GRINDER - TRITURATORE

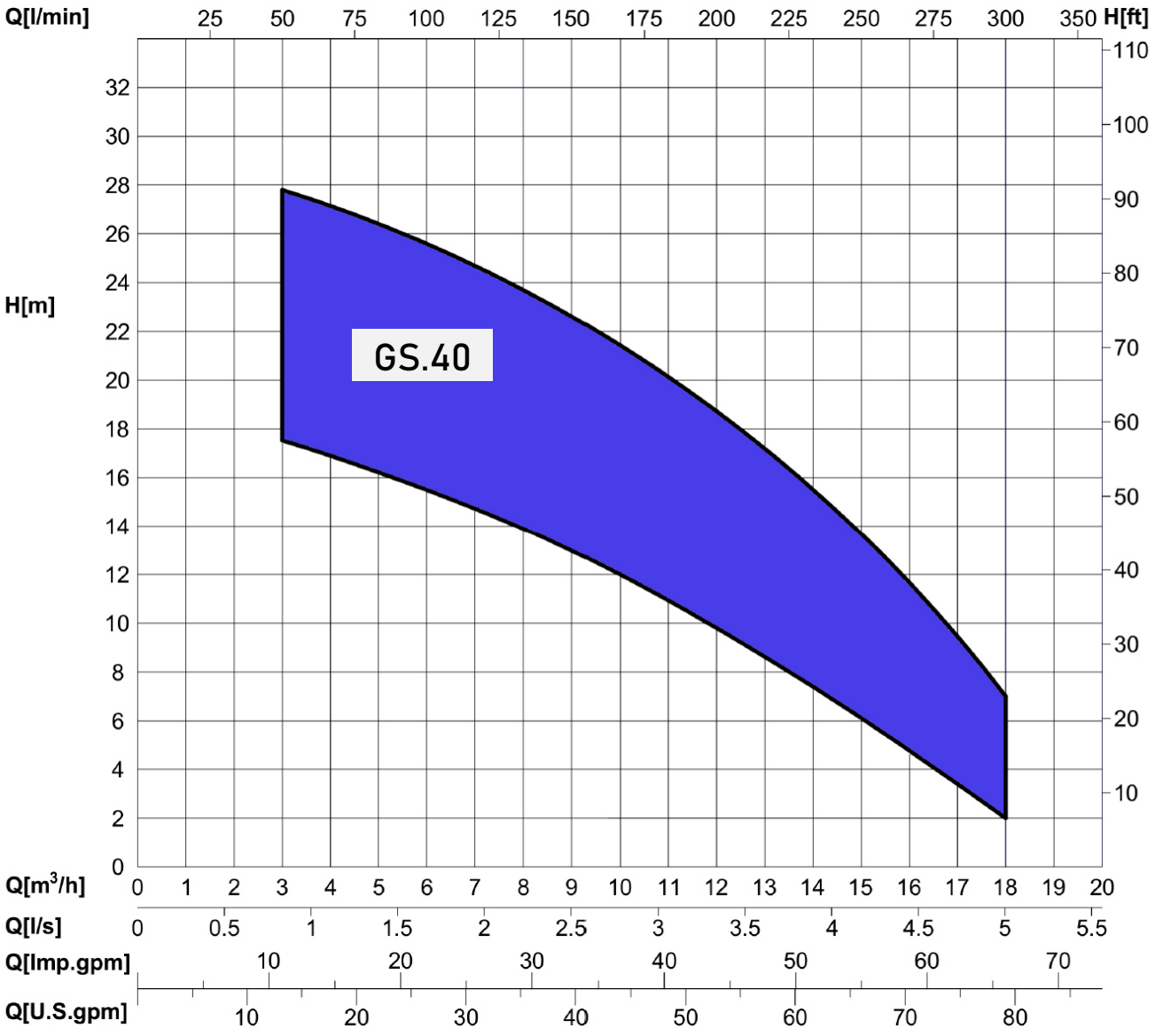
GS

SUBMERSIBLE
PUMPS FOR DIRTY WATERS

with multi-blades centrifugal impeller and grinding system [GS]
suitable for waste water containing fibers and solids

POMPE
SOMMERGIBILI PER ACQUE SPORCHE

con girante centrifuga a multi pale e sistema di triturazione [GS]
idonea per acque di scarico che contengono fibre e solidi



GRINDER - TRITURATORE GS

EN

Submersible pumps with a semi-open impeller abd grinder system. Hydraulic solution that provides high heads and medium-low flow rates.
Very suitable to pump sewage and domestic/industrial waste waters in applications with small pipes or where there are significant geodedic heights.

IT

Elettropompe sommergibili con girante semiaperta arretrata e sistema di triturazione. Soluzione idraulica che fornisce prevalenze elevate e portate medio-basse.
Molto indicata per il pompaggio di reflui civili, reflui industriali ed acque luride in genere in applicazioni con tubazioni piccole o dove ci siano altezze geodediche importanti.

1 Cast Iron G25 Motor Body.
Corpo motore in ghisa GG25.

2 Stator (1 ~ or 3 ~).
Statore avvolto (1 ~ or 3 ~).

3 Oil Chamber - Cooling and lubrication of the mechanical seals.

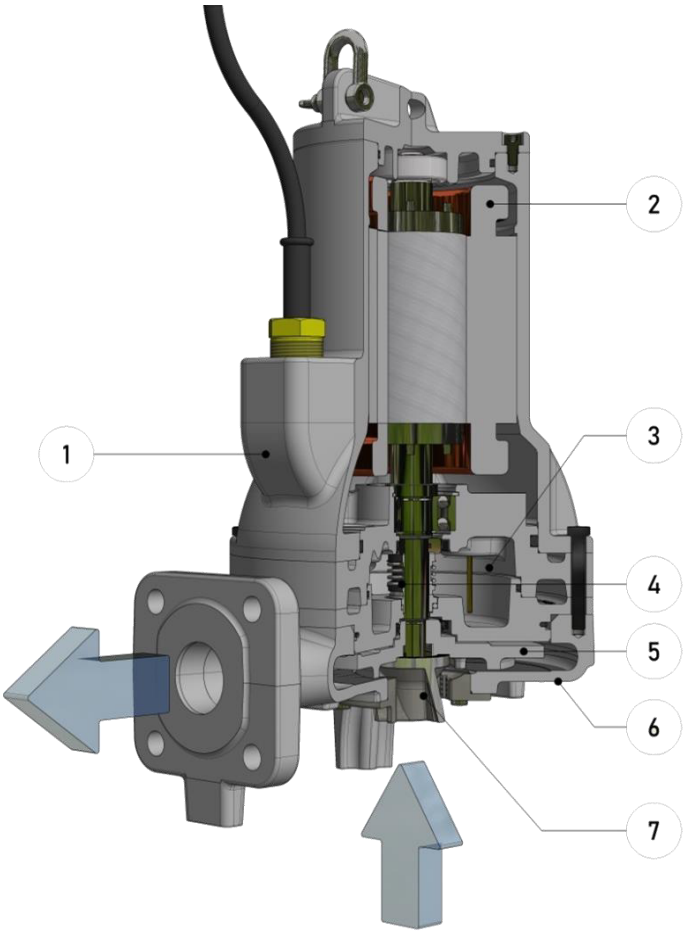
Camera olio - raffreddamento e lubrificazione delle tenute meccaniche.

4 Mechanical seals.
Tenute meccaniche.

5 Multi-blades impeller.
Girante multipale .

6 GG25 Cast iron body pump.
Corpo Pompa in ghisa GG25.

7 Grinder system
Sistema di triturazione



Area of use / Settori d'impiego

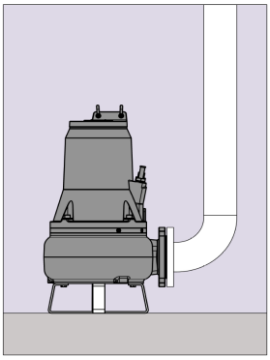
- Waste water treatment - civil / industrial plants
  Trattamento delle acque di scarico - impianti civili / industriali.
- Pressurized sewage systems / Impianti fognari in pressione

Applications / Applicazioni

- Water and sludge from civil, industrial and domestic also containig fibres.
  Acque e fanghi provenienti da scarichi civili, industrialie domestici contenenti anche fibre.

Types of installation - Tipi di installazione

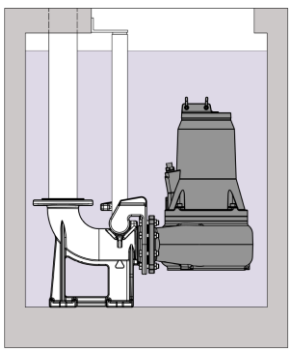
S Transportable underwater
Trasportabile in immersione



- Versatile solution suitable for various uses. A hose connection or connection flange is required for the rigid discharge line. The pump must be placed on a support stand.

- Soluzione versatile adatta a diversi impieghi.
E' necessario un attacco per tubo flessibile o flangia di collegamento per la tubazione premente rigida. La pompa va posizioata su un cavalletto di sostegno.

FC Fixed submersible with coupling device
Fissa in immersione con dispositivodi accoppiamento



- Automatic positioning system of the pump inside the tank connected to the discharge pipe. The pump is lowered or extracted with a lifting chain; the pump slides along two guide rails until it engages with the foot coupling.
- Sistema di posizionamento automatico della pompa all'interno della vasca collegato alla tubazione premente. La pompa viene calata o estratta con catena di sollevamento; scorre lungo due tubi guida fino ad agganciarsi al piede di accoppiamento.

SUBMERSIBLE PUMPS
POMPE SOMMERGIBILI

GS.40

GS.40_[GM.125gs] series

THREE-PHASE MOTORS

GS.40_11.2T_[GM.125gs]	- 2 poles	- 1,1 KW
GS.40_15.2T_[GM.125gs]	- 2 poles	- 1,5 KW
GS.40_22.2T_[GM.125gs]	- 2 poles	- 2,2 KW

SINGLE-PHASE MOTORS

GS.40_11.2M_[GM.125gs]	- 2 poles	- 1,1 KW
GS.40_15.2M_[GM.125gs]	- 2 poles	- 1,5 KW



GS.40_[GM.125gs]

- Submersible pumps with an impeller equipped with a shredding system, compact and
- Cast iron construction; base treatment with water-based acrylic primer and final finishing with water-based paint (30µm). Special coating with two-component epoxy resistant to abrasion on request (80µm).

- Pompe sommergibili con girante dotata di sistema di triturazione, compatte e di robusta costruzione.
- Costruzione in ghisa; trattamento di fondo con primer acrilico a base d'acqua e rifinitura finale con vernice a base d'acqua (30µm). Rivestimento speciale con bicomponente epossidico resistente all'abrasione (80µm) su richiesta.

- Pompes submersibles avec roue équipée d'un système de broyage, construction compacte et robuste.
- Construction en fonte ; traitement de base avec apprêt acrylique à base d'eau et finition finale avec peinture à base d'eau (30µ Revêtement spécial avec époxy bi-composant résistant à l'abrasion (80µm) sur demande.

- Bombas sumergibles con impulsor equipado con sistema de trituración, construcción compacta
- Construcción de hierro fundido; tratamiento base con imprimación acrílica al agua y acabado final con barniz al agua (30µ Revestimiento especial con epoxi bicomponente (80µm) resistente a la abrasión, bajo pedido.

OPERATING LIMITS - LIMITI DI UTILIZZO

- Tmax = 40 °C standard product
  Tmax = 70 °C special version
  6 ≤ PH ≤12
  Chloride content < 200 mg/l
  Abrasive solid content < 1mg/l
  Density ~ 1 kg/dm^3
  Viscosity ~ 1 mm^2/s;

- Tmax = 40 °C prodotto standard
  Tmax = 70 °C versioni speciali
  6 ≤ PH ≤12
  Contenuto cloruri < 200 mg/l
  Contenuto solidi abrasivi < 1mg/l
  Densità ~ 1kg/dm^3
  Viscosità ~ 1mm^2/s;

- Tmax = 40 °C produit standard
  Tmax = 70 °C versions spéciales
  6 ≤ PH ≤12
  Teneur en chlorurec< 200 mg/l
  Teneur en solides abrasifs < 1mg/l
  Densité ~ 1kg/dm^3
  Viscosité ~ 1mm^2/s;

- Tmax = 40 °C producto estándar
  Tmax = 70 °C versiones especiales
  6 ≤ PH ≤12
  Contenido de cloruro< 200 mg/l
  Contenido sólidos abrasivos < 1mg/l
  Densidad ~ 1kg/dm^3
  Viscosidad ~ 1mm^2/s;

SUBMERSIBLE PUMPS
POMPE SOMMERGIBILI

GS.40

TECHNICAL DATA - DATI TECNICI

	GS.40_[GM.125gs]				
MODELS - MODELLI	GS.40_11.2M	GS.40_15.2M	GS.40_11.2T	GS.40_15.2T	GS.40_22.2T
RPM/Poles - NGiri al min/Nr poli	3000 / 2	3000 / 2	3000 / 2	3000 / 2	3000 / 2
P2: Shaft power - Potenza all'albero [kW]	1,1	1,5	1,1	1,5	2,2
P1: Input Power - Potenza assorbita [kW]	1,6	1,9	1,6	2,0	2,9
Power Factor - Fattore di potenza [Cosφ]	0,87	0,83	0,77	0,82	0,78
Power supply/Freq - Alimentazione/Freq [V/Hz]	1 ~ 230 / 50	1 ~ 230 / 50	3 ~ 400 / 50	3 ~ 400 / 50	3 ~ 400 / 50
Single-phase - Monofase	●	●			
Three-phase - Triase			●	●	●
Starting - Avviamento	100 + 40 µF	100 + 40 µF	D.O.L.	D.O.L.	D.O.L.
Rated current - Corrente nominale [A]	8	10	3	4	5,4
Starting current - Corrente di spunto [A]	24	30	15,7	22	33
Free Passage - Passaggio libero Ø [mm]	-	-	-	-	-
Impeller diameter - Diametro girante [mm]	124	136	124	136	159
Float level switch - Galleggiante	-	-	-	-	-
Power cable type/lenght - Cavo alim. tipo/lungh. [m]	H07RN-F 3G1,5 / 10			H07RN-F 4G1,5 / 10	
Signal cable type/lenght - Cavo segn. tipo/lungh. [m]	H07RN-F 7G1,5 / 10			H07RN-F 7G1,5 / 10	
Nr. Starts per hour - Nr. Avviamenti / ora	25	25	25	25	25
Pump weight - Peso pompa [kg]	39	40	39	40	41

SUBMERSIBLE PUMPS
POMPE SOMMERGIBILI

GS.40_[GM.125gs]

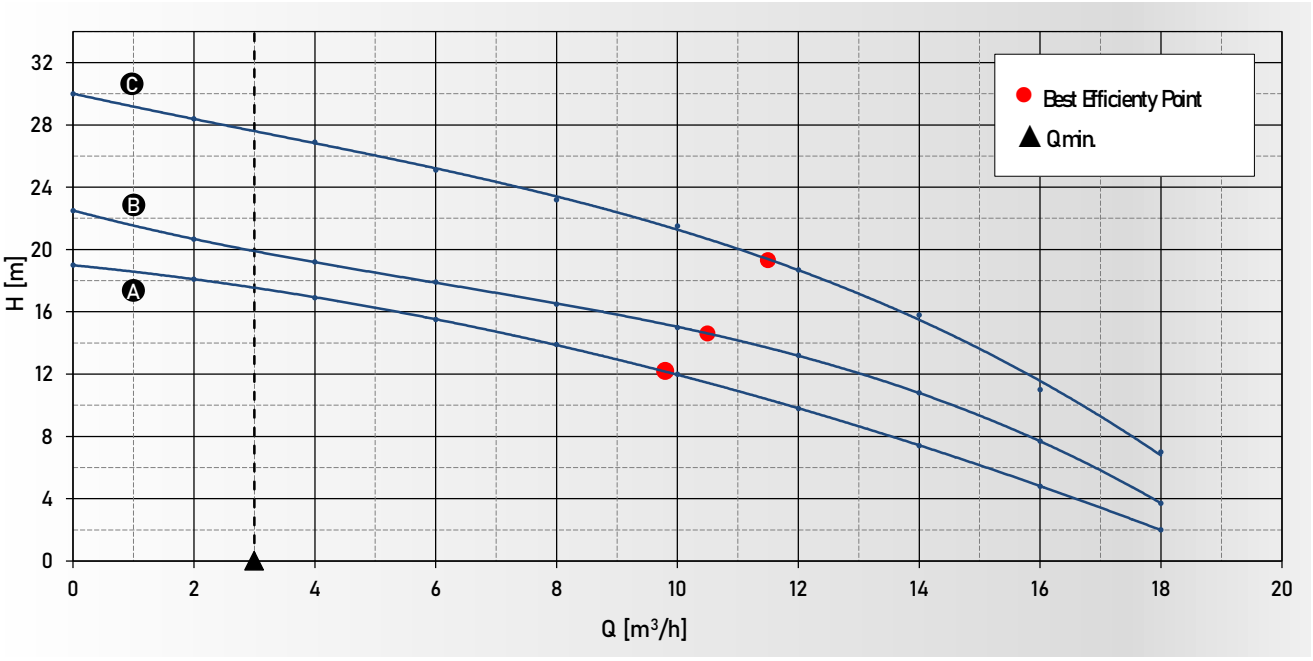
Ⓐ = GS.40_11.2T_[GM125gs] / GS.40_11.2M_[GM125gs]* - 1,1 KW

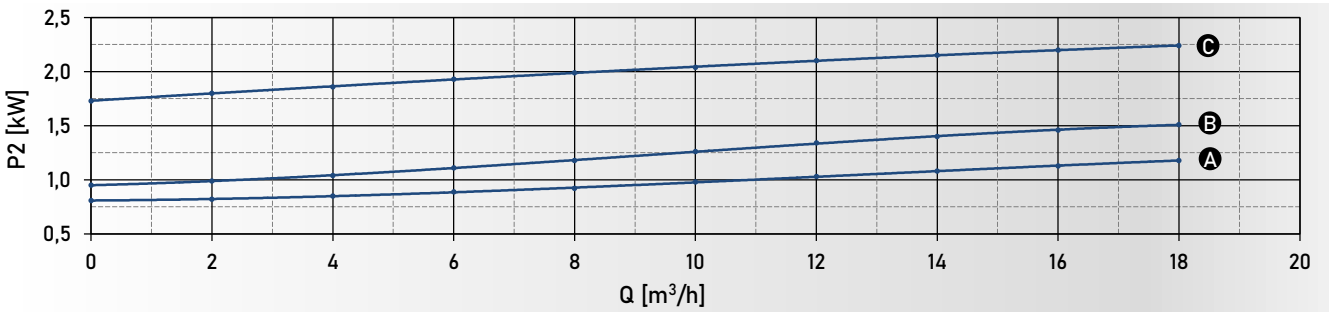
Ⓑ = GS.40_15.2T_[GM125gs] / GS.40_15.2M_[GM125gs]* - 1,5 KW

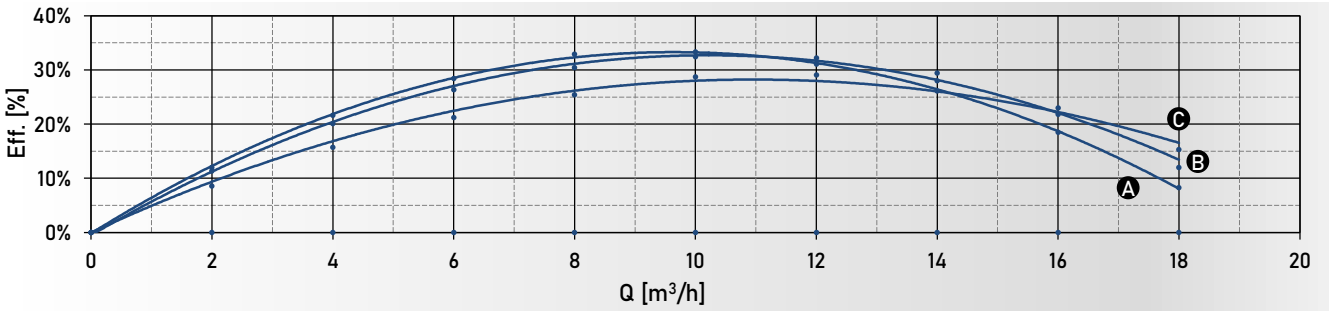
Ⓒ = GS.40_22.2T_[GM125gs] - 2,2 KW

50 Hz Three-phase motors - 2 poles - 3000 rpm

*50 Hz Single-phase motors - 2 poles - 3000 rpm





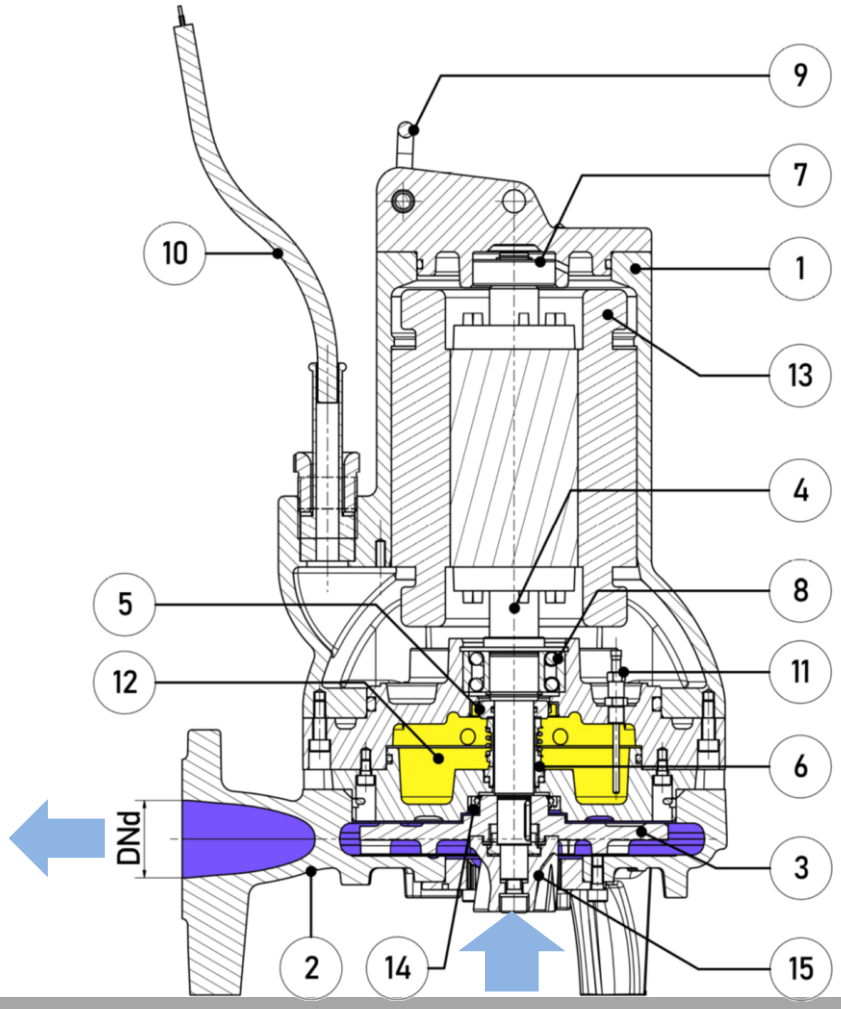


Q											
	m³/h	0	2	4	6	8	10	12	14	16	18
	L/min	0	33	67	100	133	167	200	233	267	300
	L/s	0	0,6	1,1	1,7	2,2	2,8	3,3	3,9	4,4	5,0

H [m]										
Ⓐ = GS.40_11.2T / GS.40_11.2M_[GM125gs]	19,0	18,1	16,9	15,5	13,90	12,00	9,80	7,40	4,80	2,00
Ⓑ = GS.40_15.2T / GS.40_15.2M_[GM125gs]	22,5	20,7	19,2	17,9	16,50	15,00	13,20	10,80	7,70	3,70
Ⓒ = GS.40_22.2T_[GM125gs]	30,0	28,4	26,9	25,1	23,20	21,50	18,70	15,80	11,00	7,00

SECTIONAL VIEWS - VISTE IN SEZIONE

GS.40_[GM.125gs]

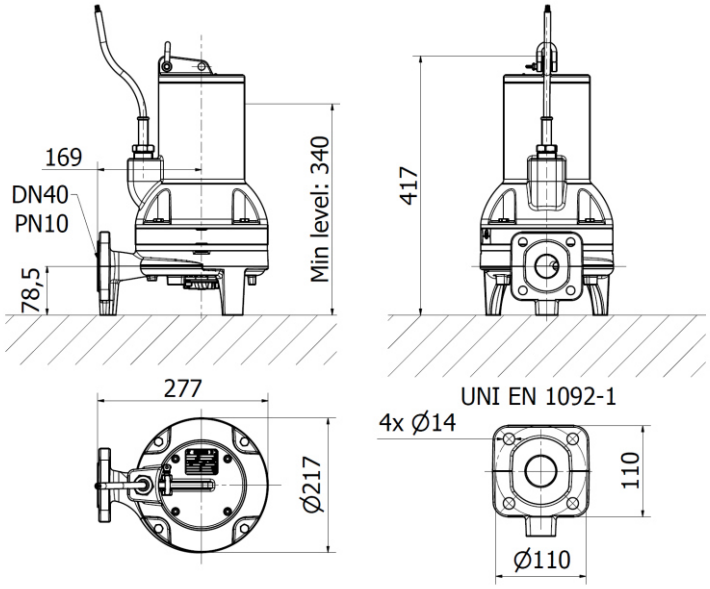


Pos.	Description	Descrizione	Material - Materiale
1	Motor body	Corpo motore	Cast Iron GG25 - Ghisa
2	Pump body	Corpo idraulico	Cast Iron GG25 - Ghisa
3	Impeller	Girante	Cast Iron GG25 - Ghisa
4	Shaft	Albero	Steel AISI 420B - Acciaio
5	Radial seal ring motor side	Anello tenuta radiale lato motore	NBR / Steel Aisi 304 - Acciaio
6	Side pump mechanical seal	Tenuta meccanica lato pompa	Silicon carbide / Silicon Carbide
7	Upper beraing	Cuscinetto superiore	6302 2RS1
8	Lower bearing	Cuscinetto inferiore	3205 A 2RS1
9	Shackle	Grillo	Steel Aisi 304 - Acciaio
10	Supply Cable	Cavo elettrico	H07RN-F
11	Oil probe (Optional)	Sonda olio (Optional)	
12	Oil chamber - cooling and lubrication of mechanical seal	Camera olio - raffreddamento e lubrificazione tenuta meccanica	
13	Class F Stator	Statore in classe F	
14	Radial seal ring (back impeller)	Anello tenuta radiale (dietro la girante)	NBR
15	Grinder system	Sistema di triturazione	Steel Aisi 440C - Acciaio
DNd	Delivery outlet	Bocca di mandata	Flanged DN40 PN10/ DN50 PN6 - flangiato
	Screw quality grade	Grado di qualità delle viti	A2

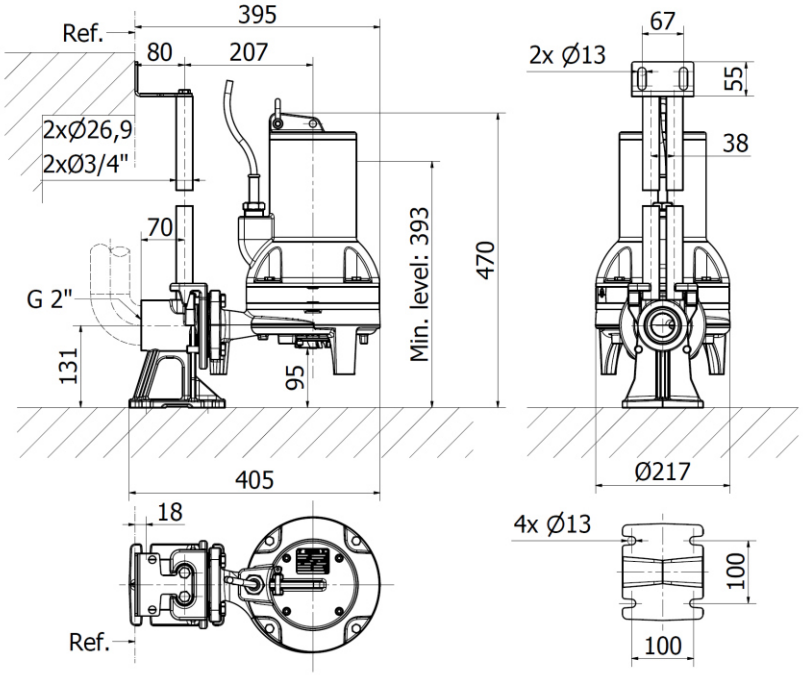
OVERALL DIMENSIONS - DIMENSIONI D'INGOMBRO

GS.40_[GM.125gs]

S



FC



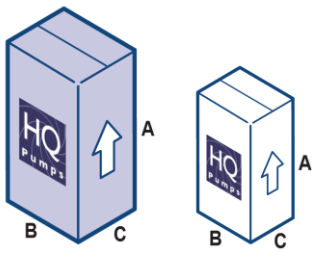
INSTALLATION MODES - MODALITA' D'INSTALLAZIONE

S =Transportable underwater - Trasporto in immersione

FC =Fixed with coupling dvice - Fissa con dispositivo di accoppiamento

PACKAGING DIMENSIONS - DIMENSIONI IMBALLAGGIO mm

	A	B	C
Pump - Pompa	600	240	290
Foot coupling - Piede di accoppiamento	260	195	175



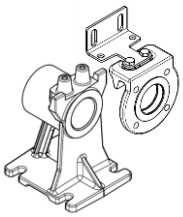
Dimensions and technical data are indicative, not binding and subjected to possible modifications without notice.
Dimensioni e dati tecnici sono indicativi, non vincolanti e soggetti a eventuali modifiche senza preavviso.

c



TBV - art. 4BV000003

Threaded valve G 2"
Valvola di ritegno filettata G 2"



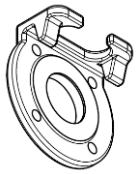
FC - art. 8FC000002

DN50 PN6 Foot Coupling - outlet G 2"
Piede di accoppiamento DN50 PN6 - uscita G 2"



SHELL - art. 3CS000021

Counterweight for level switch
Contrappeso per galleggiante



AT - art. 6KIT00011

Adapter for competitors foot couplings
Adattatore per dispositivodi accoppiamento di terze parti



HF - art. 3CS000007

Level switch for sewage (10 m el. cable)
Regolatore di livello per acque reflue (cavo el. 10 m)



TUTOR - art. 3CS000020

Float guidance system for confined spaces
Sistema di guida del galleggiante per spazi ristretti



INT 69F – art. 2EC000040

Protection Relay for temperature and leakage monitoring

Relè di protezione per il monitoraggio della temperatura e delle perdite



START BOX (M) - art. 5EC000003

START BOX (MA) - art. 5EC000091

Capacitor box for 1 singlephase pump starting
(M) without float switch – (MA) with float switch
Cassetta portacondensatore per avviamento di 1 pompa
(M)senza galleggiante – (MA) con galleggiante



ECH



ECL

GS.40_[GM.125gs]		P_2 [KW]	In [A]	Avv. Start.	ECH - ELECTROMECHANCAL 1 Pump ECH.1.M-14 5EC000008	ECH - ELECTROMECHANCAL 1 Pump ECH.1.T-7 5EC000005	ECH - ELECTROMECHANCAL 2 Pumps ECH.2.M-14 5EC000032	ECH - ELECTROMECHANCAL 2 Pumps ECH.2.T-7 5EC000029	ECL - ELECTRONIC 1 Pump ECL.1.M-16 5EC000081	ECL - ELECTRONIC 1 Pump ECL.1.T-15 5EC000083	ECL - ELECTRONIC 2 Pumps ECL.2GS.M-16 5EC000099	ECL - ELECTRONIC 2 Pumps ECL.2.T-15 5EC000084
GS.40_11.2M_[GM.125gs]	1~230V	1,1	8	100+40µF	•		•		•		•	
GS.40_15.2M_[GM.125gs]	1~230V	1,5	10	100+40µF	•		•		•		•	
GS.40_11.2T_[GM.125gs]	3~400V	1,1	3	DOL		•		•		•		•
GS.40_15.2T_[GM.125gs]	3~400V	1,8	4,1	DOL		•		•		•		•
GS.40_22.2T_[GM.125gs]	3~400V	2,2	5,4	DOL		•		•		•		•