

NK150-200/210-168A2F1AE-SGQQE

Grundfos pump 98323935



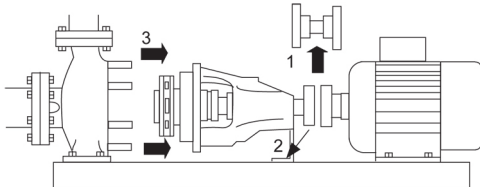
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info@lenntech.com

tel. +31 152 610 900

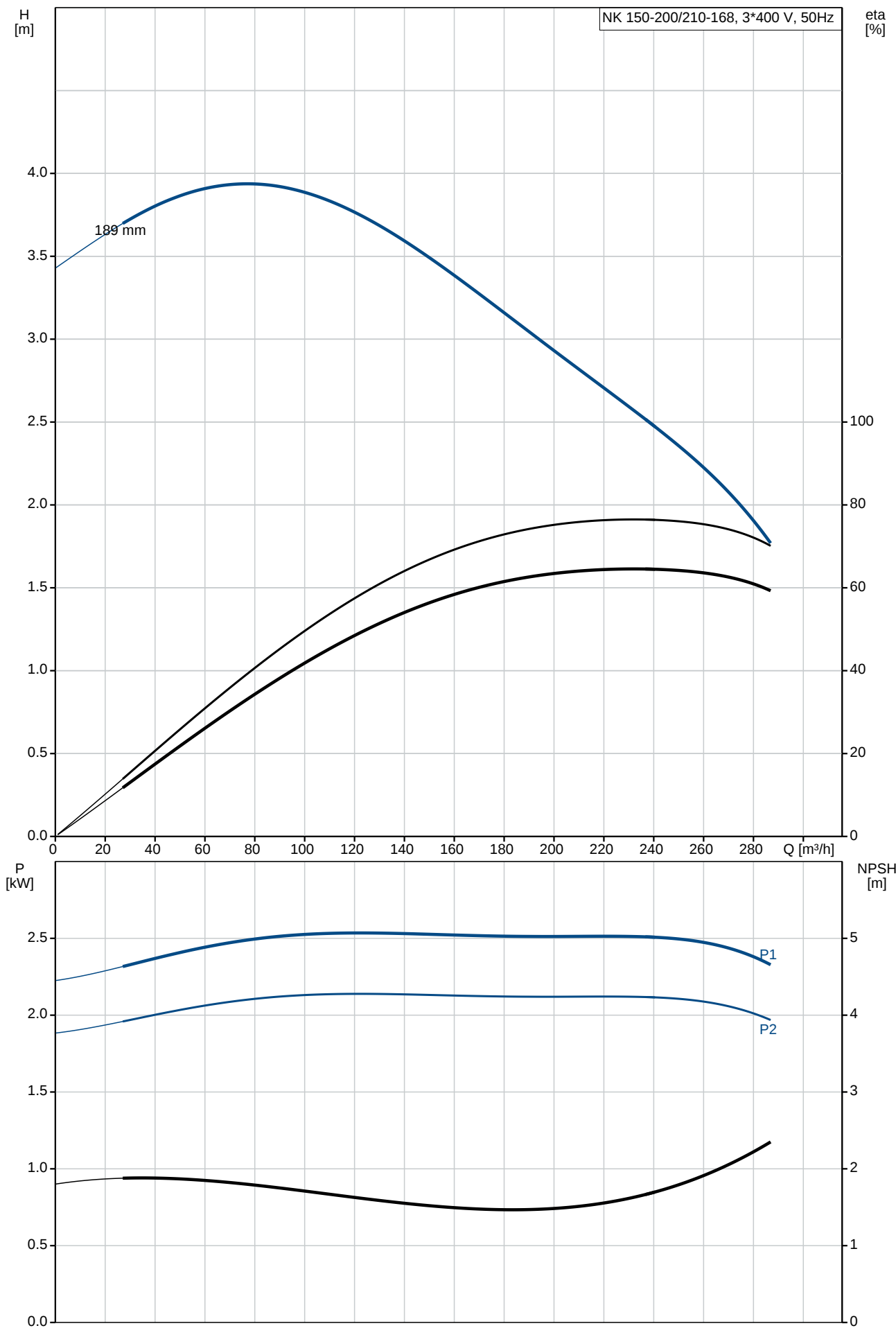
fax. +31 152 616 289

Position	Qty.	Description
	1	NK 150-200/210-168 A2-F-A-E-GQQE  Product No.: On request Non-self-priming, single-stage, centrifugal volute pump designed according to ISO 5199 with dimensions and rated performance according to EN 733. Flanges are PN 10 with dimensions according to EN 1092-2. The pump has an axial suction port, a radial discharge port and horizontal shaft. It is of the back pull-out design enabling removal of the coupling, bearing bracket and impeller without disturbing the motor, pump housing or pipework. The unbalanced rubber bellows shaft seal with reduced seal face is according to DIN EN 12756. The pump is fitted with a foot-mounted, fan-cooled asynchronous motor. Pump and motor are mounted on a common base frame. Further product details The product's minimum efficiency index (MEI) is greater or equal to 0.70. This is by the Commission Regulation (EU) considered as an indicative benchmark for best-performing water pump available on the market as from 1 January 2013. Pump and motor are mounted on a common steel base frame in accordance with ISO 3661. The back pull-out design together with a spacer coupling makes it possible to make service on the pump without dismantling the pump housing and motor from the base frame. This saves realignment of pump and motor after service. 1) Remove coupling. 2) Remove the bolts in the bearing bracket support foot. 3) Remove the bearing bracket from the pump housing.  Cast-iron parts have an epoxy-based coating made in a cathodic electro-deposition (CED) process. CED is a high-quality dip-painting process where an electrical field around the products ensures deposition of paint particles as a thin, well-controlled layer on the surface. An integral part of the process is a pretreatment. The entire process consists of these elements: 1) Alkaline-based cleaning. 2) Zinc phosphating. 3) Cathodic electro-deposition. 4) Curing to a dry film thickness 18-22 my m. The colour code for the finished product is NCS 9000/RAL 9005. Pump The pump housing has both a priming and a drain hole closed by plugs. The impeller is a closed impeller with double-curved blades with smooth surfaces. The impeller is statically balanced according to ISO 1940-1 class G6.3 and hydraulically balanced to compensate for axial thrust. Wear rings used in pump housing and for impeller are made of bronze/brass or cast iron. The shaft seal is an unbalanced rubber bellows seal with reduced seal face. Due to the bellows, the seal does not wear the shaft, and the axial movement is not prevented by deposits on the shaft. The narrow seal face makes the seal perform well in high-viscosity and anti-freezing liquids. Primary seal: • Rotating seal ring material: silicon carbide (SiC) • Stationary seat material: silicon carbide (SiC) This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

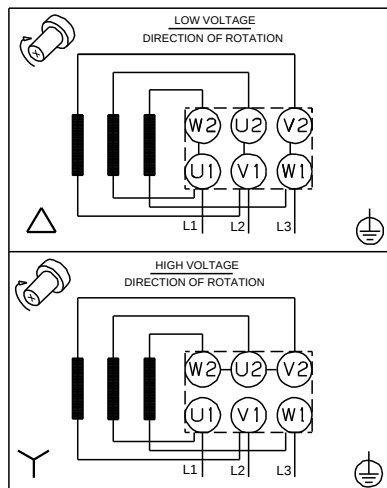
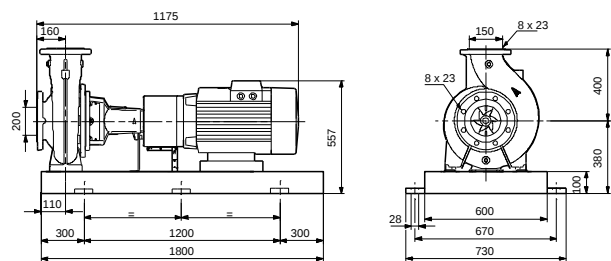
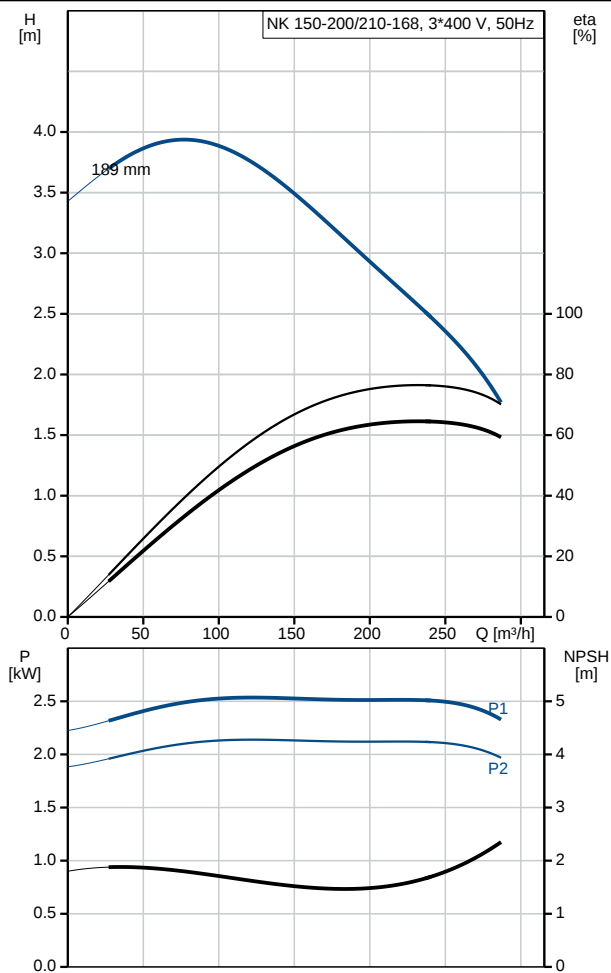
Position	Qty.	Description
		Secondary seal material: EPDM (ethylene-propylene rubber) EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils. The shaft is made of stainless steel and has a diameter of 32 mm where the coupling is mounted. The pump uses a spacer coupling between the pump and motor shaft.  Motor The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards and mounting designation B3 (IM 1001). Electrical tolerances comply with IEC 60034. The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1. The motor does not incorporate motor protection and must be connected to a motor-protective circuit breaker which can be manually reset. The motor-protective circuit breaker must be set according to the rated current of the motor (I1/1). The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center. Technical data Liquid: Pumped liquid: Water Liquid temperature range: -25 .. 60 °C Liquid temperature during operation: 20 °C Density: 998.2 kg/m³ Technical: Rated flow: 231 m³/h Rated head: 2.6 m Actual impeller diameter: 210-168 mm Impeller nom: 200 mm Primary shaft seal: GQQE Secondary shaft seal: NONE Curve tolerance: ISO9906:2012 3B Materials: Pump housing: Cast iron EN-GJL-250 ASTM A48-40 B Impeller: Cast iron EN-GJL-200 ASTM A48-30 B Rubber: EPDM Wear ring mat.: Bronze (CuSn10) Installation: Maximum ambient temperature: 55 °C Maximum operating pressure: 10 bar Flange standard: EN 1092-2 Pump inlet: DN 200 Pump outlet: DN 150 Pressure rating: PN 10 Coupling type: Spacer Base frame: EN / ISO Electrical data: Motor type: SIEMENS

Position	Qty.	Description
		IE Efficiency class: IE3 Rated power - P2: 2.2 kW Mains frequency: 50 Hz Rated voltage: 3 x 220-240D/380-420Y V Rated current: 9,15-8,30/5,30-4,80 A Starting current: 680-680 % Cos phi - power factor: 0.75 Rated speed: 970 rpm Efficiency: IE3 84,3% Motor efficiency at full load: 84.3-84.3 % Motor efficiency at 3/4 load: 84.9-84.9 % Motor efficiency at 1/2 load: 83.6-83.6 % Number of poles: 6 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Lubricant type: Grease Others: Minimum efficiency index, MEI $\geq$: 0.70 ErP status: EuP Standalone/Prod. Net weight: 404 kg Gross weight: 518 kg Shipping volume: 1.91 m³

On request NK 150-200/210-168 A2-F-A-E-GQQE 50 Hz

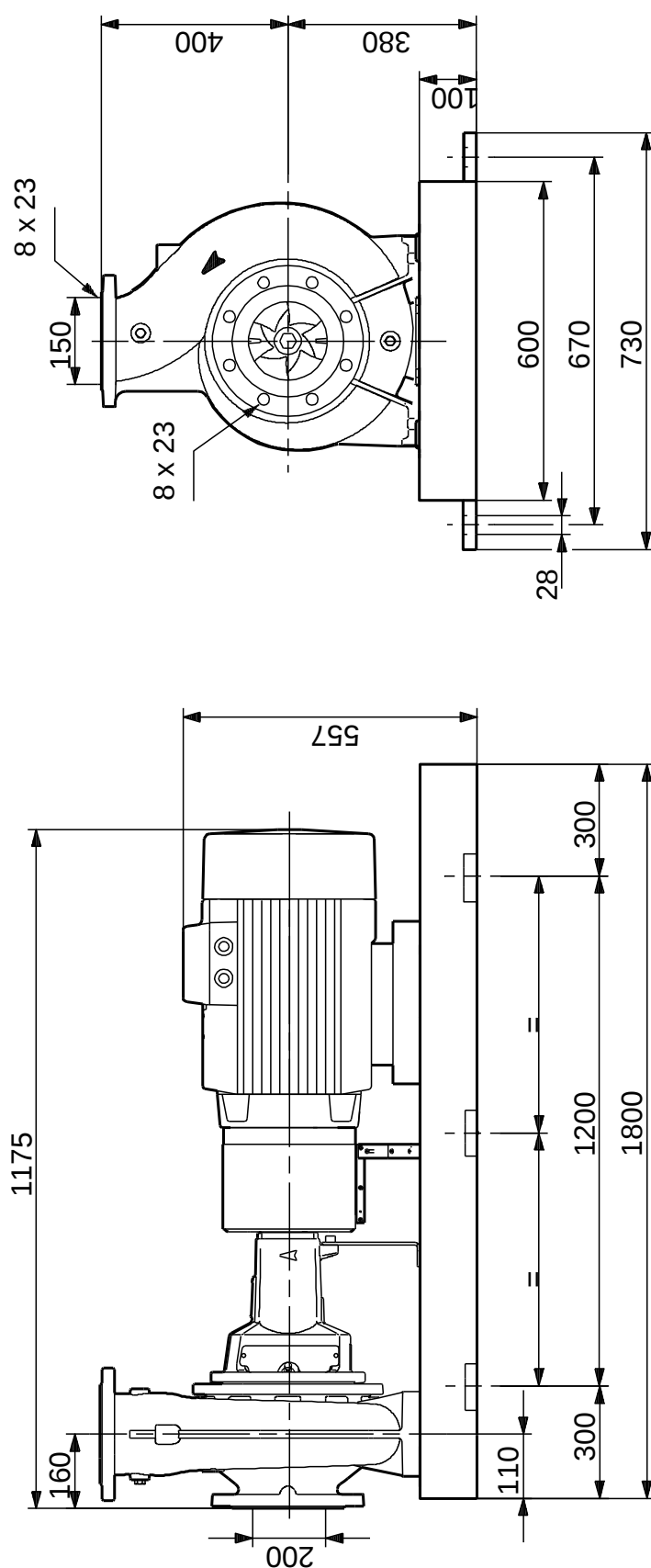


Description	Value
General information:	
Product name:	NK 150-200/210-168
Product No:	A2-F-A-E-GQQE
EAN number:	On request
Technical:	
Rated flow:	231 m³/h
Rated head:	2.6 m
Actual impeller diameter:	210-168 mm
Impeller nom:	200 mm
Primary shaft seal:	GQQE
Secondary shaft seal:	NONE
Shaft diameter:	32 mm
Curve tolerance:	ISO9906:2012 3B
Pump version:	A2
Materials:	
Pump housing:	Cast iron
	EN-GJL-250
	ASTM A48-40 B
Impeller:	Cast iron
	EN-GJL-200
	ASTM A48-30 B
Material code:	A
Rubber:	EPDM
Code for rubber:	E
Wear ring mat.:	Bronze (CuSn10)
Installation:	
Maximum ambient temperature:	55 °C
Maximum operating pressure:	10 bar
Flange standard:	EN 1092-2
Pump inlet:	DN 200
Pump outlet:	DN 150
Pressure rating:	PN 10
Coupling type:	Spacer
Wear ring(s):	neckring(s)
Base frame:	EN / ISO
Connect code:	F
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	-25 .. 60 °C
Liquid temperature during operation:	20 °C
Density:	998.2 kg/m³
Electrical data:	
Motor type:	SIEMENS
IE Efficiency class:	IE3
Rated power - P2:	2.2 kW
Mains frequency:	50 Hz
Rated voltage:	3 x 220-240D/380-420Y V
Rated current:	9,15-8,30/5,30-4,80 A
Starting current:	680-680 %
Cos phi - power factor:	0.75
Rated speed:	970 rpm
Efficiency:	IE3 84,3%
Motor efficiency at full load:	84.3-84.3 %
Motor efficiency at 3/4 load:	84.9-84.9 %
Motor efficiency at 1/2 load:	83.6-83.6 %
Number of poles:	6
Enclosure class (IEC 34-5):	55 Dust/Jetting
Insulation class (IEC 85):	F
Motor protec:	NONE
Motor No:	98957421
Lubricant type:	Grease
Others:	
Minimum efficiency index, MEI ≥:	0.70



Description	Value
ErP status:	EuP Standalone/Prod.
Net weight:	404 kg
Gross weight:	518 kg
Shipping volume:	1.91 m ³

On request NK 150-200/210-168 A2-F-A-E-GQQE 50 Hz



Note! All units are in [mm] unless others are stated.
Disclaimer: This simplified dimensional drawing does not show all details.

Exploded view



Sectional drawing (TM058200 for TPE2,TPE3)



TM058200

Exploded view (TM057026 for MGE model H/I)



Parts list NK 150-200/210-168, Product No. On request
Valid from 1.3.2010 (1009)

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
+	Motor				1	pcs
-	Coupling cpl.				1	pcs
89.b	Socket set screw		Length (mm): 8		2	
			Thread: M6			
89.d	Hex socket head cap screw		Length (mm): 16		12	
			Thread: M6			
89.p	Coupling female				1	
89o	Coupling part spacer side				6	
89o	Coupling part spacer side				1	
89r	Spacer sleeve				1	
89s	Spacer ring				1	
-	Nut				1	pcs
66	Washer		Designation: DIN 125 A2		1	
			Internal diameter: 19			
			Outer diameter: 34			
			Thickness: 3			
66a	Spring lock washer				1	
67	Nut		Thread: M18		1	
-	Pump housing cpl.				1	pcs
6	Pump housing				1	
36	Nut		Thread: M10		8	
-	7 Coupling guard cpl.				1	pcs
-	7 Coupling guard cpl.				1	
7c	Spacer f/coupling guard				1	
7e	Hex socket head cap screw				3	
94	Lock nut		Thread: M6		2	
7b	Retainer for coupling guard				1	
7k	Hex socket head cap screw		Length (mm): 10		4	
			Thread: M6			
-	7.d Foot for coupling guard				1	pcs
7d	Foot for coupling guard				1	
7h	Hex socket head cap screw				2	
7l	Support f/coupling guard foot				1	
66	Washer				2	
49	Impeller				1	pcs
53.b	Spacer ring				1	pcs
72.a	O-ring		Diameter: 221,84		1	pcs
			Material type: EPDM			
			Thickness: 3,53			
-	77 Cover				1	pcs
77	Cover				1	
-	86 Bearing bracket				1	pcs
28a	Hex head screw		Length (mm): 25		1	
			Thread: M12			
53.b	Spacer ring				1	
54	Ball bearing				2	
54a	O-ring		Diameter: 89,5		2	
			Material type: EPDM			
			Thickness: 3			
77a	Pan head screw				4	
86	Bearing bracket				1	
153a	Retaining ring				2	
156a	Bearing cover				2	
159a	V-ring				2	
-	90 Base plate				1	pcs
	Hex head screw				4	
	Washer				16	
	Base plate				1	
	Support rail				2	

Pos	Description	Annotation	Données de classification	Référence	Quantité	Unité
	Support block				2	
	Support block				2	
7h	Hex head screw		Length (mm): 16		2	
			Thread: M8			
28	Hex head screw		Length (mm): 30		2	
			Thread: M12			
36	Nut		Thread: M10		8	
66	Washer				2	
66	Washer				4	
66	Washer				2	
90b	Hex head screw				4	
105	Shaft seal		Material type: GQQE		1	pcs
105b	Spacer				1	pcs

Disclaimer: The information about the Grundfos pump in this document may be outdated.

Data may be subject to alterations without further notice.

Please contact us to verify the data above is still accurate/up-to-date.

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info@lenntech.com

<https://www.lenntech.com>

tel. +31 152 610 900

fax. +31 152 616 289