



water solutions

Grey Series

Product Range



2019





water solutions

Brand Story

Zenit was founded in the late '50s by Ugo Zeni, to build and repair electric motors and hydraulic pumps.

ZENIT manufactures the following:

- **Submersible electric pumps**
- **Mixers and Bottom diffusers**
- **Lifting stations, Remote controllers, Accessories**



The product range has been enriched with the aim of providing a more complete offering to the customer and so becoming the ideal partner for installation requirements.

Zenit operates in modern facilities covering over 10,000 square metres, with more than 120 employees and consistently growing.

Zenit designers use the most advanced technology and information tools to calculate the hydraulic parameters and simulate prototype performance using 3D modelling programs.

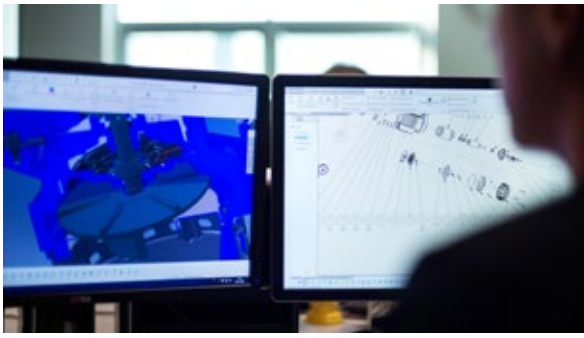
The MANUFACTURING stage involves various production departments supported by latest-generation equipment.

In 1995 Zenit was one of the first Italian companies in the electric pump sector to obtain ISO 9001 certification. Today Zenit is the benchmark for the entire sector because of the experience gained, the professionalism of its staff and its consolidated presence on the international market.

Zenit is a major international player, leader in the wastewater treatment sector, with a range of high-performance electric submersible pumps and other products

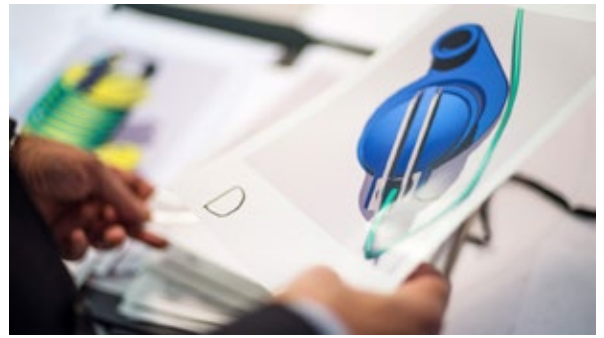


Zenit BOD, from left: Lorenzo Bottan, Davide Bottan and Massimiliano Volta.



Innovation

Zenit generates new ideas by listening to all their partners and adopting streamlined decision-making processes. They work on constant improvement of products and efficiency of service. Zenit are equipped for change, thanks to their dynamic culture which allows them to make a difference and distinguish themselves from their competitors.



Tradition

The Zenit brand's tradition is based on the work of skilled, dedicated people who have given value and credibility to solutions over the years, highlighting the expertise of those who have spent a lifetime in the market and therefore know what to do and how to do it.

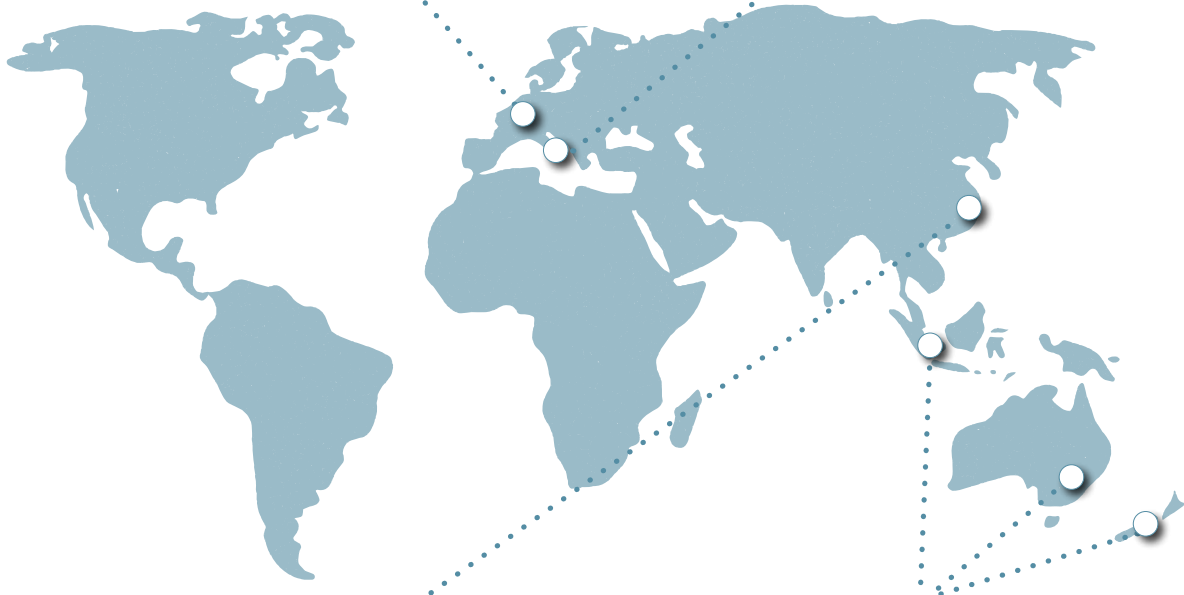
Tradition is a source of reliability, solidity and the ability to keep promises, guaranteeing the quality of our products and the solutions delivered to our customers.

Zenit Europe

Founded in Luxembourg, Zenit Europe went into full operation in January 2009. Its mission was to create a logistics and sales hub in the middle of Europe, to meet the needs of a more and more demanding global market.

Zenit Italia

Located at San Cesario (Modena), the depot of over 3,000 sq.m. is equipped with state-of-the-art finished product storage and handling equipment.



Zenit China

The sales office handles customer management and control of the local market.

A local marketing office promotes the corporate brand and ensures brand and product visibility at fairs and events right across China.

Zenit Asia-Pacific

Zenit Asia Pacific is the Zenit regional office in Singapore. It was founded in 2006 to give the company a strong presence on the Asia-Pacific and Oceania markets.

For more information visit www.zenit.com

Why Grey?

The Zenit Grey series is a new solution for pumping clear wastewaters and black waters in civil, residential and industrial applications.

Zenit Grey pumps feature cleverly **redesigned** hydraulics and motors to guarantee high performance, low consumption and outstanding versatility. These all translate to greater product efficiency, impeccable reliability and lower operating costs.

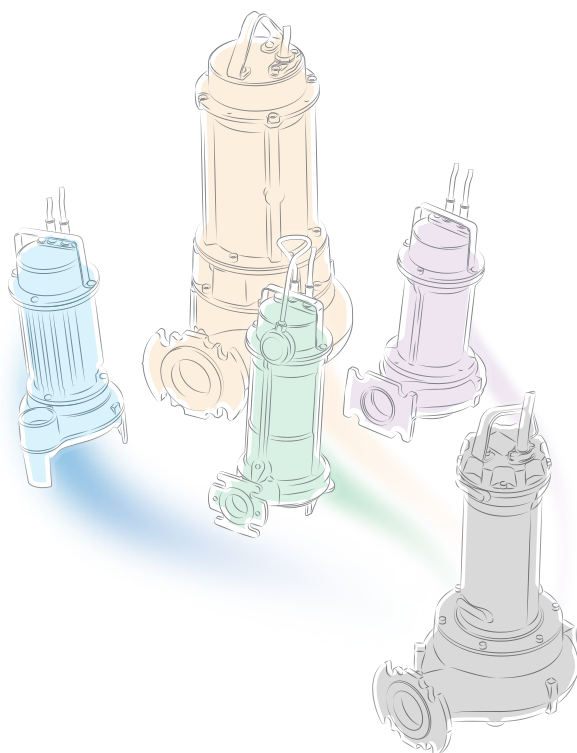
Grey series

Motors

from 1.5 to 18.5 kW operating at 50 and 60 Hz
double mechanical seal in oil chamber

Hydraulics

- channel (**DRG**)
- grinding (**GRG**)



Development of the Zenit range for global water treatment

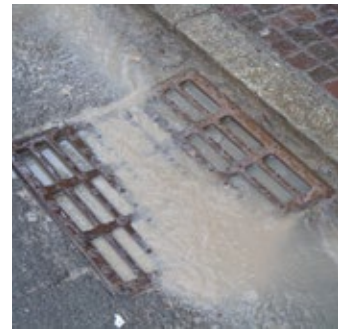
Domestic / Residential	0.25 ÷ 1.5 kw	→	steel	blue
Civil / Light Industrial	0.37 ÷ 1.5 kw	→	Grey	
Professional / Wastewater Treatment / Heavy Industrial	1.8 ÷ 355kw	→	Black	UNIQA

Under development

One range, thousands of applications

Thanks to its versatility, the Zenit Grey series can be used in a very wide variety of sectors, from civil/residential to industrial installations.

These units' strong points lie in the key principles that inspired and guided the design team throughout their development.



Efficiency

Zenit's commitment to efficient and functional engineering, the **Zenit Grey** series features cleverly designed internal hydraulics coupled with premium quality materials to create a range that delivers exceptional performance everytime.



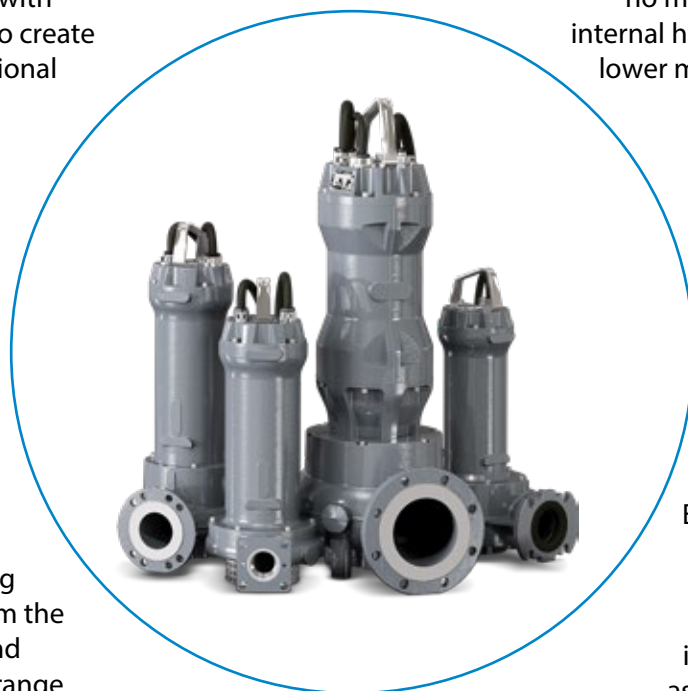
Reliability

Exceptionally reliable, **Zenit Grey** series pumps require far fewer repairs, making is low to no maintenance. With improved internal hydraulics, running costs are lower meaning less inconvenience and more effective service scheduling.



Economical

Designed to be suitable for a diverse range of applications, sizing, installing and maintaining pumps from the **Zenit Grey** series is quick and painfree. A comprehensive range of **Zenit Grey** pumps means that finding the right pump for your applicatin is economical and easy.



Simplicity

Easy to maintain and repair, the simplicity of the **Zenit Grey** series make them the ideal option for installation in new pump setups as well as upgrades to existing ones.

CIVIL applications

Zenit Grey pumps are suitable for a wide range of civil applications:

- Hospitals
- Hotels
- Shopping centres
- Airports
- Sports facilities
- Offices
- Schools

Recent developments in climate change have increased the demand for reliable, high-performance solutions capable of transferring rainwater and wastewater containing not only solid and fibrous materials but also chemicals and abrasive substances.

By combining expertise in the design of civil plants with premium quality products, Zenit have developed a range of industrial solutions capable of satisfying the requirements of design engineers and installers, as well as the most stringent governmental laws and regulations.

- 1) Pumping stations for handling the sewage from toilets in public locations - heavy duty (hospitals, sports grounds, airports): DRG, GRG
- 2) Lifting from first rainfall tanks of parks, leisure areas and car-parks (hospitals, sports grounds, shopping centres, schools): DRG
- 3) Lifting residential and other civil sewage: DRG



- 4) Collection and lifting of wastewater from the toilets and kitchens of Ho.Re.Ca. businesses (hotels, camp-sites, restaurants/bars): GRG, DRG
- 5) Drainage of rainwater and groundwater (underpasses, tunnels, stations, airports): DRG
- 6) Disposal of water containing detergents and hydrocarbons: (car washes, service stations): DRG
- 7) Water drainage from fuel storage areas (airports, service stations): DRG



TREATMENT plants

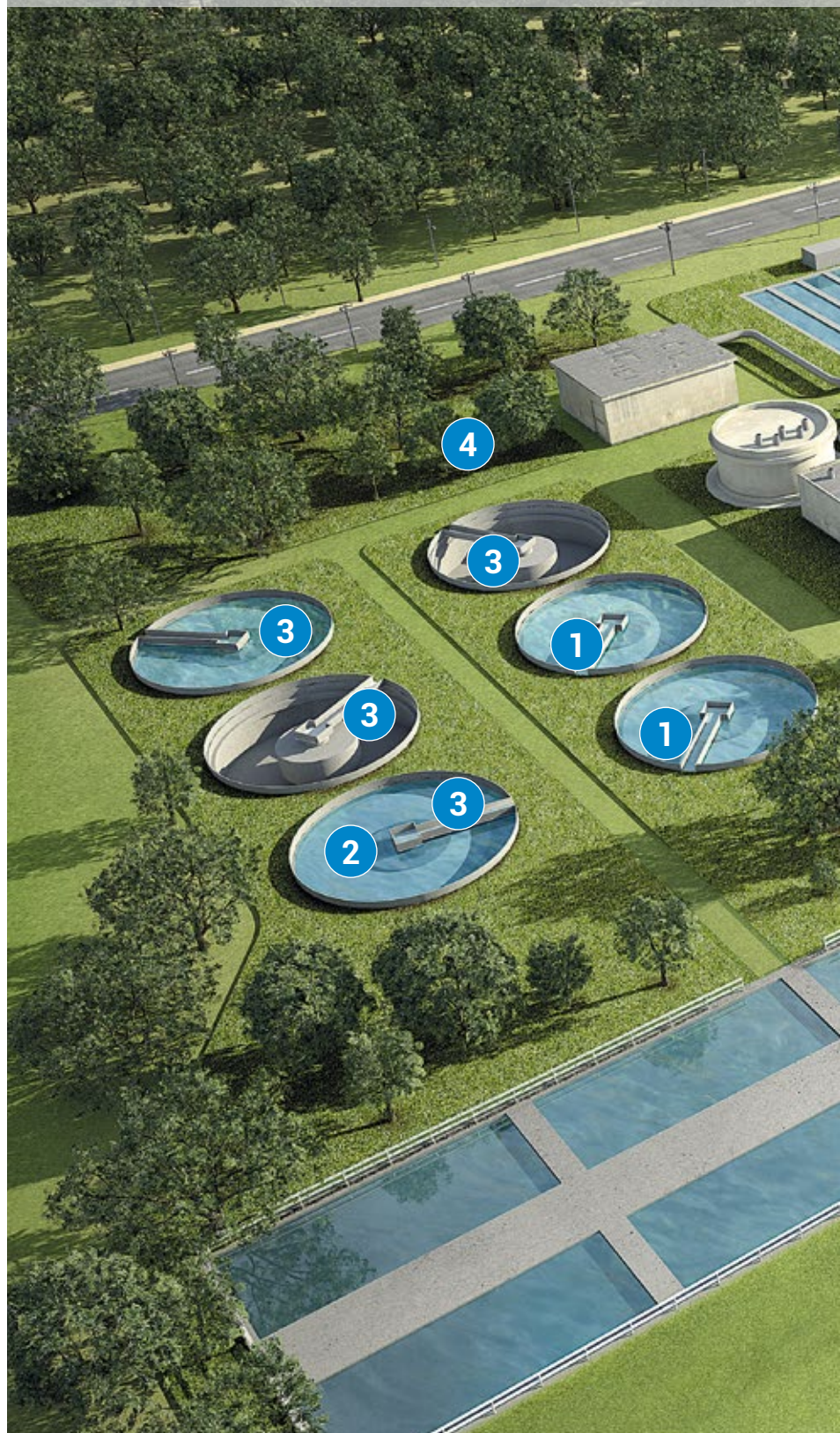
A treatment plant is a highly complex system. Its design requires exceptional expertise, consolidated experience and reliable and suitable products for the application.

Each stage of the treatment process requires clearly defined and carefully monitored conditions to allow the multiplication of bacteria, which carries out biological treatment of wastewater.

The Zenit Grey series has been developed with these considerations in mind and with an impeccable degree of precision, is capable of delivering consistent and reliable results in any phase in the wastewater treatment process, from initial lifting to surface transfer.

From waste water collection through to sludge treatment, the Zenit Grey series has been designed to support the wastewater treatment process with unwavering reliability and efficiency.

- 1) Intermediate transfer: DRG
- 2) Flow divider: DRG
- 3) Secondary sedimentation: DRG
- 4) Final transfer: DRG
- 5) Anaerobic sludge digestion: DRG





Zenit Grey Series

The Zenit Grey series features engineered hydraulics and motors, guaranteeing high performance, low power consumption and outstanding versatility.

The range incorporates models with **50 and 60 Hz single-phase and three-phase motors ranging from 1.5 to 18.5 kW.**

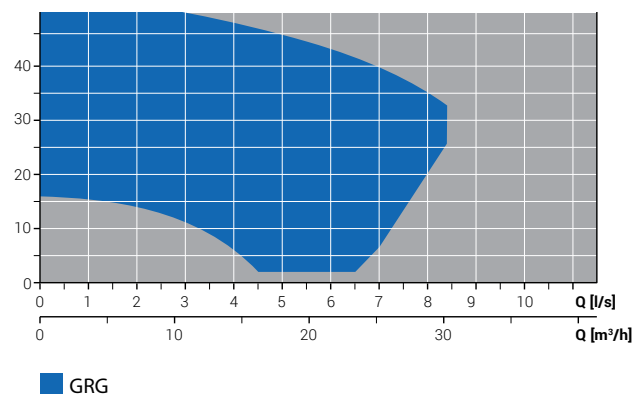
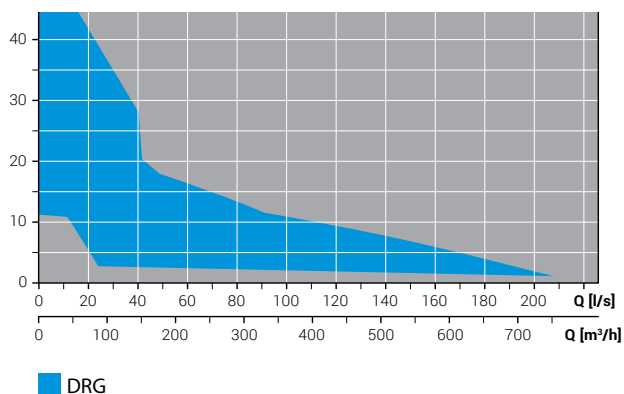
A double mechanical seal in an oil chamber guarantees a high level of reliability even when used with heavily soiled wastewater over an extended period.

A diverse range of Impeller types are available to satisfy a wide variety of application requirements, from small domestic lifting stations to civil and industrial treatment plants:

- Channel (DRG)
- Grinding (GRG)



Overview of Operating Ranges



Construction materials

Motor casing	Cast iron GJL-250
Impeller	Cast iron GJL-250
Mechanical seals	Two in silicon carbide (2SiC)
Nuts and bolts	Stainless steel - class A2-70
Standard gaskets	NBR
Drive shaft	AISI 431 Stainless Steel
Chopper knife	Chromium steel (GRG)
Painting	Bicomponent epoxy paint with high resistance to corrosion

Operating specifications

Max operating temperature	40°C
pH of liquid	6 ÷ 14
Liquid viscosity	1 mm ² /s
Max submergence	20 m
Liquid density	1 kg/dm ³
Max acoustic pressure	<70 dB
Max. starts/hour	20 (<10 kW) 15 (>10 kW)

*Future model not currently available
The data provided are not binding.

Zenit reserves the right to modify any product without notice.

A closer look at Zenit Grey

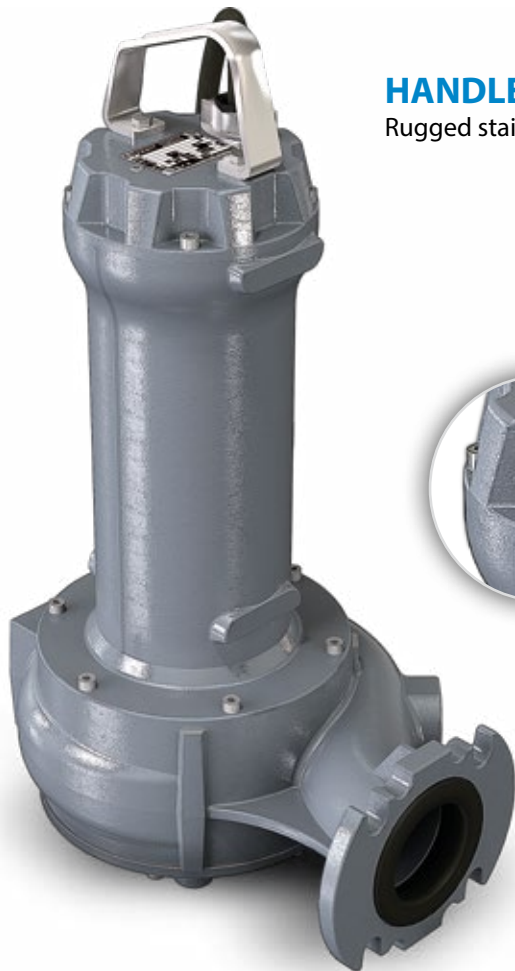


Motor	dry
Power	0.37 ÷ 18.5 kW
Pump material	
Cast iron	●
Steel	-
Bronze	-
Impeller material	
Cast iron	●
Steel	-
Bronze / Aluminium	-
Intended Use	
Clear/slightly soiled wastewaters	DR
Heavily soiled wastewaters with solids	DR / DG
Wastewaters containing filaments	GR
Discharge	
Vertical discharge	●
Horizontal discharge	●
Phases	
Single-phase	●
Three-phase	●
Installation	
Submerged	●
Dry	-
Specific certifications	
ATEX / SASO	-



Versatile, efficient and durable, the Zenit Grey series has been engineered to deliver efficient results across a wide range of applications.

Zenit Grey Series



HANDLE

Rugged stainless steel lifting and carrying handle



PRESSURISED TESTING

Every model undergoes pressurised testing to guarantee perfect assembly and operation of the gaskets, cable gland and mechanical seals.



FREE PASSAGE (DGG)

Ample free passage allowing the expulsion of solids and preventing fouling of the impeller. Up to 70mm⁺

⁺ Selected models only

Highlight

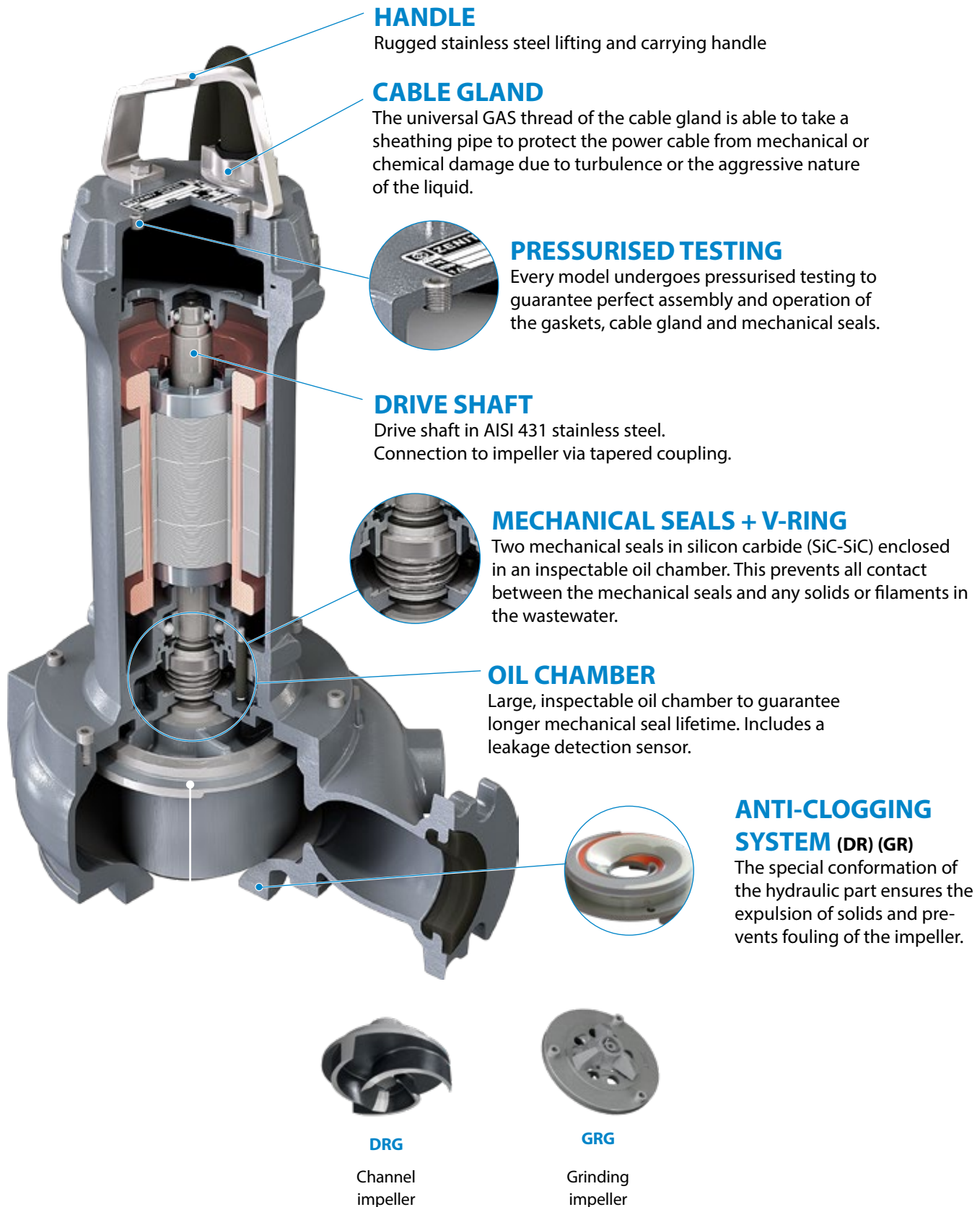


EFFICIENT AND RELIABLE

The Zenit Grey series offers reduced purchasing, installation and maintenance times and costs thanks to a wide choice of models and the use of immediately available standard components.

Exceptionally reliable, the Grey series needs far fewer repairs, meaning reduced costs. Running costs will be lower and there will be fewer system stoppages, allowing more effective maintenance scheduling.

Your guide to Zenit Grey





DRG

DR [DRENO]

Hydraulics

- Channel impeller
- Large free passage



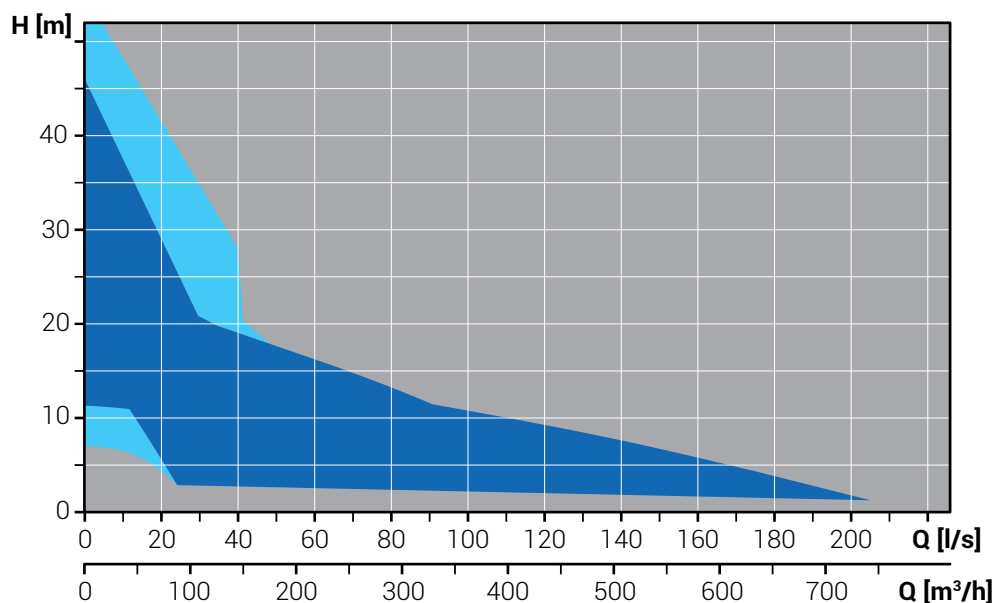
Suitable for

- Recirculation of industrial and process waters
- Civil lifting
- Drainage and lifting of water from first rainfall tanks

Range characteristics

Type of impeller	Channel
Power (P2)	0.37 ÷ 18.5 kW
Poles	2 / 4 / 6
Discharge	V GAS 1¼" - 2"
	H DN 65 ÷ 250
Free passage	max 110 mm ⁺
Max flow rate	205 l/s
Max head	50 m

DRG Performance curve



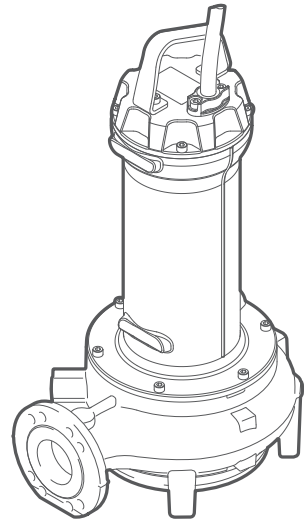
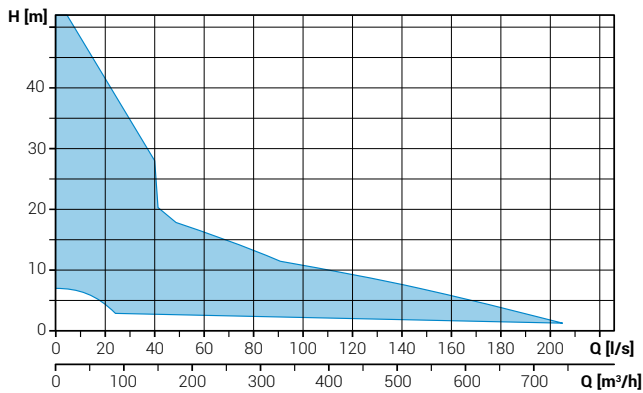
■ Available

■ Under development

⁺ Selected models only

Multi-channel open impeller

Operating ranges



Range characteristics

Motor power	1.8 ÷ 18.5 kW
Poles	2 / 4 / 6
Insulation class	H
Degree of protection	IP68
Discharge	DN65 ÷ DN250 horizontal
Free passage	max 100 x 70 mm
Max flow rate	205 l/s
Max head	48.3 m

Versions

Electrical variants	NAE, TS
Cooling system	N
Mechanical seals	2SiC

Operating specifications

Max operating temperature	40 °C
PH of treated fluid	6 ÷ 14
Viscosity of treated fluid	1 mm²/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm³
Acoustic pressure max	<70dB
Max starts per hour	30

Motor

Environmentally friendly dry motor with thermal protections

Cable

S1RN8-F electric cable. Standard version 10 m cable length

Mechanical seals

Two silicon carbide (SiC) mechanical seals in oil sump

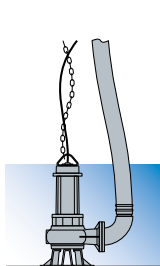
Applications

It is particularly suitable for the treatment of liquids containing suspended solids or filaments, and low or medium density activated sludges.

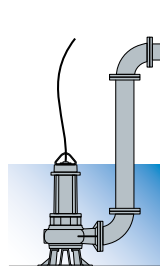
Construction materials

Case	Cast iron EN-GJL 250
Hydraulic parts	Cast iron EN-GJL 250
Impeller	Cast iron EN-GJL 250
Nuts and bolts	Stainless steel - Class A2-70
Standard gasket	Rubber - NBR
Shaft	Stainless steel - AISI 431
Paint type	Ecological bicomponent epoxy (~ 200 µm)

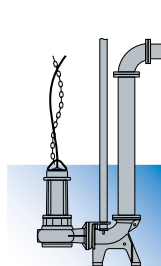
Installations



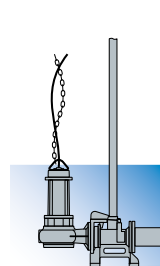
FREE
installation

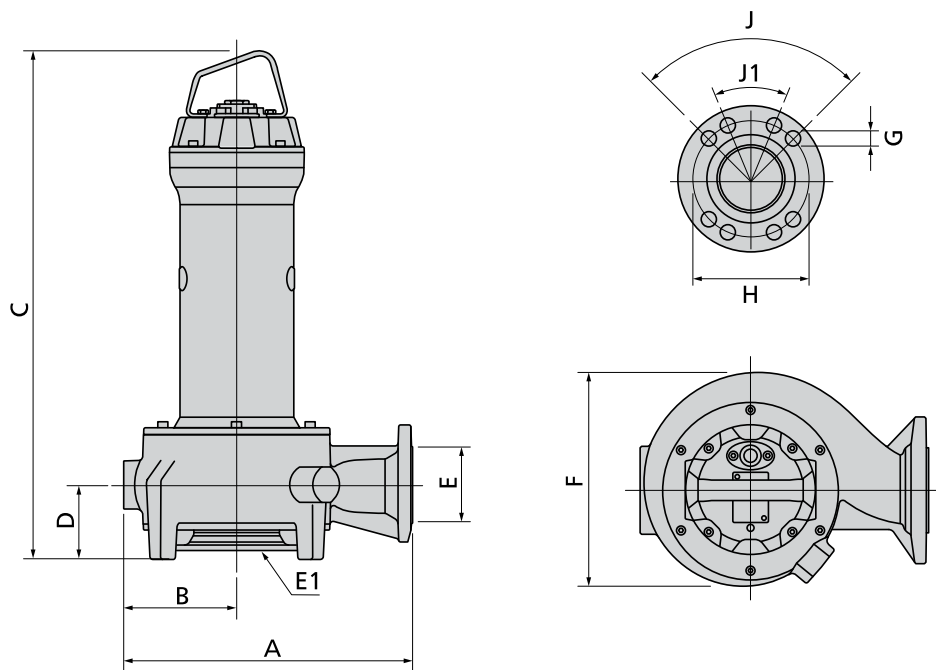


PERMANENT
installation



Installation with **BOTTOM**
COUPLER





Overall dimensions and weights

Part No.	Item Code	A	B	C	D	E	E1	F	G	H	J°	J1°	KGs
ZEN-DRG300/2/65HT	805621	344	136	565	80	65	65	255	18	145	90	-	59.6
ZEN-DRG400/2/80HT	805622	347	135	614	80	80	80	252	18	160	90	45	62.6
ZEN-DRG550/2/80HT	805623	327	142	707	91	80	80	271	18	160	90	45	68.0
ZEN-DRG300/4/80HT	805628	393	151	653	88	80	80	292	18	160	90	45	72.6
ZEN-DRG400/4/80HT	805629	393	151	653	88	80	80	291	18	160	90	45	77.0

Dimensions in mm

Packaging dimensions

Part No.	Item Code	X	Y	Z
ZEN-DRG300/2/65HT	805621	445	725	425
ZEN-DRG400/2/80HT	805622	445	725	425
ZEN-DRG550/2/80HT	805623	445	725	425
ZEN-DRG300/4/80HT	805628	445	725	425
ZEN-DRG400/4/80HT	805629	445	725	425

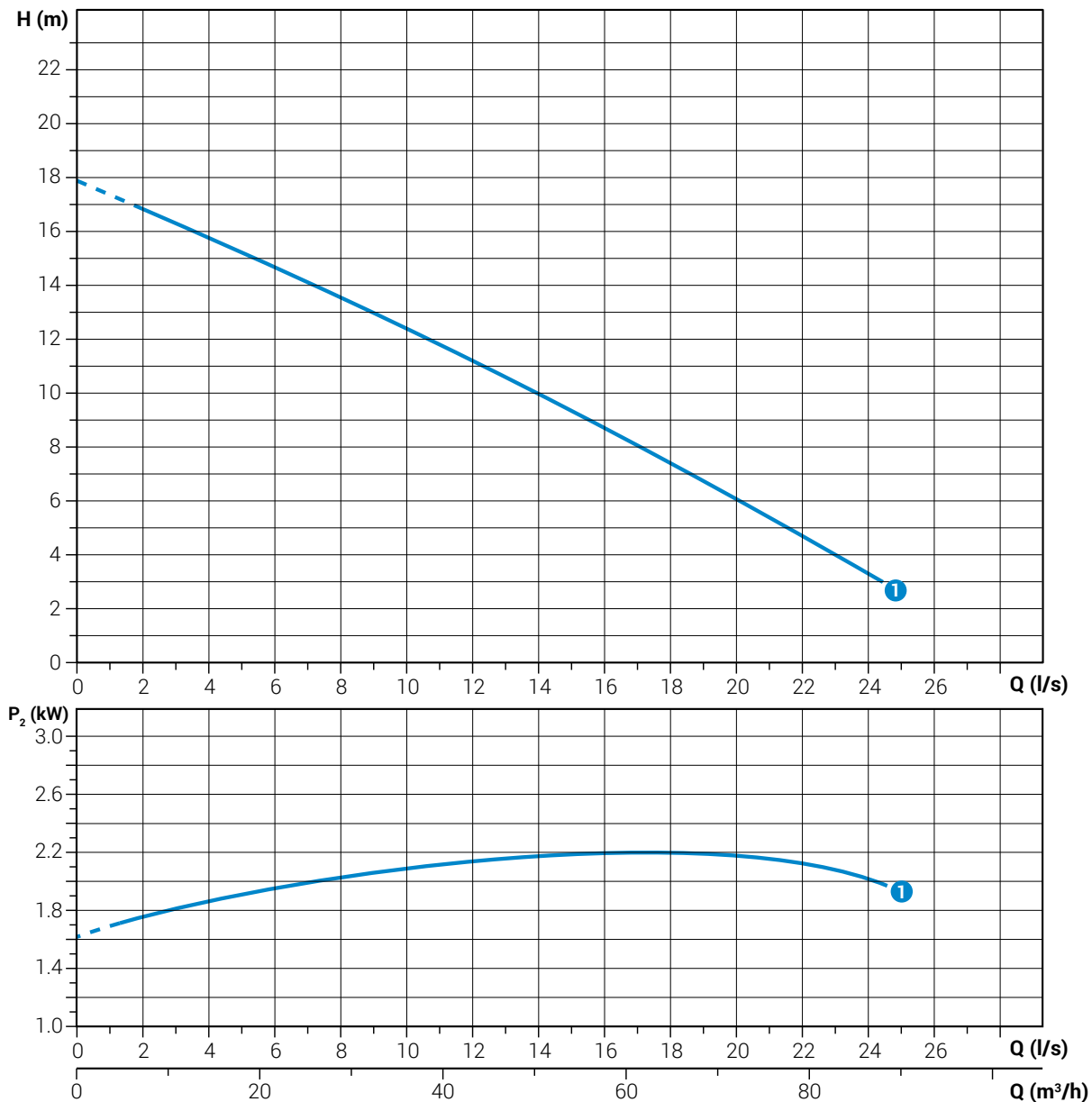
Dimensions in mm



DRG 300/2/65

Performances

	l/s	0	2	4	6	8	10	12	14	16	18	20	22	24	26
	l/min	0	120	240	360	480	600	720	840	960	1080	1200	1320	1440	1560
	m ³ /h	0	7.2	14.4	21.6	28.8	36.0	43.2	50.4	57.6	64.8	72.0	79.2	86.4	93.6
① ZEN-DRG300/2/65HT	805621	17.9	16.8	15.8	14.7	13.6	12.4	11.2	10.0	8.7	7.4	6.1	4.7	3.3	



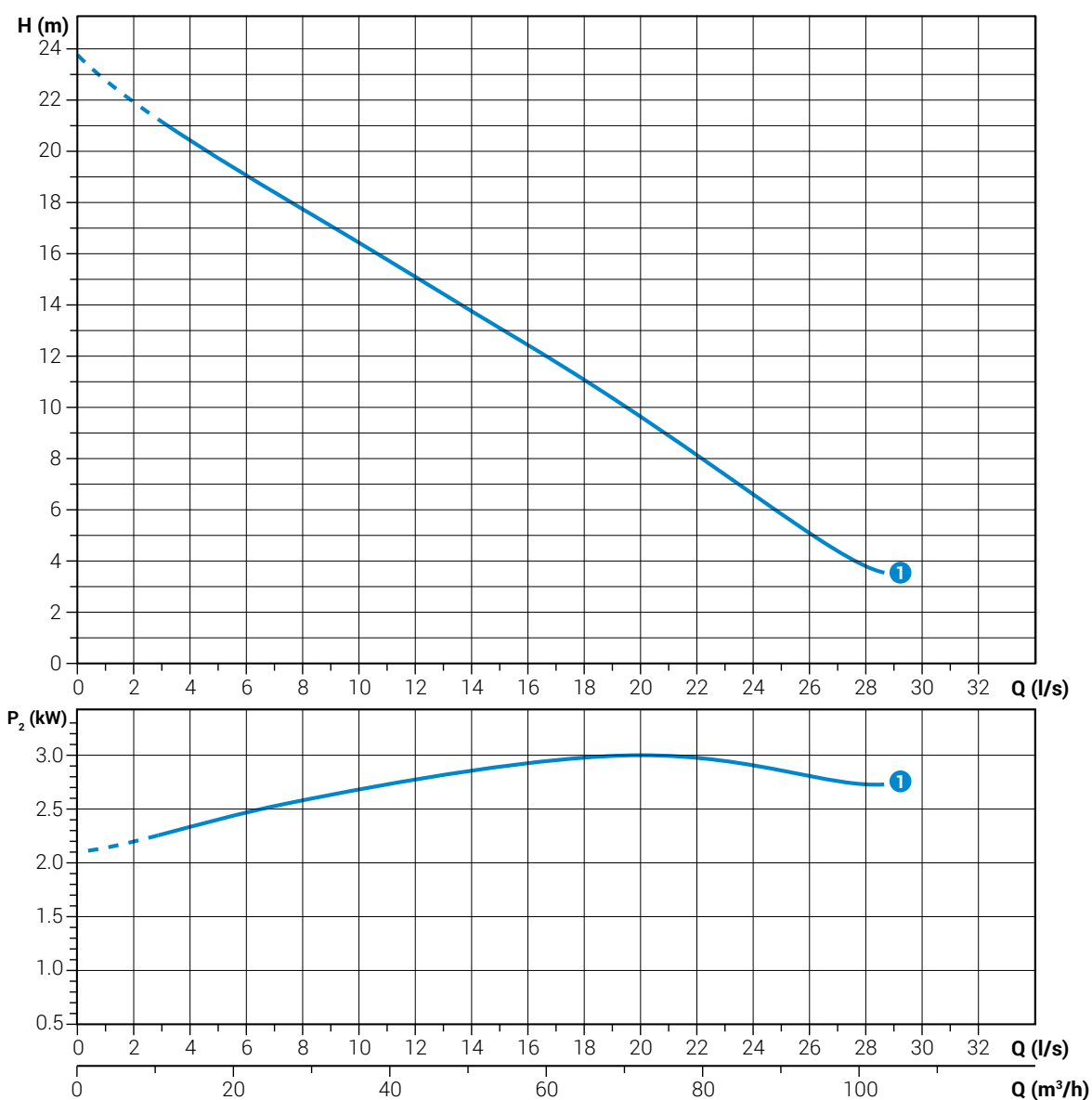
Technical data

	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Cable	Ø	Free passage	
① ZEN-DRG300/2/65HT	805621	400	3	2.76	2.2	4.62	2900	Dir	4G1.5+3x1	DN65	40x35 mm

DRG 400/2/80

Performances

	l/s	0	4	8	12	16	20	24	28
	l/min	0	240	480	720	960	1200	1440	1680
	m ³ /h	0	14.4	28.8	43.2	57.6	72	86.4	100.8
① ZEN-DRG400/2/80HT	805622	23.5	20.3	17.7	15.1	12.4	9.6	6.6	3.8



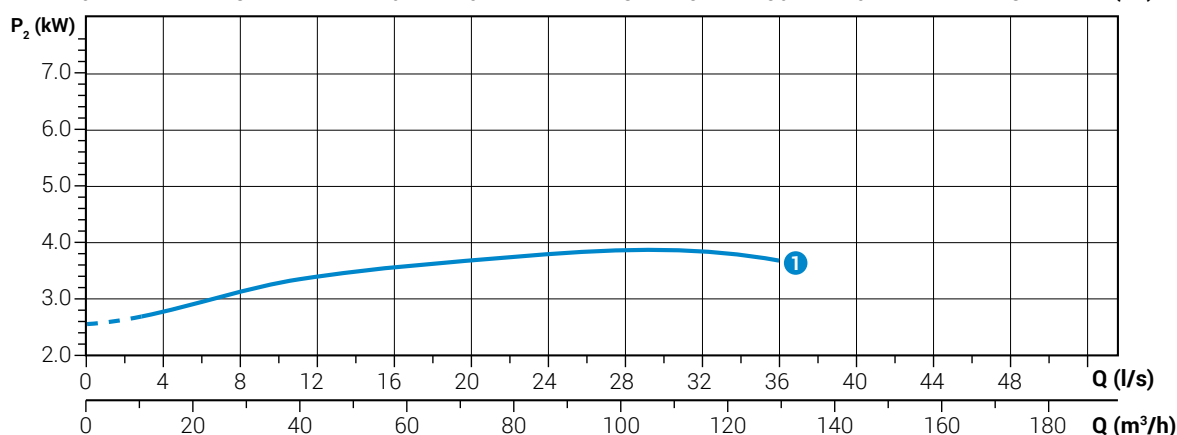
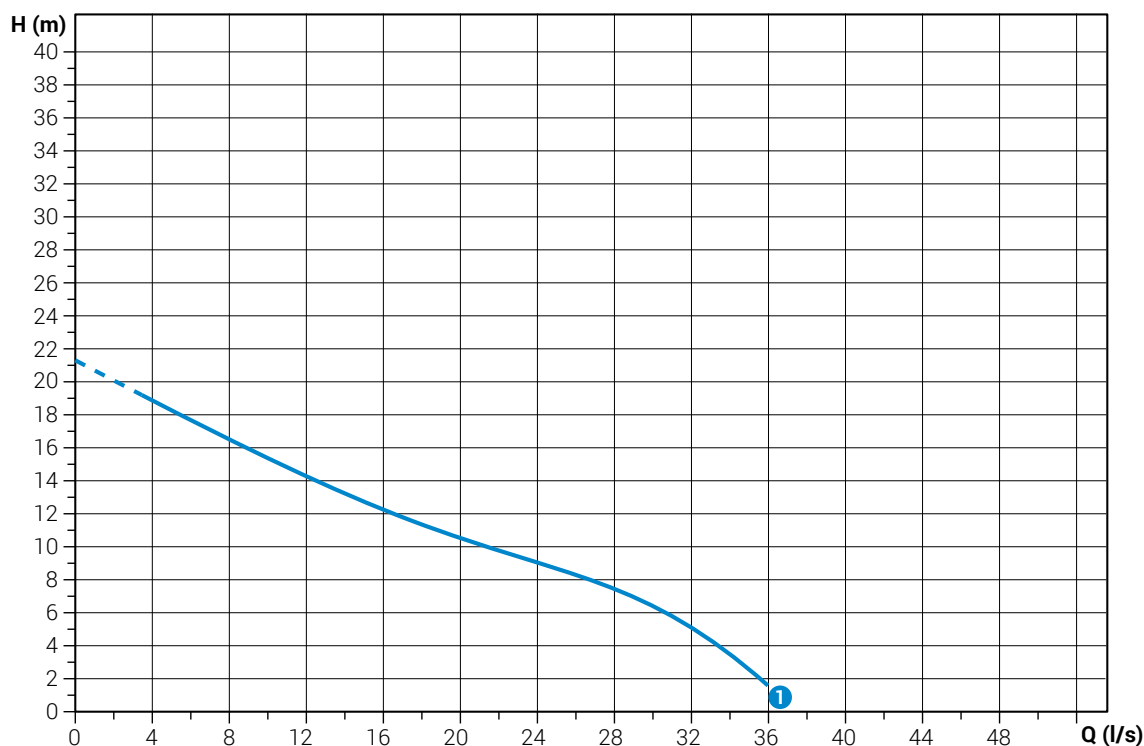
Technical data

	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Cable	Ø	Free passage
① ZEN-DRG400/2/80HT 805622	400	3	3.68	3.0	6.36	2900	Dir	4G1.5+3x1	DN80	40x35 mm

DRG 550/2/80

Performances

	l/s	0	4	8	12	16	20	24	28	32	36	40	44
	l/min	0	240	480	720	960	1200	1440	1680	1920	2160	2400	2640
	m ³ /h	0	14.4	28.8	43.2	57.6	72	86.4	100.8	115.2	129.6	144	158.4
① ZEN-DRG550/2/80HT	805623	21.2	18.8	16.4	14.2	12.2	10.5	9.0	7.4	5.0	1.6		



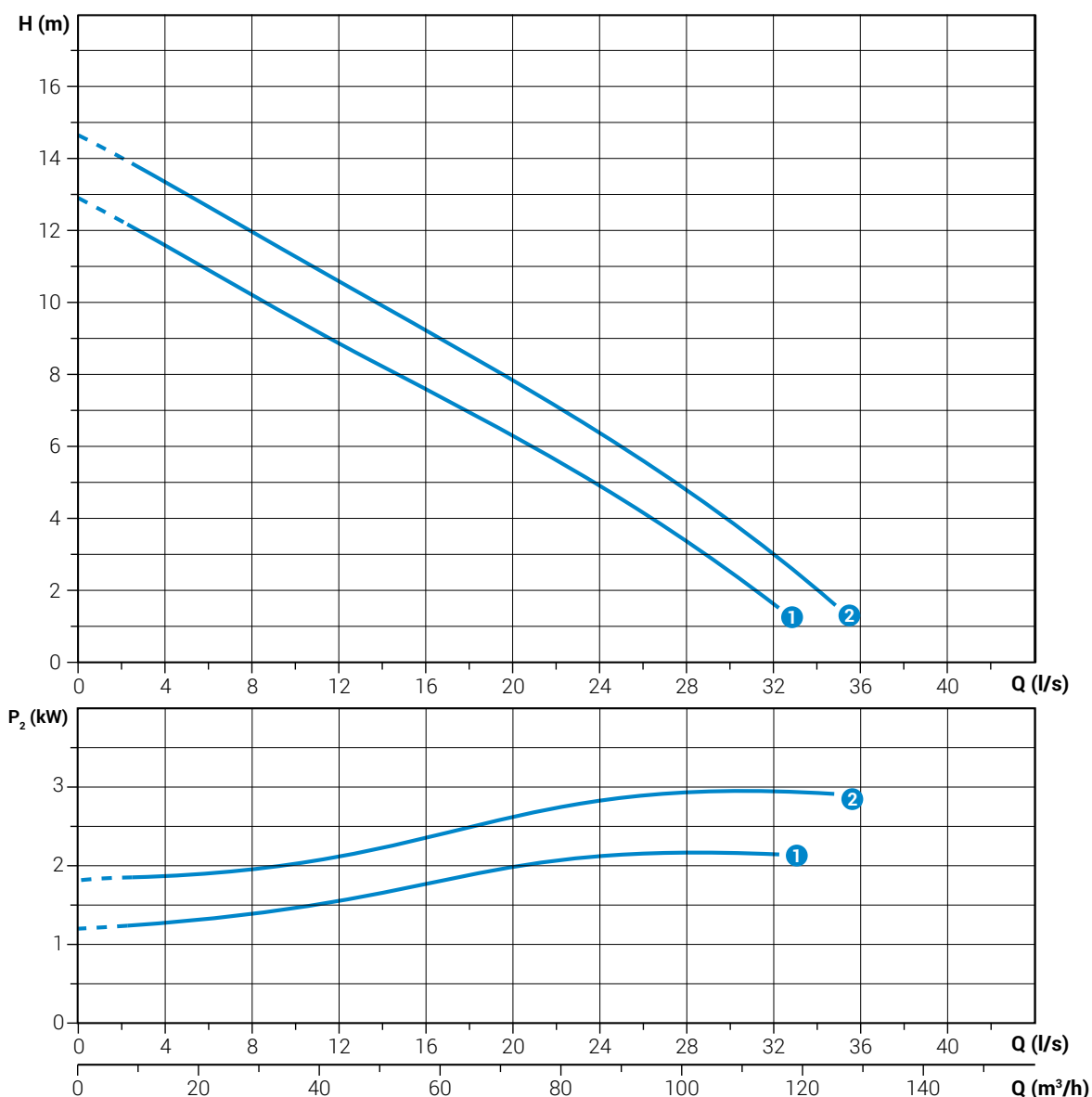
Technical data

	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Cable	Ø	Free passage
① ZEN-DRG550/2/80HT 805623	400	3	4.66	4.0	7.73	2900	Dir	4G1.5+3x1	DN80	40 mm

DRG 300-400/4/80

Performances

		0	4	8	12	16	20	24	28	32
	l/s	0	4	8	12	16	20	24	28	32
	l/min	0	240	480	720	960	1200	1440	1680	1920
	m ³ /h	0	14.4	28.8	43.2	57.6	72	86.4	100.8	115.2
①	ZEN-DRG300/4/80HT 805628	12.8	11.6	10.2	8.8	7.5	6.3	4.9	3.4	1.6
②	ZEN-DRG400/4/80HT 805629	14.6	13.4	12.0	10.6	9.2	7.8	6.4	4.8	3.0



Technical data

		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Cable	Ø	Free passage
①	ZEN-DRG300/4/80HT 805628	400	3	2.7	2.2	5.15	1450	Dir	4G1.5+3x1	DN80	76 mm
②	ZEN-DRG400/4/80HT 805629	400	3	3.68	3.0	6.72	1450	Dir	4G1.5+3x1	DN80	76 mm

GRG

GR [GRINDER]

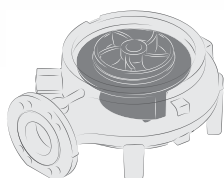


Hydraulics

- Multi-channel open impeller
- Grinding system with rotary knife

Suitable for

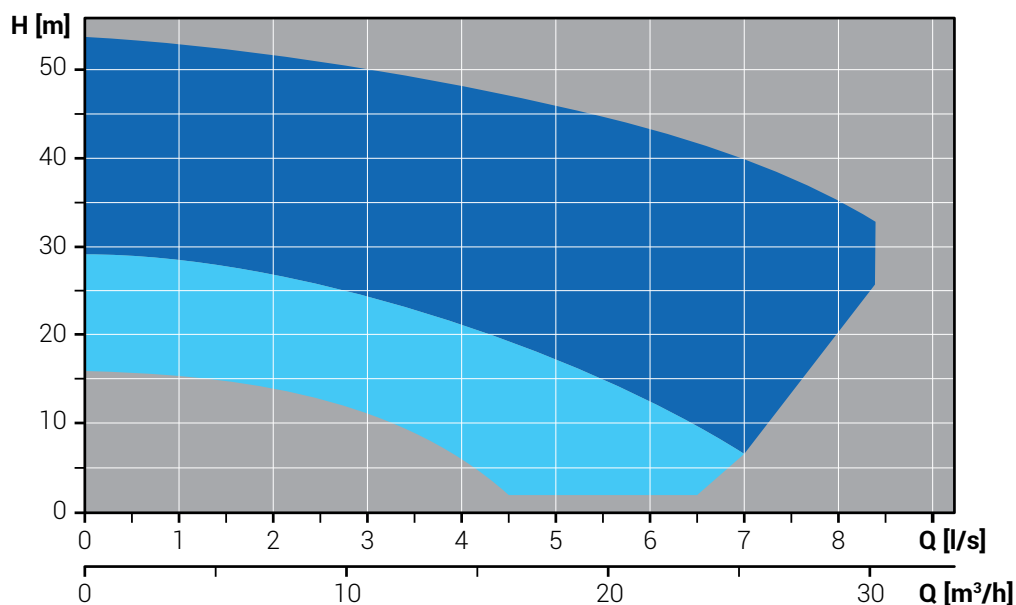
- Lifting of liquids containing fibres and filaments
- Professional and industrial applications
- Livestock farms



Range characteristics

Type of impeller	Grinding impeller	
Power (P2)	0.75 ÷ 9 kW	
Poles	2 / 4	
Discharge	V	-
	H	GAS 1½" - 2" DN 40 ÷ 100
Free passage	-	
Max flow rate	8.4 l/s	
Max head	53.5 m	

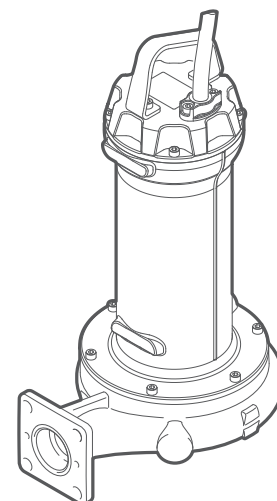
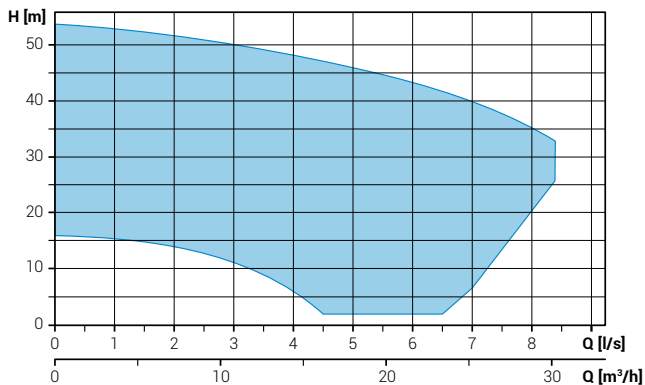
GRG Performance curve



■ Available ■ Under development

Impeller with grinder system

Operating ranges



Range characteristics

Motor power	1.8 ÷ 7.5 kW
Poles	2
Insulation class	H
Degree of protection	IP68
Discharge	GAS 1½" - 2" DN32 horizontal
Free passage	-
Max flow rate	8.4 l/s
Max head	53.7 m

Motor

Environmentally friendly dry motor with thermal protections

Cable

S1RN8-F electric cable. Standard version 10 m cable length

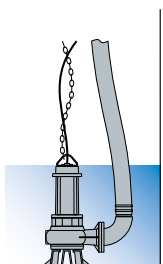
Mechanical seals

Two silicon carbide (SiC) mechanical seals in oil sump

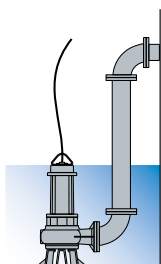
Applications

Designed for professional and industrial use, it is suitable for the treatment of liquids containing suspended solids or fibres.

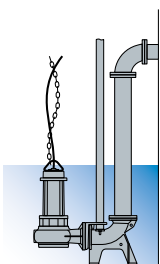
Installations



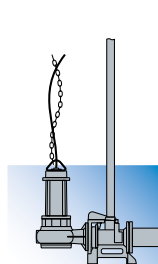
FREE
installation



PERMANENT
installation



Installation with **BOTTOM**
COUPLER



Installation with **BOTTOM**
COUPLER

Versions

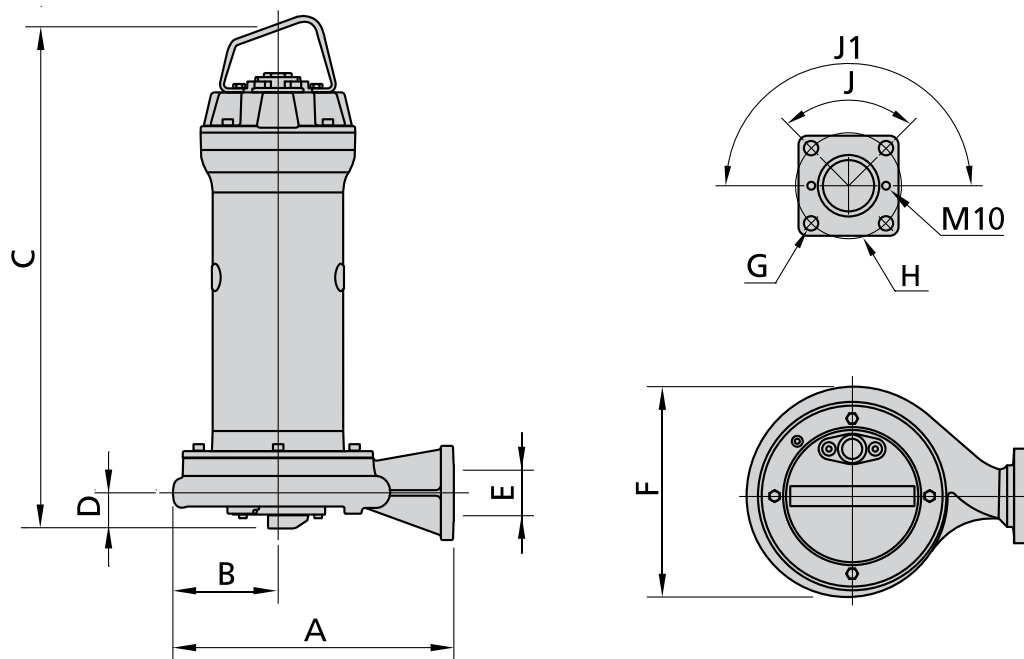
Electrical variants	NAE, TS
Cooling system	N
Mechanical seals	2SIC

Operating specifications

Max operating temperature	40 °C
PH of treated fluid	6 ÷ 14
Viscosity of treated fluid	1 mm²/s
Maximum immersion depth	20 m
Density of treated fluid	1 Kg/dm³
Acoustic pressure max	<70dB
Max starts per hour	30

Construction materials

Case	Cast iron EN-GJL 250
Hydraulic parts	Cast iron EN-GJL 250
Impeller	Cast iron EN-GJL 250
Nuts and bolts	Stainless steel - Class A2-70
Standard gasket	Rubber - NBR
Shaft	Stainless steel - AISI 431
Cutter	Chromium steel
Paint type	Ecological bicomponent epoxy (~ 200 µm)



Overall dimensions and weights

Part No.	Item Code	A	B	C	D	E	F	G	H	J°	J1°	kg
ZEN-GRG250/2/G40HT	805627	267	103	491	45	GAS 1½"- DN32	215	14	90	-	90	32.0
ZEN-GRG300/2/G50HT	805624	305	110	527	56	GAS 2"- DN32	225	18	125	90	180	58.6
ZEN-GRG400/2/G50HT	805625	352	132	594	59	GAS 2"- DN32	263	18	125	90	180	59.6
ZEN-GRG550/2/G50HT	805626	352	128	727	59	GAS 2"- DN32	263	18	125	90	180	68.7

Dimensions in mm

Packaging dimensions

Part No.	Item Code	X	Y	Z
ZEN-GRG250/2/G40HT	805627	310	580	310
ZEN-GRG300/2/G50HT	805624	445	725	425
ZEN-GRG400/2/G50HT	805625	445	725	425
ZEN-GRG550/2/G50HT	805626	535	915	560

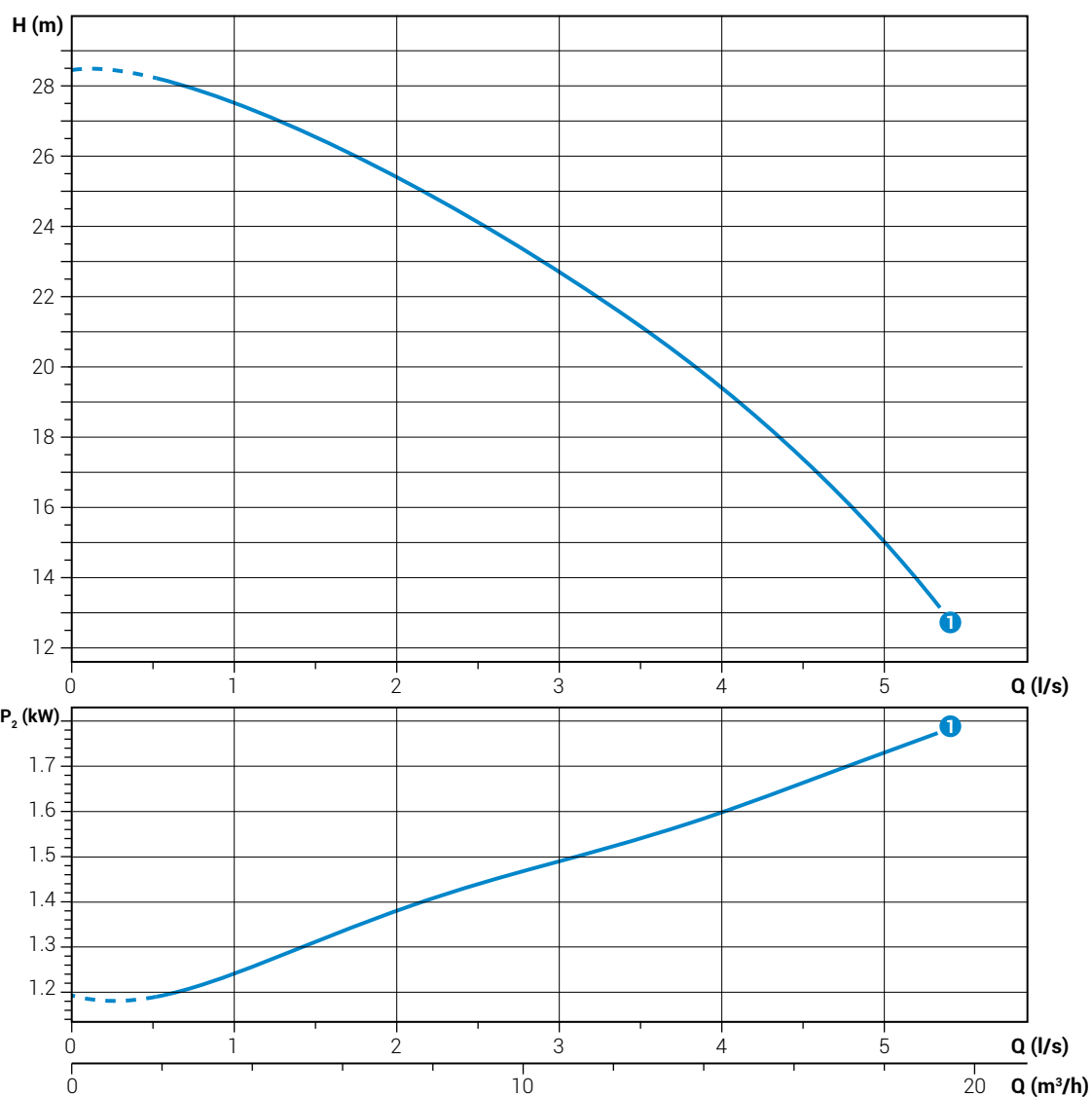
Dimensions in mm



GRG 250/4/80

Performances

		0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	
	l/s	0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	
	l/min	0	30	60	90	120	150	180	210	240	270	300	
	m ³ /h	0	1.8	3.6	5.4	7.2	9.0	10.8	12.6	14.4	16.2	18.0	
①	ZEN-GRG250/2/G40HT	805627	28.5	28.2	27.5	26.5	25.4	24.1	22.7	21.2	19.4	17.3	14.9



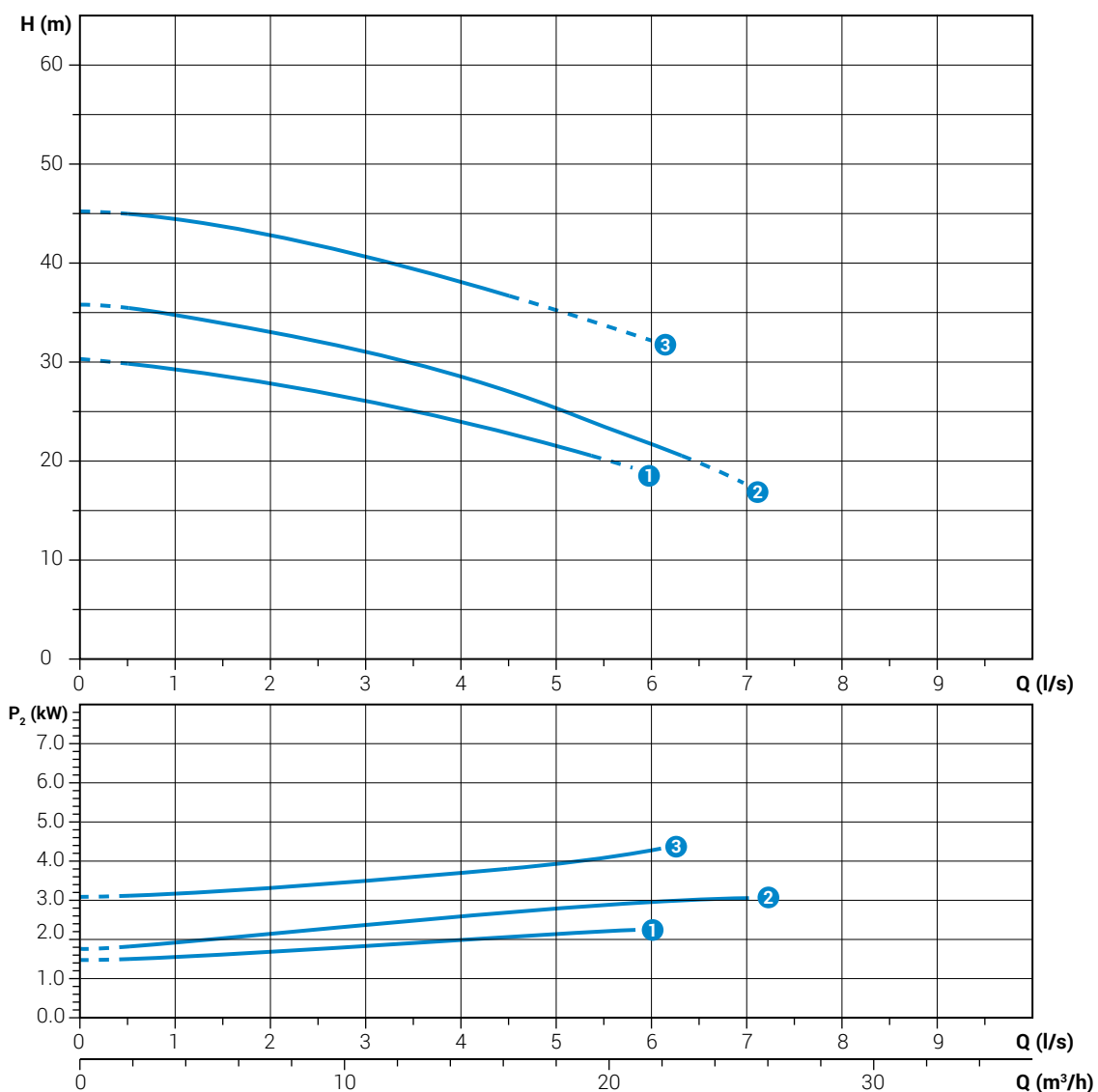
Technical data

		V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Cable	Ø	Free passage
①	ZEN-GRG250/2/G40HT 805627	400	3	2.19	1.8	3.7	2900	Dir	4G1	DN32-G1½"	-

GRG 300 - 550/2/G50H

Performances

		0	1	2	3	4	5	6	7	8
	I/s	0	1	2	3	4	5	6	7	8
	l/min	0	60	120	180	240	300	360	420	480
	m ³ /h	0	3.6	7.2	10.8	14.4	18	21.6	25.2	28.8
①	ZEN-GRG300/2/G50HT	805624	30.3	29.3	27.9	26.1	24.0	21.6		
②	ZEN-GRG400/2/G50HT	805625	35.8	34.8	33.0	31.1	28.5	25.3	21.8	17.7
③	ZEN-GRG550/2/G50HT	805626	45.1	44.4	42.8	40.6	38.1	35.3		

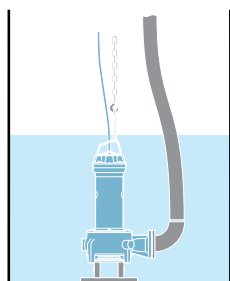


Technical data

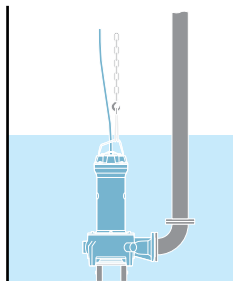
	V	Phases	P1 (kW)	P2 (kW)	A	Rpm	Start	Cable	Ø	Free passage		
①	ZEN-GRG300/2/G50HT	805624	400	3	2.76	2.2	4.62	2900	Dir	4G1.5+3x1	DN32 - G2"	-
②	ZEN-GRG400/2/G50HT	805625	400	3	3.68	3.0	6.36	2900	Dir	4G1.5+3x1	DN32 - G2"	-
③	ZEN-GRG550/2/G50HT	805626	400	3	4.66	4.0	7.73	2900	Dir	4G1.5+3x1	DN32 - G2"	-

Installations and accessories

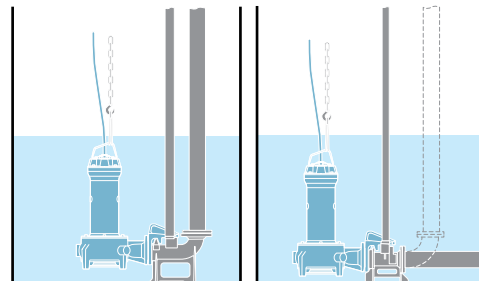
A full range of **accessories** supplied as standard simplifies any **installation**



FREE
installation



PERMANENT
installation



Installation with BOTTOM
COUPLER



Bottom couplers

- Cast iron body - steel metal fasteners
- Vertical and horizontal discharge
- DN 65 ÷ DN 250



Base plates

- In cast iron or galvanized steel
- Ideal for free installation



Ball check valves

- Cast iron body - steel metal fasteners
- Rubber ball
- DN 65 ÷ DN 250



Chains

- In stainless and galvanised steel
- Ø 6mm

Maintenance and Service

Grey models allow **easy maintenance** thanks to their simple, rational construction



The **Grey series** has been designed and built to facilitate the routine replacement of parts subject to wear and tear, to extend the life-cycle and cut operating costs.

Installation Engineers and Authorised Service Centres are provided with full documentation and detailed installation diagrams, to offer unbeatable maintenance service and ensure high product quality standards.



Before Sales

- Product selection
- Customisation
- Cost and consumption estimate



After Sales

- Support during installation
- Assistance during testing
- Authorised service centres

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