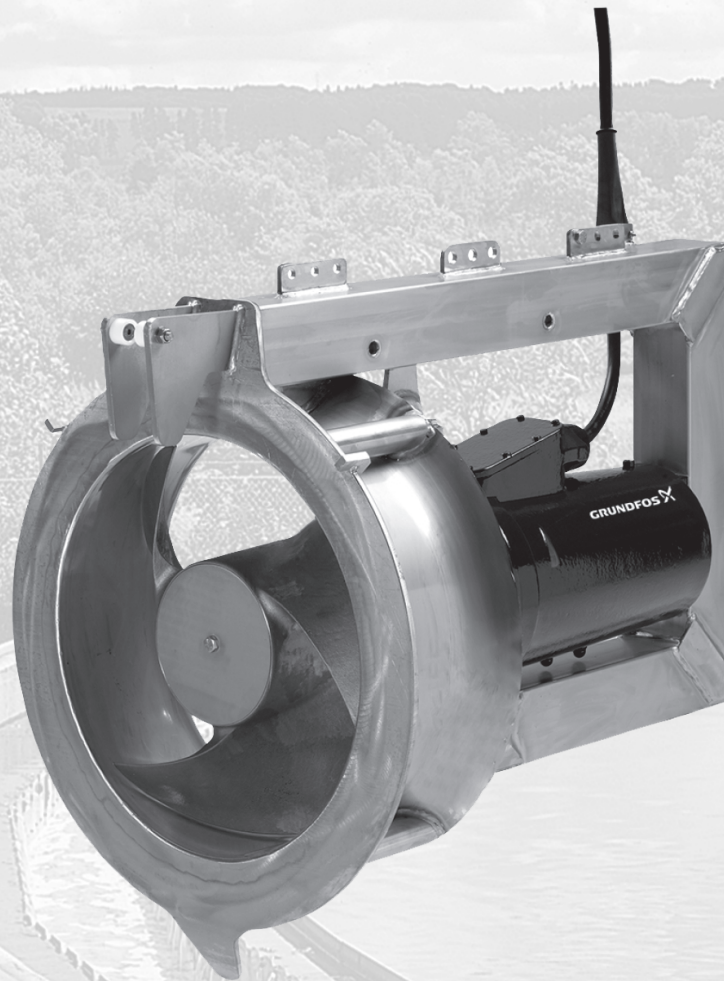


Submersible recirculation pumps

SRG

ANSI-60 Hz



SRG North America
Data booklet
Other languages
<http://net.grundfos.com/qr/i/99194863>

Submersible recirculation pumps

English (US)

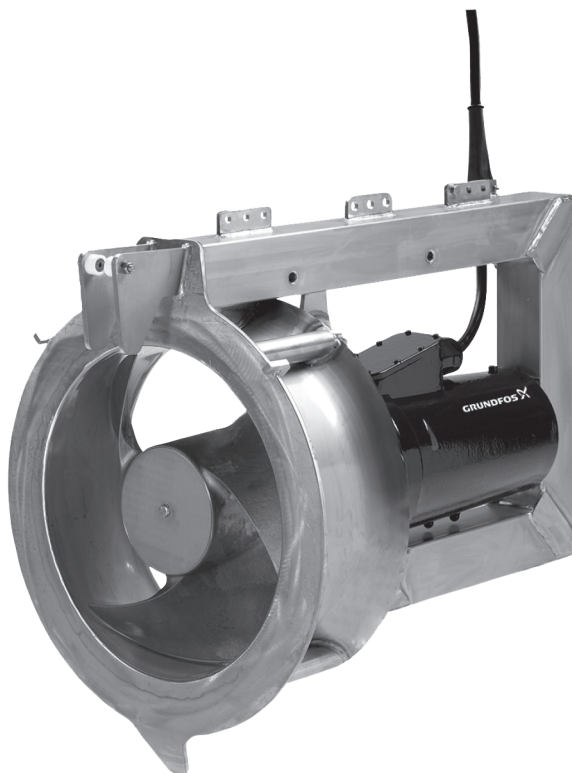
..... 4

1. Introduction	5	SRG.48.20.254.27 - 3 x 460 V	41
General description	5	SRG.68.20.299.27 - 3 x 460 V	42
Applications	5	SRG.95.20.363.27 - 3 x 460 V	43
Constructional features	5	SRG.135.20.406.27 - 3 x 460 V	44
Operating mode	5	SRG.95.32.260.11 - 3 x 460 V	45
		SRG.160.32.308.11 - 3 x 460 V	46
		SRG.175.32.355.11 - 3 x 460 V	47
2. Identification	6	SRG.200.32.334.11 - 3 x 460 V	48
Type key	6	SRG.270.32.374.11 - 3 x 460 V	49
Nameplate	6	SRG.320.32.418.11 - 3 x 460 V	50
3. Product description	7	10. Accessories	51
Features	7	Selection guide for accessories	51
Starting method	7	List of accessories	52
Water-in-oil sensor	9		
Pumped liquids	9	11. Grundfos Product Center	55
Sound pressure level	9		
Motor range	9	12. Document quality feedback	56
4. Selection of product	10		
Ordering a recirculation pump	10		
Selecting an SRG pump	10		
Performance range, 60 Hz North America	15		
5. Product range	20		
460 V	20		
6. Variants	21		
Variants	21		
7. Construction	22		
Pump	22		
Installation drawing	22		
Crane	22		
Material specification	23		
Exploded views	24		
Position numbers and material description	27		
Dimensions, accessories	28		
8. Positioning	30		
General description	30		
9. Technical data	31		
How to read the performance curves	31		
SRG.11.12.524.08 - 3 x 460 V	32		
SRG.15.12.628.08 - 3 x 460 V	33		
SRG.20.12.720.08 - 3 x 460 V	34		
SRG.26.12.805.08 - 3 x 460 V	35		
SRG.30.12.883.08 - 3 x 460 V	36		
SRG.40.12.513.25 - 3 x 460 V	37		
SRG.55.12.607.25 - 3 x 460 V	38		
SRG.75.12.722.25 - 3 x 460 V	39		
SRG.95.12.805.25 - 3 x 460 V	40		

1. Introduction

1.1 General description

This data booklet describes Grundfos submersible recirculation pumps, type SRG.



TM062762B_W

SRG

The Grundfos submersible recirculation pumps are designed for the transfer of liquids of low to medium viscosity.

The pumps are for 12 in (DN 300), 20 in (DN 500) and 32 in (DN 800) pipe diameters and have motors of 1.1 hp to 32 hp (0.8 to 24 kW).

The pumps incorporate a squirrel-case induction motor, a planetary gear and a cast stainless-steel impeller ensuring high resistance to wear and corrosion.

The 3-dimensional optimized hydraulic design ensures high efficiency.

1.2 Applications

Grundfos SRG recirculation pumps are designed for the pumping of sludge from one tank to another in sewage treatment plants and for other pump applications involving a high flow rate and low head.

1.3 Constructional features

- Strong axial gear in slim design for high hydro-dynamic efficiency
- integrated overload and overheating protection
- integrated leak sensor
- cast stainless-steel impeller
- good self-cleaning capabilities.

1.4 Operating mode

- Continuous operation when fully submerged
- intermittent operation with max. 20 starts per hour.

2. Identification

2.1 Type key

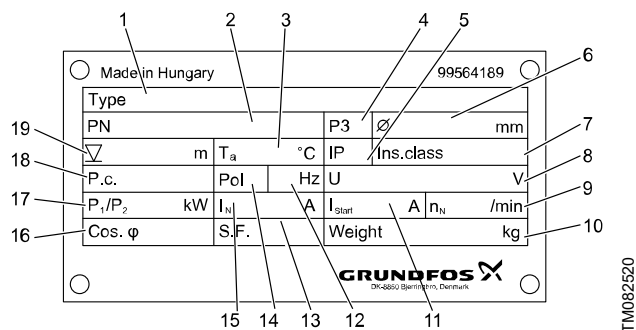
Example: **SRG.11.12.524.08.6.0H**

Code	Description	Designation
SRG	Submersible recirculation pump	Type range
11	Code from type designation / 10 1.1 hp	Motor output power P2
12	12 inches	Impeller diameter
524	524 RPM	Impeller speed
08	8°	Blade pitch
[]	Standard, non-explosion-proof pump	Explosion protection
6	60 Hz	Frequency
0H	3 × 460 V, Star	Supply voltage and starting method
1H	3 × 460 V, Delta	
[]	First generation	Generation
A	Second generation	
B	Third generation	
Z	Custom-built products	

Pos.	Description
10	Weight
11	Starting current
12	Frequency
13	Service factor
14	Number of poles
15	Rated current
16	Power factor
17	Motor power P1/P2
18	Production code (YYWW)
19	Maximum installation depth

2.2 Nameplate

The nameplate is fitted to the motor housing. The details supplied on the nameplate are required for ordering spare parts.



Nameplate

The additional nameplate supplied with the pump should be fixed in a visible position at the installation site.

Pos.	Description
1	Type designation
2	Product number and serial number
3	Liquid temperature range
4	Production site
5	Enclosure class according to IEC
6	Impeller diameter
7	Insulation class
8	Rated voltage
9	Rated speed (impeller)

3. Product description

3.1 Features

The descriptions below are related to the main components of the products. Product variants are available. See [6.1 Variants](#).

Related information

[6.1 Variants](#)

3.1.1 Motor

The motor is a 2- or 4-pole squirrel-cage induction motor. Electromagnetic components, such as stator windings and rotor, are compliant with the IE3 efficiency level of IEC 60034-30.

The rotor is supported by two single-row ball bearings.

3.1.2 Gearbox

A planetary gearbox is positioned between the motor and the impeller. The pump has one gear stage. The gearbox shaft is supported by two separated tapered roller bearings. This construction ensures that no axial or radial forces from the propeller can load neither the gear wheels nor the motor bearings.

The gearbox is oil-filled, and the gear wheels are hardened to ensure long life. The gearbox housing has an integrated water-in-oil sensor which can be connected to an external relay to give an alarm or to cut out the motor in case of water ingress.

See the installation and operating instructions for information on oil type, oil quality and oil change intervals.

3.1.3 Bearings

Motor: Single-row ball bearings.

Gear: Tapered roller bearings.

3.1.4 Sealing system

To prevent ingress of the surrounding liquid, the pump has a multistage sealing system. The first seal is placed behind of the propeller and encapsulates the inside of the gearbox inclusive shaft completely.

This primary seal consists of a labyrinth seal, two lip seals of FKM running on a low-wear ceramic layer and a mechanical shaft seal.

A secondary seal is located between gearbox and motor and consists of a mechanical shaft seal.

	Sealing against ingress of surrounding liquid	Sealing between gearbox and motor
SRG.xx12 SRG.48.20	Two lip seals and a mechanical shaft seal, SiC/SiC ¹⁾	Mechanical shaft seal, carbon/Alox
Other SRG pumps	Two lip seals and a mechanical shaft seal, tungsten carbide/tungsten carbide	

¹⁾ SiC: Silicon carbide.

3.1.5 Impeller

The three-blade, self-cleaning impeller is made of cast stainless steel.

3.1.6 Cable and cable entry

The watertight cable entry prevents moisture ingress down to a depth of 66 feet (20 m). The cable entry is sealed by a double set of elastomeric rubber with a clamping ring.

Standard cable types	Dimensions	Outer diameter [in (mm)]
S1BN8-F 11G1.5	11 x AWG 16 (1.5 mm ²)	0.67 (17)
S1BN8-F 11G2.5	11 x AWG 14 (2.5 mm ²)	0.83 (21)
TPE/TPE 7G4 + 4 x 1.5	7 x AWG 11 (4 mm ²) + 4 x AWG 16 (1.5 mm ²)	0.83 (21)

The cable type required for each product appears in [Technical data](#).

Sensors

As standard, the SRG is supplied with the following:

- three thermal switches (PTO)
- one water-in-oil sensor incorporated in the gearbox.

For the water-in-oil sensor, a relay is needed. See [Water-in-oil sensor](#).

Related information

[3.3 Water-in-oil sensor](#)

3.2 Starting method

Continuous operation

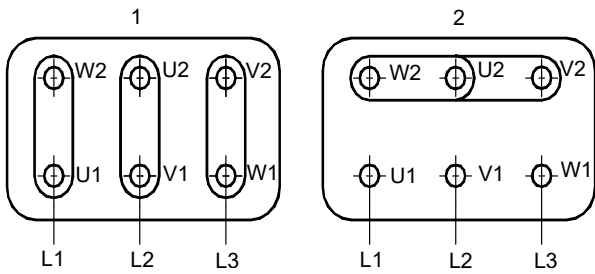
Start the recirculation pump via a soft starter or frequency converter throughout the entire power range.

Intermittent operation

Use a soft starter or frequency converter.

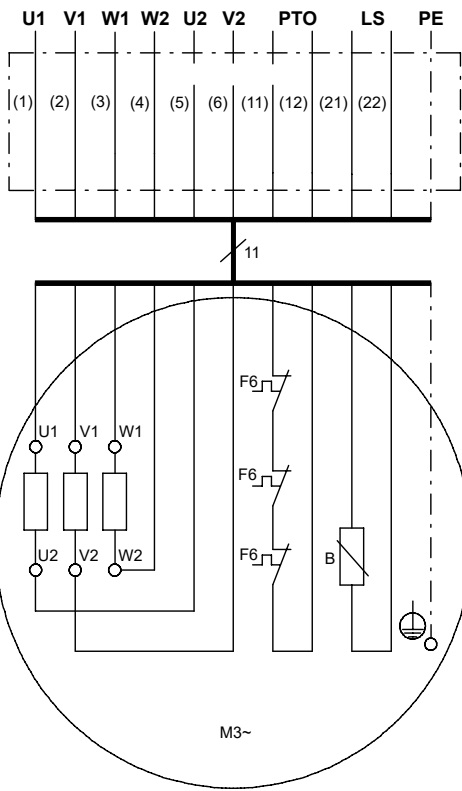
Wiring diagrams

For voltage and starting method 1H, wire the motor using the delta connection. For voltage and starting method 0H, wire the motor using the star connection method. Connection methods are shown in fig. [Schematic drawing of delta and star connection](#). See also Nameplate, position 1 and [Type key](#) to determine the voltage and starting method of your mixer or flowmaker.



Schematic drawing of delta and star connection

Pos.	Description
1	Delta
2	Star

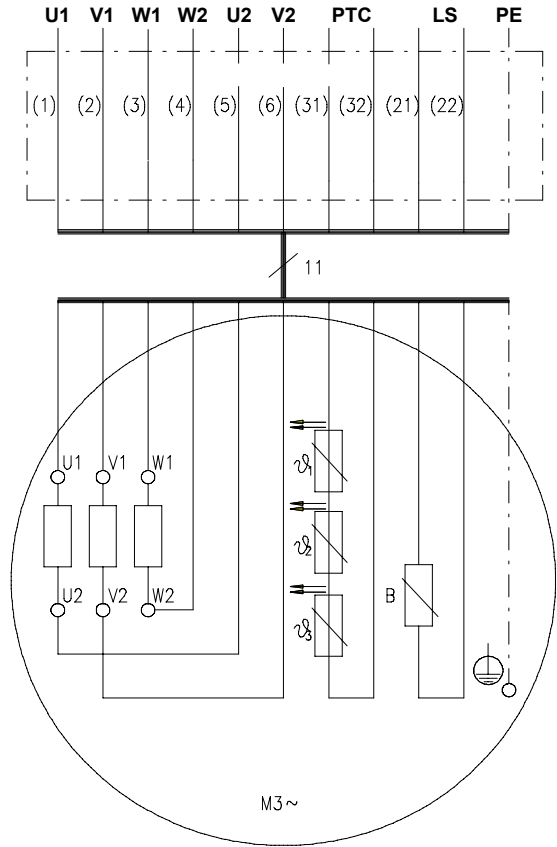


Three thermal switches (PTO)

Terminals	Description
1, 2, 3, 4, 5, 6	Ends of the three stator windings (U1, U2, V1, V2, W1, W2)
11, 12	Thermal switches (F6)
21, 22	Leak sensor in gearbox (B). See Water-in-oil sensor on page Water-in-oil sensor .

TM024953

TM024940



Three thermistors (PTC sensors)

Terminals	Description
1, 2, 3, 4, 5, 6	Ends of the three stator windings (U1, U2, V1, V2, W1, W2)
31, 32	PTC sensors according to DIN 44081 (ø1, ø2, ø3)
21, 22	Leak sensor in gearbox (B). See Water-in-oil sensor on page Water-in-oil sensor .

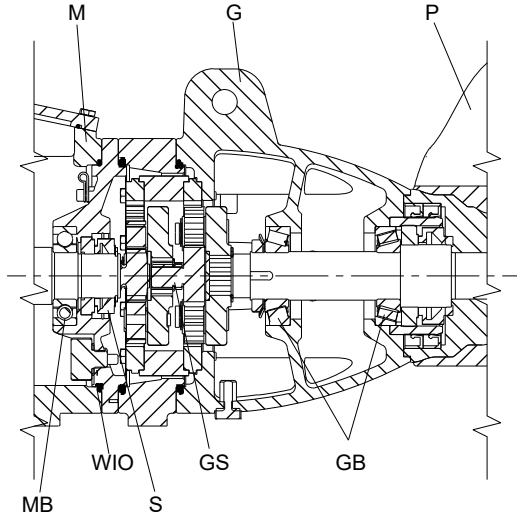
Related information

- [2.1 Type key](#)
- [2.2 Nameplate](#)
- [3.3 Water-in-oil sensor](#)

TM024932

3.3 Water-in-oil sensor

The gearbox is monitored for the ingress of water by means of a water-in-oil sensor (leak sensor) incorporated in the gearbox or shaft seal housing. Via an external relay, the sensor triggers an alarm signal and/or switches off the motor.



TM062788

Gear box

Pos.	Description
M	Motor
G	Gearbox
P	Impeller
MB	Motor bearing
WIO	Water-in-oil sensor
S	Secondary shaft seal
GS	Gear stages
GB	Gear bearings

We recommend that you connect the sensor to a relay. The relay must be a Grundfos relay.

Note: Being an electronic component, the water-in-oil sensor must not be tested with an ohmmeter or another measuring instrument.

3.4 Pumped liquids

pH value	: 4-10
Liquid temperature	: 41-104 °F (5-40 °C)
Maximum density	: 66.2 lb/ft ³ (1060 kg/m ³)
Maximum dynamic viscosity	: 500 cSt (mPas)
Maximum dry solids content	: 1.5 %
Chloride content	: Stainless steel (304 (1.4301)) : ≤ 200 ppm (mg/l)

3.5 Sound pressure level

The sound pressure level of the pump is lower than 70 dB(A).

3.6 Motor range

Type designation	Supply voltage	Shaft power [hp (kW)]	Number of poles
SRG.11.12.524.	3 x 460 V Y	1.1 (0.8)	2
SRG.15.12.628.	3 x 460 V Y	1.5 (1.1)	
SRG.20.12.720.	3 x 460 V Y	2.0 (1.5)	
SRG.26.12.805.	3 x 460 V Y	2.6 (1.9)	
SRG.30.12.883.	3 x 460 V Y	3.0 (2.2)	
SRG.40.12.513.	3 x 460 V D	4.0 (3.0)	
SRG.55.12.607.	3 x 460 V D	5.5 (4.0)	
SRG.75.12.722.	3 x 460 V D	7.0 (5.5)	
SRG.95.12.805.	3 x 460 V D	9.5 (7.0)	
SRG.48.20.254.	3 x 460 V D	4.8 (3.5)	
SRG.68.20.299.	3 x 460 V D	6.8 (5.0)	
SRG.95.20.363.	3 x 460 V D	9.5 (7.0)	
SRG.135.20.406.	3 x 460 V D	13.5 (10.0)	
SRG.95.32.260.	3 x 460 V D	9.5 (7.0)	
SRG.160.32.308.	3 x 460 V D	16.0 (12.0)	
SRG.175.32.355.	3 x 460 V D	17.5 (13.0)	
SRG.200.32.334.	3 x 460 V D	20.0 (15.0)	
SRG.270.32.374.	3 x 460 V D	27.0 (20.0)	
SRG.320.32.418.	3 x 460 V D	32.0 (24.0)	

4. Selection of product

4.1 Ordering a recirculation pump

You only need to select a few product numbers to complete your order:

- SRG recirculation pump (standard)
- custom-built variants (option)
- mechanical installation accessories
- electrical accessories, leak detector relay and variable speed drive.

4.1.1 Standard pump

This is an example of what you get when you order a standard SRG pump:

- recirculation pump with motor, gearbox, impeller and rack
- factory-fitted 50 ft (15 m) power supply cable
- paint, black, NCS9000N, coating according to ISO 12944-2:2017 Im2 H
- three thermal switches (PTO), one in each motor winding
- one water-in-oil sensor incorporated in the gearbox.

Note: In Grundfos Product Center you can find product data by entering the type designation, e.g. SRG.11.12.524.08.6.0H.

4.1.2 Variants

If a longer cable or an explosion-proof version is required, it is no longer a standard pump. A list of variants can be found in [Variants](#).

Related information

[6.1 Variants](#)

4.1.3 Accessories

For selection of the correct accessories, see [Accessories](#).

Note: The accessories are not fitted from factory.

Related information

[10. Accessories](#)

4.1.4 Relay

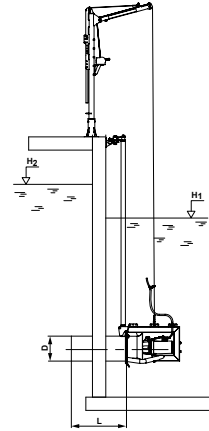
A Grundfos leak detector relay can be selected.

4.2 Selecting an SRG pump

The selection guide is for guidance only. For detailed information, please contact Grundfos. The performance curves for SRG pumps shown later in this section are based on the following:

- system description and layout
- flow rate, Q , in l/sec
- geodetic head, H_{geo} , in m ($H_{geo} = H_2 - H_1$).

Note: In contrast to a common wastewater pump, the head loss of recirculation pumps has a significant influence on the total head and it must be calculated.



System layout

Head loss can be calculated on the basis of information in the system layout.

TM030571

4.2.1 Symbols

These symbols are used in the calculations on the following pages:

A	=	Area	
D	=	Internal pipe diameter	
L	=	Length of pipe	
g	=	Acceleration of gravity (9.81 m/sec ²)	
H	=	Total pump head	
H ₁	=	Liquid level in tank 1	
H ₂	=	Liquid level in tank 2	
H _f	=	Head loss due to friction	
H _{geo}	=	Geodetic head	
H _{system}	=	Head loss in system	
H _J	=	Head loss in pipes	
H _{Jn}	=	Head loss in fittings and system	
H _{valve}	=	Head loss in valves (supplier data - typically 0.05 to 0.5 m)	
Q	=	Flow rate	
V	=	Flow velocity	
z	=	Loss coefficient	$V \frac{Q [m^3/sec]}{A [m^2]}$

4.2.2 Equations

$$H_f = H_{geo} + H_{system}$$

$$H_{system} = H_{valve} + \sum H_{Jn} + H_J$$

4.2.3 Cross-sectional area of pipes

DN	Area [m ²]
300	0.0707
400	0.1257
500	0.1963
600	0.2827
700	0.3848
800	0.5027

4.2.4 Pipe loss nomogram

Guide values for surface roughness (k) for pipes

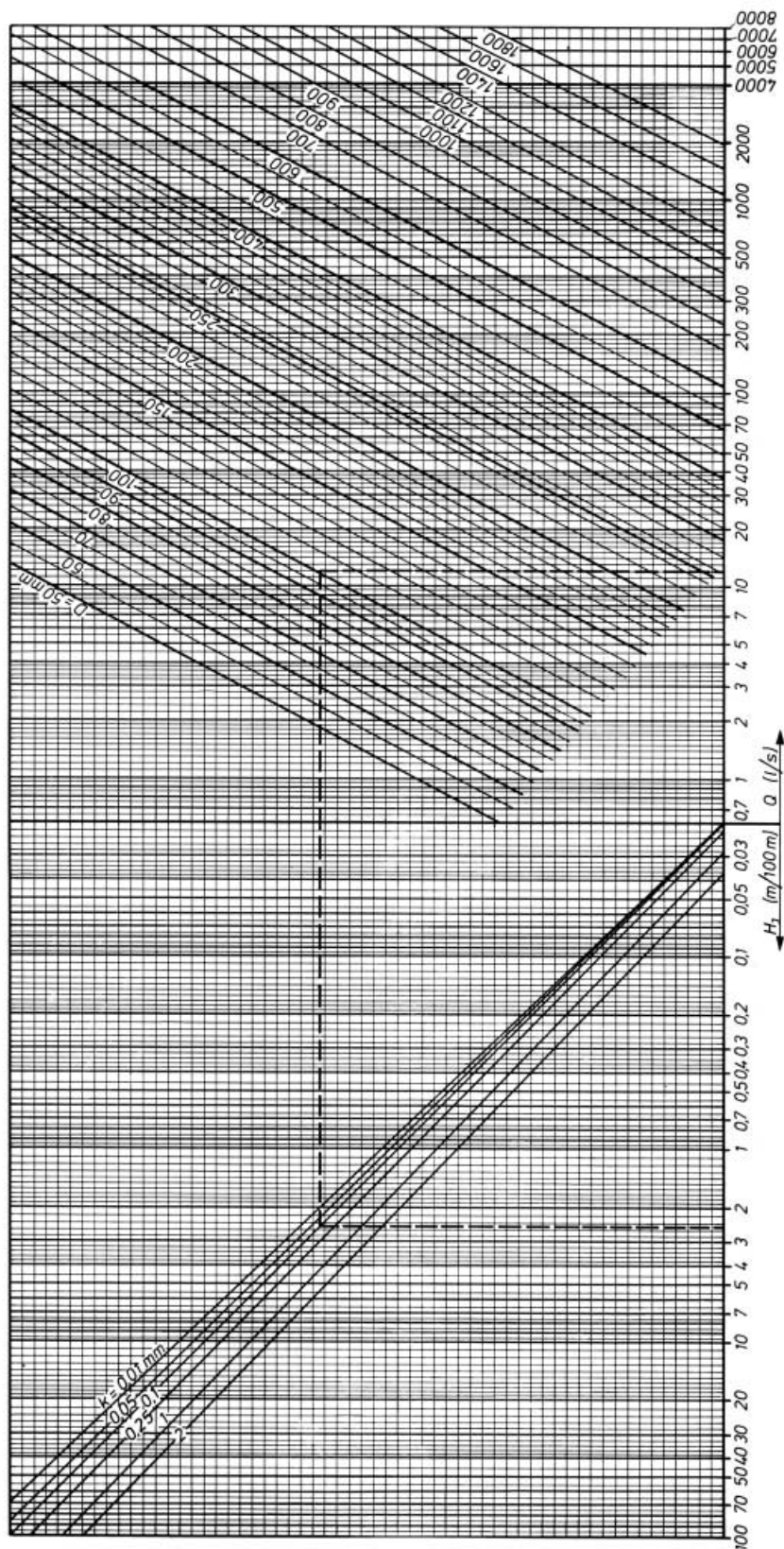
pipe material	new pipe k (mm)	old pipe k (mm)
plastic	0,01	0,25
drawn steel	0,05	1,0
welded steel	0,1	1,0
drawn stainless steel	0,05	0,25
welded stainless steel	0,1	0,25
cast iron	0,25	1,0
galvanized steel	0,15	
bituminized cast iron	0,12	
concrete	0,3...2,0	
asbestos cement	0,025	

Pipe loss nomogram for clean water 20 °C

Example

Q = 12 l/s
D = 100 mm
k = 0,1 mm
H₃ = 2,5 m/100 m

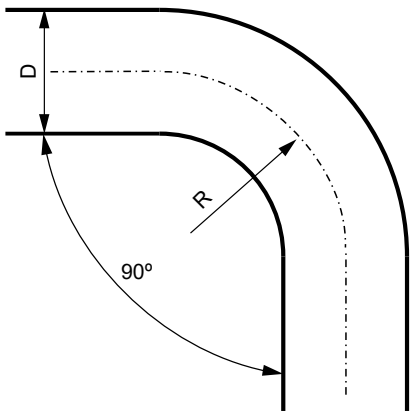
Q = Flow, l/s
D = Pipe inner diameter, mm
k = Surface roughness, mm
H₃ = Pipe losses, m/100 m



TM030585

Pipe loss nomogram

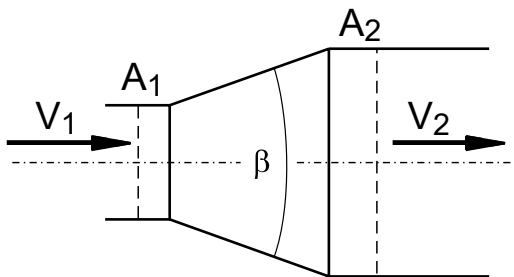
4.2.5 Head loss in fittings and systems



TM030837

Head loss in elbow

R/D	1	2	3	4	6
z	0.36	0.19	0.16	0.15	0.21
R/D	8	10	12	16	20
z	0.28	0.32	0.35	0.39	0.41

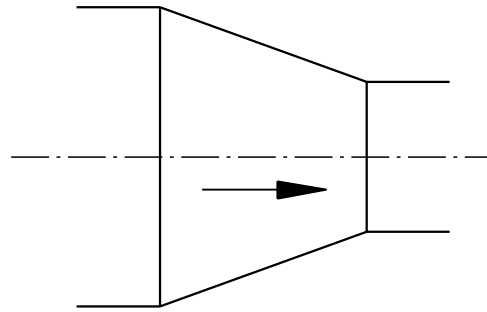


TM030838

Head loss in expansion

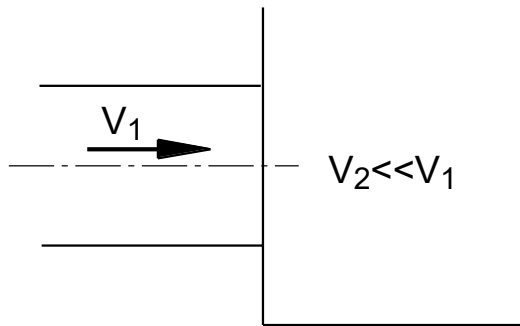
$$H_{Jn} = \zeta \frac{V_1^2}{2g} \quad \zeta = k \left(1 - \frac{A_1}{A_2}\right)^2$$

b°	5	10	15	20	30	40	45	50
k	0.13	0.17	0.26	0.41	0.71	0.90	0.93	1.05
β°	60	70	80	90	100	120	140	160
k	1.12	1.13	1.10	1.07	1.06	1.05	1.04	1.02



Head loss in reduction

$$H_{Jn} \approx 0$$



Head loss in outlet

$$H_{Jn} = \frac{V_1^2}{2g}$$

TM030839

TM030840

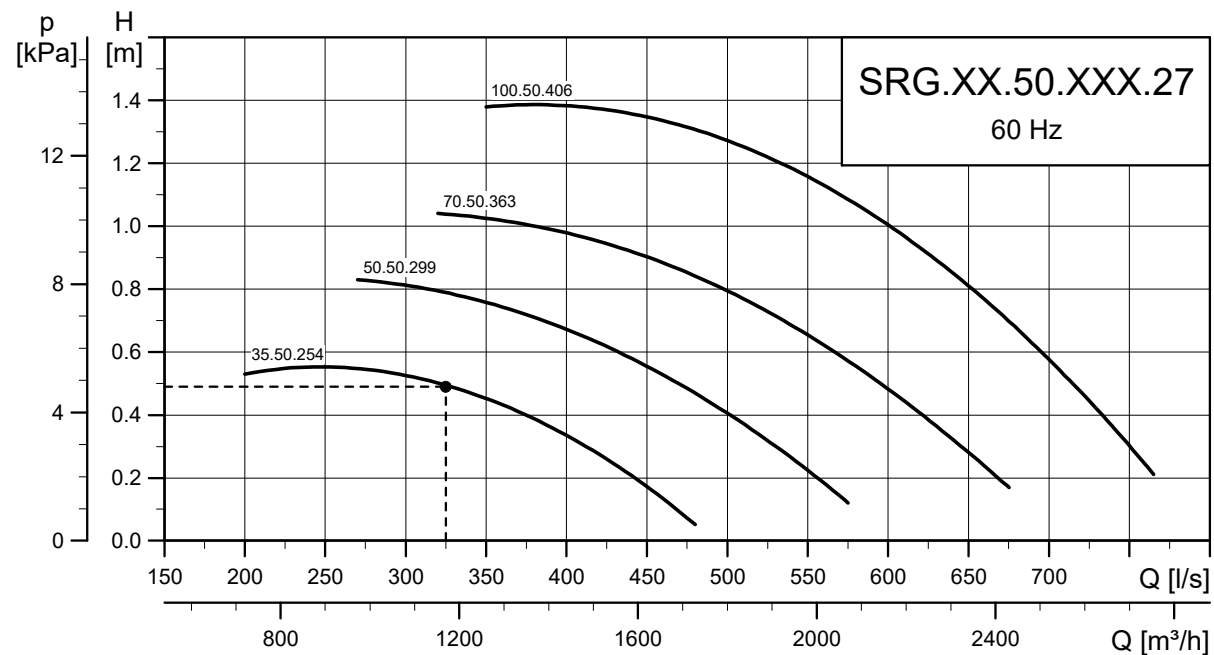
Example**Calculation of H [m]**

Q	=	325 l/sec
H _{geo}	=	0.35 m
L _{pipe}	=	2 m
H	=	H _{geo} + H _{system}
H _{system}	=	H _J + ΣH _{Jn} + H _{valve}
H _J	=	0 due to the short pipe length
H _{Jn}	=	limited to the outlet loss
H _{Jn}	=	$\frac{V_1^2}{2g} \Rightarrow V_1 = \frac{(0.325 \text{ [m}^3\text{/sec)})}{0.1963 \text{ [m}^2]} = 1.66 \text{ [m/sec]} \Rightarrow H_{Jn} = \frac{1.66^2 \text{ [m}^2\text{/sec}^2]}{2 \times 9.81 \text{ [m/sec}^2]} = 0.14 \text{ [m]}$
H _{valve}	=	0 as no valve is installed
Result		
H _{system}	=	0 m + 0.14 m + 0 m = 0.14 m
H	=	0.35 m + 0.14 m = 0.49 m

Q: 325 l/sec

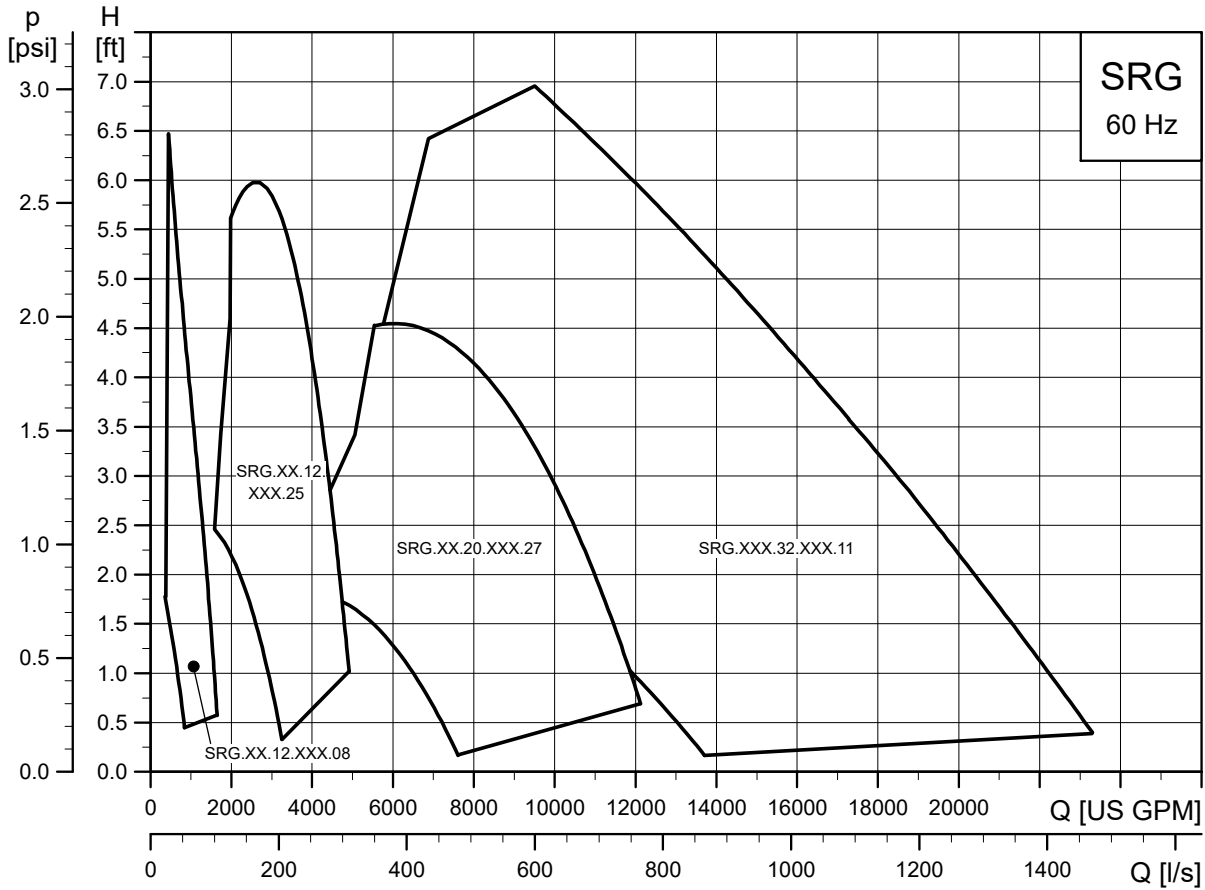
H: 0.49 m

On the basis of the above calculation, we can now determine that SRG.35.50.254.27.6.1K.A is suitable for the application.



Performance curves for SRG.XX.50.XXX.27

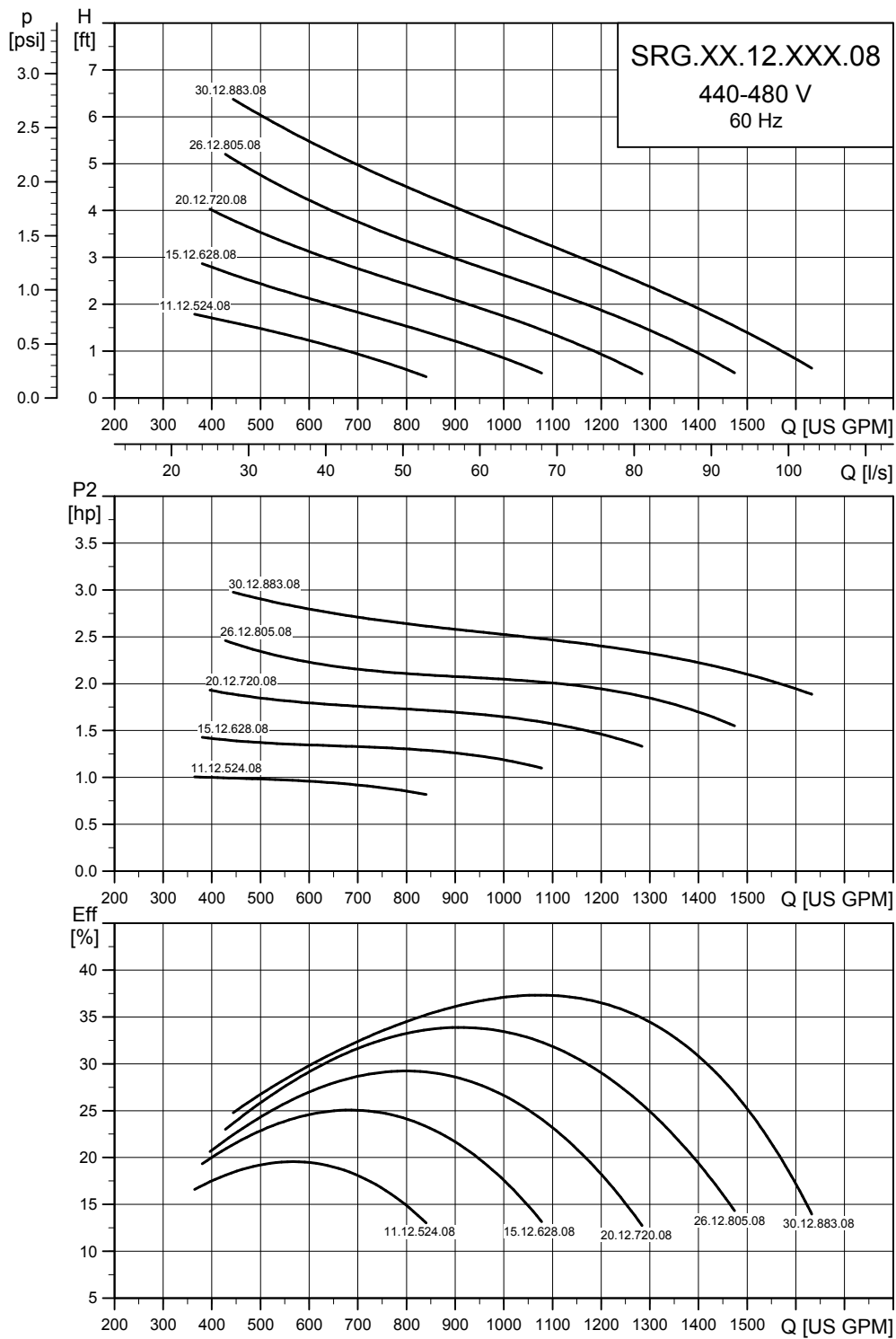
4.3 Performance range, 60 Hz North America



TM067339

Performance range, 60 Hz North America

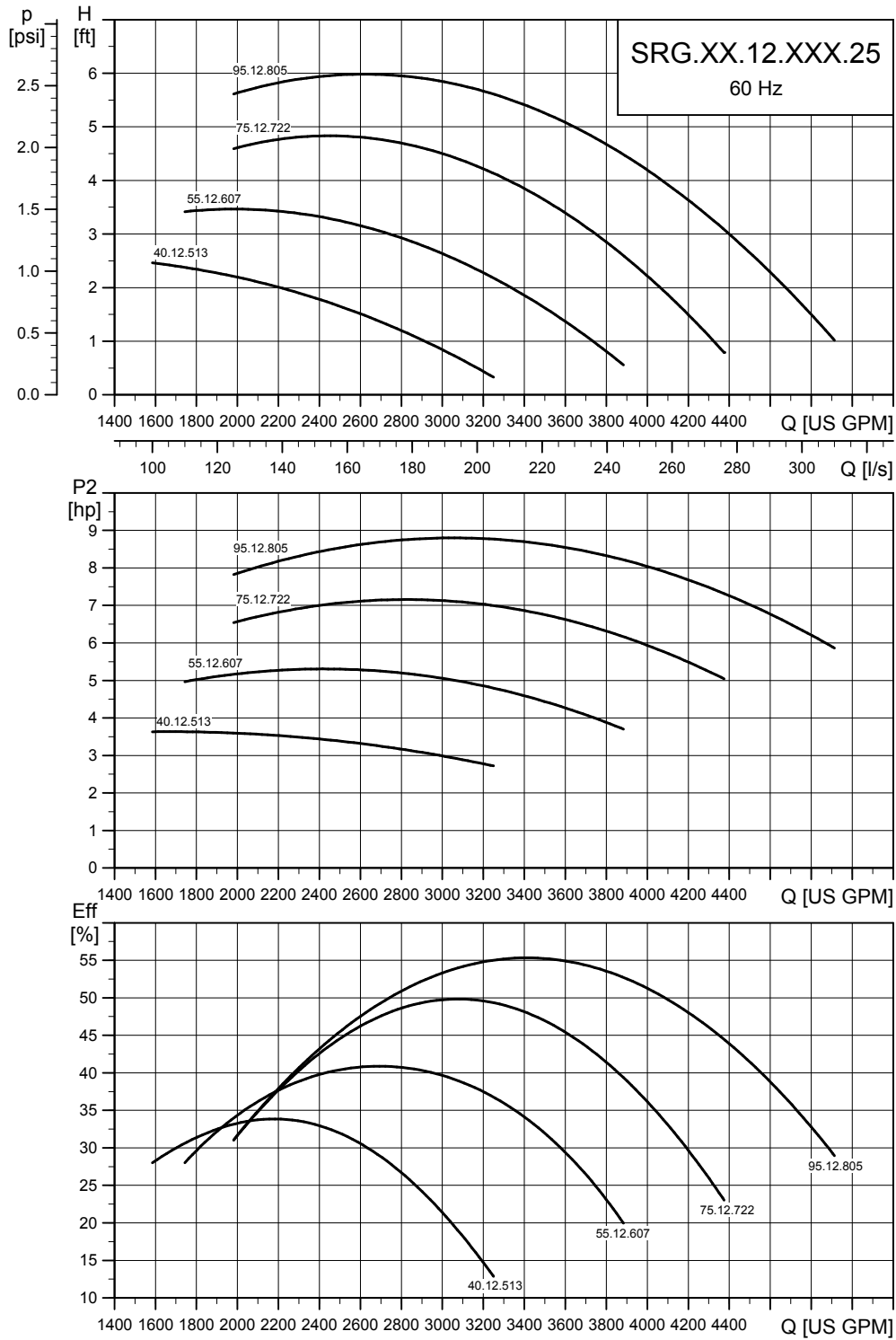
4.3.1 SRG.xx.12.xxx.08, 3 x 460 V



Performance curves, SRG.xx.12.xxx.08, 3 x 460 V

TM067340

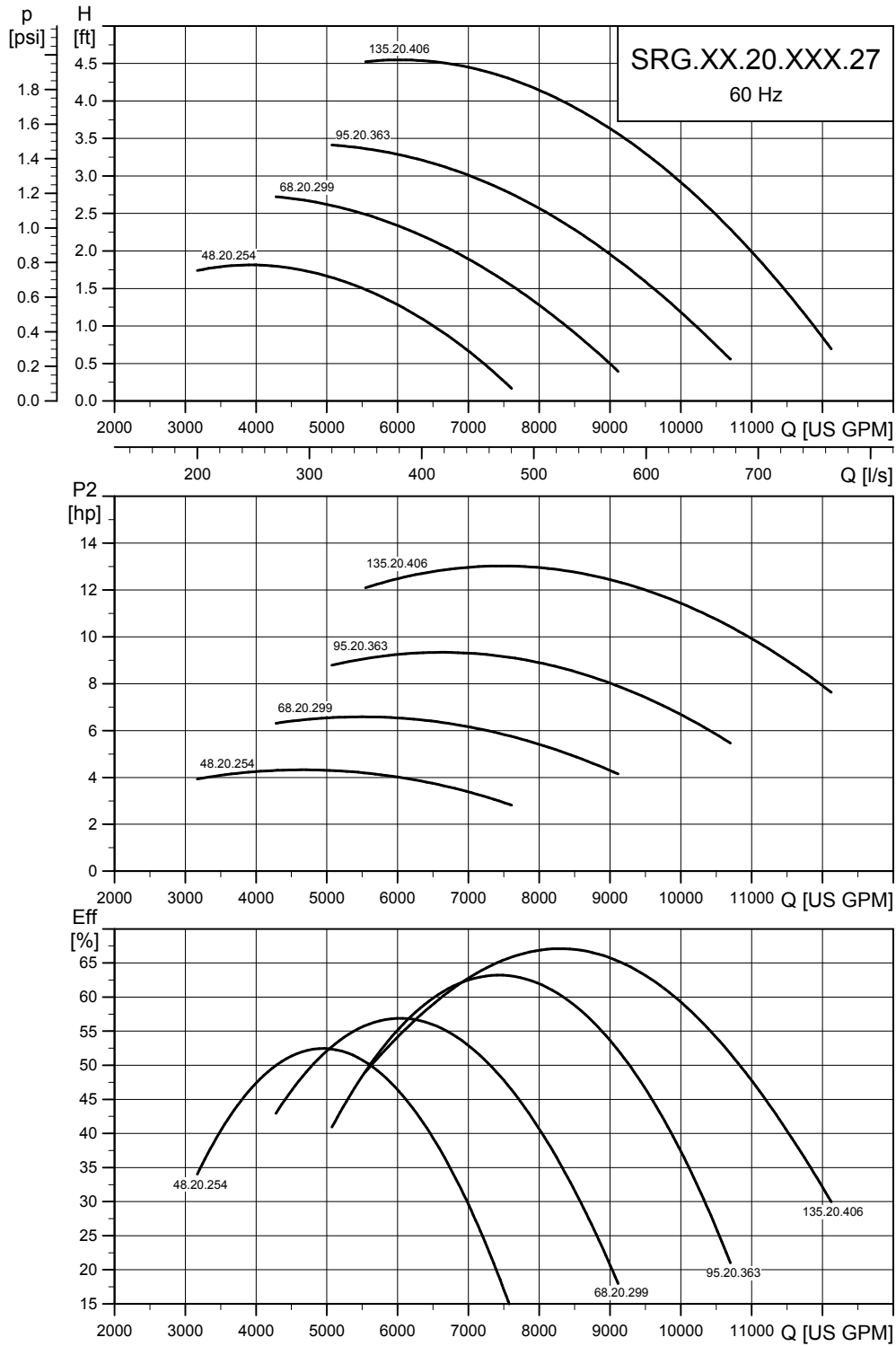
4.3.2 SRG.xx.12.xxx.25, 3 x 460 V



Performance curves, SRG.xx.12.xxx.25, 3 x 460 V

TM067341

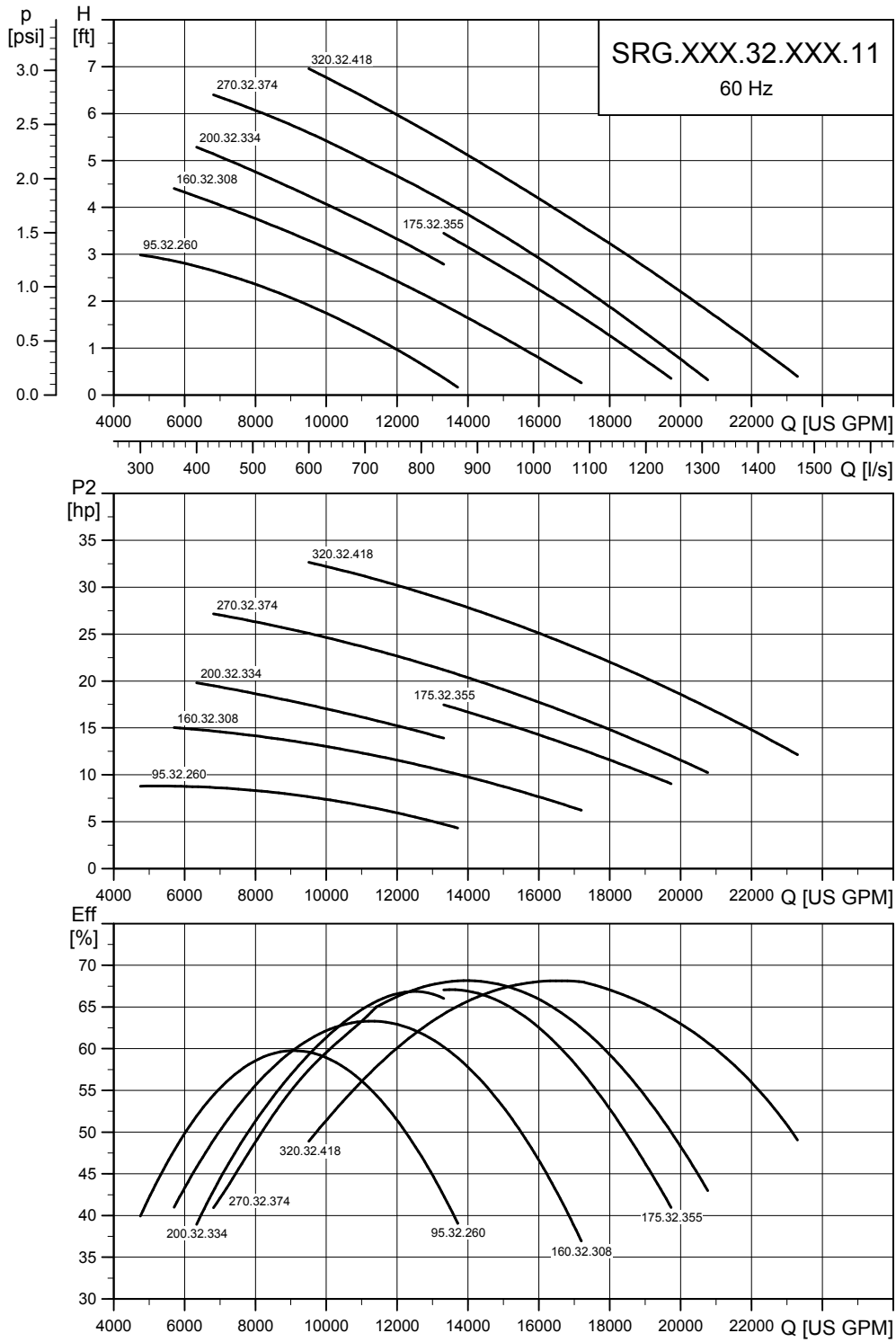
4.3.3 SRG.xx.20.xxx.27, 3 x 460 V



Performance curves, SRG.xx.20.xxx.27, 3 x 460 V

TM067342

4.3.4 SRG.xxx.32.xxx.11, 3 x 460 V



Performance curves, SRG.xx.32.xxx.11, 3 x 460 V

TM067343

5. Product range

5.1 460 V

Type designation	Product numbers of standard cables	Product numbers of screened cables
	50 ft (15 m)	50 ft (15 m)
SRG.11.12.524.08.6.0H	98798307	98798349
SRG.15.12.628.08.6.0H	98798308	98798350
SRG.20.12.720.08.6.0H	98798309	98798351
SRG.26.12.805.08.6.0H	98798310	98798352
SRG.30.12.883.08.6.0H	98798311	98798353
SRG.40.12.513.25.6.1H	98798312	98798354
SRG.55.12.607.25.6.1H	98798313	98798355
SRG.75.12.722.25.6.1H	98798314	98798356
SRG.95.12.805.25.6.1H	98798315	98798357
SRG.48.20.254.27.6.1H	98798316	98798358
SRG.68.20.299.27.6.1H	98798317	98798359
SRG.95.20.363.27.6.1H	98798318	98798360
SRG.135.20.406.27.6.1H	98798319	98798361
SRG.95.32.260.11.6.1H	98798320	98798362
SRG.160.32.308.11.6.1H	98798321	98798363
SRG.175.32.355.11.6.1H	98798323	98798365
SRG.200.32.334.11.6.1H	98798322	98798364
SRG.270.32.374.11.6.1H	98798324	98798366
SRG.320.32.418.11.6.1H	98798326	98798368

6. Variants

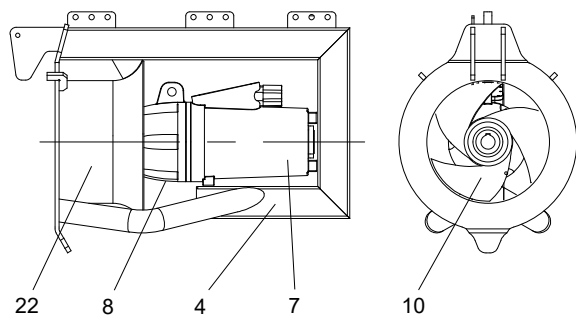
6.1 Variants

Motor		
		33 ft (10 m)
		82 ft (25 m)
	7 x AWG 11 (4 mm ²) + 4 x AWG 16 (1.5 mm ²) ∅0.83" (21 mm)	TPE/TPE 7G4 + 4 x 1.5
		115 ft (35 m)
		164 ft (50 m)
		33 ft (10 m)
		82 ft (25 m)
Power supply cable	Standard cable	11 x AWG 16 (1.5 mm ²) ∅0.67" (17 mm)
		S1BN8-F 11G1.5
		115 ft (35 m)
		164 ft (50 m)
		Contact Grundfos
		33 ft (10 m)
		82 ft (25 m)
	11 x AWG 14 (2.5 mm ²) ∅0.83" (21 mm)	S1BN8-F 11G2.5
		115 ft (35 m)
		164 ft (50 m)
		33 ft (10 m)
		82 ft (25 m)
Screened power supply cable	Screened cable, complete, (cast in the cable entry)	7 x AWG 11 (4 mm ²) + 4 x AWG 17 (1 mm ²) ∅0.89" (22.5 mm)
		S1BC4N8-F 7G4 + 4 x 1
		115 ft (35 m)
		33 ft (10 m)
		82 ft (25 m)
		115 ft (35 m)
Thermal protection	PTC sensor, one in each phase	Contact Grundfos
Coating		
Product coating	Motor/gear housing	Different colors Thicker protection layer
		Contact Grundfos
Impeller coating	Stainless-steel impellers	Different colors Protection layer
		300 micron epoxy
Testing		
Dry-testing motor certificate	Electrical properties and tightness	Contact Grundfos
Production certificate	Certificate of compliance to EN 10204 2.1	Contact Grundfos
Factory test certificate	Inspection and test certificate according to EN 10204 2.2	Contact Grundfos
Other		
Special packaging	Batch packaging, hard/soft box	Contact Grundfos
Special nameplate		Contact Grundfos
Other variants		Contact Grundfos

7. Construction

7.1 Pump

The position numbers in fig. *SRG* refer to *Material specification*.



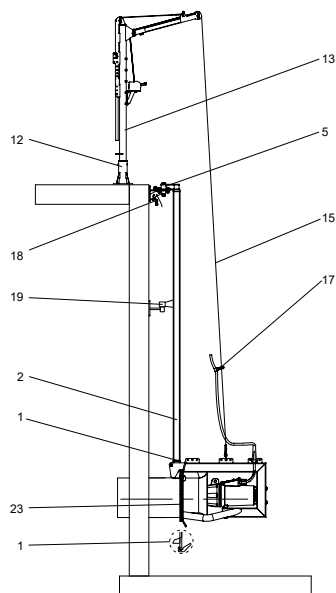
SRG

Related information

[7.4 Material specification](#)

7.2 Installation drawing

The position numbers in fig. *Example of pump installation* refer to *Material specification*.



Example of pump installation

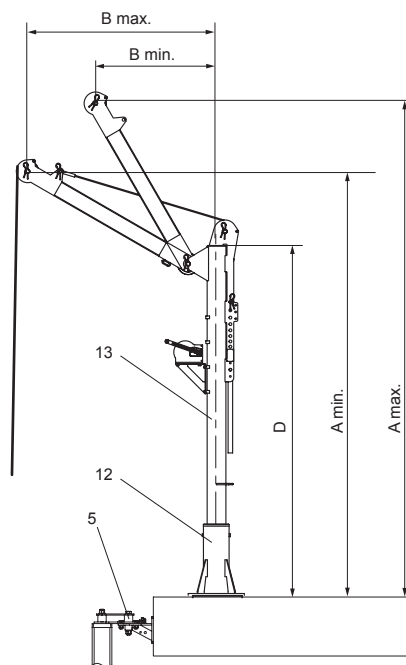
For detailed drawings of each accessory, see [10. Accessories](#).

Related information

[7.4 Material specification](#)

7.3 Crane

In order to select the right size of crane for a specific SRG, see [10.1 Selection guide for accessories](#). The crane can easily be lifted off the crane foot (12) if it is needed in another installation.



Crane

Crane type	A _{min.} [in (mm)]	A _{max.} [in (mm)]	B _{min.} [in (mm)]	B _{max.} [in (mm)]	D [in (mm)]
M	111.7 (2838)	138.6 (3521)	25.7 (654)	58 (1474)	90 (2286)
L					89.7 (2280)

Crane type	M	L
Wire diameter	0.24" (Ø6)	0.28" (Ø7)
Type of winch	8 AF	12 AF
Max. load	550 lb (250 kg)	1100 lb (500 kg)
Total weight	135 lb (61.2 kg)	169 lb (76.5 kg)

7.4 Material specification

The position numbers refer to figs *SRG* to *Crane*.

Pos.	Component	Material	DIN W.-Nr./EN standard	AISI/ASTM
1	Bottom fixation for connection flange	Stainless steel	1.4301	304
2	Column profile	Stainless steel	1.4301	304
4	Pump rack	Stainless steel	1.4301	304
5	Top fixation bracket	Stainless steel	1.4301	304
7	Motor housing	Cast iron, grade 25 (EN-GJL-250)	EN-JL1040	A48 CI 40B
8	Gear box	Cast iron, grade 25 (EN-GJL-250)	EN-JL1040	A48 CI 40B
10	Impeller	Stainless steel	1.4581/1.4408	316
12	Crane foot	Stainless steel	1.4301	304
13	Crane with winch and lifting wire	Stainless steel	1.4301	304
15	Lifting wire including wire clamp	Stainless steel	1.4404	316 L
17	Cable clamp	Stainless steel	1.4301	304
18	Cable sock including shackle. Ø10	Stainless steel/synthetic material	1.4404	316 L
19	Intermediate fixation bracket	Stainless steel	1.4301	304
22	Hydraulic inlet	Stainless steel	1.4301	304
23	Connection flange	Steel	1.4301	304

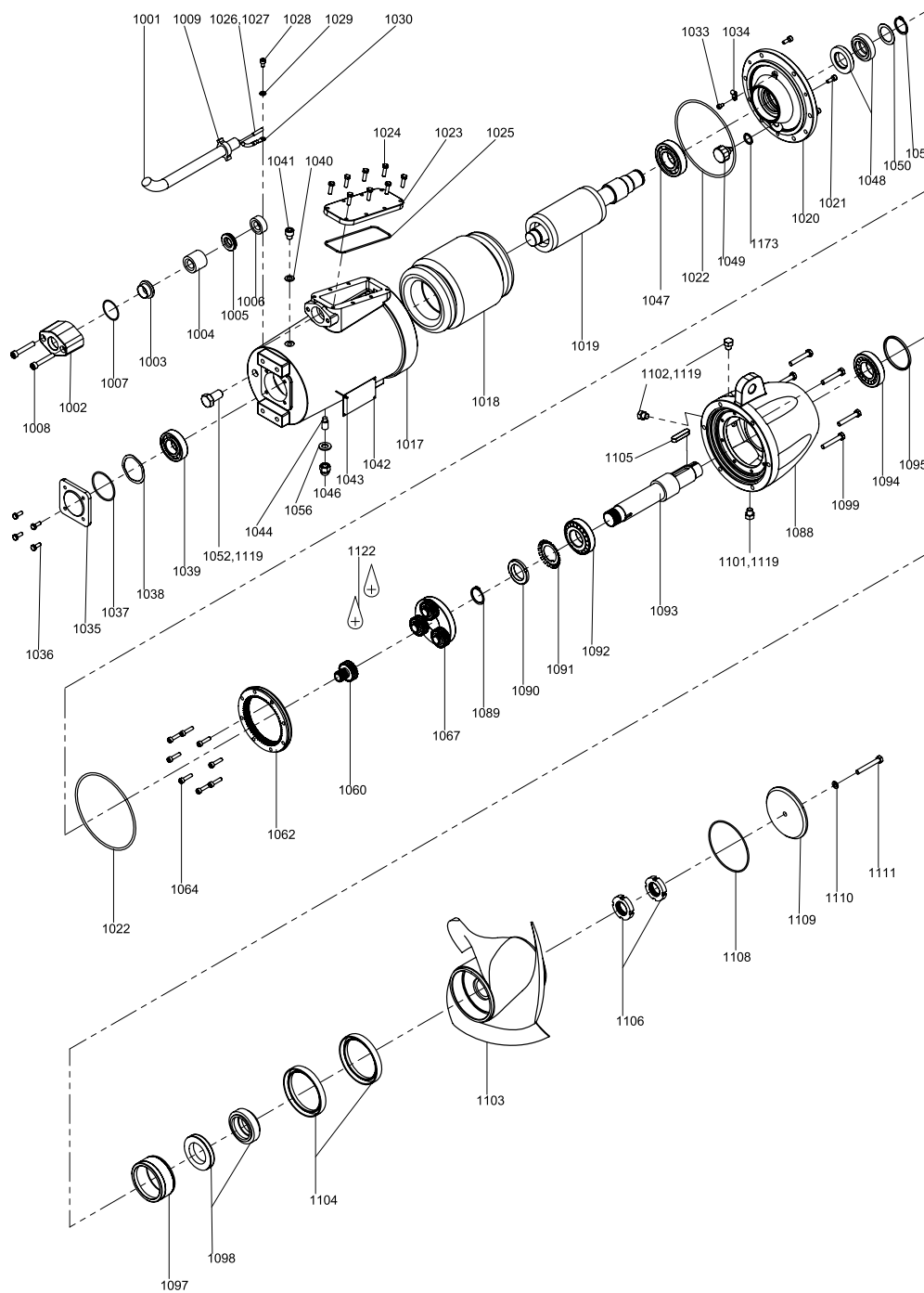
Related information

[7.1 Pump](#)

[7.3 Crane](#)

7.5 Exploded views

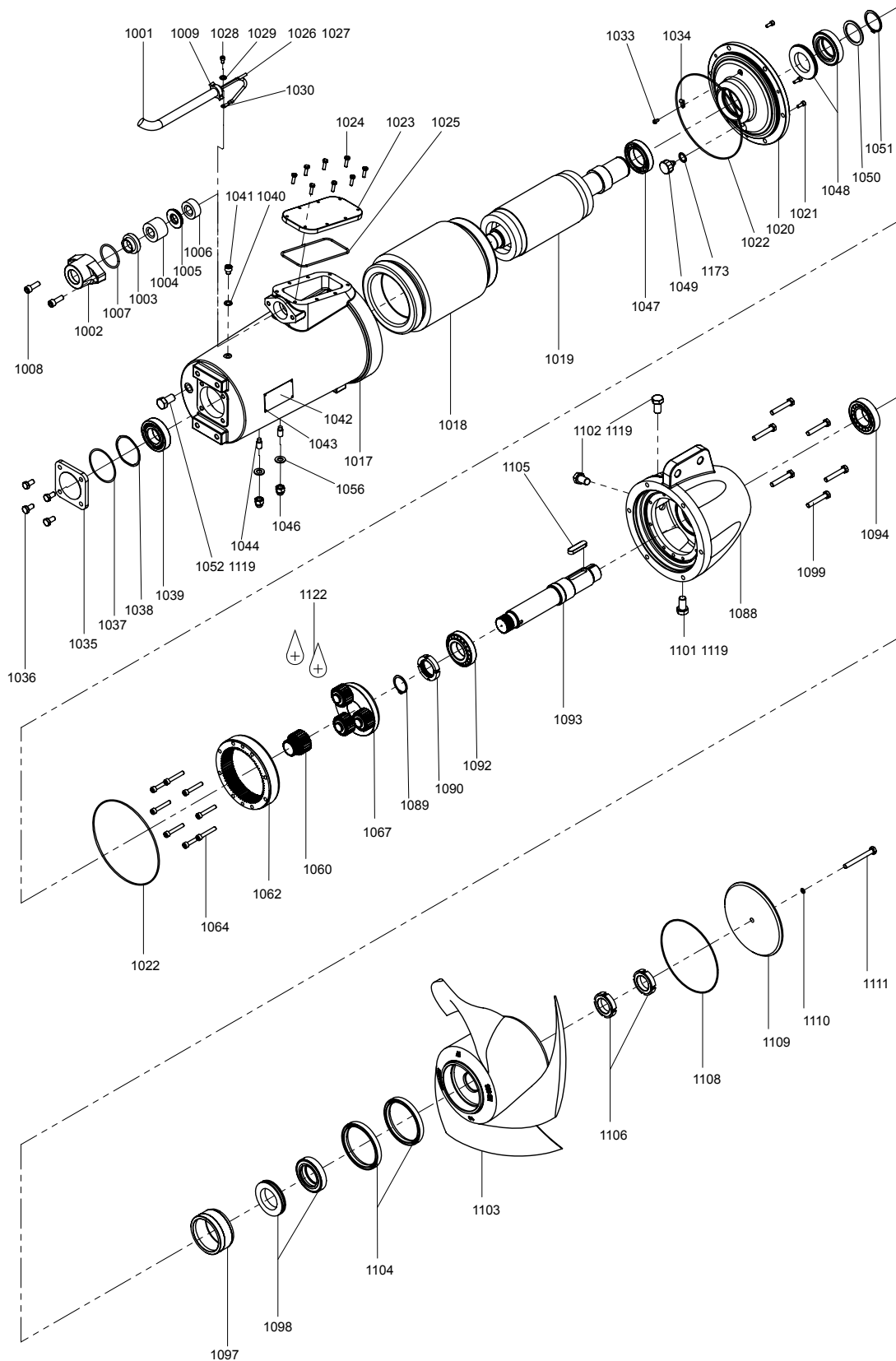
7.5.1 SRG.xx.12.xxx and SRG.48.20.xxx



Exploded view, SRG.xx.12.xxx and SRG.48.20.xxx

TM062752

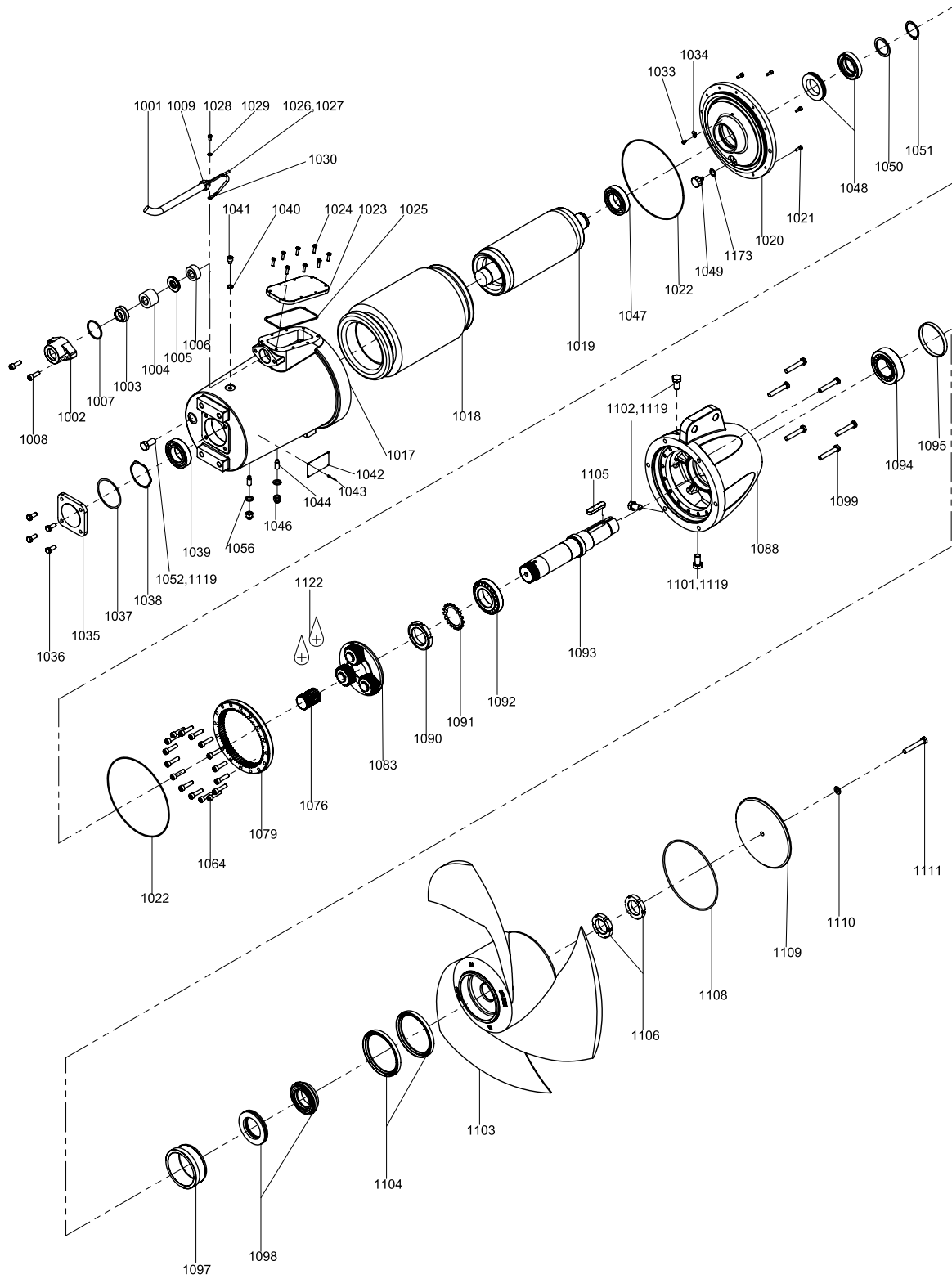
7.5.2 SRG.68-135.20.xxx and SRG.95-175.32.xxx



Exploded view, SRG.68-135.20.xxx and SRG.95-175.32.xxx

TM062750

7.5.3 SRG.200-320.32.xxx



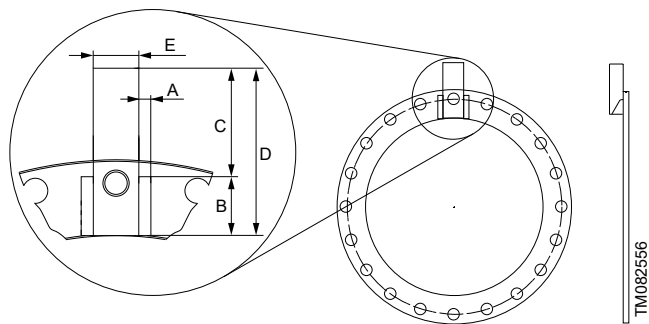
Exploded view, SRG.200-320.32.xxx

7.6 Position numbers and material description

Pos.	Description	Material
1001	Cable	CPE (rubber)
1002	Cable flange	ASTM 48 class 35B (EN-GJL250)
1003	Cable guide	304 (DIN 1.4301)
1004	Cable seal, large	Elastomer (70 shore hardness)
1005	Thrust washer	304 (DIN 1.4301)
1006	Cable seal, small	Elastomer (70 shore hardness)
1007	O-ring	NBR
1008	Screw	304 (DIN 1.4301)
1009	Cable relief	Zinc-plated steel
1017	Motor housing	EN-GJL250
1018	Stator	Treated sheet metal/copper
1019	Rotor with shaft	Treated sheet metal/aluminium /DIN 1.7147
1020	Motor flange	ASTM 48 class 35B (EN-GJL250)
1021	Screw	Zinc-plated steel
1022	O-ring	NBR
1023	Terminal box cover	ASTM 48 class 35B (EN-GJL250)
1024	Screw	304 (DIN 1.4301)
1025	O-ring	NBR
1026	Cable joint	Tin-plated copper, PA-insulated
1027	Cable joint	Tin-plated copper, PA-insulated
1028	Screw	Zinc-plated steel
1029	Lock washer	Zinc-plated spring steel
1030	Cable shoe	Tin-plated copper
1033	Screw	Zinc-plated steel
1034	Cable clamp	
1035	Bearing cover	ASTM 48 class 35B (EN-GJL250)
1036	Screw	304 (DIN 1.4301)
1037	O-ring	NBR
1038	Compensation disc	AISI 1075 (DIN 1.0605)
1039	Ball bearing	
1040	U-washer	Copper
1041	Screw	304 (DIN 1.4301)
1042	Nameplate	304 (DIN 1.4301)
1043	Rivet	304 (DIN 1.4301) (INOX/INOX)
1044	Set screw	Plain steel 45H / DIN 1.4401
1046	Nut	304 (DIN 1.4301)
1047	Ball bearing	
1048	Mechanical shaft seal	Carbon/alox/NBR
1049	Water-in-oil sensor	Brass/epoxy resin
1050	Shim	Bright steel
1051	Circlip	Spring steel (DIN 17222)
1052	Plug	ASTM B36 / B36M Brass (DIN 2.0220)
1053	Connection for protective earthing	Nickel-plated brass
1056	Seal washer	Copper

Pos.	Description	Material
1060	Sun wheel	34CrMo4V (DIN 1.7220)
1062	Ring gear	34CrMo4V (DIN 1.7220)
1064	Screw	Zinc-plated steel
1067	Planet gear, complete	Ck45N (DIN 1.1191) /34CrMo4V
1088	Gear housing	ASTM 48 class 35B (EN-GJL250)
1089	Circlip	Spring steel (DIN 17222)
1090	Slotted nut	Bright steel
1091	Lock washer	Bright steel
1092	Tapered roller bearing	
1093	Gear shaft	AISI 3115 16CrNi4 (DIN 1.5713)
1094	Tapered roller bearing	
1095	Intermediate ring	ASTM A572 (DIN 1.0570)
1097	Wear ring	304 (DIN 1.4301)
1098	Mechanical shaft seal	Tungsten carbide/SiC-SiC
1099	Screw	304 (DIN 1.4301)
1101	Drain plug with magnet	ASTM B36 / B36M Brass (DIN 2.0220)
1102	Plug	ASTM B36 / B36M Brass (DIN 2.0220)
1103	Impeller	CF8M (DIN 1.4408/DIN 1.4581)
1104	Lip seal	FKM
1105	Fit-in key	Ck45
1106	Slotted nut	Bright steel
1108	O-ring	NBR
1109	Hub cover	304 (DIN 1.4301)
1110	Washer	ASTM B36 / B36M Brass (DIN 2.0220)
1111	Screw	304 (DIN 1.4301)
1119	Tape	PTFE
1120	Screw-sealing paste	
1121	Sealing paste	
1122	Gear oil	ISO VG 68
1173	Seal washer	Copper

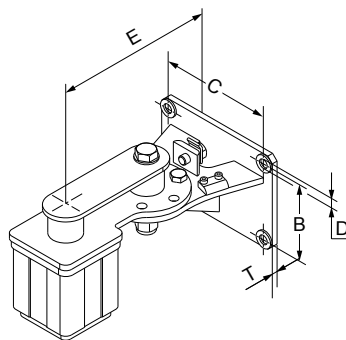
7.7 Dimensions, accessories



TM082556

Bottom fixation on connection flange

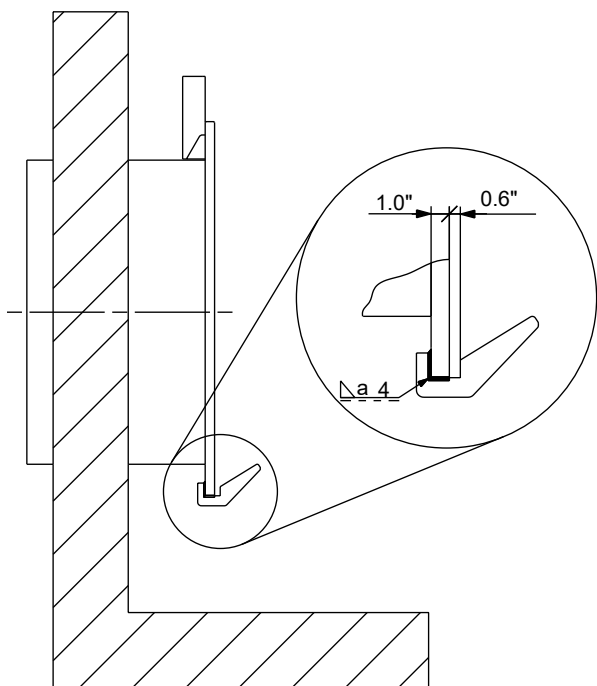
Pump type	A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	E [in (mm)]
All	0.59 (15)	2.52 (64)	6.14 (156)	8.66 (220)	2.5" x 2.5" x .12"



TM043899

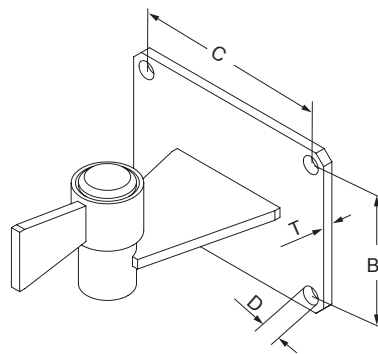
Top fixation bracket

Column profile	B [in (mm)]	C [in (mm)]	D [in (mm)]	E [in (mm)]	T [in (mm)]
2.5" x 2.5"	4.33 (110)	6.30 (160)	0.59 (15)	9.45 (240)	0.31 (8)



TM080668

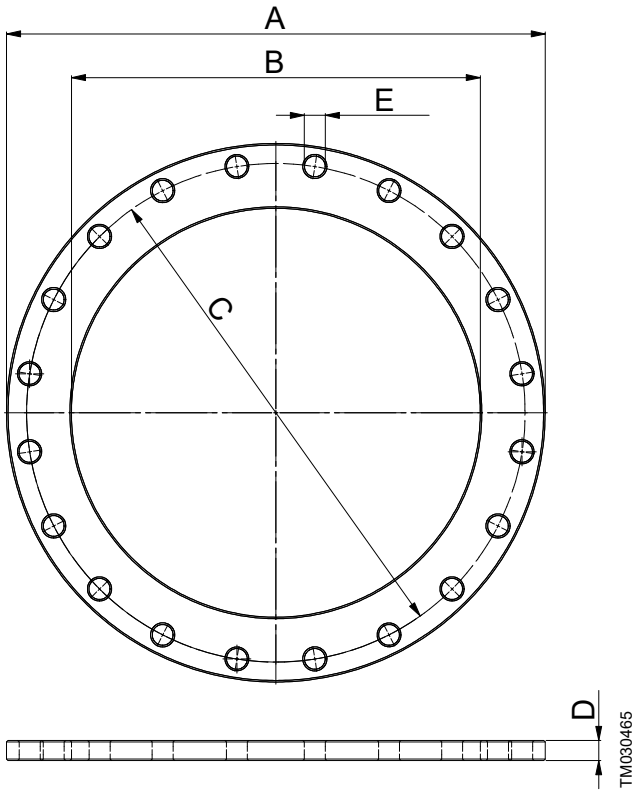
Claws for connection flange, SRG.xx.32.xx (delivered together with the bottom fixation)



TM043903

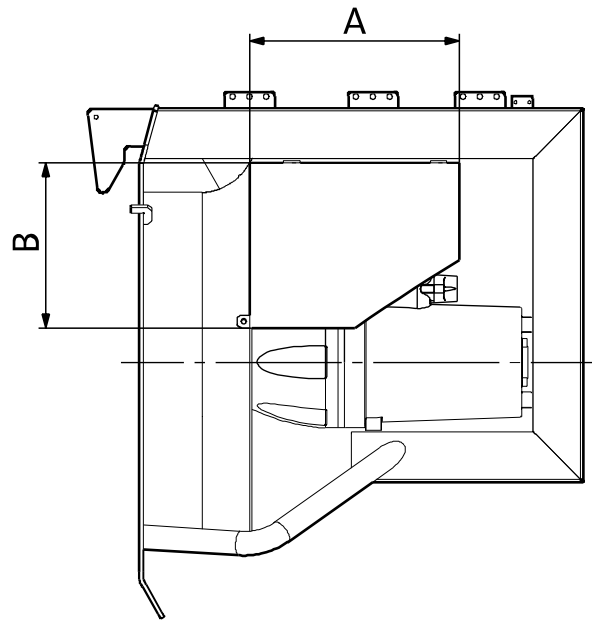
Intermediate fixation bracket

B [in (mm)]	C [in (mm)]	D [in (mm)]	T [in (mm)]
4.33 (110)	6.30 (160)	0.59 (15)	0.31 (8)



Connection flange

ANSI (DN)	A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	E [in (mm)]
12" (300)	17.5 (445)	12.1 (306.5)	15.7 (400)	0.60 (15)	12 x 7/8" (Ø22)
20" (500)	26.4 (670)	20.0 (508.5)	24.4 (620)	0.98 (25)	20 x 1" (Ø26)
32" (800)	40.0 (1015)	32.1 (816)	37.4 (950)	0.98 (25)	24 x 1-1/4" (Ø33)



Vortex shield

Pump type	A [in (mm)]	B [in (mm)]	Weight [lb (kg)]
SRG.xx.12.xx	11.8 (300)	6.85 (174)	6.6 (3)
SRG.xx.20.xx	16.5 (420)	10.1 (256)	13 (6)
SRG.xx.32.xx	19.7 (500)	15.7 (399)	33 (15)

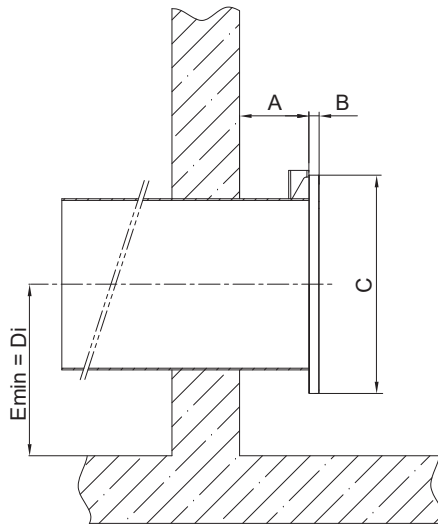
TM030563

8. Positioning

8.1 General description

Submersible recirculation pumps must be positioned properly in order to obtain efficient operation and prevent vibrations resulting in wear and/or reduced pump performance.

Submersible recirculation pumps are normally equipped with a hydraulic inlet connecting to the connection flange. See fig. *Dimensions of connecting pipe*.



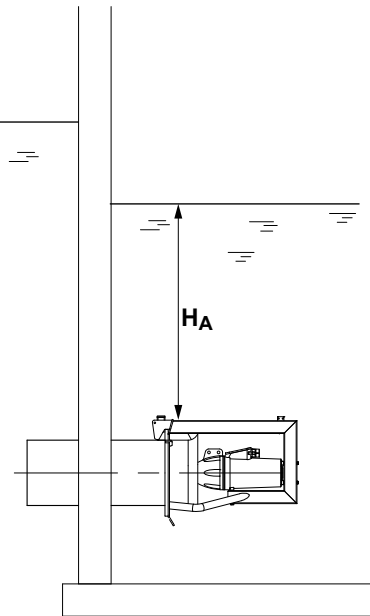
Dimensions of connecting pipe

Pump type	ANSI (DN)	Flange	A [in (mm)]	B [in (mm)]	C [in (mm)]	E _{min} [in (mm)]
SRG.xx.12	12" (300)			0.6 (15)	17.5 (445)	11.8 (300)
SRG.xx.20	20" (500)	150 lb (PN 10 2/3)	10.6 (270)	0.98 (25)	26.4 (670)	19.7 (500)
SRG.xx.32	32" (800)				40.0 (1015)	31.5 (800)

E_{min}: distance from bottom of tank to middle of connecting pipe.

D_i: D impeller

If the pump is operating at low water levels, install a vortex shield in order to prevent the pump from sucking air into the impeller. A vortex shield is available as an accessory. See fig. *Installation with vortex shield*.



Installation with vortex shield

H_A: distance from top of pump rack to surface of liquid.

Pump type	Min. H _A without vortex shield [in (mm)]	Min. H _A with vortex shield [in (mm)]
SRG.xx.12	18 (450)	12 (300)
SRG.xx.20	30 (750)	20 (500)
SRG.xx.32	48 (1200)	32 (800)

Aeration diffusers cannot be positioned below the pump.

The distance from the pump impeller to the nearest aeration diffuser must be at least 5 x the propeller diameter plus the installation height.

It is possible to operate several pumps in parallel. The distance between pumps must be at least 3 x the propeller diameter measured from centre line to centre line.

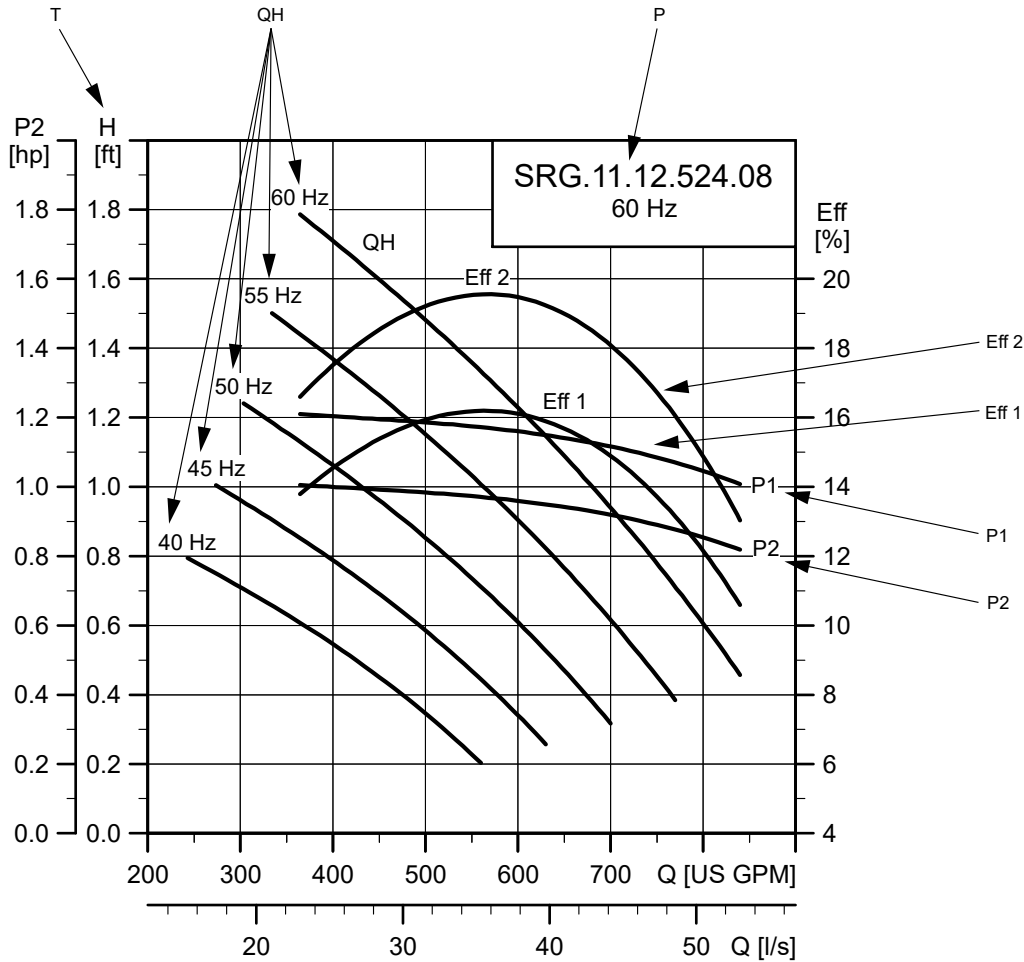
TM062654

TM062663

9. Technical data

9.1 How to read the performance curves

The guidelines below apply to the curves on the following pages. Tolerances are according to ISO 9906:2012, grade 3B.



TM080669

Performance curves

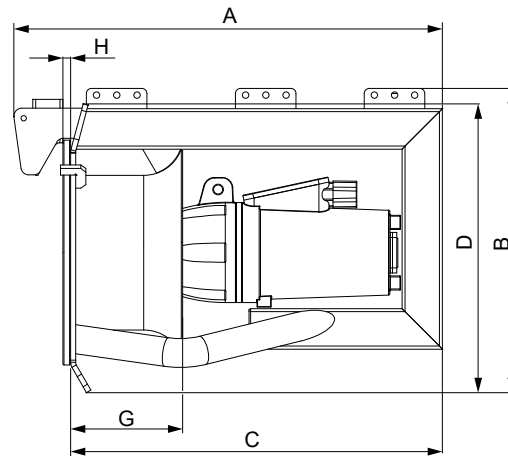
Pos.	Description
T	Total pump head $H = H_{total}$
QH	QH curves at different frequencies
P	Pump type
Eff 1	Eff 1: overall efficiency
Eff 2	Eff 2: hydraulic efficiency
P2	P2: shaft power
P1	P1: motor output power

9.2 SRG.11.12.524.08 - 3 x 460 V

9.2.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	2
Power output P2	1.1 hp (0.8 kW)
I _N	1.9 A
I _{start}	29 A
Cos φ 1/1 load	0.73
Nominal impeller diameter	12 in (300 mm)
Number of impeller blades	3
Impeller speed	524 RPM
Blade angle	8 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.2.2 Dimensions and weights

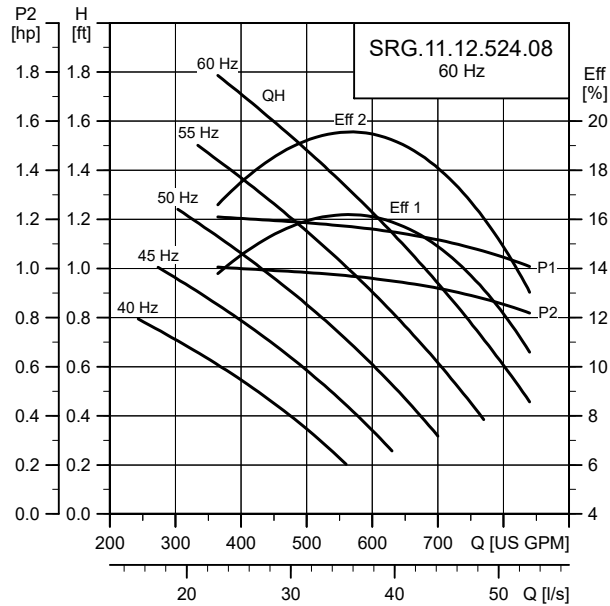


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ²⁾ [lb (kg)]	
							Standard	Screened
33.4 (848)	23.7 (602)	29.0 (736)	22.5 (571)	8.66 (220)	0.6 (15)	50 (15)	245 (111)	256 (116)

2) Including the cable.

9.2.3 Performance curves



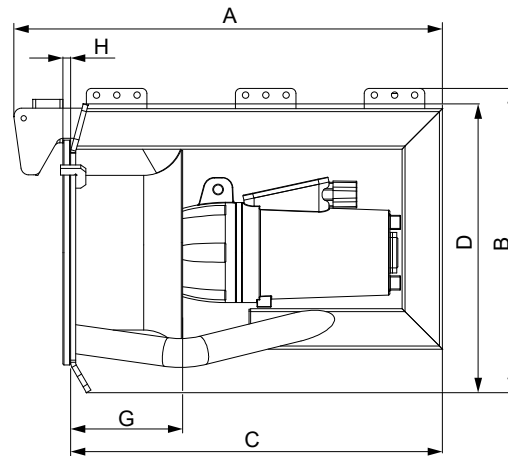
TM067175

9.3 SRG.15.12.628.08 - 3 x 460 V

9.3.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	2
Power output P2	1.5 hp (1.1 kW)
I _N	2.3 A
I _{start}	29 A
Cos φ 1/1 load	0.81
Nominal impeller diameter	12 in (300 mm)
Number of impeller blades	3
Impeller speed	628 RPM
Blade angle	8 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.3.2 Dimensions and weights

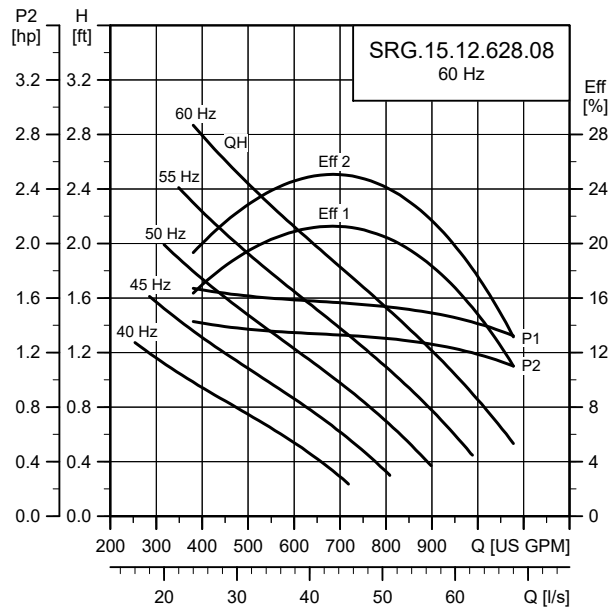


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ³⁾ [lb (kg)]	
							Standard	Screened
33.4 (848)	23.7 (602)	29.0 (736)	22.5 (571)	8.66 (220)	0.6 (15)	50 (15)	245 (111)	256 (117)

3) Including the cable.

9.3.3 Performance curves



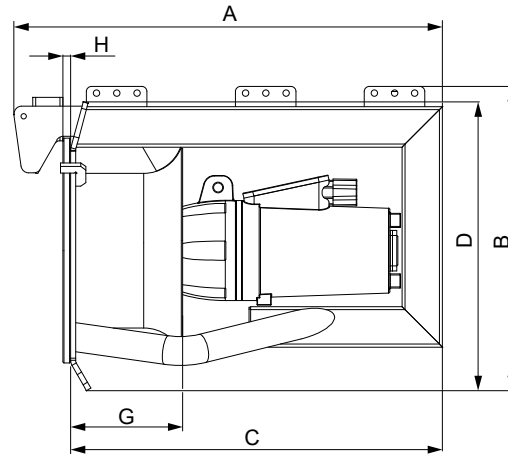
TM067176

9.4 SRG.20.12.720.08 - 3 x 460 V

9.4.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	2
Power output P2	2.0 hp (1.5 kW)
I _N	2.8 A
I _{start}	29 A
Cos φ 1/1 load	0.88
Nominal impeller diameter	12 in (300 mm)
Number of impeller blades	3
Impeller speed	720 RPM
Blade angle	8 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.4.2 Dimensions and weights

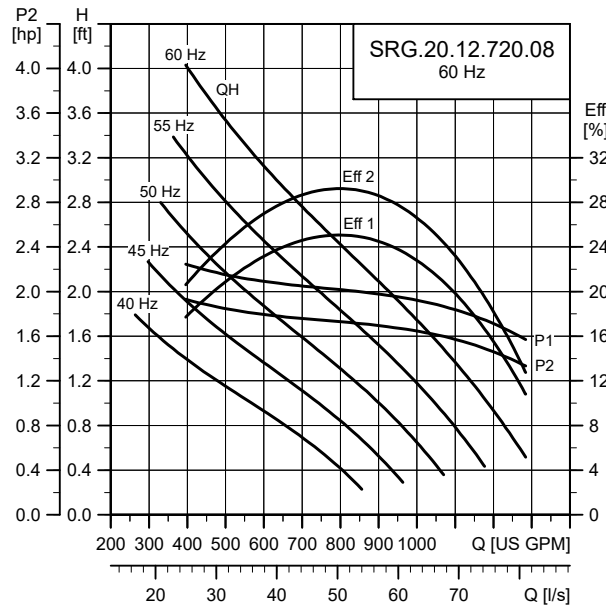


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ³⁾ [lb (kg)]	
							Standard	Screened
33.4 (848)	23.7 (602)	29.0 (736)	22.5 (571)	8.66 (220)	0.6 (15)	50 (15)	245 (111)	256 (117)

³⁾ Including the cable.

9.4.3 Performance curves



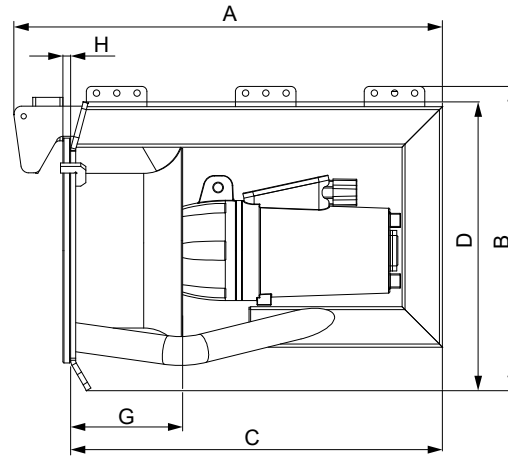
TM067177

9.5 SRG.26.12.805.08 - 3 x 460 V

9.5.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	2
Power output P2	2.6 hp (1.9 kW)
I _N	3.4 A
I _{start}	29 A
Cos φ 1/1 load	0.90
Nominal impeller diameter	12 in (300 mm)
Number of impeller blades	3
Impeller speed	805 RPM
Blade angle	8 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.5.2 Dimensions and weights

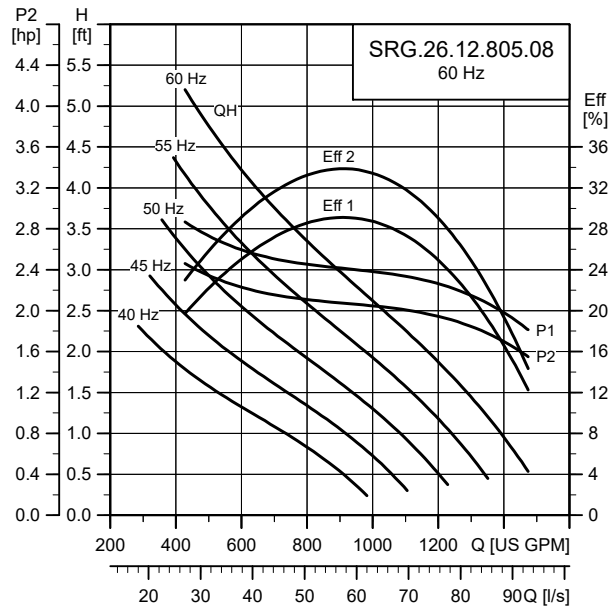


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ³⁾ [lb (kg)]	
							Standard	Screened
33.4 (848)	23.7 (602)	29.0 (736)	22.5 (571)	8.66 (220)	0.6 (15)	50 (15)	245 (111)	256 (117)

3) Including the cable.

9.5.3 Performance curves



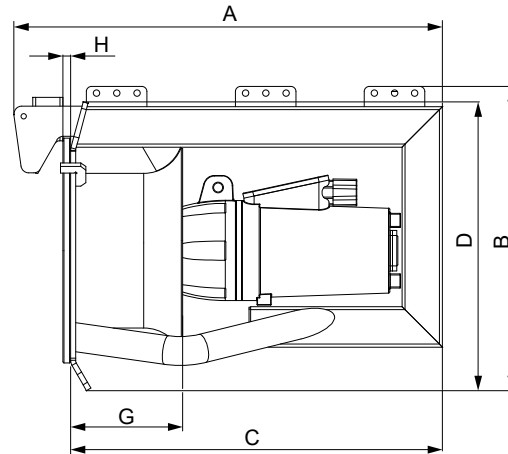
TM067178

9.6 SRG.30.12.883.08 - 3 x 460 V

9.6.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	2
Power output P2	3.0 hp (2.2 kW)
I _N	3.8 A
I _{start}	29 A
Cos φ 1/1 load	0.91
Nominal impeller diameter	12 in (300 mm)
Number of impeller blades	3
Impeller speed	883 RPM
Blade angle	8 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.6.2 Dimensions and weights

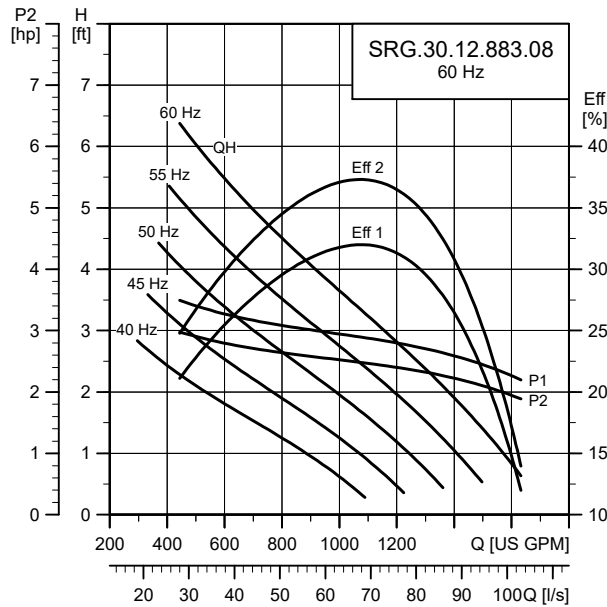


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ³⁾ [lb (kg)]	
							Standard	Screened
33.4 (848)	23.7 (602)	29.0 (736)	22.5 (571)	8.66 (220)	0.6 (15)	50 (15)	245 (111)	256 (117)

3) Including the cable.

9.6.3 Performance curves



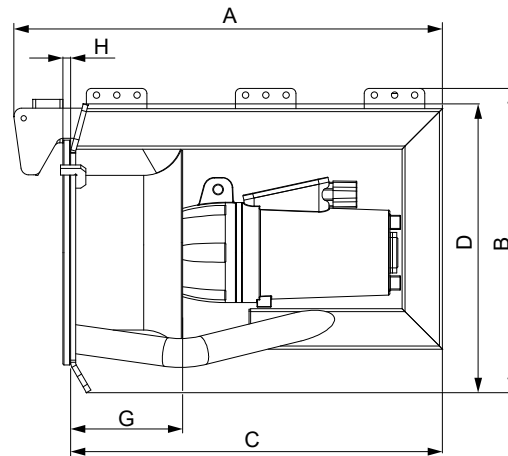
TM067179

9.7 SRG.40.12.513.25 - 3 x 460 V

9.7.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	2
Power output P2	4.0 hp (3.0 kW)
I_N	5.3 A
I_{start}	65 A
Cos ϕ 1/1 load	0.86
Nominal impeller diameter	12 in (300 mm)
Number of impeller blades	3
Impeller speed	513 RPM
Blade angle	25 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.7.2 Dimensions and weights

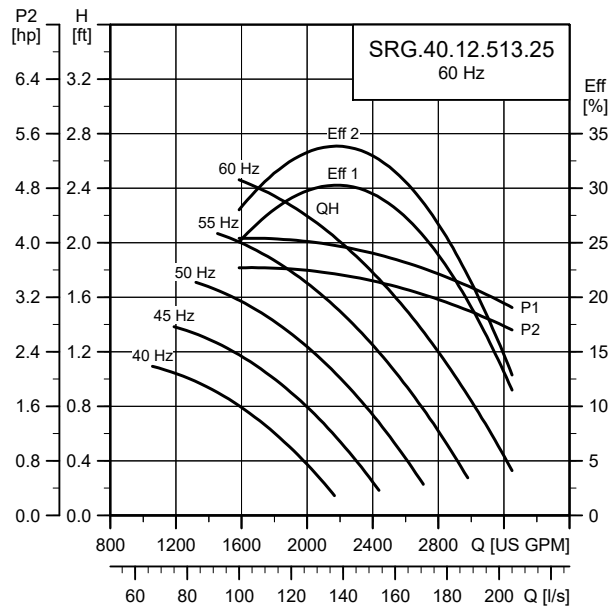


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ⁴⁾ [lb (kg)]	
							Standard	Screened
33.4 (848)	23.7 (602)	29.0 (736)	22.5 (571)	8.66 (220)	0.6 (15)	50 (15)	251 (114)	265 (120)

4) Including the cable.

9.7.3 Performance curves



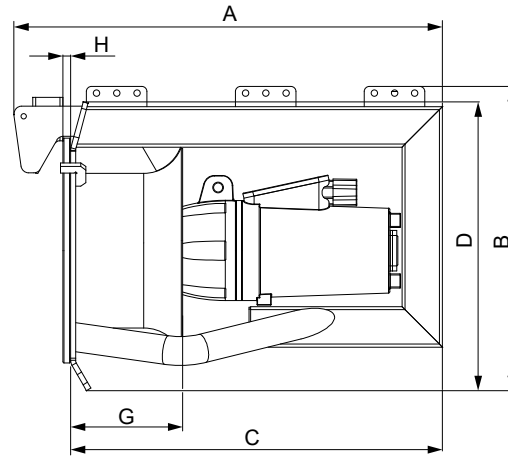
TM067180

9.8 SRG.55.12.607.25 - 3 x 460 V

9.8.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	2
Power output P2	5.5 hp (4.0 kW)
I _N	6.8 A
I _{start}	65 A
Cos φ 1/1 load	0.88
Nominal impeller diameter	12 in (300 mm)
Number of impeller blades	3
Impeller speed	607 RPM
Blade angle	25 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.8.2 Dimensions and weights

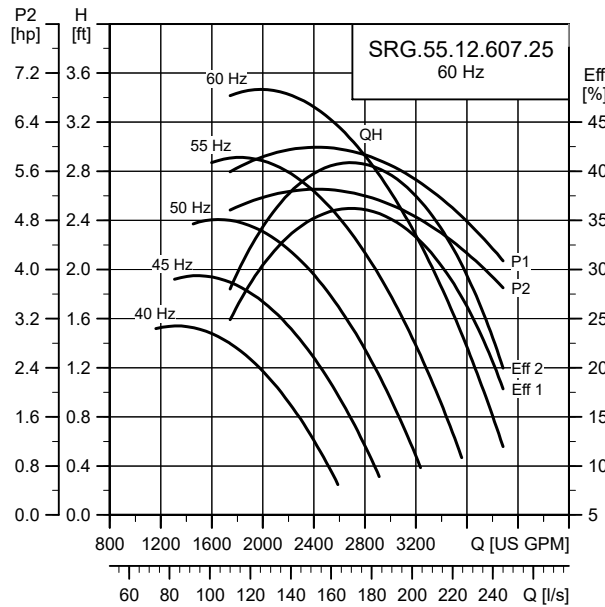


TM030547

A [in] (mm)	B [in] (mm)	C [in] (mm)	D [in] (mm)	G [in] (mm)	H [in] (mm)	Cable length [ft (m)]	Weight ⁴⁾ [lb (kg)]	
							Standard	Screened
33.4 (848)	23.7 (602)	29.0 (736)	22.5 (571)	8.66 (220)	0.6 (15)	50 (15)	251 (114)	265 (120)

4) Including the cable.

9.8.3 Performance curves



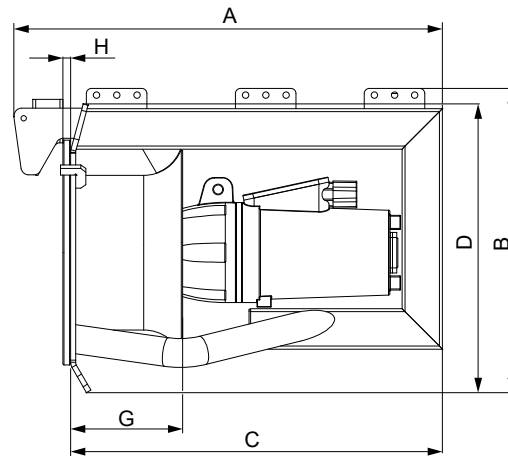
TM067181

9.9 SRG.75.12.722.25 - 3 x 460 V

9.9.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	2
Power output P2	7.5 (5.5 kW)
I _N	12.8 A
I _{start}	132 A
Cos φ 1/1 load	0.69
Nominal impeller diameter	12 in (300 mm)
Number of impeller blades	3
Impeller speed	722 RPM
Blade angle	25 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.9.2 Dimensions and weights

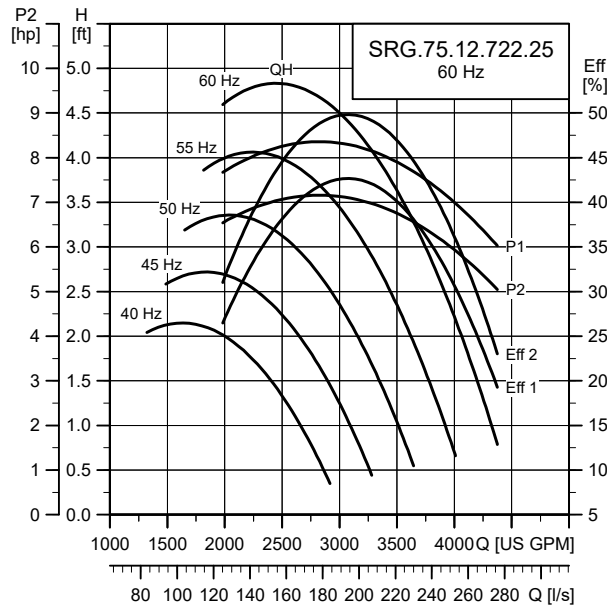


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ⁵⁾ [lb (kg)]	
							Standard	Screened
33.4 (848)	23.7 (602)	29.0 (736)	22.5 (571)	8.66 (220)	0.6 (15)	50 (15)	269 (122)	282 (128)

5) Including the cable.

9.9.3 Performance curves



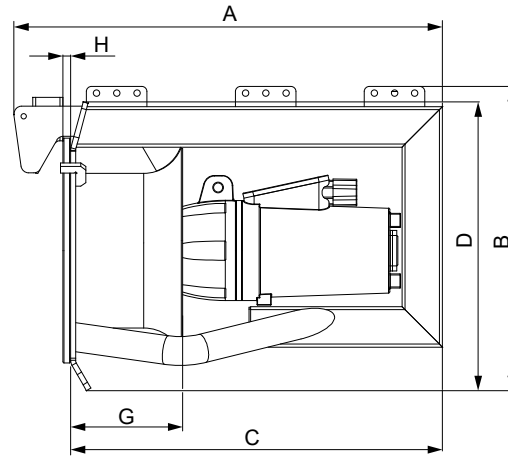
TM067182

9.10 SRG.95.12.805.25 - 3 x 460 V

9.10.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	2
Power output P2	9.5 (7.0 kW)
I _N	14.6 A
I _{start}	132 A
Cos φ 1/1 load	0.77
Nominal impeller diameter	12 in (300 mm)
Number of impeller blades	3
Impeller speed	805 RPM
Blade angle	25 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.10.2 Dimensions and weights

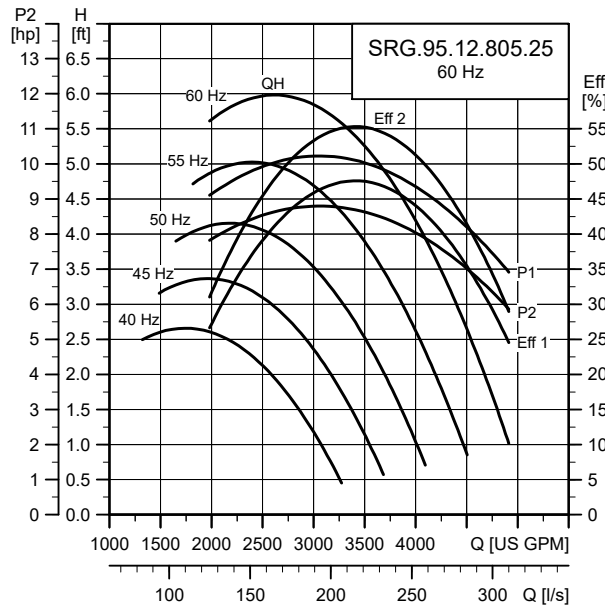


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ⁵⁾ [lb (kg)]	
							Standard	Screened
33.4 (848)	23.7 (602)	29.0 (736)	22.5 (571)	8.66 (220)	0.6 (15)	50 (15)	269 (122)	282 (128)

5) Including the cable.

9.10.3 Performance curves



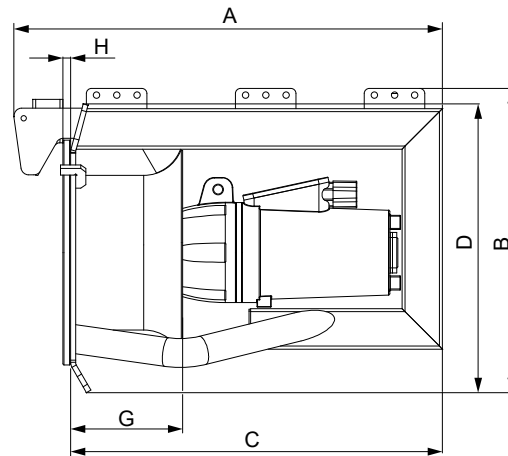
TM067183

9.11 SRG.48.20.254.27 - 3 x 460 V

9.11.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	4
Power output P2	4.8 hp (3.5 kW)
I _N	6.4 A
I _{start}	44 A
Cos φ 1/1 load	0.84
Nominal impeller diameter	20 in (500 mm)
Number of impeller blades	3
Impeller speed	254 RPM
Blade angle	27 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.11.2 Dimensions and weights

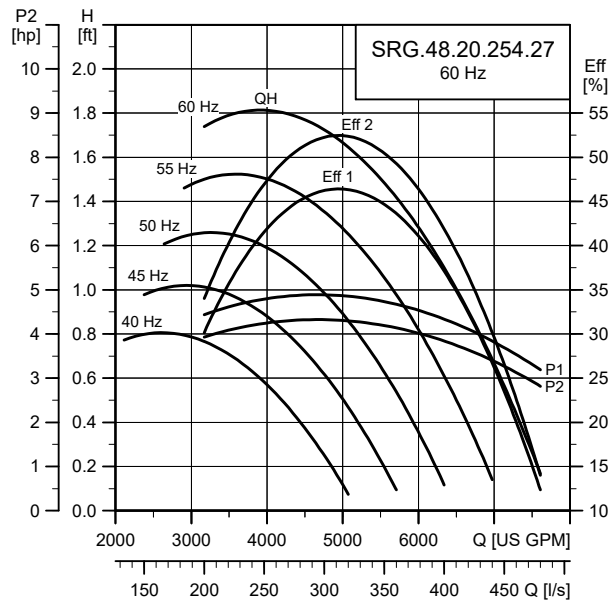


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ⁶⁾ [lb (kg)]	
							Standard	Screened
35.8 (910)	32.9 (835)	30.98 (787)	32.4 (824)	9.06 (230)	0.98 (25)	50 (15)	335 (152)	348 (158)

6) Including the cable.

9.11.3 Performance curves



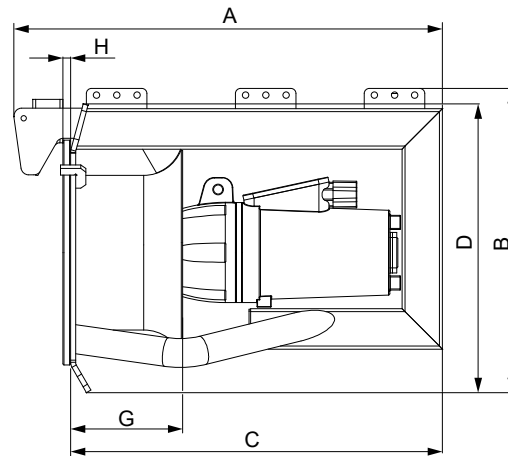
TM067184

9.12 SRG.68.20.299.27 - 3 x 460 V

9.12.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	4
Power output P2	6.8 hp (5.0 kW)
I_N	11.5 A
I_{start}	105 A
Cos ϕ 1/1 load	0.67
Nominal impeller diameter	20 (500 mm)
Number of impeller blades	3
Impeller speed	299 RPM
Blade angle	27 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G2.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.12.2 Dimensions and weights

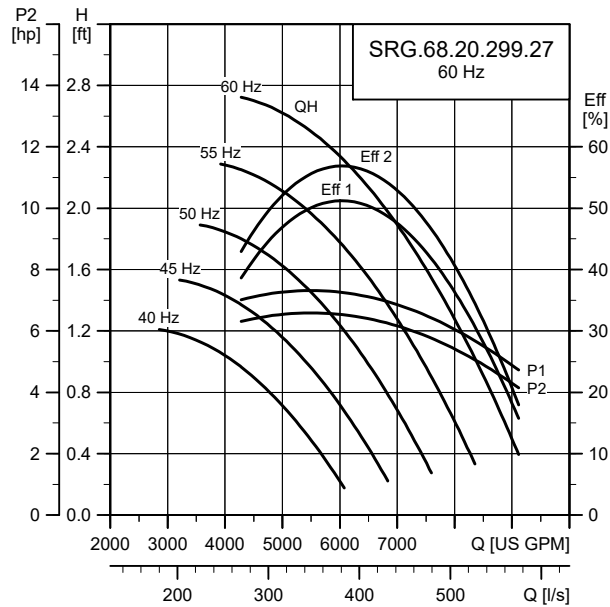


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ⁷⁾ [lb (kg)]	
							Standard	Screened
44.1 (1119)	33.7 (855)	39.2 (996)	32.4 (824)	9.06 (230)	0.98 (25)	50 (15)	536 (243)	545 (247)

7) Including the cable.

9.12.3 Performance curves



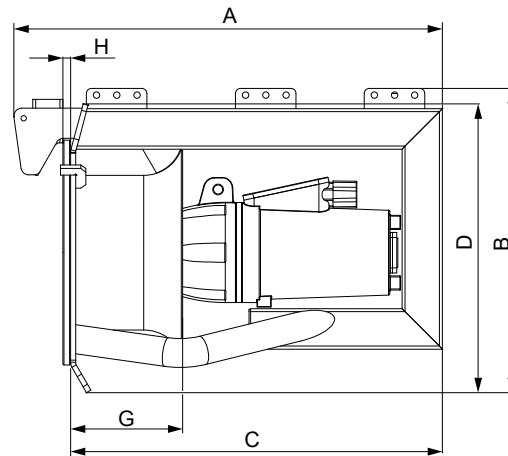
TM067185

9.13 SRG.95.20.363.27 - 3 x 460 V

9.13.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	4
Power output P2	9.5 hp (7.0 kW)
I _N	13.5 A
I _{start}	105 A
Cos φ 1/1 load	0.75
Nominal impeller diameter	20 in (500 mm)
Number of impeller blades	3
Impeller speed	363 RPM
Blade angle	27 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G2.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.13.2 Dimensions and weights

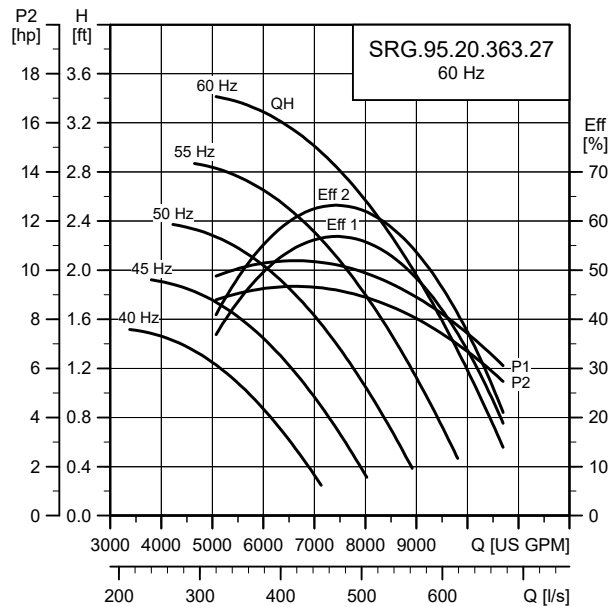


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ⁷⁾ [lb (kg)]	
							Standard	Screened
44.1 (1119)	33.7 (855)	39.2 (996)	32.4 (824)	9.06 (230)	0.98 (25)	50 (15)	536 (243)	545 (247)

7) Including the cable.

9.13.3 Performance curves



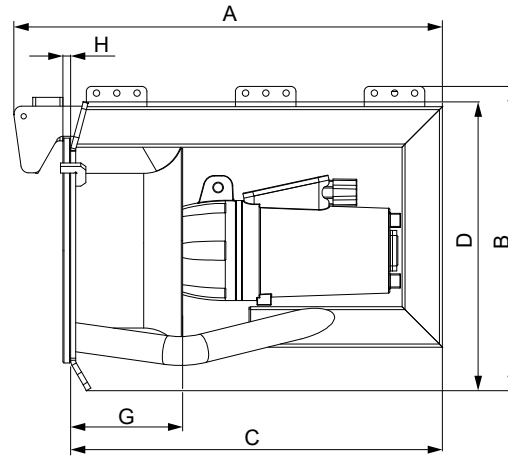
TM067186

9.14 SRG.135.20.406.27 - 3 x 460 V

9.14.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	4
Power output P2	13.5 hp (10 kW)
I _N	19.0 A
I _{start}	158 A
Cos φ 1/1 load	0.75
Nominal impeller diameter	20 in (500 mm)
Number of impeller blades	3
Impeller speed	406 RPM
Blade angle	27 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G2.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.14.2 Dimensions and weights

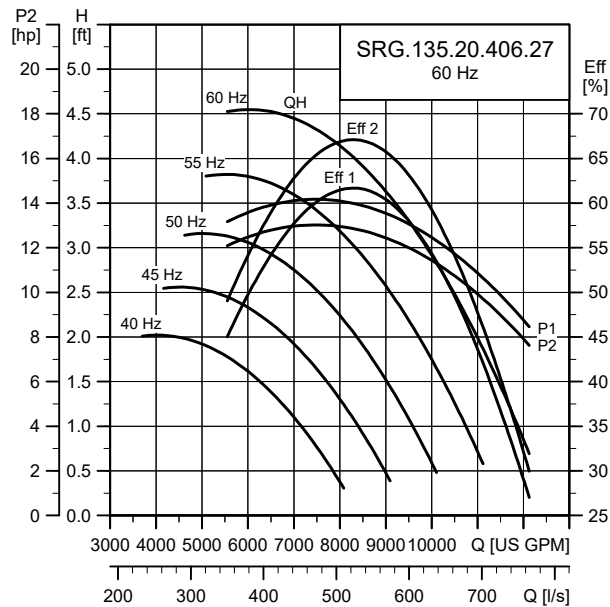


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ⁸⁾ [lb (kg)]	
							Standard	Screened
44.1 (1119)	33.7 (855)	39.2 (996)	32.4 (824)	9.06 (230)	0.98 (25)	50 (15)	571 (259)	580 (263)

⁸⁾ Including the cable.

9.14.3 Performance curves



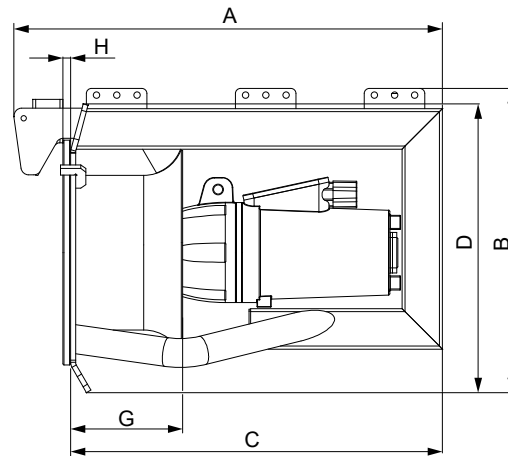
TM067187

9.15 SRG.95.32.260.11 - 3 x 460 V

9.15.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	4
Power output P2	9.5 hp (7.0 kW)
I _N	13.5 A
I _{start}	105 A
Cos φ 1/1 load	0.75
Nominal impeller diameter	32 in (800 mm)
Number of impeller blades	3
Impeller speed	260 RPM
Blade angle	11 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G2.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.15.2 Dimensions and weights

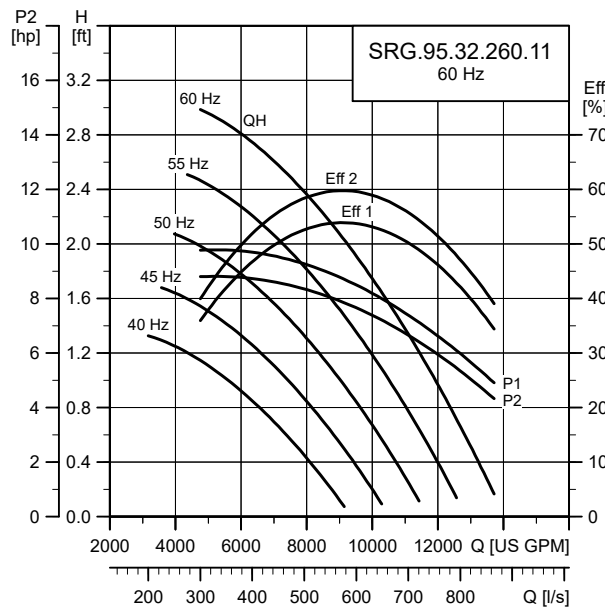


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ⁹⁾ [lb (kg)]	
							Standard	Screened
44.4 (1129)	48.7 (1237)	39.6 (1006)	48.2 (1225)	10.5 (267)	0.98 (25)	50 (15)	743 (337)	752 (341)

⁹⁾ Including the cable.

9.15.3 Performance curves



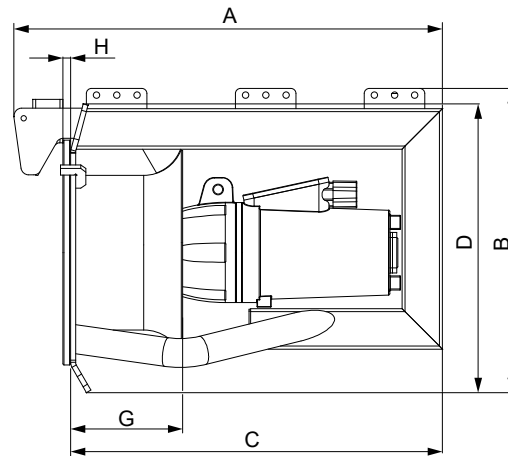
TM067188

9.16 SRG.160.32.308.11 - 3 x 460 V

9.16.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	4
Power output P2	16.0 hp (12 kW)
I _N	22 A
I _{start}	158 A
Cos φ 1/1 load	0.79
Nominal impeller diameter	32 in (800 mm)
Number of impeller blades	3
Impeller speed	308 RPM
Blade angle	11 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G2.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.16.2 Dimensions and weights

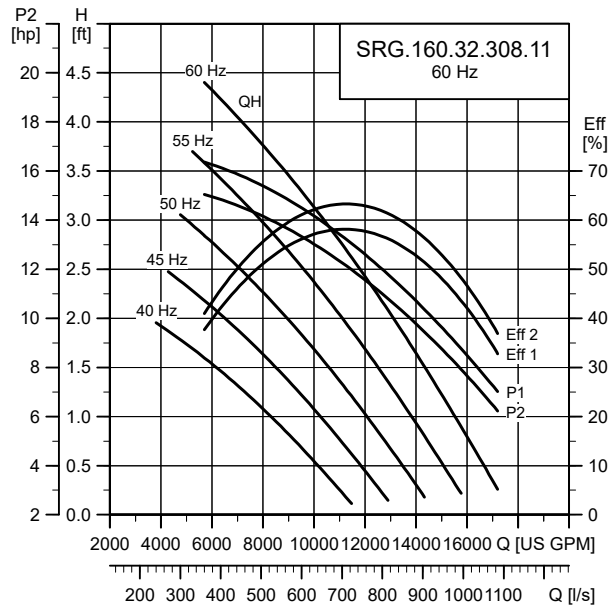


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ¹⁰⁾ [lb (kg)]	
							Standard	Screened
44.4 (1129)	48.7 (1237)	39.6 (1006)	48.2 (1225)	10.5 (267)	0.98 (25)	50 (15)	778 (353)	787 (357)

¹⁰⁾Including the cable.

9.16.3 Performance curves



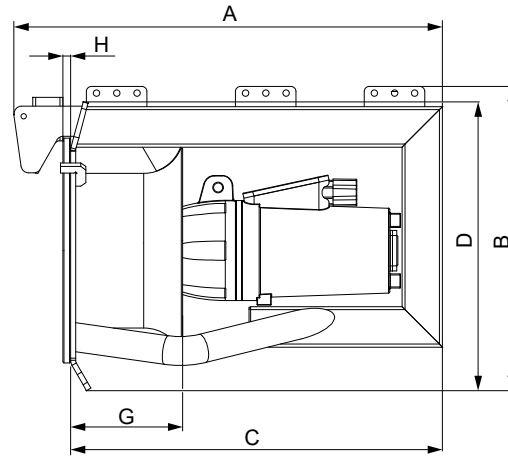
TM067189

9.17 SRG.175.32.355.11 - 3 x 460 V

9.17.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	4
Power output P2	17.5 (13 kW)
I _N	23 A
I _{start}	158 A
Cos φ 1/1 load	0.80
Nominal impeller diameter	32 in (800 mm)
Number of impeller blades	3
Impeller speed	355 RPM
Blade angle	11 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	S1BN8-F 11G2.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.17.2 Dimensions and weights

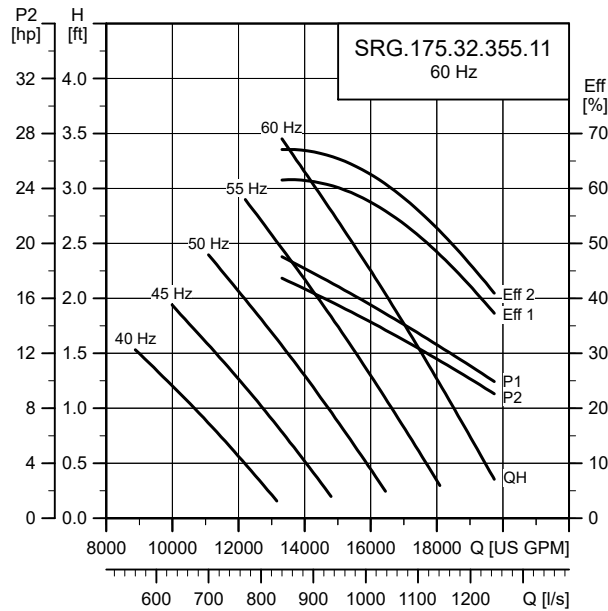


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ¹⁰⁾ [lb (kg)]	
							Standard	Screened
44.4 (1129)	48.7 (1237)	39.6 (1006)	48.2 (1225)	10.5 (267)	0.98 (25)	50 (15)	778 (353)	787 (357)

¹⁰⁾Including the cable.

9.17.3 Performance curves



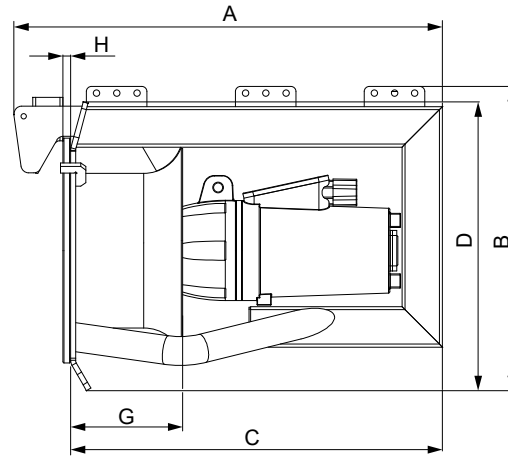
TM067190

9.18 SRG.200.32.334.11 - 3 x 460 V

9.18.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	4
Power output P2	20.0 hp (15 kW)
I _N	29 A
I _{start}	211 A
Cos φ 1/1 load	0.74
Nominal impeller diameter	32 in (800 mm)
Number of impeller blades	3
Impeller speed	334 RPM
Blade angle	11 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	TPE/TPE 7G4 + 4 x 1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.18.2 Dimensions and weights

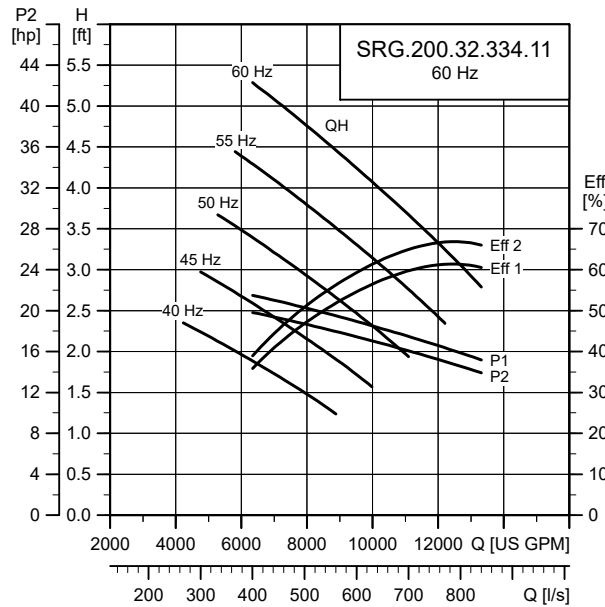


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ¹¹⁾ [lb (kg)]	
							Standard	Screened
46.5 (1181)	49.5 (1257)	41.7 (1058)	48.2 (1225)	10.5 (267)	0.98 (25)	50 (15)	955 (433)	963 (437)

¹¹⁾ Including the cable.

9.18.3 Performance curves



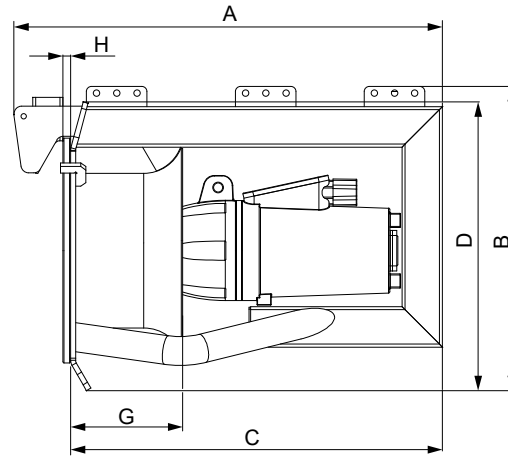
TM067191

9.19 SRG.270.32.374.11 - 3 x 460 V

9.19.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	4
Power output P2	27.0 hp (20 kW)
I _N	36 A
I _{start}	211 A
Cos φ 1/1 load	0.79
Nominal impeller diameter	32 in (800 mm)
Number of impeller blades	3
Impeller speed	374 RPM
Blade angle	11 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	TPE/TPE 7G4 + 4 x 1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.19.2 Dimensions and weights

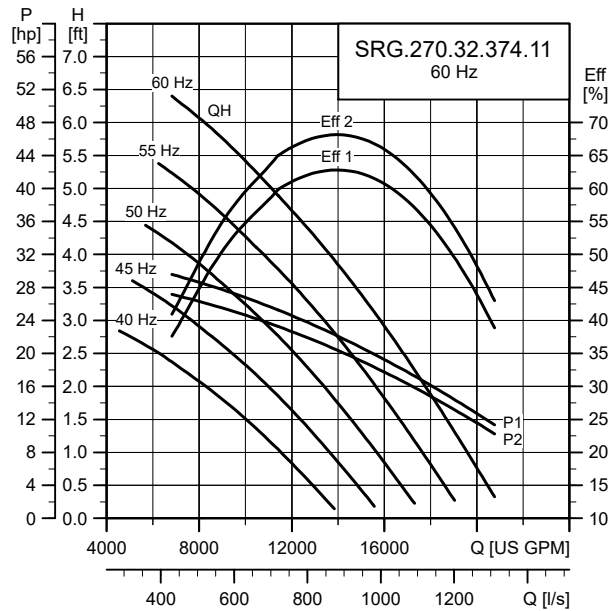


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ¹¹⁾ [lb (kg)]	
							Standard	Screened
46.5 (1181)	49.5 (1257)	41.7 (1058)	48.2 (1225)	10.5 (267)	0.98 (25)	50 (15)	955 (433)	963 (437)

¹¹⁾ Including the cable.

9.19.3 Performance curves



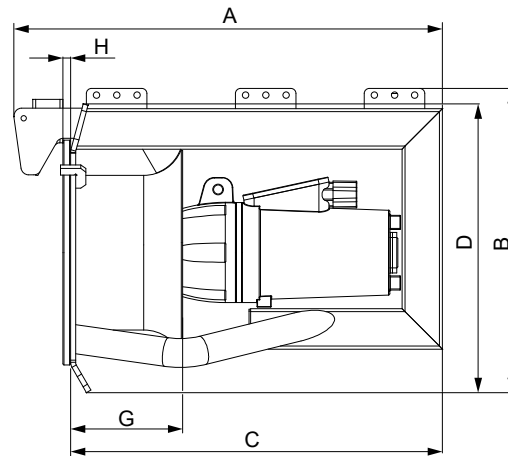
TM067192

9.20 SRG.320.32.418.11 - 3 x 460 V

9.20.1 Product data

Continuous frequency converter operation	40-60 Hz
Voltage	3 x 460 V
Voltage tolerance	- 10 %/+ 10 %
Number of poles	4
Power output P2	32.0 (24 kW)
I _N	43 A
I _{start}	211 A
Cos φ 1/1 load	0.80
Nominal impeller diameter	32 in (800 mm)
Number of impeller blades	3
Impeller speed	418 RPM
Blade angle	11 °
Enclosure class	IP68
Maximum installation depth	66 ft (20 m)
Maximum number of starts per hour	20
Cable length	50 ft (15 m)
Standard cable	TPE/TPE 7G4 + 4 x 1.5
Screened cable	S1BC4N8-F 7G4 + 4 x 1

9.20.2 Dimensions and weights

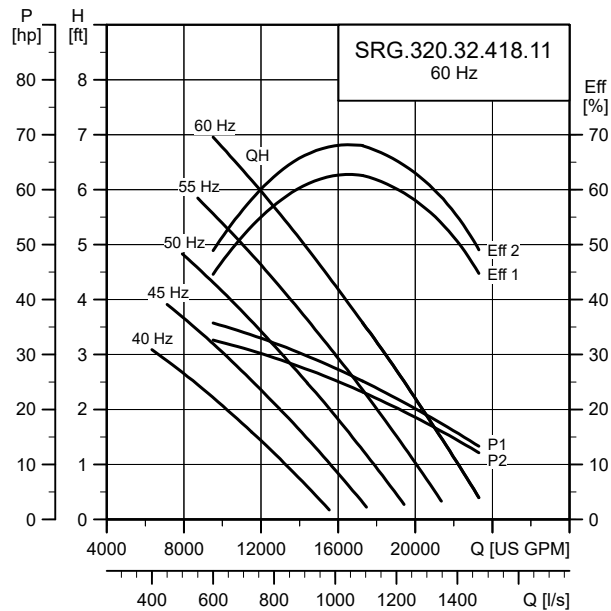


TM030547

A [in (mm)]	B [in (mm)]	C [in (mm)]	D [in (mm)]	G [in (mm)]	H [in (mm)]	Cable length [ft (m)]	Weight ¹¹⁾ [lb (kg)]	
							Standard	Screened
46.5 (1181)	49.5 (1257)	41.7 (1058)	48.2 (1225)	10.5 (267)	0.98 (25)	50 (15)	955 (433)	963 (437)

¹¹⁾ Including the cable.

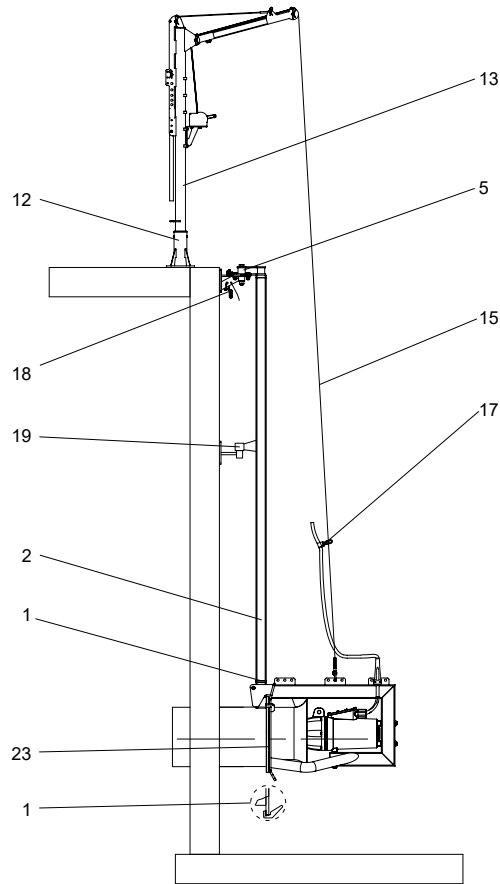
9.20.3 Performance curves



TM067193

10. Accessories

Grundfos offers the following equipment for installation, inspection and service of submersible recirculation pumps. The position numbers in fig. *SRG installation drawing* refer to *List of accessories*.



TM043962

SRG installation drawing

Related information

[10.2 List of accessories](#)

10.1 Selection guide for accessories

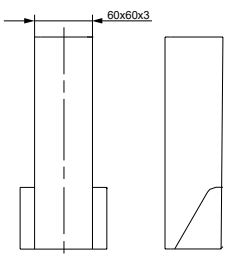
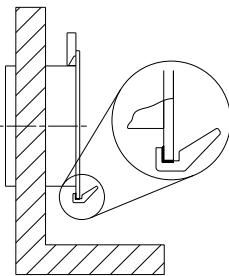
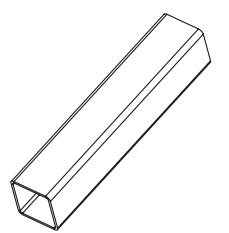
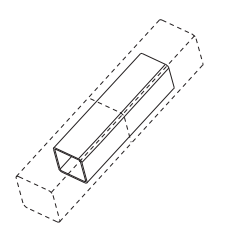
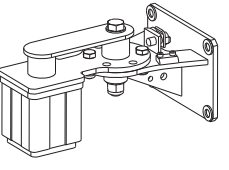
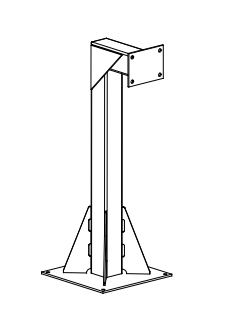
Type designation	Column profile [in (mm)] ¹²⁾	Crane type [lb (kg)]	Wire size	Cable clamp ¹³⁾
SRG.xx.12	2.5 x 2.5 x 0.12 (60 x 60 x 3)	M 550 (250)	0.24" (Ø6)	0.67" (Ø17)
SRG.48.20	2.5 x 2.5 x 0.12 (60 x 60 x 3)	M 550 (250)	0.24" (Ø6)	0.67" (Ø17)
SRG.68.20 - SRG.135.20	2.5 x 2.5 x 0.12 (60 x 60 x 3)	L 1100 (500)	0.28" (Ø7)	0.79" (Ø20)
SRG.xx.32	2.5 x 2.5 x 0.12 (60 x 60 x 3)	L 1100 (500)	0.28" (Ø7)	0.79" (Ø20)

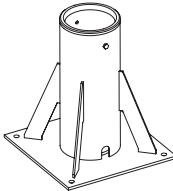
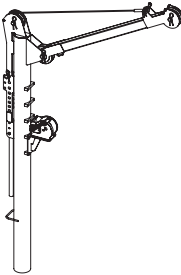
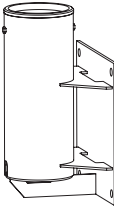
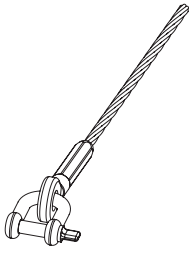
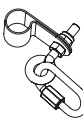
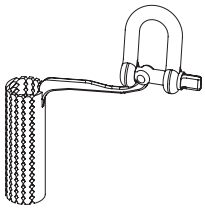
¹²⁾ If the installation height exceeds 6 m, use an intermediate fixation bracket. If this is not possible, please contact Grundfos.

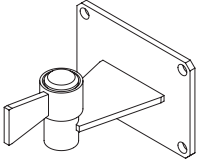
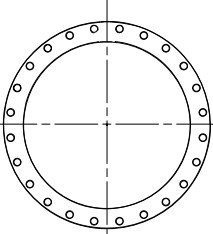
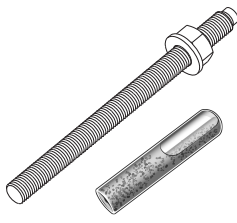
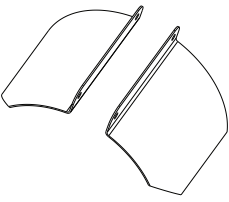
¹³⁾ For all pump with screened cable, use clamp type 0.79" (Ø20).

10.2 List of accessories

The position numbers refer to fig. *SRG installation drawing*.

Drawing	Pos. Item	Dimensions and product range	Material DIN W.-Nr./AISI	Product number
	1 Bottom fixation	SRG.xx.12-20	1.4301/304	96564825
	1 Bottom fixation	SRG.xx.32.xxx	1.4301/304	96585482
	2 Column profile	2.5 x 2.5 x 0.12 in (60 x 60 x 3 mm) 19.7 ft (6 m)	1.4404/316 L	Contact Grundfos
	Connection piece for column profile Required for column profile longer than 19.7 ft (6 m.)	2.5 x 2.5 x 0.12 in (60 x 60 x 3 mm) 0.66 ft (0.20 m)	1.4301/304	Contact Grundfos
	5 Top fixation bracket complete including safety wire	2.5 x 2.5 in (60 x 60 mm) column profile	1.4301/304	95037090
	Support for top fixation		1.4404/316 L	95037091
			1.4301/304	95037404
			1.4404/316 L	95039149

Drawing	Pos.	Item	Dimensions and product range	Material DIN W.-Nr./AISI	Product number	
	12	Crane foot	550 and 1100 lb (250 and 500 kg) crane	1.4301/304	95036908	
				1.4404/316 L	95037685	
				Galvanized steel	95036894	
	13	Crane with winch	M 500 lb (250 kg)	1.4301/304	95036900	
				1.4404/316 L	95037670	
				Galvanized steel	95036874	
				1.4301/304	95036950	
				1.4404/316 L	95037700	
				L 1100 lb (500 kg)	Galvanized steel	95036975
	14	Crane foot for vertical installation	500 and 1100 lb (250 and 500 kg) crane	1.4301/304	95036980	
				1.4404/316 L	95037710	
				Galvanized steel	95037000	
	15	Lifting wire, \varnothing 0.24" (6 mm), 33 ft (10 m), easy mounting, including \varnothing 0.31" (8 mm) shackle and wire clamp		1.4404/316 L	Contact Grundfos	
				Lifting wire, \varnothing 0.24" (6 mm), 50 ft (15 m), easy mounting, including \varnothing 0.31" (8 mm) shackle and wire clamp		1.4404/316 L
				Lifting wire, \varnothing 0.28" (7 mm), 33 ft (10 m), easy mounting, including \varnothing 0.39" (10 mm) shackle and wire clamp		1.4404/316 L
				Lifting wire, \varnothing 0.28" (7 mm), 50 ft (15 m), easy mounting, including \varnothing 0.39" (10 mm) shackle and wire clamp		1.4404/316 L
	17	Cable clamp	\varnothing 0.67" (17 mm)	1.4404/316 L	96494352	
			\varnothing 0.79" (20 mm)	1.4404/316 L	96494354	
	18	Cable sock, including shackle, \varnothing 0.39" (10 mm)		Synthetic material, 1.4404/316 L	95037141	

Drawing	Pos.	Item	Dimensions and product range	Material DIN W.-Nr./AISI	Product number
	19	Intermediate fixation bracket complete	All profile sizes longer than 20 ft (6 m)	1.4301/304	95037148
				1.4404/316 L	95037149
	23	Connection flange		12" ANSI 150 lb (DN 300)	1.4301/304 96564826
					1.4404/316 L 95011105
				20" ANSI 150 lb (DN 500)	1.4301/304 96564827
					1.4404/316 L 95011106
				32" ANSI 150 lb (DN 800)	1.4301/304 96564828
				1.4404/316 L	95011107
		Anchor bolt, 1/2" x 6-1/4" (M12 x 160) 1 x anchor 1 x nut, 1 x washer 1 x spring washer 1 x glue cartridge		1.4404/316 L	95036113
		Vortex shield	SRG.xx.12.	1.4301/304	96564832
				1.4404/316 L	95037601
				SRG.xx.20.	1.4301/304 96564833
				1.4404/316 L	95037602
				1.4301/304	96564834
			SRG.xx.32.	1.4404/316 L	95037603

Related information[10. Accessories](#)

11. Grundfos Product Center

Online search and sizing tool to help you make the right choice.

From the international view, you can select your specific country to view the product range available to you.

International view: <https://product-selection.grundfos.com>

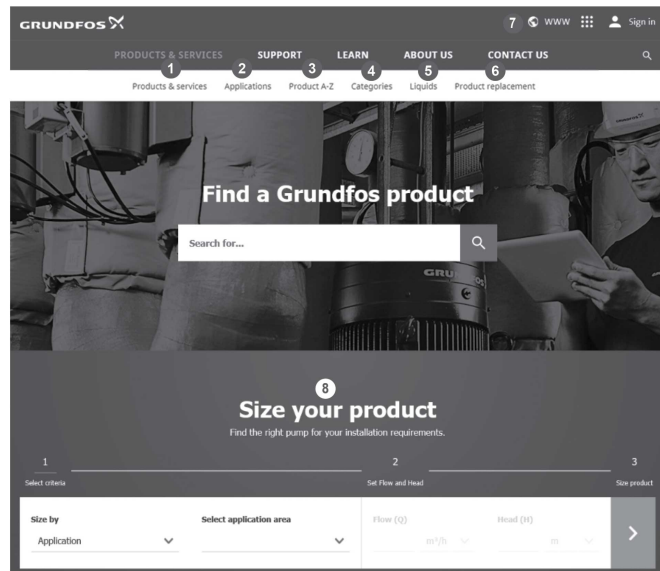
All the information you need in one place

Performance curves, technical specifications, pictures, dimensional drawings, motor curves, wiring diagrams, spare parts, service kits, 3D drawings, documents, system parts. The Product Center displays any recent and saved items - including complete projects - right on the main page.



Downloads

On the product pages, you can download installation and operating instructions, data booklets, service instructions, etc., in PDF format.



TM072383-1_GRAY

When you select your country, you will see the menus below. Note that some menus may not be available depending on the country.

Example: <https://product-selection.grundfos.com/us>

Pos.	Description
1	Products & services enables you to find products and documents by typing a product number or name into the search field.
2	Applications enables you to choose an application to see how Grundfos can help you design and optimize your system.
3	Products A-Z enables you to look through a list of all the Grundfos products.
4	Categories enables you to look for a product category.
5	Liquids enables you to find pumps designed for aggressive, flammable or other special liquids.
6	Product replacement enables you to find a suitable replacement.
7	WWW enables you to select the country, which changes the language, the available product range and the structure of the website.
8	Sizing enables you to size a product based on your application and operating conditions.

12. Document quality feedback

To provide feedback about this document, scan the QR code using your phone's camera or a QR code app.



[Click here to submit your feedback](#)

U.S.A.

Global Headquarters for WU
856 Koomey Road
Brookshire, Texas 77423 USA
Phone: +1-630-236-5500

GRUNDFOS CBS Inc.
902 Koomey Road
Brookshire, TX 77423 USA
Phone: 281-994-2700
Toll Free: 1-800-955-5847
Fax: 1-800-945-4777

GRUNDFOS Pumps Corporation
9300 Loiret Boulevard
Lenexa, Kansas 66219 USA
Tel.: +1 913 227 3400
Fax: +1 913 227 3500

Canada

GRUNDFOS Canada inc.
2941 Brighton Road
Oakville, Ontario
L6H 6C9
Tel.: +1-905 829 9533
Fax: +1-905 829 9512

Mexico

Bombas GRUNDFOS de México
S.A. de C.V.
Boulevard TLC No. 15
Parque industrial Stiva Aeropuerto
Apodaca, N.L. 66600
Tel.: +52-81-8144 4000
Fax: +52-81-8144 4010

Revision Info

Last revised on 04-2021

99194863 11.2023
ECM: 1377436

GRUNDFOS Holding A/S
Poul Due Jensens Vej 7
DK-8850 Bjerringbro
Tel: +45 87 50 14 00
www.grundfos.com

