VTH

SUBMERSIBLE PUMPS

VTH

Elettropompe sommergibili con girante Vortex

Submersible electropumps with Vortex impeller

Potenze / *Power:*	**12÷40 kW**
Mandate / *Delivery*	**DN80 - 100**

Impieghi
La serie VTH 2 poli trova impiego nel pompaggio e liquidi fognari con pezzi solidi in sospensione Le alte prestazioni le rendono efficaci in varie applicazioni: depuratori, canalizzazioni industriali, zootecnia, fognature.

Caratteristiche
Tutti i componenti principali sono realizzati in Ghisa GG25. Due tenute meccaniche separate (lato motore a bagno olio, lato girante a contatto con il liquido) e componentistica di prima qualità, ne garantiscono il perfetto funzionamento.

Motori
- Motori asincroni 2 poli con rotore a gabbia di scoiattolo
- Protezione termica T1 e T2 incorporato nel motore da collegare ad un apposito quadro di comando
- Isolamento statore classe F (155°C)
- Grado protezione IP 68

Raffreddamento
Raffreddamento effettuato dal liquido nel quale la pompa è immersa.

Limiti di impiego
- Temperatura massima del liquido: 40°C con unità completamente sommersa
- Disponibili versioni speciali (escluso ATEX) fino alla temperatura liquido di 60°C con unità completamente sommersa, non a servizio continuo (S1)
- Massima profondità di immersione: 20m
- Valori pH ammessi: 6-10
- Caratteristiche idrauliche valide per liquidi di densità <1,1 kg/dm^3
- Tensioni ammesse: 230/400V o 400/690V ±5% a seconda del modello
- Frequenza ammessa: 50Hz ±2%

Application
The VTH 2 poles Series is used for pumping sewage with suspended solids. High performance renders it useful in a variety of applications including water treatment plants, industrial plants, farming and sewage.

Characteristic
All main components are made of grey cast iron GG25. Two individual mechanical seals (motor side in the oil chamber, impeller side in contact with the liquid) and high quality parts, ensure the perfect functioning and reliability of the product.

Motor range
- *Squirrel cage motor 2 poles*
- *Thermal protection T1 and T2 embedded in the motor winding (to be wired to the three pole contactor in the control panel)*
- *Class F insulation (155°C)*
- *IP 68 protection*

Motor cooling
The cooling of the motor is ensured by the liquid where the pump is submerged.

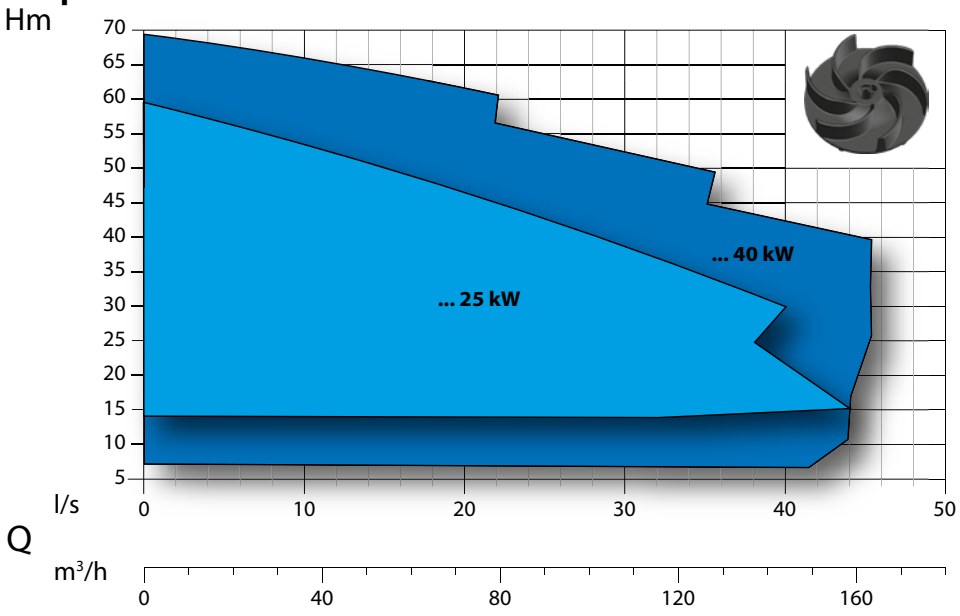
Limits of use
- *Max. permissible liquid temperature: 40°C with pump fully submerged*
- *On request, special version (excluded ATEX) to withstand liquid temperature up to 60°C with pump fully submerged, no S1 service*
- *Maximum depth of immersion: 20 mt*
- *Permissible pH value: 6-10*
- *Hydraulic features suitable for liquids with density <1,1 kg/dm^3*
- *Allowed voltage: 230/400V or 400/690V±5% depending on the pump*
- *Allowed frequency: 50Hz ±2%*

Designazione / *Designation*

VTH EX 100 - 2 / 250

- Serie pompa / *Pump series*
- Certificazione ATEX / IECEx / *ATEX/ IECEx certification*
- Bocca di mandata DN / *Delivery DN*
- Numero poli / *Poles number*
- Potenza kWP2 - es. 250=25kW / *Power kWP2 - ex. 250=25kW*

Campo di Prestazione / *Performance Overview*



Identificazione Curve

Curves Identification

- DN80
- DN100

Normative

Norms

Curve secondo ISO 9906:2012 3B2
According to ISO 9906:2012 3B2

Distinta dei componenti e materiali
List of components and materials

Golfare - *Hook*
Acciaio inox AISI 416 - *Stainless steel AISI 416*

Porta cuscinetto superiore - *Upper bearing support*
Ghisa GG25 - *Cast iron GG25*

Cassa motore - *Motor casing*
Ghisa GG25 - *Cast iron GG25*

Cuscinetto superiore - *Upper bearing*

Albero motore - *Motor shaft*
Acciaio inox AISI 420 - *Stainless steel AISI 420*

Motore elettrico - *Electric motor*

Rotore - *Rotor*

Cuscinetto inferiore - *Lower bearing*

Porta motore - *Motor holder*
Ghisa GG25 - *Cast iron GG25*

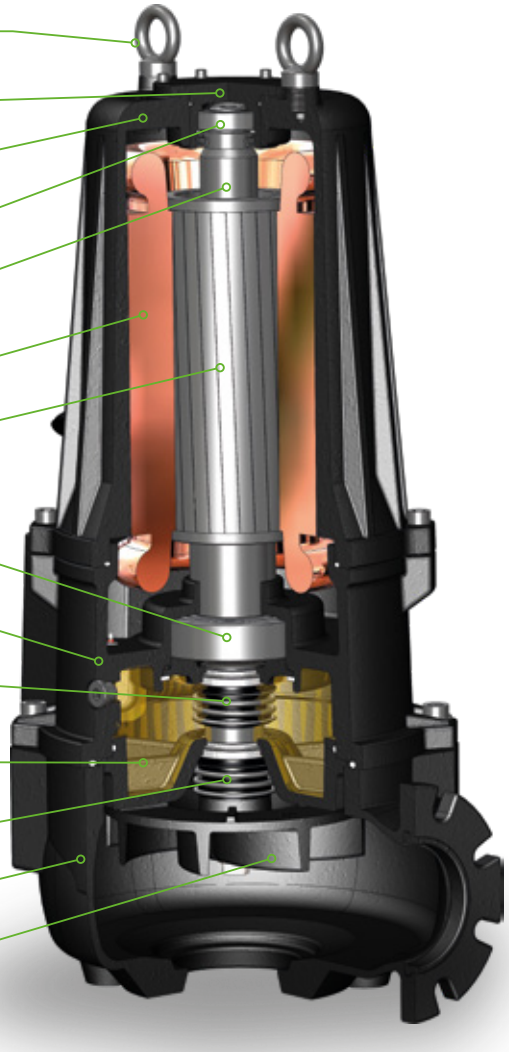
Tenuta meccanica - *Mechanical seal*
Carburo di silicio - *Silicon/Carbide* (SIC/SIC/Viton)

Disco di chiusura - *Closing plate*
Ghisa GG25 - *Cast iron GG25*

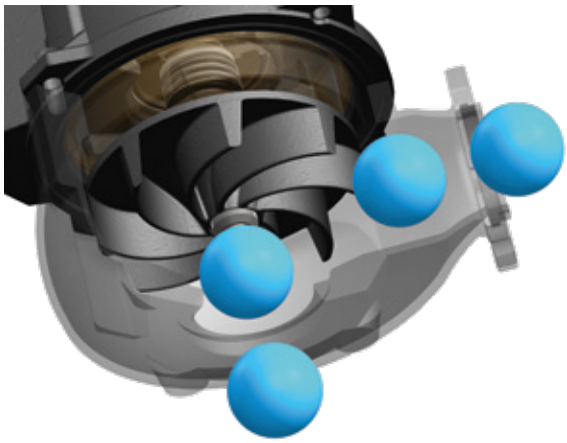
Tenuta meccanica - *Mechanical seal*
Carburo di silicio - *Silicon/Carbide* (SIC/SIC/Viton)

Corpo pompa - *Body pump*
Ghisa GG25 - *Cast iron GG25*

Girante - *Impeller*
Ghisa GG25 - *Cast iron GG25*



Tecnologie e Soluzioni
Technology and Features



Giranti
I giranti sono stati sviluppati per offrire sempre ottime prestazioni, senza rinunciare ad ampi passaggi di corpi solidi.

Impellers
Impellers have been studied to grant excellent performances and ample solid handling.

Pompe antideflagranti / *Explosion proof pumps*

CE 0477 Ex II 2G Ex db IIB T4 Gb
Ex h IIB T4 Gb
EPT 17 ATEX 2703 X 0°≤ Ta ≤ 40°

I presenti certificati garantiscono la sicurezza contro le esplosioni, in assoluta conformità con le stringenti direttive europee ed internazionali ATEX/IECEx.

These certificates grant for the safe use of the product in hazardous area in line with the stringent European and International standards ATEX/IECEx.

Sensore d'umidità
Sensore conforme alle norme sulla sicurezza integrata contro le esplosioni EN 60079-0, EN 60079-1 tramite barriera di protezione. Di serie su tutta la gamma (non applicabile con IECEx).

Seal leak detector
The seal leak detector is certified according to the norm EN 60079-0, EN 60079-1 (through safety barrier) and fitted standard on all series (not applicable with IECEx).

Cuscinetti
La serie monta il cuscinetto superiore a rulli cilindrici, atto ad assorbire e resistere ad eventuali sollecitazioni trasmesse dall'albero motore.

Bearings
The series is fitted with a cylindrical roller bearing (upper bearing) to absorb the thrust and vibration generated by the pump shaft.

VTH 80-2

Mandata Orizzontale DN80 PN16 - RPM 2850 1/min 2 poli

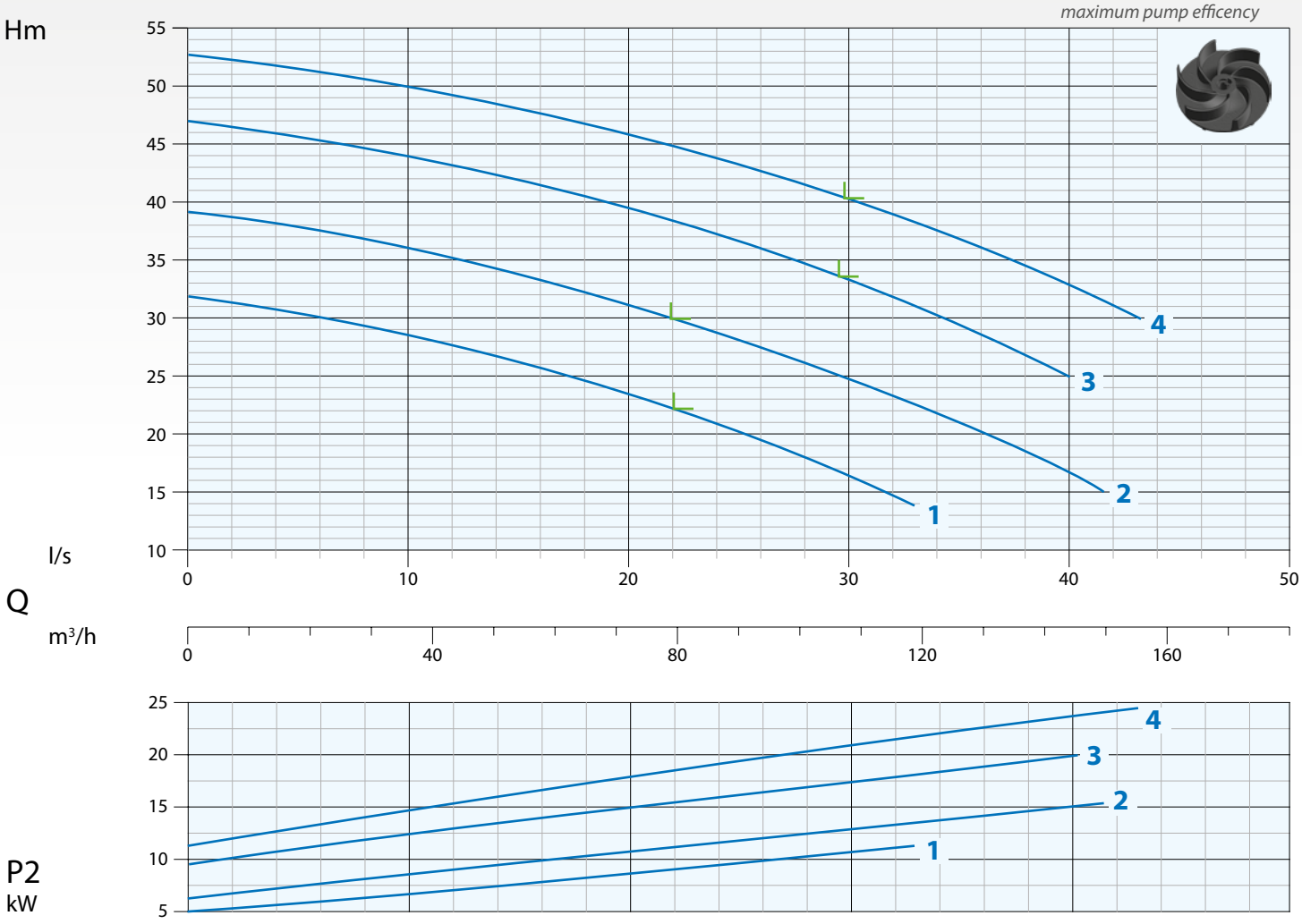
Horizontal Outlet DN80 PN16 - RPM 2850 1/min 2 poles

Immagine a solo scopo illustrativo
Picture for illustration purposes only

Curva di Prestazione

Performance Curve

L = rendimento massimo pompa
maximum pump efficency



N°	Tipo *Type*	l/s	4	8	10	14	20	24	30	34	40	42
		l/m	240	480	600	840	1200	1440	1800	2040	2400	2520
		m³/h	14,4	28,8	36	50,4	72	86,4	108	122,4	144	151,2
1	VTH 80-2/120	mt	31	29	28,5	27	23,5	21	16,5			
2	VTH 80-2/150		38	37	36	34	31	29	25	22	17	
3	VTH 80-2/200		46	45	44	42	39,5	37	33	30	25	
4	VTH 80-2/250		52	51	50	48,5	46	44	40	37,5	33	31

N°	Tipo *Type*	EX	Mandata *Delivery*	Passaggio *Free Passage*	kW P1	kW P2	HP	R.P.M. 1/min	A 3 Phase - 400V	Hz
1	VTH 80-2/120	•	DN80 PN16	70 mm	13,4	12	16	2850	22	50
2	VTH 80-2/150	•			17,2	15	20		29,5	
3	VTH 80-2/200	•			23,7	20	27		41	
4	VTH 80-2/250	•			28,2	25	33		47,5	

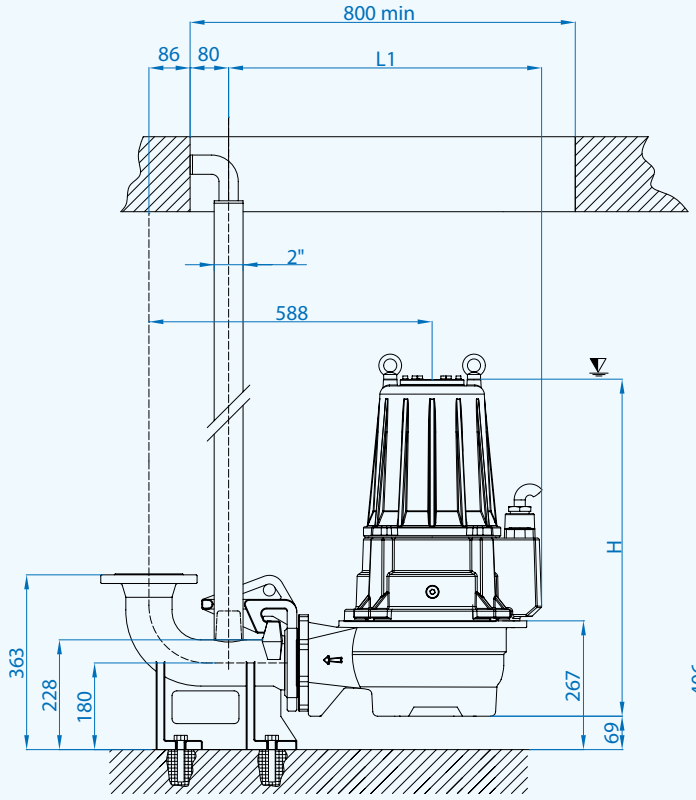
• Pompa antideflagrante disponibile con certificazioni:
Available explosion proof pump with certifications:

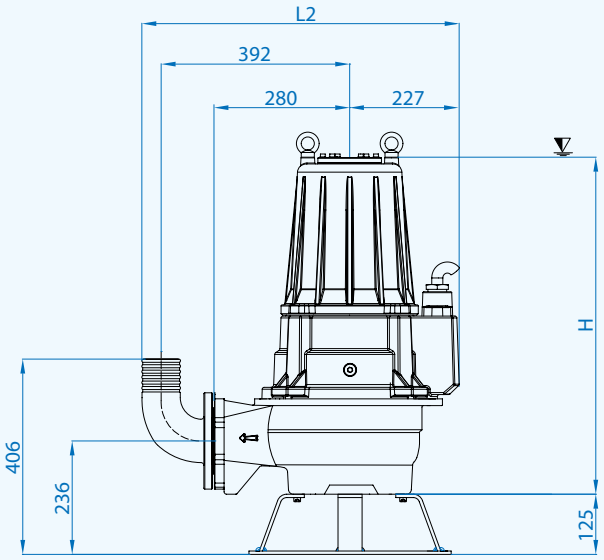
CE 0477
EPT 17 ATEX 2703 X

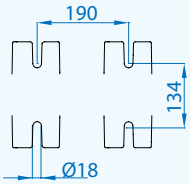
Ex II 2G
Ex db IIB T4 Gb
Ex h IIB T4 Gb
0°≤ Ta ≤ 40°

VTH

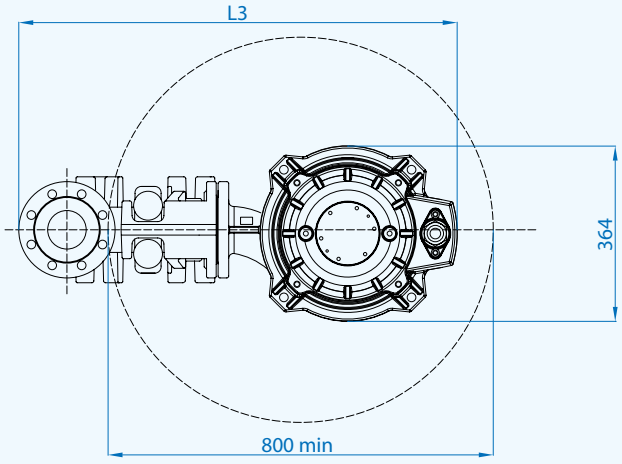
Sommergenza minima
Minimum submersion

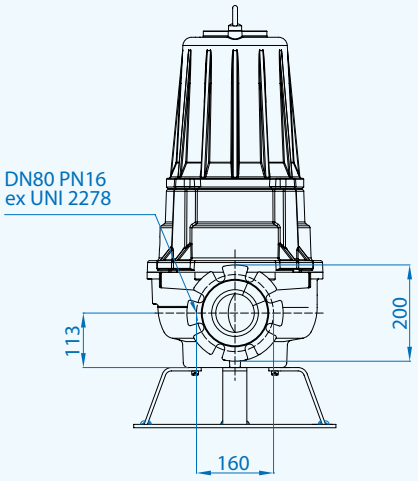






	H	L1	L2	L3
VTH 80-2/120-150	700	650	655	911
VTH 80-2/200-250	741	678	683	934





Cavi / *Cables*

Pompe *Pumps*	Versione *Version*	Fasi *Phases*	Cavo *Cable*	Sezione cavo mm² *Cable cross section mm²*	mt
80-2/120-150	Standard	3 ~ 400V	H07RN8F	10x2,5 Ø23*	10
	ATEX	Y-Δ	NSSHÖU-J	7x2,5+3x0,50 Ø20*	10
80-2/200-250	Standard	3 ~ 400V	H07RN8F	7x4+3x1 Ø20,5*	10
	ATEX	Y-Δ	NSSHÖU-J	7x6+3x1 Ø24*	10

* Terminali liberi - *Free terminals*

Dimensioni imballo / *Packaging dimension*

Tipo - *Type*	X mm	Y mm	Z mm	Kg
VTH 80-2/120	510	860	420	186
VTH 80-2/150				195
VTH 80-2/200				242
VTH 80-2/250				244

Accessori - *Optional*

Piede di accoppiamento
Tipo: DUTY 80 e B5
Automatic coupling foot
Type: DUTY 80 and B5

Curva flangiata con portagomma N2
Base di sostegno P7
Flanged hose connection N2
Foot support P7

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VTH 100-2

Mandata Orizzontale DN100 PN16 - RPM 2850 1/min 2 poli

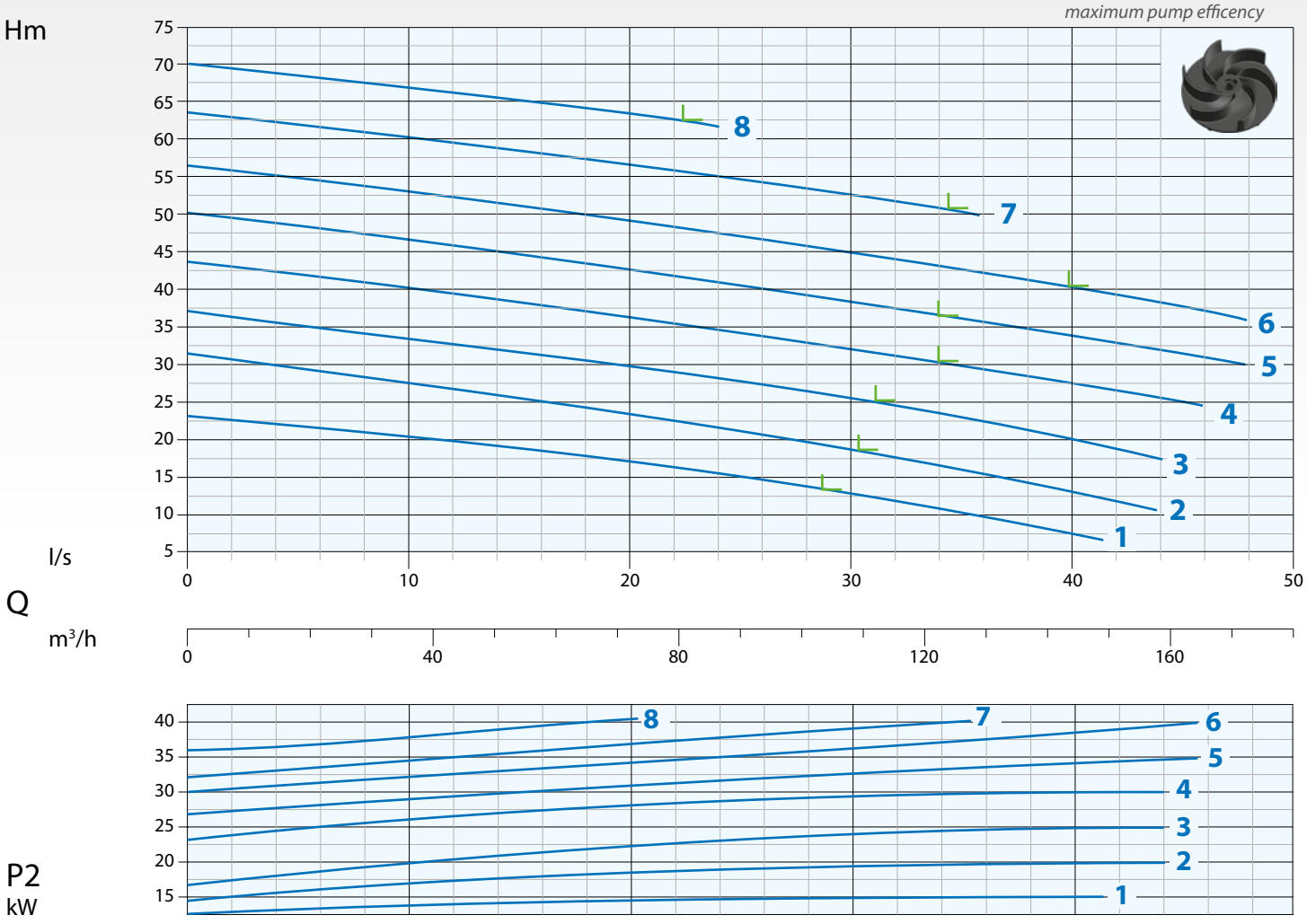
Horizontal Outlet DN100 PN16 - RPM 2850 1/min 2 poles

Immagine a solo scopo illustrativo
Picture for illustration purposes only

Curva di Prestazione

Performance Curve

= rendimento massimo pompa
maximum pump efficency



N°	Tipo *Type*	l/s	4	8	10	14	20	24	30	34	40	42
		l/m	240	480	600	840	1200	1440	1800	2040	2400	2520
		m³/h	14,4	28,8	36	50,4	72	86,4	108	122,4	144	151,2
1	VTH 100-2/150	mt	22,5	21	20,5	18	17	15	12,5	11	7,5	
2	VTH 100-2/200		30	28	27,5	26	23,5	22	18,5	16,5	12,5	12
3	VTH 100-2/250		35,5	34,5	33	32,5	30	28	26,5	23,5	20	18
4	VTH 100-2/300		42,5	40,5	40	38,5	36	35	32	31	27,5	27
5	VTH 100-2/350		48,5	47	46	45	42,5	41	38	37	34	32,5
6	VTH 100-2/400		55,5	54	53	52	49	47,5	45	43	40	39
7	VTH 100-2/400-1		62,5	61	60	58,5	57	55	52,5	51		
8	VTH 100-2/400-2		68	67,5	66,5	65	63	62				

N°	Tipo *Type*	EX	Mandata *Delivery*	Passaggio *Free Passage*	kW P1	kW P2	HP	R.P.M. 1/min	A 3 Phase - 400V	Hz
1	VTH 100-2/150	•	DN100 PN16	100 mm	17,2	15	20	2850	30,2	50
2	VTH 100-2/200	•			23,7	20	27		40,4	
3	VTH 100-2/250	•			28,2	25	34		47,4	
4	VTH 100-2/300	•			37,4	30	41		59,7	
5	VTH 100-2/350	•			40,6	35	47,5		65,1	
6	VTH 100-2/400	•			48,2	40	54		76,2	
7	VTH 100-2/400-1	•			48,2	40	54		76,2	
8	VTH 100-2/400-2	•			48,6	40	54		76,5	

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CE 0477
EPT 17 ATEX 2703 X

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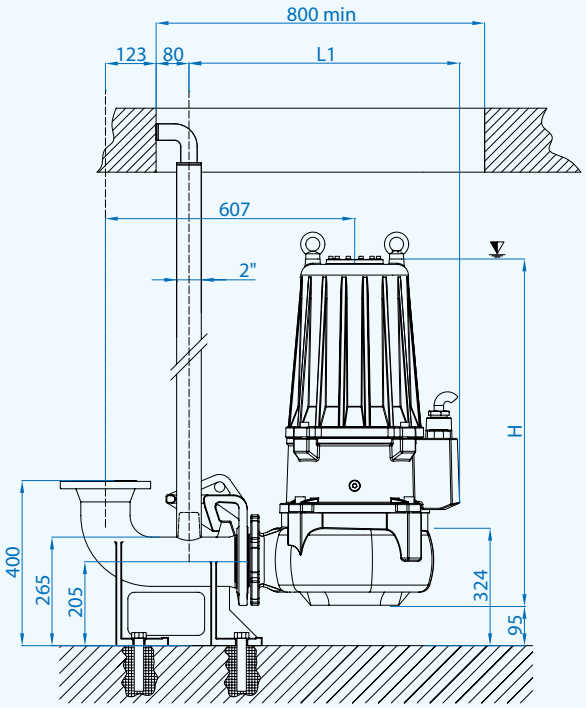
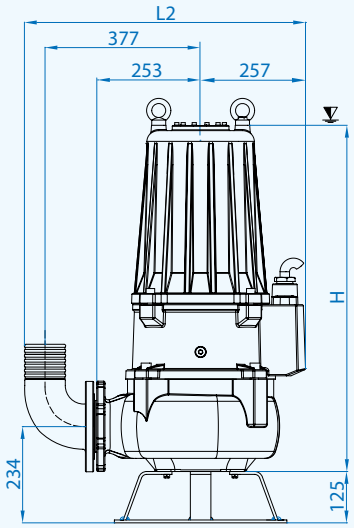
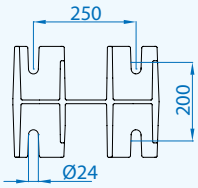
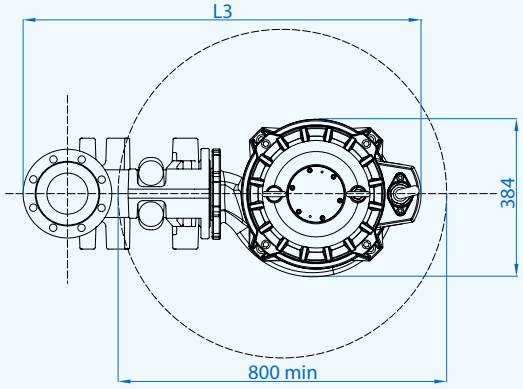


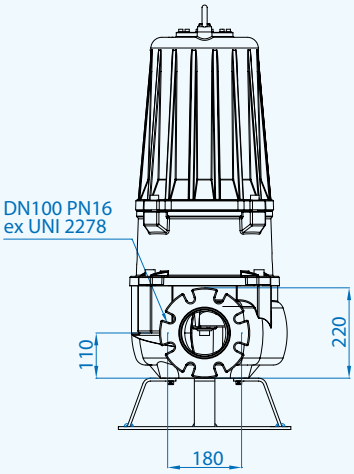
Sommergenza minima
Minimum submersion



	H	L1	L2	L3
VTH 100-2/150	728	650	659	911
VTH 100-2/200-250	769	659	684	969
VTH 100-2/300-350-400	843	659	684	969







Cavi / *Cables*

Pompe *Pumps*	Versione *Version*	Fasi *Phases*	Cavo *Cable*	Sezione cavo mm² *Cable cross section mm²*	mt
100-2/150	Standard	3 ~ 400V	H07RN8F	10x2,5 Ø23*	10
	ATEX	Y-Δ	NSSHÖU-J	7x2,5+3x0,50 Ø20*	10
100-2/200-250	Standard	3 ~ 400V	H07RN8F	7x4+3x1 Ø20,5*	10
	ATEX	Y-Δ	NSSHÖU-J	7x6+3x1 Ø24*	10
100-2/300-350-400	Standard	3 ~ 400V	NSSHÖU-J	7x6+3x1 Ø24*	10
	ATEX	Y-Δ			10

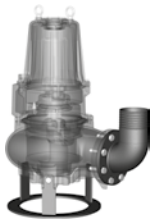
* Terminali liberi - *Free terminals*

Dimensioni imballo / *Packaging dimension*

Tipo - *Type*	X mm	Y mm	Z mm	Kg
VTH 100-2/150	510	860	420	210
VTH 100-2/200				252
VTH 100-2/250				254
VTH 100-2/300				310
VTH 100-2/350				340
VTH 100-2/400				380
VTH 100-2/400-1				382
VTH 100-2/400-2				385

Accessori - *Optional*

Piede di accoppiamento
Tipo: DUTY 100 e B6
Automatic coupling foot
Type: DUTY 100 and B6



Curva flangiata con portagomma N3
Base di sostegno P7
Flanged hose connection N3
Foot support P7

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