DNA

SUBMERSIBLE PUMPS

Elettropompe sommergibili con girante Vortex

Submersible electropumps with Vortex impeller

Potenze / *Power:*	**0.56÷2.2 kW**
Mandate / *Delivery:*	**DN50 - 65 - 80**

Impieghi

La serie DNA trova impiego nel pompaggio di liquidi biologici e fognari. L'ampio passaggio di corpi solidi, la rendono particolarmente idonea ad essere utilizzata su depuratori, impianti fognari pubblici e privati, industrie zootecnia. Le versioni a 4 poli si prestano ad essere impiegate nella condizione di servizio continuo S1, e si distinguono per l'elevata silenziosità di funzionamento.

Application

The DNA Series is used for sewage and waste water. Its wide channel permits the free passage of solids rendering it particularly useful in water treatment plants, domestic, municipal and farming applications. The 4 pole version can be used in applications where continuous S1 service is needed and are characterised by their quiet operation.

Caratteristiche

Tutti i componenti principali sono realizzati su Ghisa GG20. Due tenute meccaniche contrapposte in bagno d'olio, garantiscono il perfetto funzionamento.

Characteristic

The main components are fabricated in cast iron GG20. The Double mechanical seal in a back to back configuration located in the oil chamber guarantee long durability to the product.

Motori

- Motori asincroni 2-4 poli con rotore a gabbia di scoiattolo
- Protezione termica incorporata (DNA ...-2/220 e DNA ...-4/090 termico T1 e T2 incorporato nel motore da collegare al quadro elettrico)
- Isolamento statore classe F (155°C)
- Grado protezione IP 68

Motor range

- *Squirrel cage motor in 2 and 4 pole version*
- *Thermal protection embedded in the winding (In the DNA ...-2/220 and DNA ...-4/090 model the thermal protection T1 and T2 conductor to be wired to the control panel)*
- *Insulation class F 155°C*
- *Motor protection IP 68*

Raffreddamento

Raffreddamento effettuato dal liquido nel quale la pompa è immersa.

Motor cooling

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

Limiti di impiego

- Temperatura massima del liquido: 40°C con unità completamente sommersa
- Massima profondità di immersione: 20m
- Valori pH ammessi: 6-10
- Caratteristiche idrauliche valide per liquidi di densità <1,1 kg/dm^3
- Tensioni ammesse: 230V/400V ±5%
- Frequenza ammessa: 50Hz ±2%

Limits of use

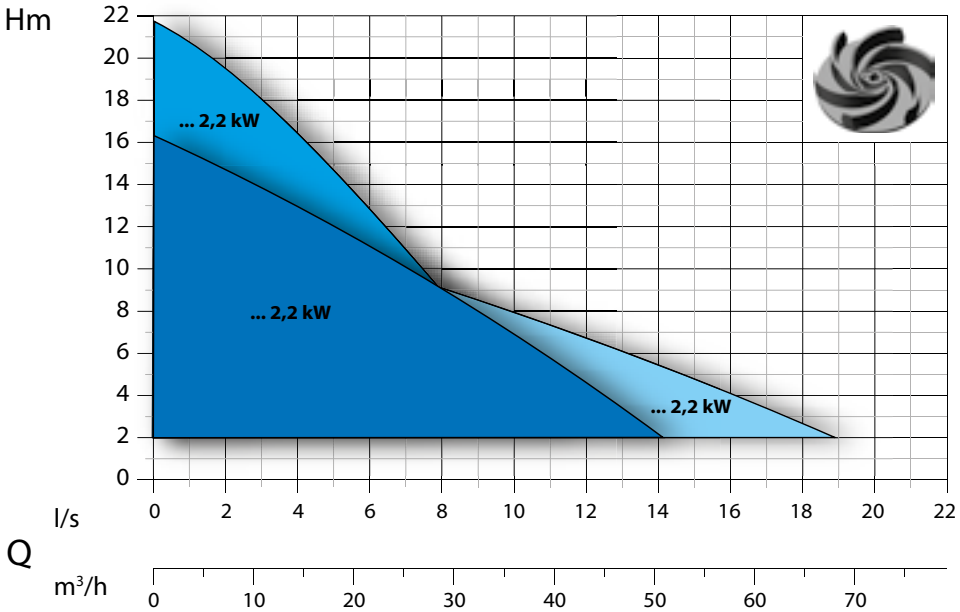
- *Max. permissible liquid temperature: 40°C with pump fully submerged*
- *Maximum depth of immersion: 20 mt.*
- *Permissible pH value: 6-10*
- *Hydraulic features suitable for liquids with density <1,1 kg/dm^3*
- *Allowed voltage: 230V/400V ±5%*
- *Allowed frequency: 50Hz ±2%*

Designazione / *Designation*

DNA EX 80 - 2 / 150 M/T G

- DNA — Serie pompa / *Pump series*
- EX — Certificazione ATEX / *ATEX certification*
- 80 — Bocca di mandata DN / *Delivery DN*
- 2 — Numero poli / *Poles number*
- 150 — Potenza kWP2 - es. 150=1.5kW / *Power kWP2 - ex. 150=1.5kW*
- M/T — Monofase/Trifase / *Monophase/Threephase*
- G — Galleggiante / *Float swicht*

Campo di Prestazione / *Performance Overview*



Identificazione Curve

Curves Identification

- DN50
- DN65
- DN80

Normative

Norms

Curve secondo ISO 9906:2012 3B2

According to ISO 9906:2012 3B2

Distinta dei componenti e materiali
List of components and materials

Manico - *Handle*
Acciaio Inox - *Stainless steel*

Coperchio Motore - *Motor Cover*
Ghisa GG20 - *Cast Iron GG20*

Cassa Motore - *Motor Casing*
Ghisa GG20 - *Cast Iron GG20*

Albero Motore - *Motor Shaft*
Acciaio Inox AISI 420 - *Stainless steel AISI 420*

Motore elettrico - *Electric Motor*
-

Flangia Porta cuscinetto - *Flange Bearing Support*
Ghisa GG20 - *Cast Iron GG20*

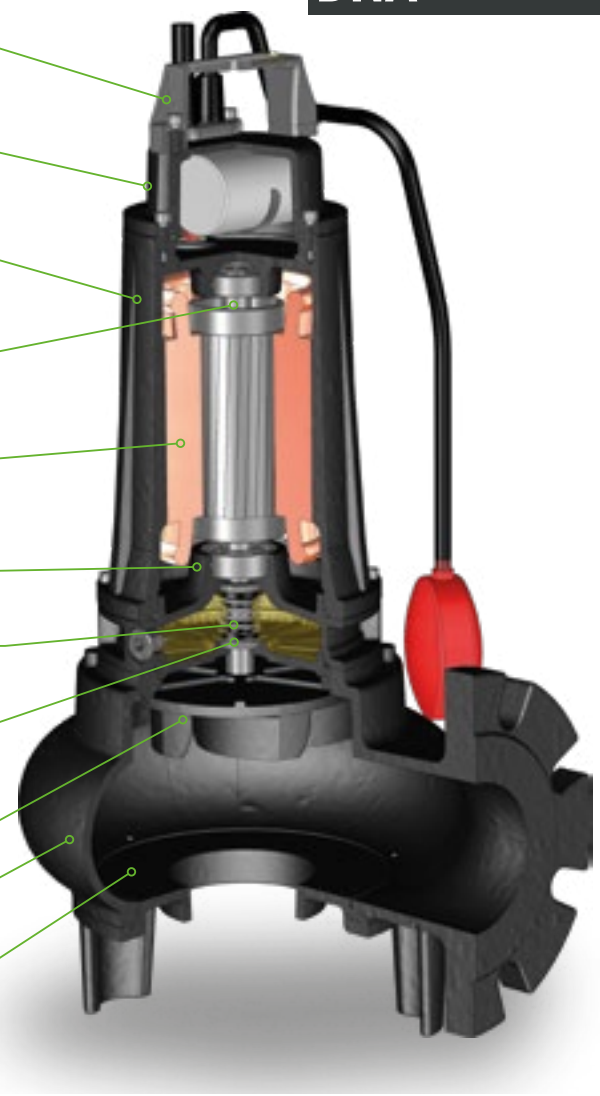
Doppia Tenuta Meccanica - *Double Mechanical Seal*
Lato motore carbone/ceramica - *Motor side: Carbon/Ceramic* (CA/CE/Viton)
Lato girante carburo di silicio - *Impeller side: Silicon carbide* (SIC/SIC/Viton)

Configurazione ATEX - *ATEX Configuration*
Lato motore : tenuta a labbro - *Motor side: Lip seal*
Lato girante carburo di silicio - *Impeller side: Silicon carbide* (SIC/SIC/Viton)

Girante - *Impeller*
Ghisa GG20 - *Cast Iron GG20*

Corpo Pompa - *Body Pump*
Ghisa GG20 - *Cast Iron GG20*

Coperchio Chiusura - *Wearing Plate*
Ghisa GG20 - *Cast Iron GG20*



Tecnologie e Soluzioni
Technology and Features

Pompe antideflagranti
La serie è disponibile con certificato ATEX su richiesta dove indicato

Explosion proof pumps
Pumps with explosion proof available on request.

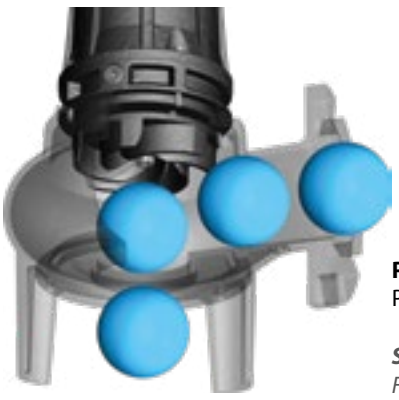
CE 0477 Ex II 2G Ex db IIB T4 Gb
Ex h IIB T4 Gb
0°≤ Ta ≤ 40°
EPT 17 ATEX 2701 X

Relé di Comando
Per il funzionamento del galleggiante su motori trifase fino a 1,5 kW 2 poli.
ATEX escluso.

Relay
For the correct operating of the float switch on the three-phase version, up to 1,5 kW 2 poles. ATEX excluded.

Camera Olio
Totale Lubrificazione tenute garantita anche nelle condizioni più estreme.
La camera olio è ispezionabile.

Oil Chamber
Excellent lubrication of the mechanical seals even in the harshest pumping conditions. Inspectional oil chamber.



Passaggio Solidi
Passaggio integrale di corpi solidi.

Solids Handling
Full free passage of solids.

DRENO POMPE SI RISERVA DI CAMBIARE SENZA PREAVVISO I DATI RIPORTATI IN QUESTO CATALOGO
DRENO POMPE *CAN ALTER WITHOUT NOTIFICATIONS THE DATA MENTIONED IN THIS CATALOGUE*

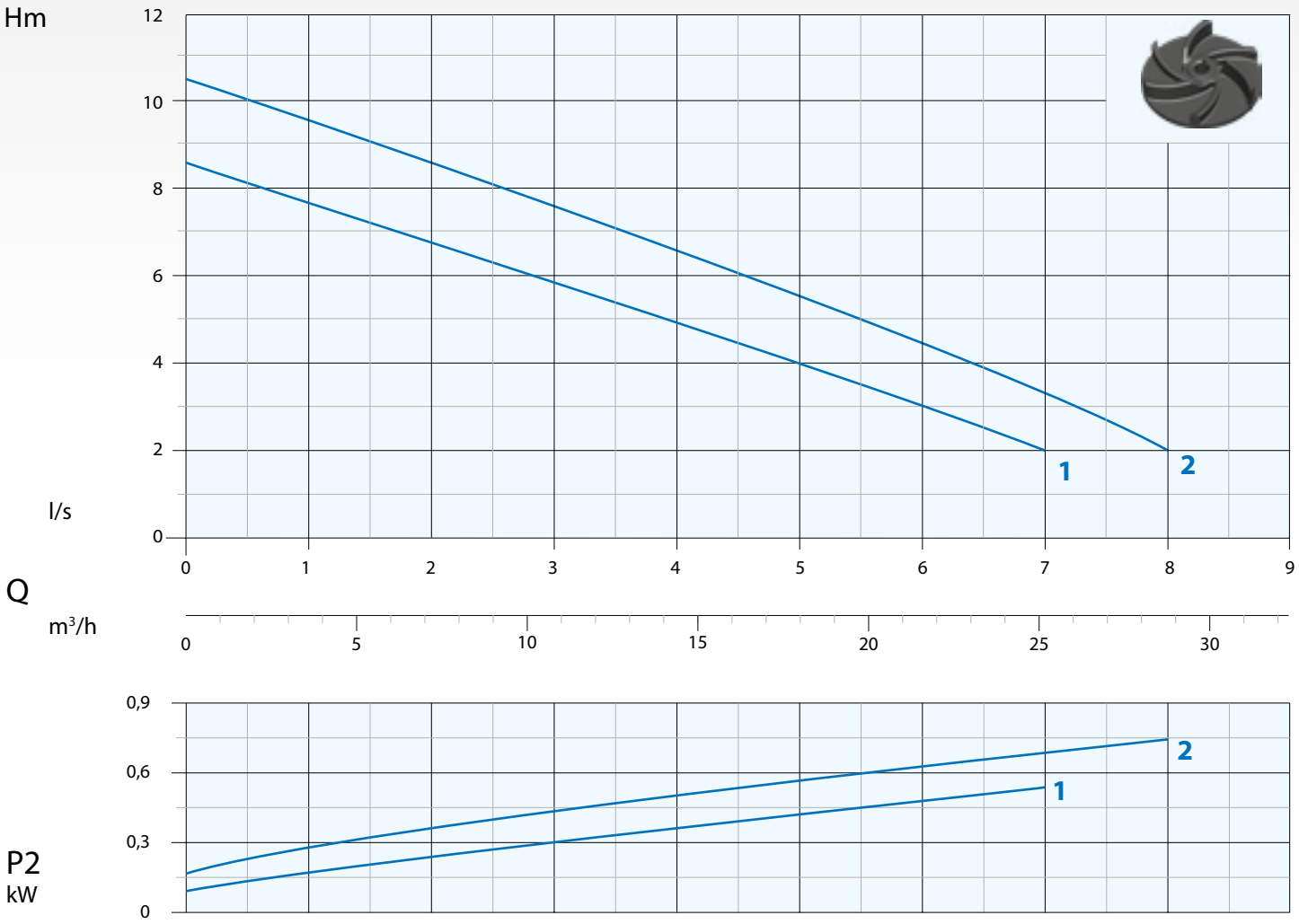
DNA 50-2

Mandata Orizzontale DN50 PN10 - G 2" - RPM 2850 1/min 2 poli

Horizontal Outlet DN50 PN10 - G 2" - RPM 2850 1/min 2 poles

Immagine a solo scopo illustrativo
Picture for illustration purposes only

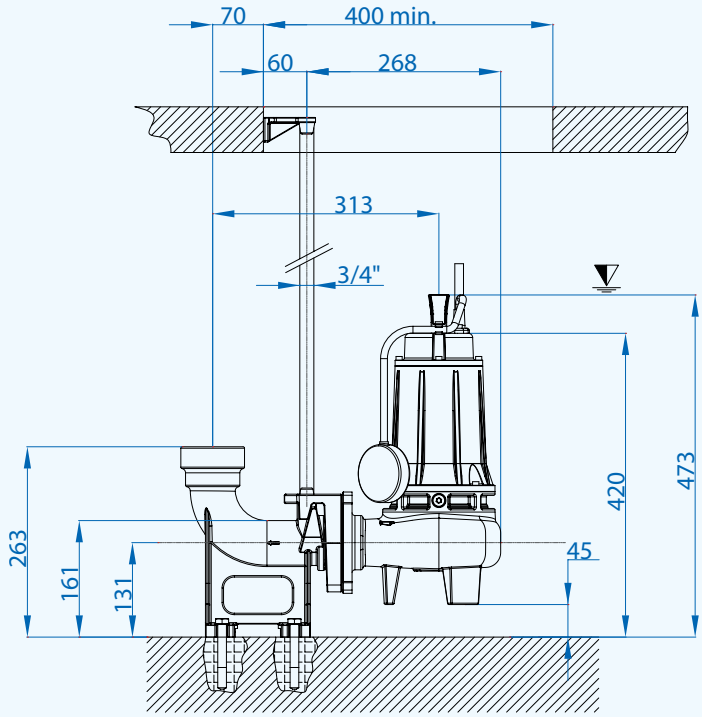
Curva di Prestazione
Performance Curve



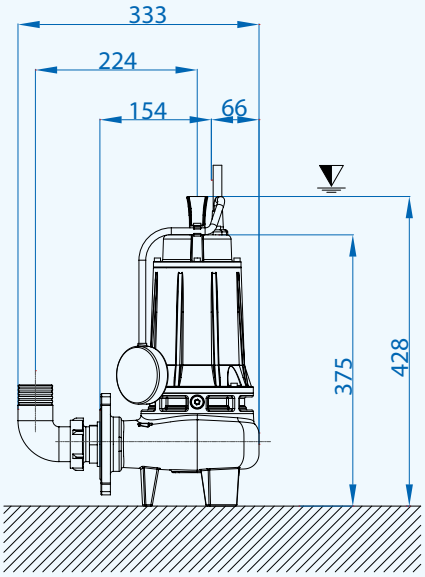
N°	Tipo *Type*	l/s	1	2	3	4	5	6	7	8	9
		l/m	60	120	180	240	300	360	420	480	540
		m³/h	3,6	7,2	10,8	14,4	18	21,6	25,2	28,8	32,4
1	DNA 50-2/056 M/T	mt	7,5	6,8	5,8	5	4	2,5	2		
2	DNA 50-2/075 M/T		9,5	8,5	7,5	6,5	5,5	4,5	3,3	2	

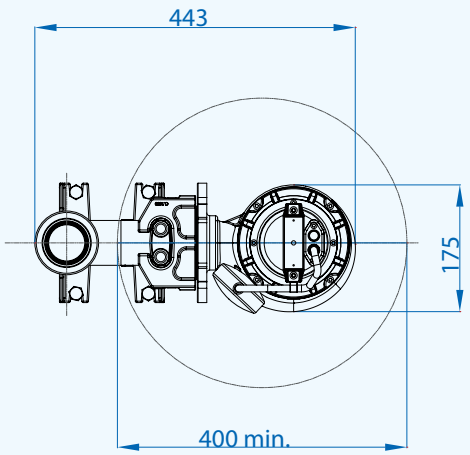
N°	Tipo *Type*	EVO	Mandata *Delivery*	Passaggio *Free Passage*	kW		HP	R.P.M. 1/min	A			Hz
					P1	P2			1 Phase - 230V	µf	3 Phase - 400V	
1	DNA 50-2/056 M/T	•	DN 50 - G 2"	45 mm	0,79	0,56	0,75	2850	3,6	16	1,8	50
2	DNA 50-2/075 M/T	•			1,0	0,75	1		5,2	20	2,0	

DNA 50-2/056-075

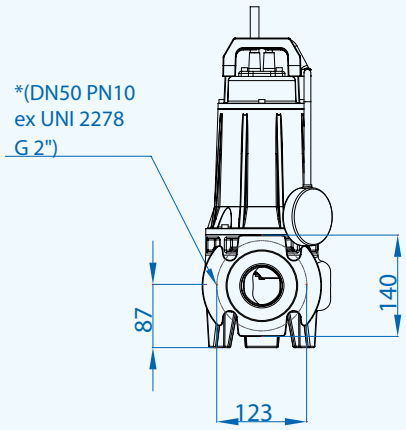


Sommergenza minima
Minimum submersion





Sommergenza minima
Minimum submersion



Cavi / *Cables*

Monofase - *Single phase* 230V
H07RN8F 3x1 Ø9 con Spina Schuko - *Schuko plug*
Lunghezza - *Length 10* mt

Trifase - *Threephase* 400V
H07RN8F 4x1 Ø10 con terminali liberi - *Free terminals*
Lunghezza - *Length* 10 mt

Accessori - *Optional*

Pompe monofasi: Control-box per funzionamento con condensatore esterno
For single phase pumps: Control-box with external main capacitor

Piede di accoppiamento rapido
Tipo: DUTY 50, Easy 3.2 o E3.1
Automatic coupling foot
Type: DUTY 50 Easy 3.2 or E3.1

Curva filettata con portagomma 2"
Thread hose connection 2"

Dimensioni imballo / *Packaging dimension*

Tipo - *Type*	X mm	Y mm	Z mm	Kg
DNA 50-2/056 M/T	230	450	270	19
DNA 50-2/075 M/T				19,5

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Date_16/04/19

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DNA 50-2

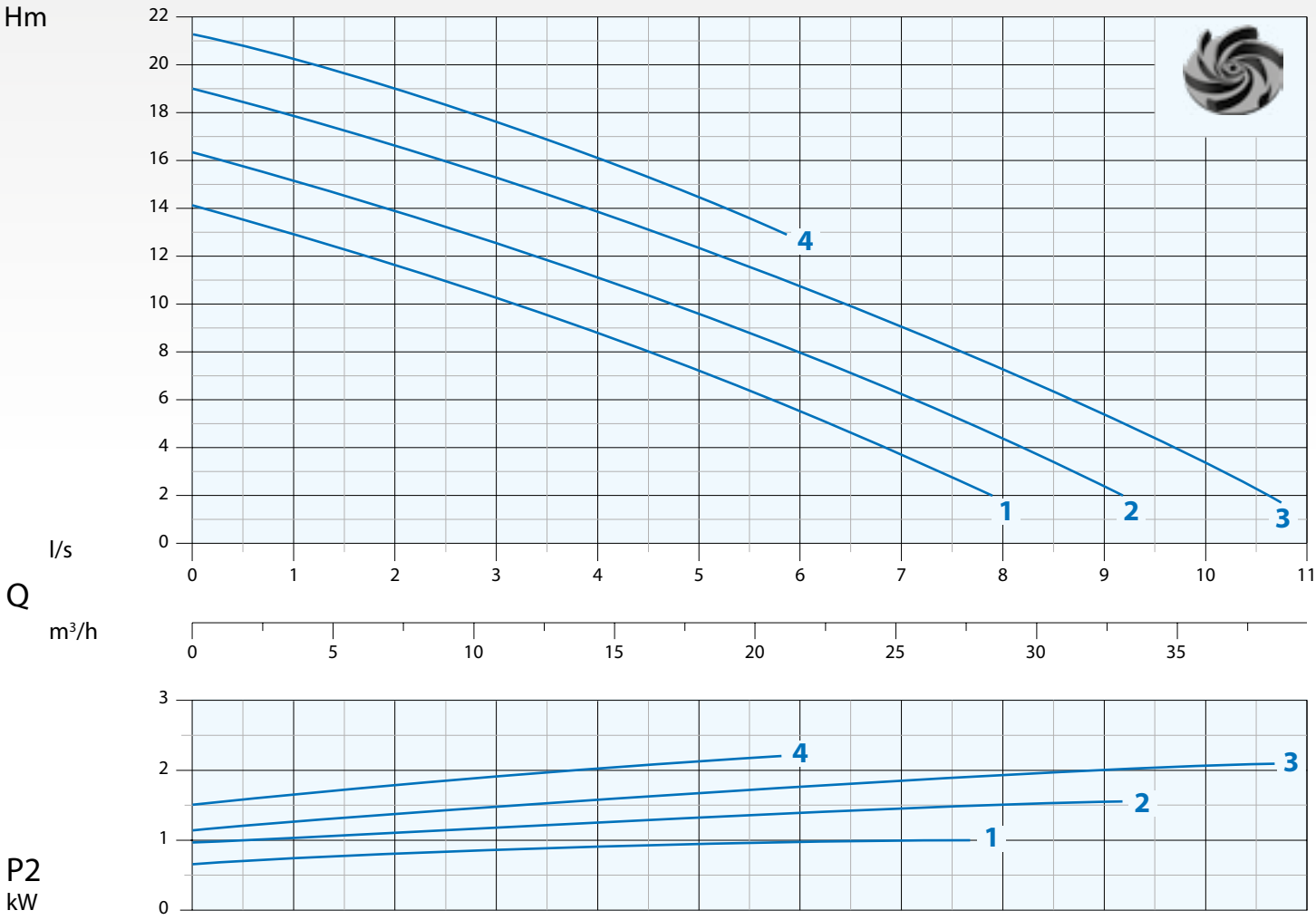
Mandata Orizzontale DN50 PN10 - G 2" - RPM 2850 1/min 2 poli

Horizontal Outlet DN50 PN10 - G 2" - RPM 2850 1/min 2 poles

Immagine a solo scopo illustrativo
Picture for illustration purposes only

Curva di Prestazione

Performance Curve

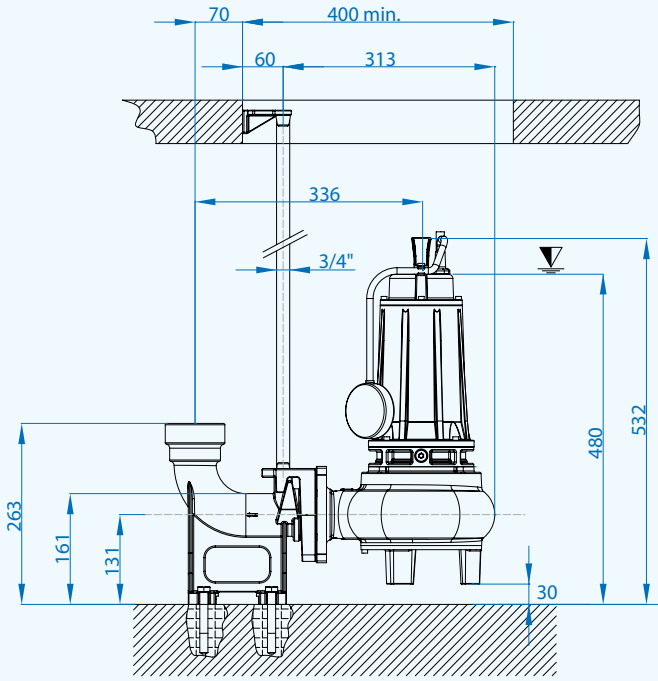


N°	Tipo *Type*		l/s	0,5	1	2	3	4	5	6	7	8	9	10
			l/m	30	60	120	180	240	300	360	420	480	540	600
			m³/h	1,8	3,6	7,2	10,8	14,4	18	21,6	25,2	28,8	32,4	36
1	DNA 50-2/110 M/T	mt		13,5	13	11,5	10,5	8,8	7	5,5	3,5	2		
2	DNA 50-2/150 M/T			15,8	15	14	12,5	11	9,5	8	6,5	4,5	2,5	
3	DNA 50-2/220 T			18,5	18	16,5	15,2	14	12,5	10,8	9	7,2	5,5	3,5
4	DNA 50-2/220-1 T			20,8	20	19	17,5	16	14,5					

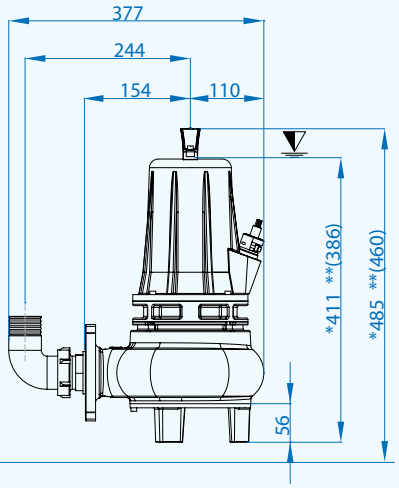
N°	Tipo *Type*	EX	Mandata *Delivery*	Passaggio *Free Passage*	kW		HP	R.P.M. 1/min	A			Hz
					P1	P2			1 Phase - 230V	µf	3 Phase - 400V	
1	DNA 50-2/110 M/T	•	DN50 PN10 - G 2"	50 mm	1,6	1,1	1,5	2850	7,8	30	2,9	50
2	DNA 50-2/150 M/T	•			2,1	1,5	2		9,9	32	3,6	
3	DNA 50-2/220 T	•			3,0	2,2	3				5,3	
4	DNA 50-2/220-1 T	•			3,0	2,2	3				5,3	

• Pompa antideflagrante disponibile con certificazione
Available explosion proof pump

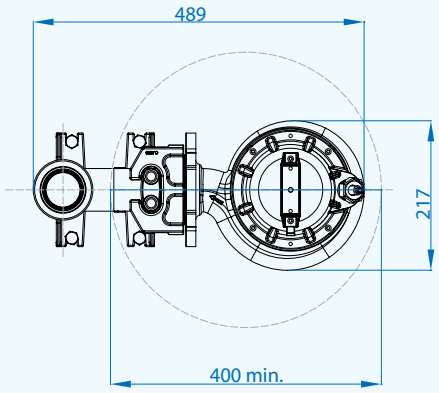
CE 0477
EPT 17 ATEX 2701 X
Ex II 2G Ex db IIB T4 Gb
Ex h IIB T4 Gb
0°≤ Ta ≤ 40°

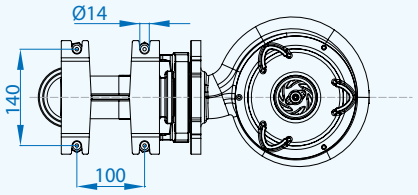


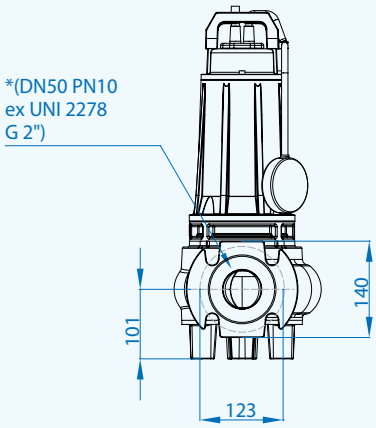
*DNA(EX) 50-2/220 - *DNA(EX) 50-2/220-1
**VERSIONI ATEX fino a 1,5kW - **ATEX VERSION up to 1,5kW



Sommergenza minima
Minimum submersion







Cavi / *Cables*

Pompe *Pumps*	Fasi *Phases*	Cavo *Cable*	Sezione cavo mm² *Cable cross section mm²*	mt
DNA 50-2/110-150	1 ~ 230V	H07RN8F	3x1 Ø9*	10
	3 ~ 400V		4x1 Ø10**	10
DNA 50-2/220-220-1	3 ~ 400V	H07RN8F	4x1,5+2x0,50 Ø12**	10
Versioni /Versions ATEX	1 ~ 230V	NSSHÖU-J	4x1,5+2x0,50 Ø12***	10
	3 ~ 400V		4x1,5+2x0,50 Ø12**	10

* Spina Schuko - *Schuko plug*
** Terminali liberi - *Free terminals* *** Di serie con control-box - *Standard with control-box*

Dimensioni imballo / *Packaging dimension*

Tipo - *Type*	X mm	Y mm	Z mm	Kg
DNA 50-2/110 M/T	260	585	315	28
DNA 50-2/150 M/T				29
DNA 50-2/220 T				30
DNA 50-2/220-1 T				30

Accessori - *Optional*

Quadri ATEX disponibili su richiesta
Explosion proof control box available on request

Pompe monofasi: Control-box per funzionamento con condensatore esterno
For single phase pumps: Control-box with external main capacitor

Piede di accoppiamento rapido Tipo: DUTY 50, Easy 3.2 o E3.1
Automatic coupling foot Type: DUTY 50 Easy 3.2 or E3.1

Curva filettata portagomma 2"
Thread hose connection 2"

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Date_01/02/18

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DNA 50-4

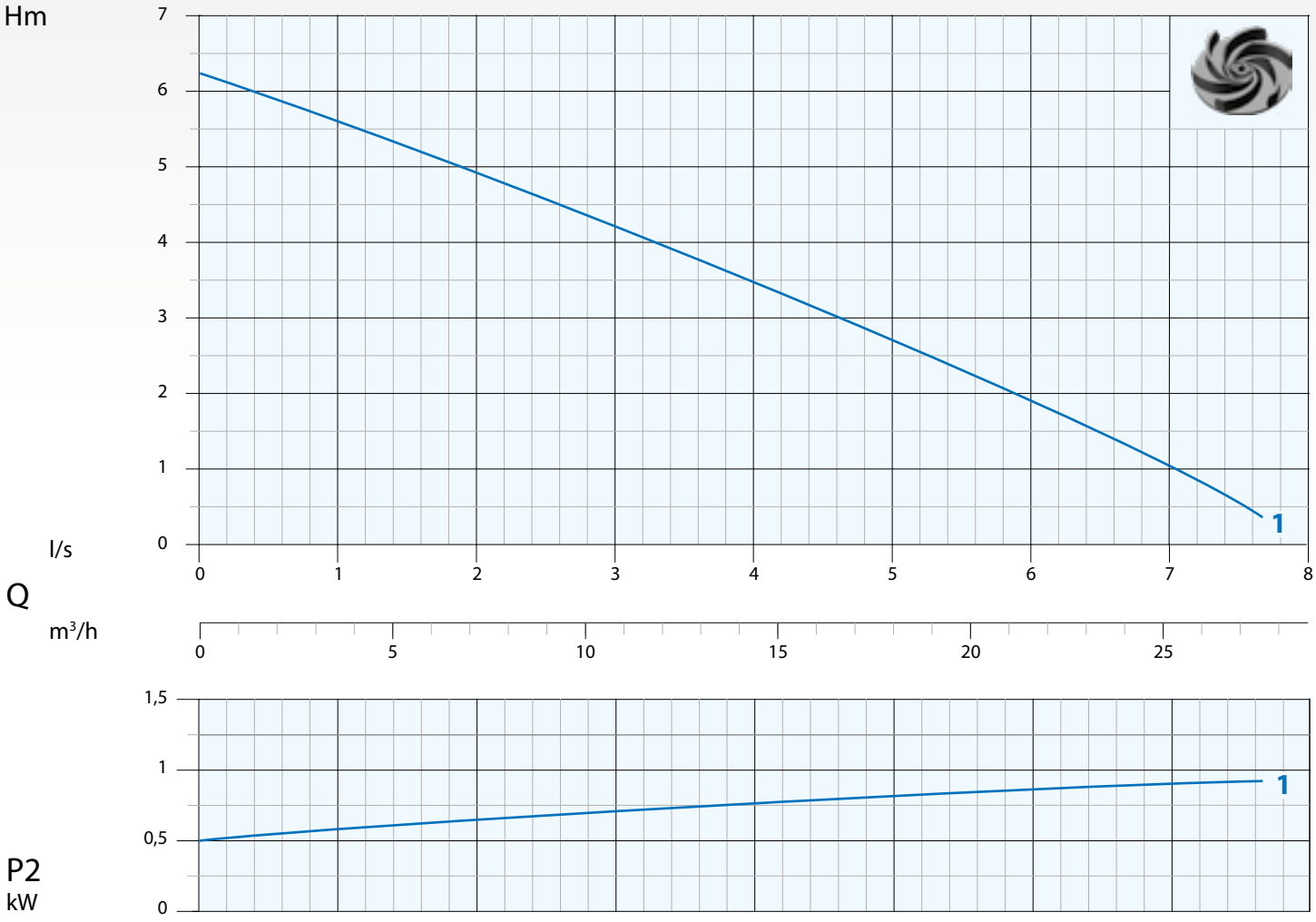
Mandata Orizzontale DN50 PN10 - G 2" - RPM 1450 1/min 4 poli

Horizontal Outlet DN50 PN10 - G 2" - RPM 1450 1/min 4 poles

Immagine a solo scopo illustrativo
Picture for illustration purposes only

Curva di Prestazione

Performance Curve

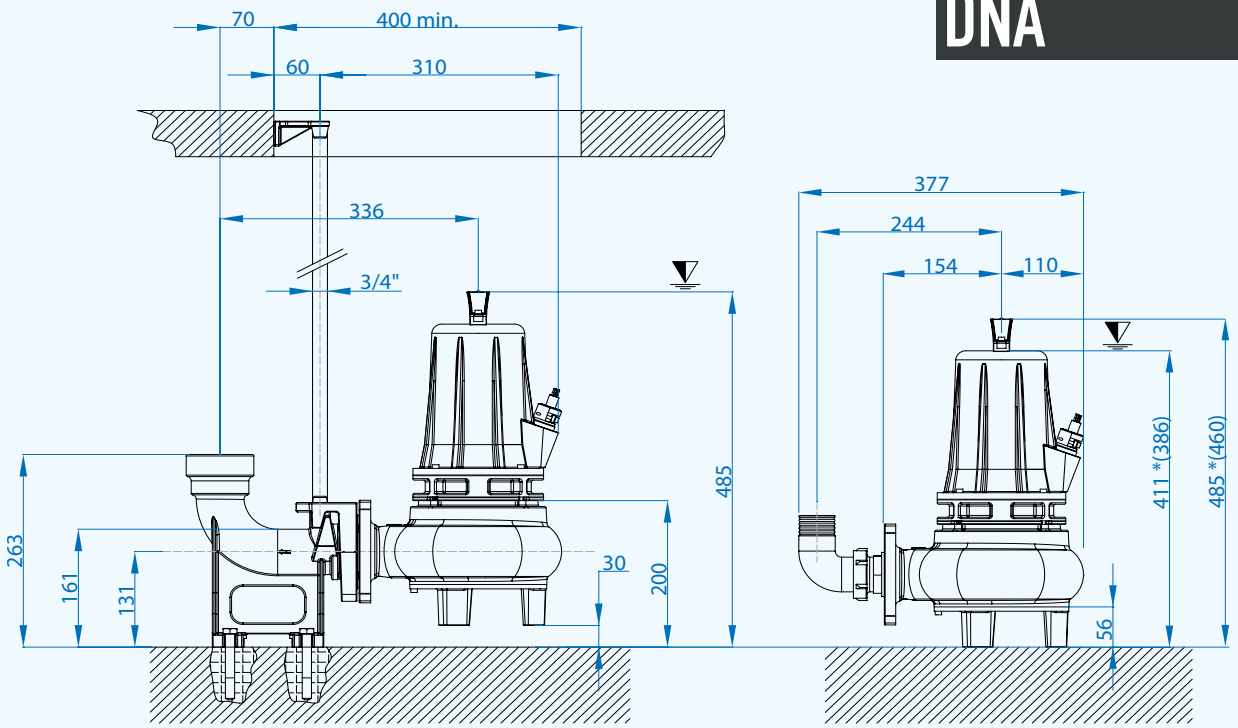


N°	Tipo *Type*	l/s	0,5	1	2	3	4	5	6	7	7,5
		l/m	30	60	120	180	240	300	360	420	450
		m³/h	1,8	3,6	7,2	10,8	14,4	18	21,6	25,2	27
1	DNA 50-4/090 M/T	mt	5,8	5,2	4,8	4,5	3,5	2,7	1,8	1	0,5

N°	Tipo *Type*	EX	Mandata *Delivery*	Passaggio *Free Passage*	kW		HP	R.P.M. 1/min	A			Hz
					P1	P2			1 Phase - 230V	µf	3 Phase - 400V	
1	DNA 50-4/090 M/T	•	DN50 PN10 - G 2"	50 mm	1,1	0,9	1,2	1450	4,7	20	2,5	50

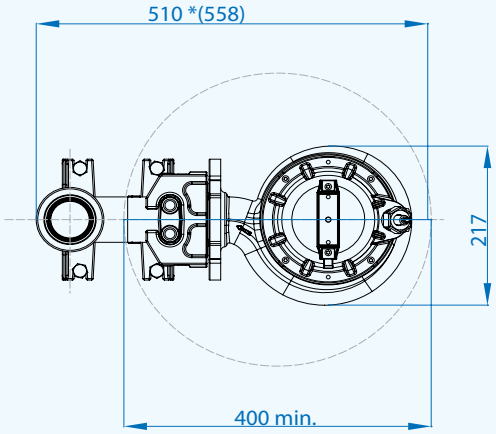
• Pompa antideflagrante disponibile con certificazione
Available explosion proof pump

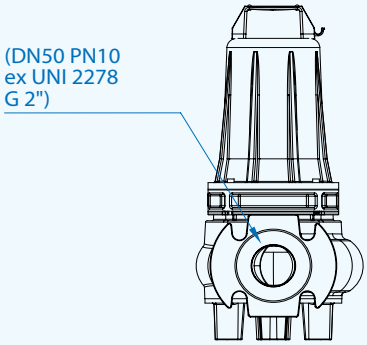
CE 0477
EPT 17 ATEX 2701 X
Ex II 2G Ex db IIB T4 Gb
Ex h IIB T4 Gb
0°≤ Ta ≤ 40°

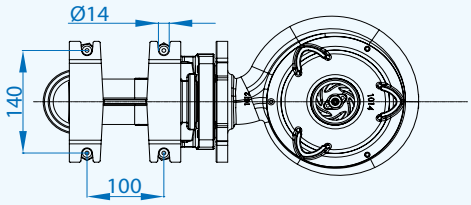


* VERSIONI ATEX - ATEX VERSION

Sommergenza minima
Minimum submersion







Cavi / *Cables*

	Fasi *Phases*	Cavo *Cable*	Sezione cavo mm² *Cable cross section mm²*	mt
Standard	1 ~ 230V	H07RN8F	4x1,5+2x0,50 Ø12*	10
	3 ~ 400V		4x1,5+2x0,50 Ø12**	10
Versioni - Versions ATEX	1 ~ 230V	NSSHÖU-J	4x1,5+2x0,50 Ø12*	10
	3 ~ 400V		4x1,5+2x0,50 Ø12**	10

* Di serie con Control Box - *Standard with Control Box*
** Terminali liberi - *Free terminals*

Dimensioni imballo / *Packaging dimension*

Tipo - *Type*	X mm	Y mm	Z mm	Kg
DNA 50-4/090 M/T	260	585	315	30

Accessori - *Optional*

Quadri ATEX disponibili su richiesta
Explosion proof control box available on request

Piede di accoppiamento rapido
Tipo: DUTY 50, Easy 3.2 o Easy 3.1
Automatic coupling foot
Type: DUTY 50 Easy 3.2 or Easy 3.1

Curva filettata
portagomma 2"
Thread hose connection 2"

Doc_Rev.1
Date_01/02/18

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DNA 65-2

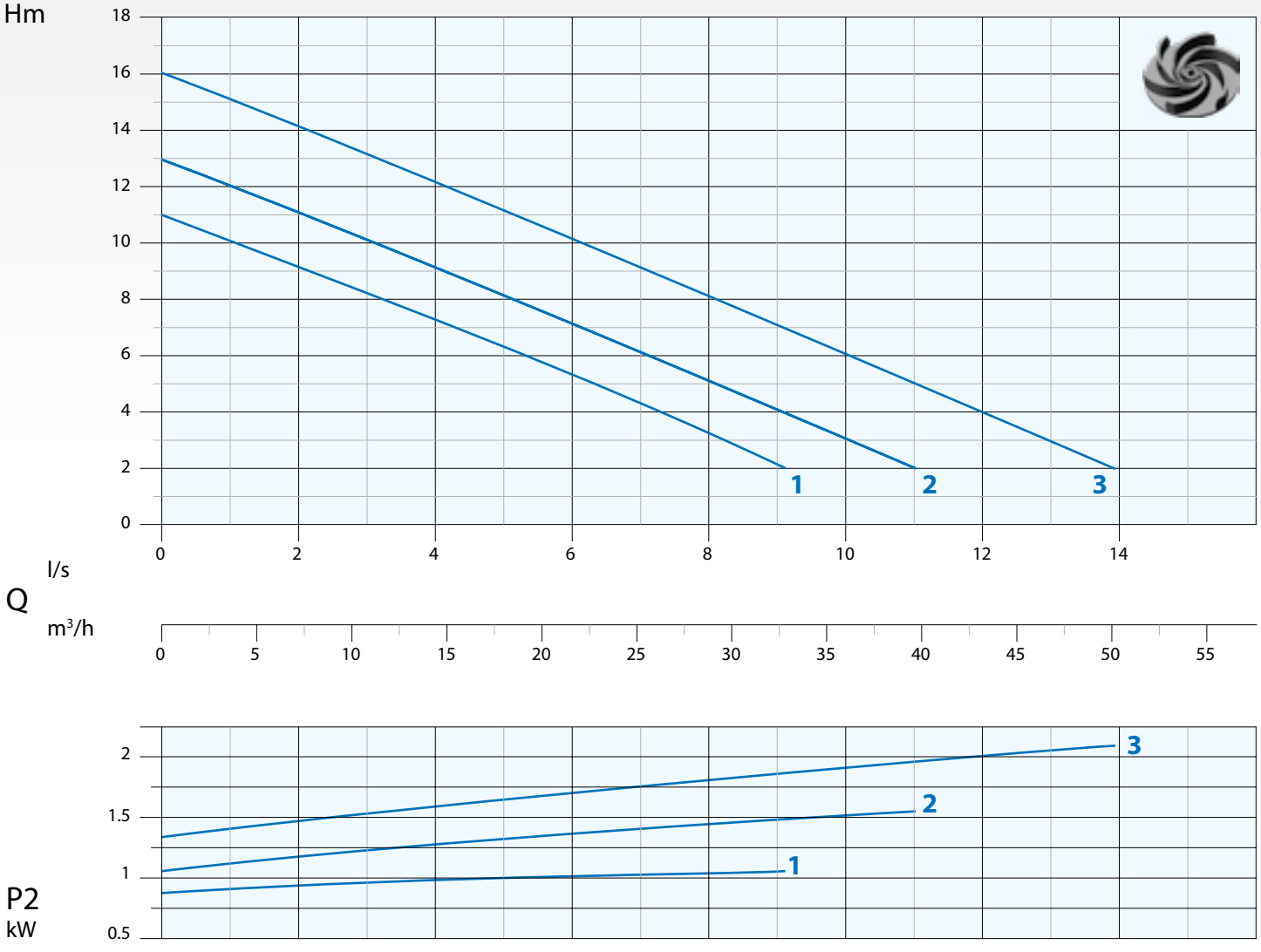
Mandata Orizzontale DN65 PN10 - RPM 2850 1/min 2 poli

Horizontal Outlet DN65 PN10 - RPM 2850 1/min 2 poles

Immagine a solo scopo illustrativo
Picture for illustration purposes only

Curva di Prestazione

Performance Curve

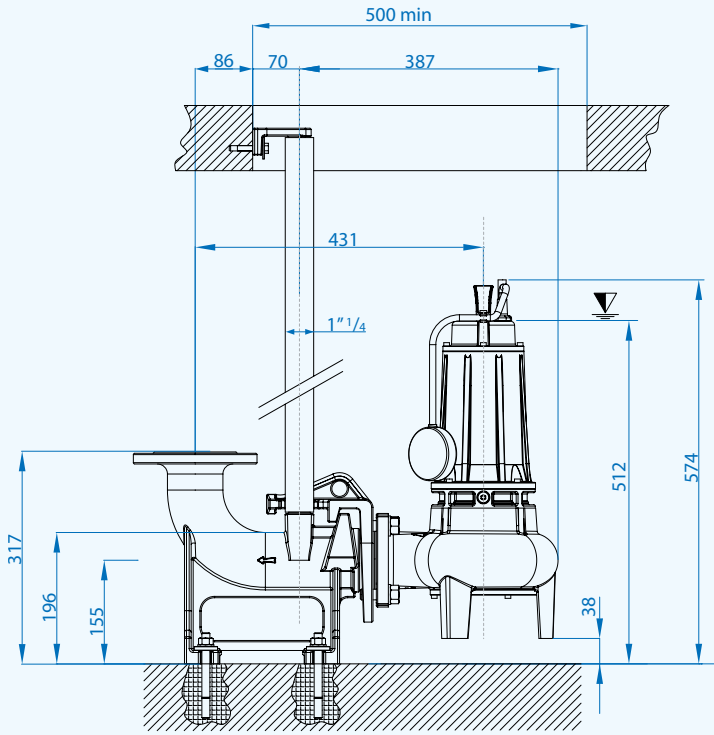


N°	Tipo *Type*	l/s	1	2	4	6	8	10	11	12	14
		l/m	60	120	240	360	480	600	660	720	840
		m³/h	3,6	7,2	14,4	21,6	28,8	36,0	39,6	43,2	50,4
1	DNA 65-2/110 M/T	mt	10	9	7,5	5,5	3,2				
2	DNA 65-2/150 M/T		12	11	9	7	5	3	2		
3	DNA 65-2/220 T		15	14	12	10	8	6	5	4	2

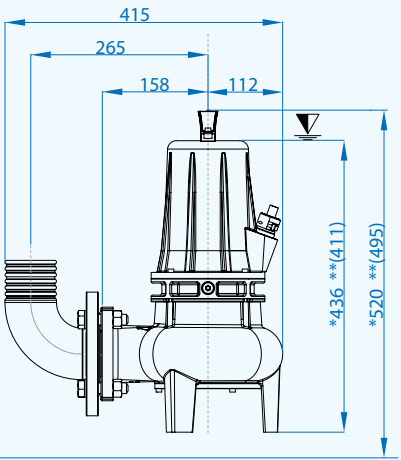
N°	Tipo *Type*	EX	Mandata *Delivery*	Passaggio *Free Passage*	kW P1	kW P2	HP	R.P.M. 1/min	A 1 Phase - 230V	A µf	A 3 Phase - 400V	Hz
1	DNA 65-2/110 M/T	•	DN65 PN10	65 mm	1,6	1,1	1,5	2850	7,4	30	2,7	50
2	DNA 65-2/150 M/T	•			1,9	1,5	2		9,9	32	3,4	
3	DNA 65-2/220 T	•			2,6	2,2	3				5,2	

• Pompa antideflagrante disponibile con certificazione
Available explosion proof pump

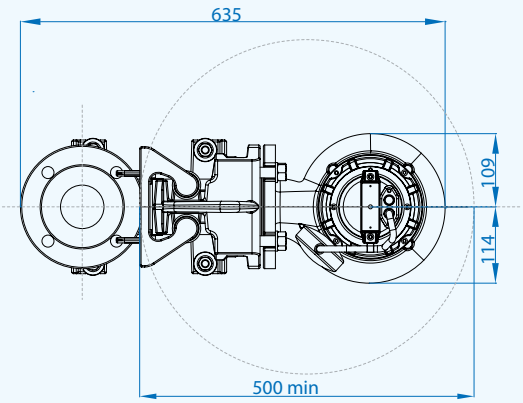
CE 0477
EPT 17 ATEX 2701 X
Ex II 2G Ex db IIB T4 Gb
Ex h IIB T4 Gb
0°≤ Ta ≤ 40°

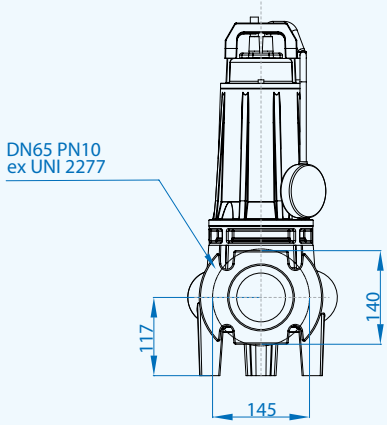


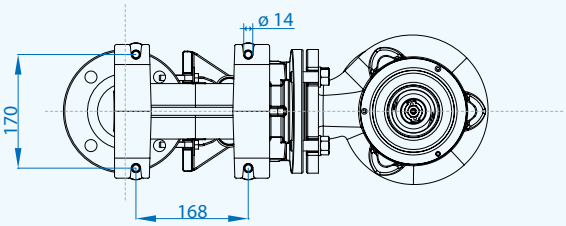
* DNA(EX) 65-2/220
**VERSIONI ATEX fino a 1,5 kW - **ATEX VERSION up to 1,5kW*



Sommergenza minima
Minimum submersion







Cavi / *Cables*

Pompe *Pumps*	Fasi *Phases*	Cavo *Cable*	Sezione cavo mm² *Cable cross section mm²*	mt
DNA 65-2/110-150	1 ~ 230V	H07RN8F	3x1 Ø9*	10
	3 ~ 400V		4x1 Ø10**	10
DNA 65-2/220 T	3 ~ 400V	H07RN8F	4x1,5+2x0,50 Ø12**	10
Versioni/Versions ATEX	1 ~ 230V	NSSHÖU-J	4x1,5+2x0,50 Ø12***	10
	3 ~ 400V		4x1,5+2x0,50 Ø12**	10

* Spina Schuko - *Schuko plug*
** Terminali liberi - *Free terminals* *** Di serie con control-box - *Standard with control-box*

Dimensioni imballo / *Packaging dimension*

Tipo - *Type*	X mm	Y mm	Z mm	Kg
DNA 65-2/110 M/T	260	585	315	28
DNA 65-2/150 M/T				30
DNA 65-2/220 T				30,5

Accessori - *Optional*

Quadri ATEX disponibili su richiesta
Explosion proof control box available on request

Pompe monofasi: Control-box per funzionamento con condensatore esterno
For single phase pumps: Control-box with external main capacitor

Piede di accoppiamento rapido Tipo: DUTY 65
Automatic coupling foot Type: DUTY 65

Curva flangiata portagomma N5
Flanged hose connection N5

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DRENO POMPE SI RISERVA DI CAMBIARE SENZA PREAVVISO I DATI RIPORTATI IN QUESTO CATALOGO
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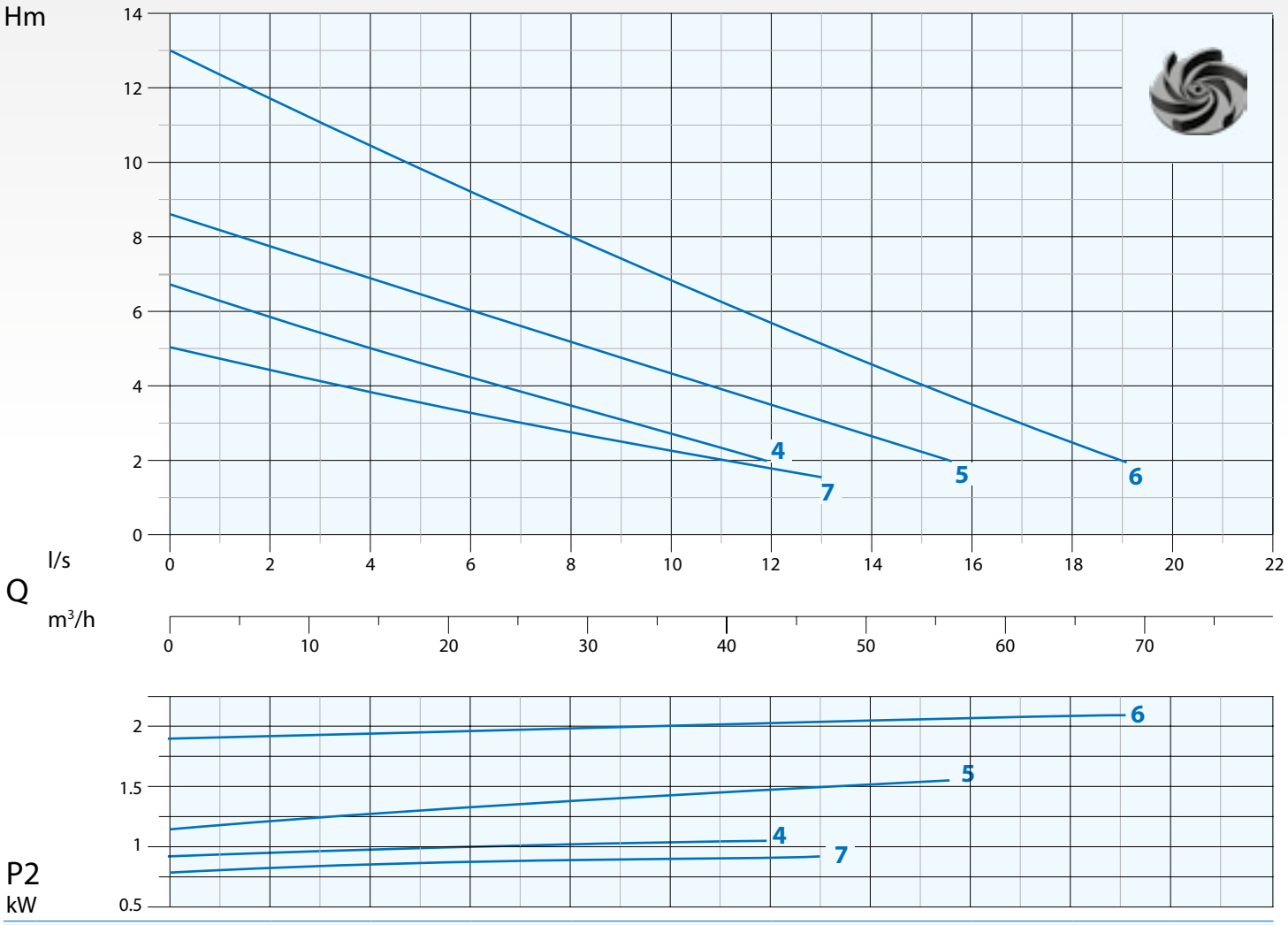
DNA 80-2/4

Mandata Orizzontale DN80 PN16
RPM 2850 1/min 2 poli
RPM 1450 1/min 4 poli

Horizontal Outlet DN80 PN16
RPM 2850 1/min 2 poles
RPM 1450 1/min 4 poles

Immagine a solo scopo illustrativo
Picture for illustration purposes only

Curva di Prestazione
Performance Curve

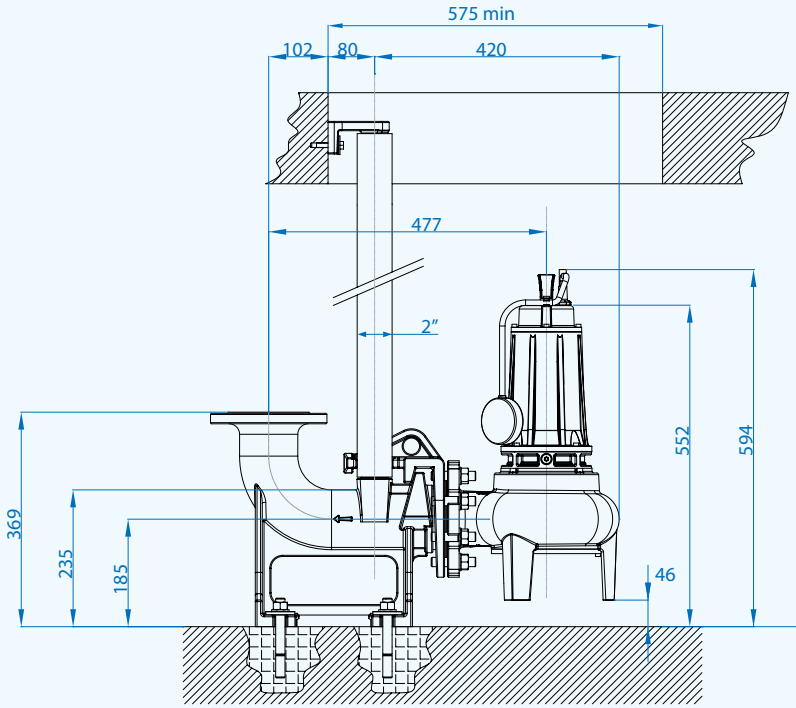


N°	Tipo *Type*		l/s	1	2	4	6	8	10	12	14	16
			l/m	60	120	140	360	480	600	720	840	960
			m³/h	3,6	7,2	14,4	21,6	28,8	36,0	43,2	50,4	57,6
4	DNA 80-2/110 M/T	mt		6,5	5,8	5	4,5	3,5	2,8	2		
5	DNA 80-2/150 M/T			8,2	7,5	7	6	5,3	4,5	3,5	2,5	
6	DNA 80-2/220 T			12,5	11,5	10,5	9,2	8	6,8	5,8	4,5	3,5
7	DNA 80-4/090 M/T			4,8	4,5	3,9	3,2	2,8	2,5	1,8		

N°	Tipo *Type*	EX	Mandata *Delivery*	Passaggio *Free Passage*	kW P1	kW P2	HP	R.P.M. 1/min	A 1 Phase - 230V	A µf	A 3 Phase - 400V	Hz
4	DNA 80-2/110 M/T	•	DN80 PN16	80 mm	1,6	1,1	1,5	2850	7,4	30	2,8	50
5	DNA 80-2/150 M/T	•			1,9	1,5	2		9,9	32	3,6	
6	DNA 80-2/220 T	•			2,7	2,2	3				5,3	
7	DNA 80-4/090 M/T	•		75 mm	1,1	0,9	1,2	1450	4,7	20	2,6	

• Pompa antideflagrante disponibile con certificazione
Available explosion proof pump

CE 0477
EPT 17 ATEX 2701 X
Ex II 2G Ex db IIB T4 Gb
Ex h IIB T4 Gb
0°≤ Ta ≤ 40°



*DNA(EX) 80-2/220
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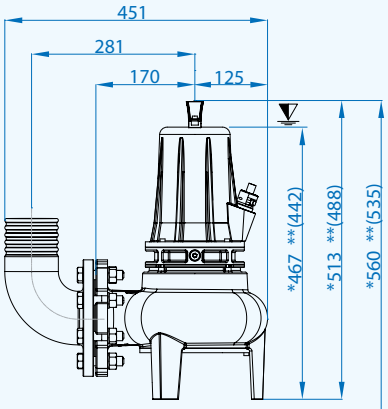
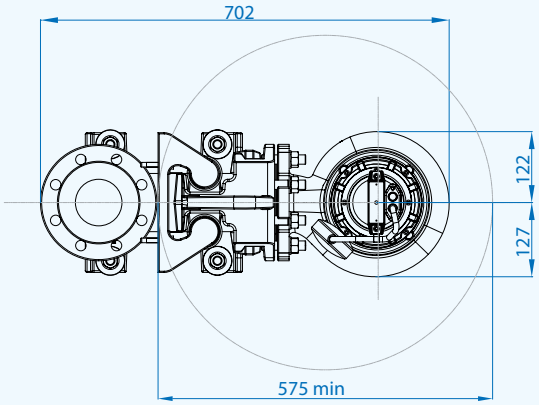
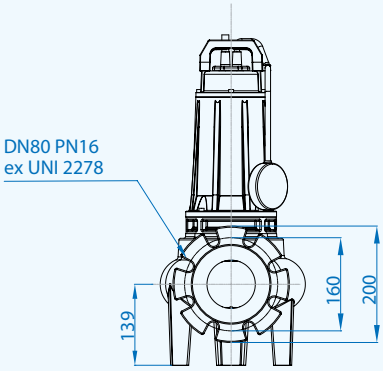
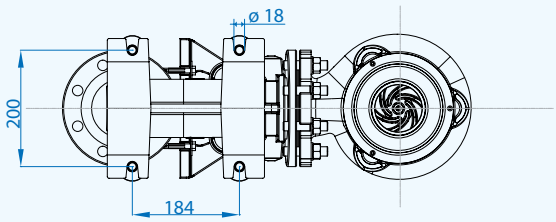


Sommergenza minima
Minimum submersion







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Versioni/Version ATEX	1 ~ 230V	NSSHÖU-J	4x1,5+2x0,50 Ø12***	10
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DNA 80-2/220 T				35
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Piede di accoppiamento rapido Tipo: DUTY 80 e B5
Automatic coupling foot Type: DUTY 80 and B5

Curva flangiata portagomma N2
Flanged hose connection N2

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