100	288	–	298	–
3GP EVM10 5N/2,2	940	–	985	–	1005	–	1055	–	140	770	1045	–	1095	–	1045	–	1145	–	985	1180	765	960	1160	DN100	310	–	320	–
3GP EVM10 6N/2,2	940	–	985	–	1005	–	1055	–	140	800	1045	–	1095	–	1045	–	1145	–	985	1180	765	960	1160	DN100	315	–	330	–
3GP EVM10 8N/3,0	940	–	985	–	1005	–	1055	–	140	910	1045	–	1095	–	1045	–	1145	–	985	1180	765	960	1160	DN100	338	–	353	–
3GP EVM10 10N/4,0	940	–	985	–	1005	–	1055	–	140	970	1045	–	1095	–	1045	–	1145	–	985	1180	765	960	1160	DN100	373	–	388	–
3GP EVM10 11N/4,0	940	–	985	–	1005	–	1055	–	140	1000	1045	–	1095	–	1045	–	1145	–	985	1180	765	960	1160	DN100	381	–	396	–
3GP EVM18 3F/3,0	1010	–	1060	–	1090	–	1140	–	150	790	1045	–	1145	–	1045	–	1145	–	1190	1385	940	1135	1160	DN125	402	–	417	–
3GP EVM18 4F/4,0	1010	–	1060	–	1090	–	1140	–	150	840	1045	–	1145	–	1045	–	1145	–	1190	1385	940	1135	1160	DN125	441	–	461	–
3GP EVM18 5F/5,5	1010	–	1060	–	1090	–	1140	–	150	955	1045	–	1345	–	1045	–	1345	–	1190	1385	940	1135	1160	DN125	527	–	562	–
3GP EVM18 6F/5,5	1010	–	1060	–	1090	–	1140	–	150	995	1045	–	1345	–	1045	–	1345	–	1190	1385	940	1135	1160	DN125	548	–	578	–
3GP EVM18 7F/7,5	1010	1010	1060	1060	1090	1090	1140	1140	150	1035	1045	1345	1345	1345	1045	1345	1345	1345	1190	1385	940	1135	1160	DN125	574	614	604	604

SIN. PH. = Monofase
D.O.L. = Trifase Avviamento diretto
T.S.D. = Trifase Avviamento stella - triangolo
I = Comando ad inverter