

Grey Water and Condensate Pump

Rotex

Type Series Booklet



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Type Series Booklet Rotex

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Drainage / Waste Water

Grey Water and Condensate Pump

Rotex



Main applications

- Disposal
- Heating systems
- Drainage systems
- Drainage

Fluids handled

- Grey water
- Heating water
- Condensate
- River, lake and groundwater

Operating data

Operating properties

Characteristic		Value	
		Rotex 10, 20	Rotex 70
Flow rate	Q	Up to 24 m ³ /h (6.67 l/s)	
Head	H	Up to 14 m	
Fluid temperature	t	Up to +90 °C	Up to +70 °C

Designation

Example: Rotex 10 / 100 D

Key to the designation

Code	Description
Rotex	Type series
10	Size
10	<ul style="list-style-type: none"> ▪ Heavy-duty design Rp 1¹/₄ / 2 ▪ Two-channel impeller ▪ Level control with displacement weight
20	<ul style="list-style-type: none"> ▪ Heavy-duty design Rp 2 ▪ Three-channel impeller ▪ Level control with displacement weight
70 ¹⁾	<ul style="list-style-type: none"> ▪ Light-duty design Rp 1¹/₄ / 2 ▪ Open radial impeller ▪ Level control with float switch
100	Installation depth [cm]
	100, 170 ²⁾
D	Drive
D	Three-phase motor
E	Single-phase AC motor

Design details

Design

- Vertical installation
- Single-stage, self-priming centrifugal pump
- Pump foot designed as inlet strainer
- Discharge to the top, parallel to the pump shaft
- Pump and motor rigidly connected via a support column
- Ready to be plugged in
- 1.5 m power cable
- Level control

Impeller type

- Two-channel impeller
- Three-channel impeller
- Open radial impeller

Drive

- Surface-cooled three-phase motor, IP55
- Single-phase AC motor, IP55

Bearings

- Product-lubricated plain bearing
- Grease-packed deep groove ball bearings sealed for life

1) Rotex size 70 cannot be used for handling condensate.

2) Rotex size 70 is only available up to an installation depth of 100 cm.

Materials

Overview of available materials

Description	Material	
	Rotex 10, 20	Rotex 70
Discharge casing	Grey cast iron	-
Volute casing	-	Grey cast iron
Pump shaft for installation depth 100 cm	Steel	Steel
Pump shaft for installation depth 170 cm	Chrome steel	-
Pump foot	-	Grey cast iron
Impeller	Grey cast iron	Polyamide
Bearing housing	Grey cast iron	-
Bearing bush	Sinter bronze, steel PTFE/CuSn	
Pipe	Steel	
Flange	-	Grey cast iron
Casing wear ring	Bronze	-

Product benefits

- Ready-to-connect, easy installation and commissioning
 - Automatic operation by level control with displacement weight or float switch
 - Easy to install thanks to low weight, compact design and ready-to-connect system
- Maintenance-free thanks to grease-packed deep groove ball bearings sealed for life and product-lubricated plain bearings

Technical data

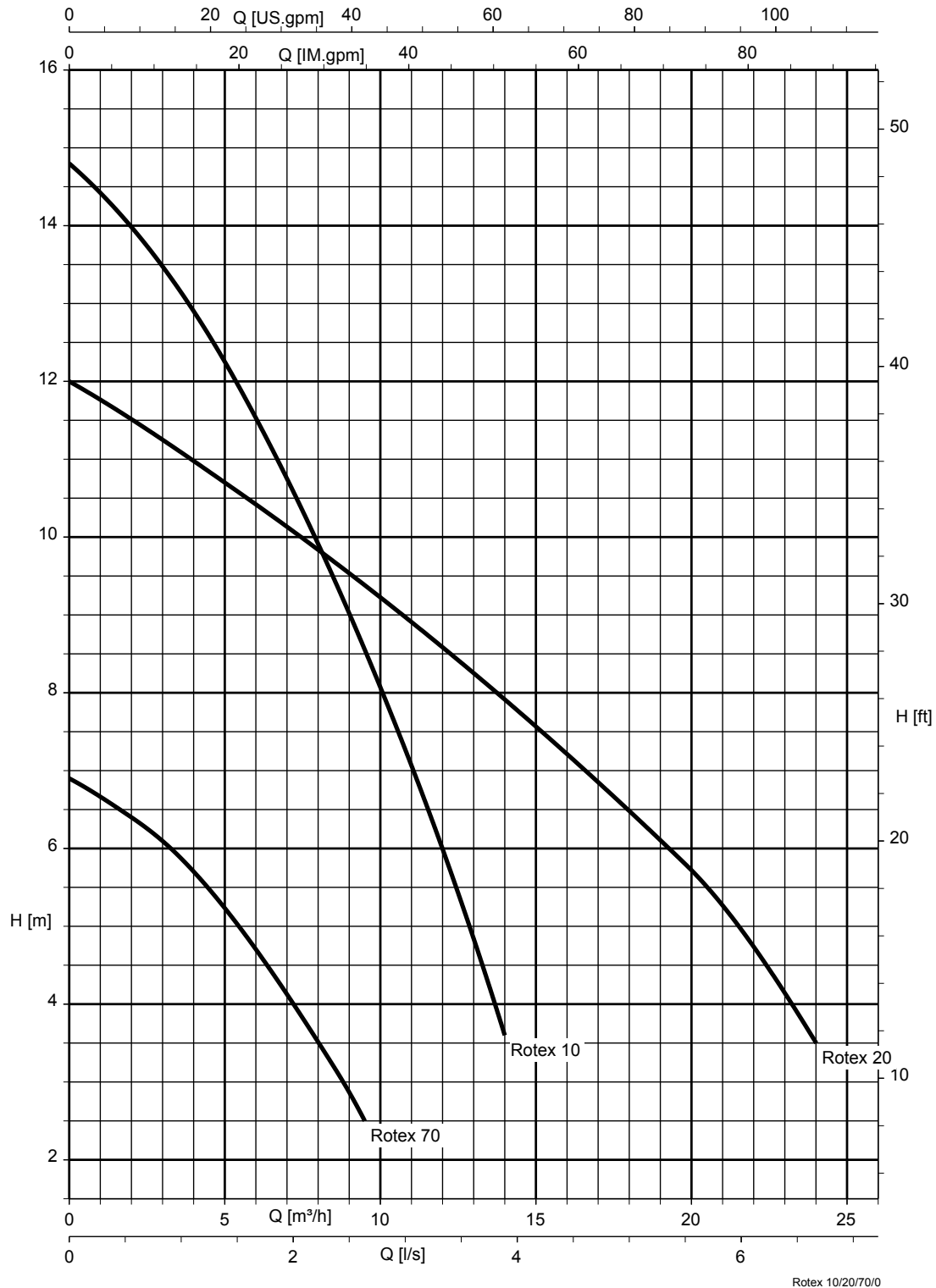
Rotex 10, 20, 70

Technical data

Size	Installation depth [cm]	Connection	P ₂ [kW]	I _N [A]		Mat. No.	[kg]
				1 ~ 230 V	3 ~ 400 V		
10/100 D	100	Rp 1¼	0,55	-	1,35	00529119	25
10/100 E	100	Rp 1¼	0,55	3,6	-	00529129	26
10/170 D	170	Rp 1¼	0,55	-	1,35	00529118	34
10/170 E	170	Rp 1¼	0,55	3,6	-	00529128	35
20/100 D	100	Rp 2	0,55	-	1,35	00529124	26
20/170 D	170	Rp 2	0,55	-	1,35	00529123	35
70 D	100	Rp 1¼	0,37	-	1,0	29101099	16
70 E	100	Rp 1¼	0,37	2,8	-	29101100	17

Characteristic curves

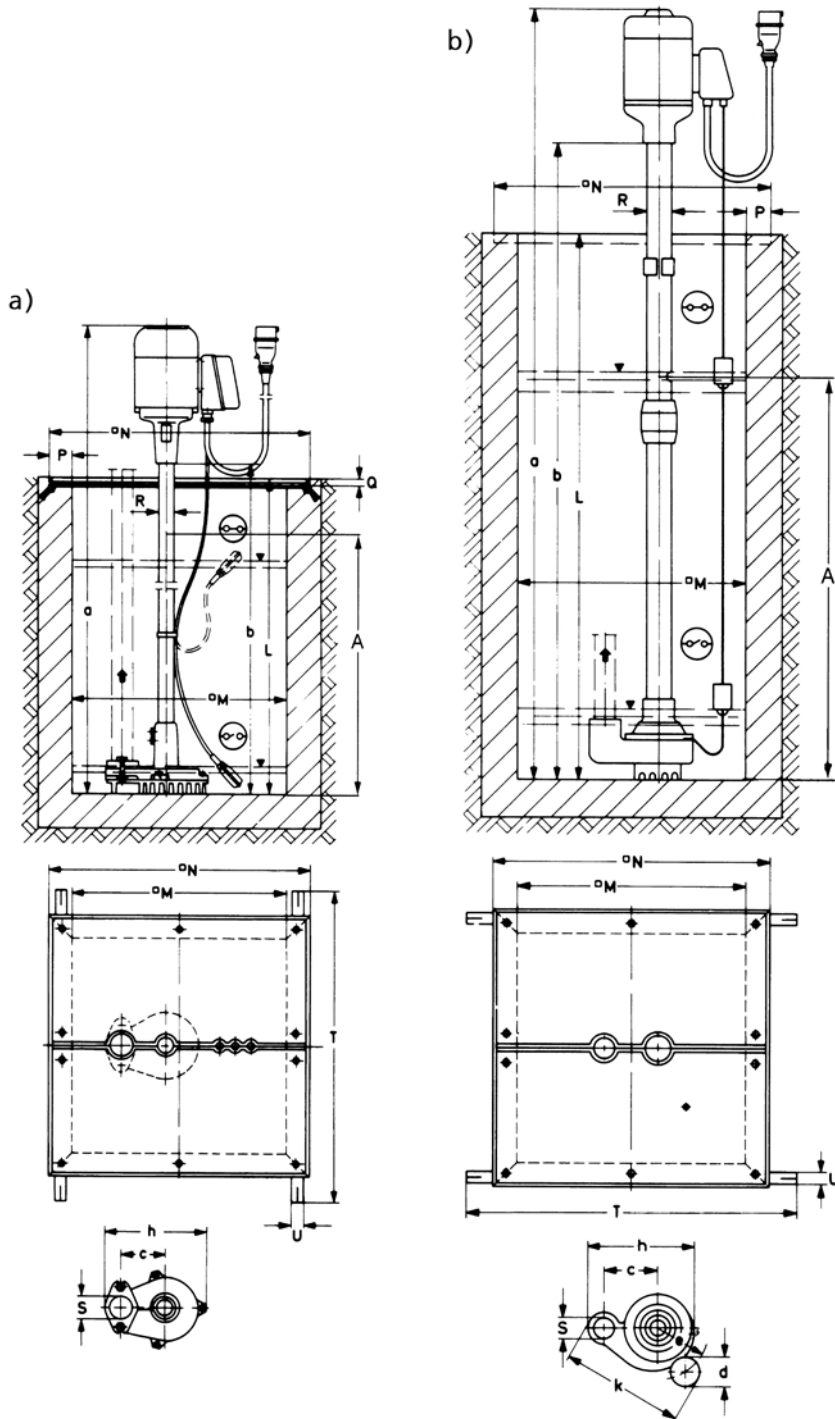
Rotex 10, 20, 70; n = 2900 rpm



Free passage: Rotex 10 = 10 mm; Rotex 20 = 13 mm; Rotex 70 = 18 mm

Dimensions

Rotex 10, 20, 70




Dimensions a) Rotex 70 b) Rotex 10, 20

Minimum water level (cut-out level)	Rotex 10, 20: 150 mm ³⁾ Rotex 70: 100 mm
Maximum water level (start-up level)	Rotex .../170: ≥ 1000 mm

3) If handling condensate: 400 mm





Dimensions [mm]

Rotex		a	b	c	d	e	h	k	A	L	M	N	P	Q	R	T	U
10/100	Rp 1 1/4	1363	1069	106	60	110	220	242	180	1000	500	560	30	20	60	660	20
10/170	Rp 1 1/4	2085	1791	106	60	110	220	242	1050	1700	500	560	30	20	60	660	20
20/100	Rp 2	1370	1076	117	60	110	240	270	180	1000	500	560	30	20	60	660	20
20/170	Rp 2	2092	1798	117	60	110	240	270	1050	1700	500	560	30	20	60	660	20
70	Rp 1 1/4	1342	1046	97	-	-	215	-	590	1000	500	560	30	20	33,8	660	20

Accessories



Pump accessories




Pump accessories

	Item	Description	Connection	Rotex			Mat. No.	[kg]
				10	20	70		
	P10	RK swing check valve Plastic, EN 12 050-4, with internal thread ISO 7/1, full port and drain plug; cannot be used for pumped drainage	Rp 1 1/4	X	-	X	01009771	0.1
			Rp 2	-	X	-	01009773	0.5
		Swing check valve ISO 7/1, made of gunmetal (225 °C max.)	Rp 2	-	X	-	00430260	2.5
	P11	Socket gate valve CuZn PN 10-12 DIN 3352 With internal/internal thread and full port	Rp 1 1/4	X	-	X	01014219	0.602
			Rp 2	-	X	-	00411503	1.1
	P18	Cover plate, steel tread-proof, split, with profile joints and angle iron mounting frame (type A 560) for 500 x 500 mm pits (Dual-pump stations with P13 Y-pipe are equipped with 2 cover plates next to each other.)	Rp 1 1/4	-	-	X	18075627	13

Alarm switchgears for pumps without ATEX




AS 0/AS 1/AS 2/AS 4/AS 5

	Item	Description	Mat. No.	[kg]
	E50	Alarm switchgear AS 0 with circuit breaker, piezoceramic signal transmitter, 85 dB(A) at a distance of 1 m and 4.1 kHz, green equipment-on lamp Plastic housing IP20, 140 x 80 x 57 mm. Use float switch, F1 moisture sensor (item E64), M1 alarm contactor or signal relay of control unit as contactor.	29128401	0.5
	E51	Alarm switchgear AS 2 with circuit breaker, piezoceramic signal transmitter, 85 dBA at a distance of 1 m and 4.1 kHz, green equipment-on lamp, volt-free contact for hook-up to a control station. Plastic housing IP20, 140 x 80 x 57 mm. Use float switch, F1 moisture sensor (item E64) or signal relay of control unit as contactor.	29128422	0.5


	Item	Description	Mat. No.	[kg]
	E52	Alarm switchgear AS 4 with circuit breaker, piezoceramic signal transmitter, 85 dB(A) at a distance of 1 m and 4.1 kHz, green equipment-on lamp, volt-free contact for hook-up to a control station, self-charging power supply unit for 5 hours' operation in the event of power failure Plastic housing IP20, 140 x 80 x 57 mm. Use float switch (E60), F1 moisture sensor (item E64) or signal relay of control unit as contactor.	29128442	0.5
	E53	Alarm switchgear AS 5 Mains-independent, with self-charging power supply unit for 10 hours' operation in the event of power failure, mains pilot LED, fault indicator light, horn-off pushbutton, volt-free contact for hook-up to a control station, ready for connection with 1.8 m connection cable and plug. ISO housing IP41, 190 x 165 x 75 mm. Use float switch (E60) or signal relay of control unit as contactor.	00530561	1.7
	E55	Alarm switchgear AS 1 In ISO plug housing IP30, mains-independent, with self-charging power supply unit for 5 hours' operation in the event of a power failure, acoustic signal 70 dB(A) with circuit breaker and integrated signal transmitter with 3-metre connection cable, max. 60 °C, not suitable for steam and condensate. 1. High water alert by suspending the moisture sensor in a (pump) sump above the pump start-up point. 2. Water alarm signal at a water level of only 1 mm (!), by placing the contactor on the floor of rooms at risk of flooding, e.g. the cellar or next to the washing machine in the kitchen or bathroom.	00533740	0.9

Control unit/switchgear accessories

Alarm equipment for alarm switchgear AS 5

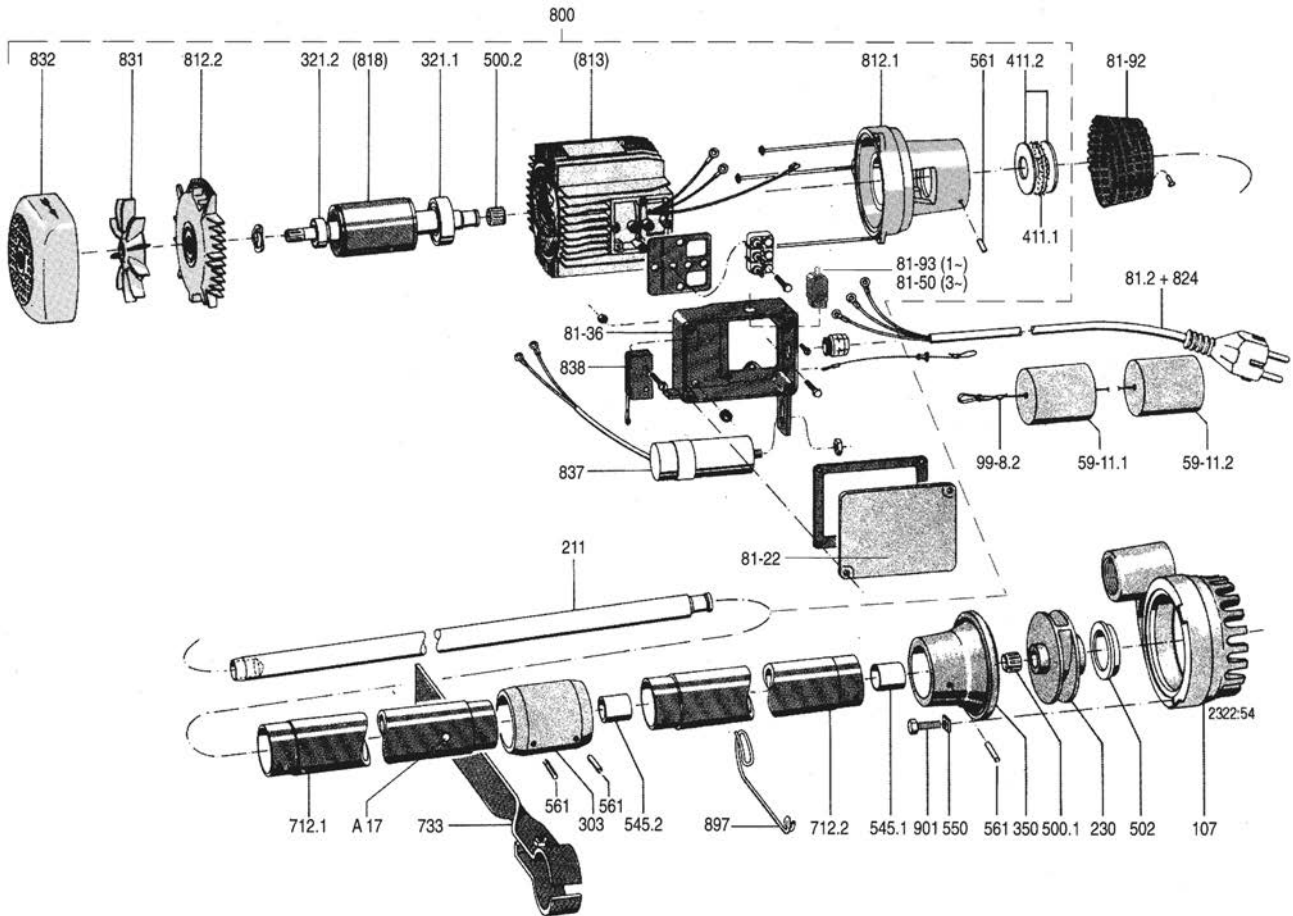
	Description	Mat. No.	[kg]
	Alarm strobe light, 12 V DC, IP65	01056355	0.3
	Horn, 12 V DC, 105 dB(A), 1.2 W, IP54	01086547	0.1
	Alarm combination, 12 V DC Alarm combination (alarm strobe light and piezo buzzer), 12 V DC, IP65	01139930	0.1

Control unit/switchgear accessories -  for Rotex 70 only!

	Item	Description	Type	Mat. No.	[kg]
	E60	Float switch with free cable end (NO contact) Switch housing made of polypropylene (max. fluid temperature 70 °C), circuit closed in upper float position, connection cable (H 07 RN-F3G1)	5 m	11037743	0.8
			10 m	11037744	1.3
			20 m	11037746	2.4

Exploded views and list of components

Rotex 10, 20



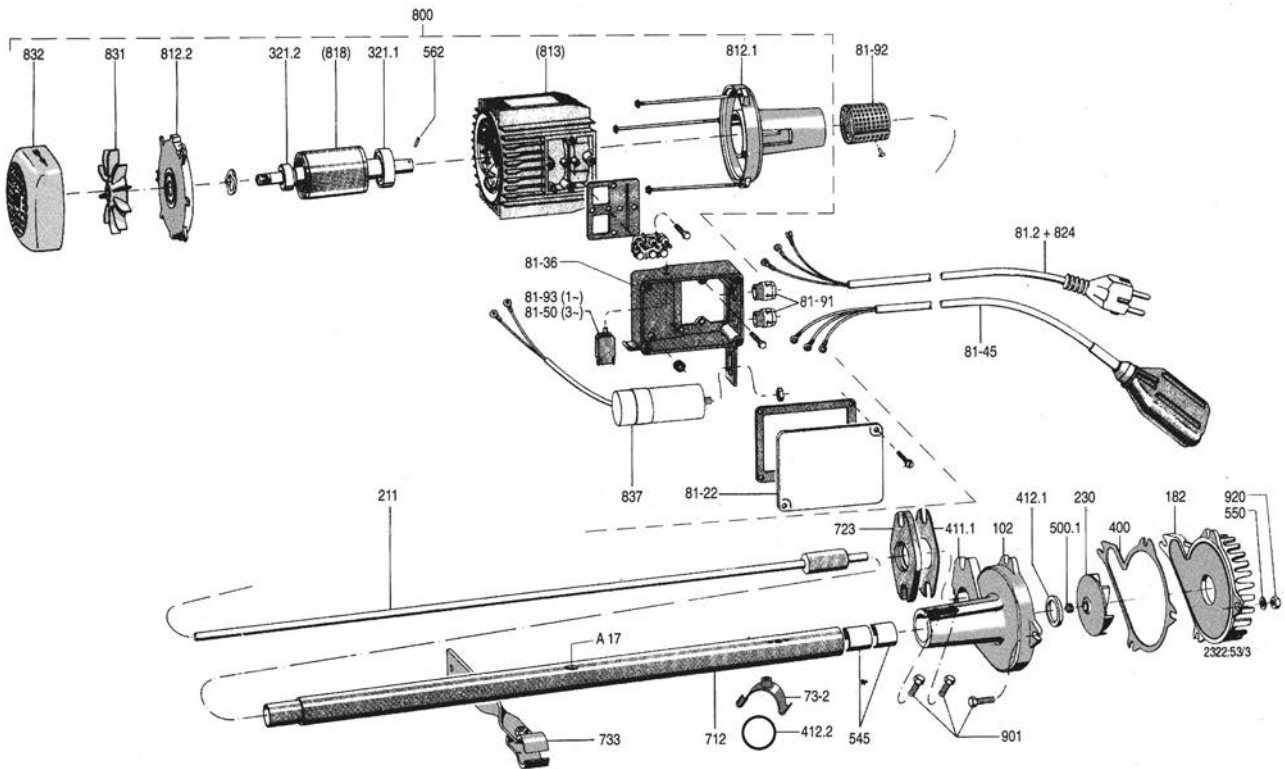
Exploded view - Rotex 10, 20 () = Not available as a separate spare part

List of components

Part No.	Description	Part No.	Description
107	Discharge casing	81-36	Terminal box base
211	Pump shaft	81-50	Contactor
230	Impeller	81-92	Cover plate
303 ⁴⁾	Thrust and radial bearing	81-93	Protective switch
321.1/2	Radial ball bearing	812.1/2	Motor housing cover
350	Bearing housing	813	Stator core pack
411.1/2	Joint ring	818	Rotor
500.1/2	Ring	824	Cable
502	Casing wear ring	831	Fan impeller
545.1/2 ⁴⁾	Bearing bush	832	Fan hood
550	Disc	837	Capacitor
561	Grooved pin	838	Switch
59-11.1/2	Weight	897	Guide piece
712.1/2 ⁴⁾	Support column	901	Hexagon head bolt
733	Pipe clamp	920	Nut
800	Motor	99-8.2	Thread
81-2	Plug	A 17	Overflow hole
81-22	Terminal box cover		

⁴⁾ Only included for installation depth 170 cm.

Rotex 70



Exploded view - Rotex 70 () = Not available as a separate spare part

List of components

Part No.	Description	Part No.	Description
102	Volute casing	81-22	Terminal box cover
182	Foot	81-36	Terminal box base
211	Pump shaft	81-45	Float switch
230	Impeller	81-50	Contactar
321.1/.2	Radial ball bearing	81-91	Cable gland
400	Gasket	81-92	Cover plate
411.1	Joint ring	81-93	Protective switch
412.1/.2	O-ring	812.1/.2	Motor housing cover
500.1	Ring	813	Stator core pack
545	Bearing bush	818	Rotor
550	Disc	824	Cable
562	Parallel pin	831	Fan impeller
712	Support column	832	Fan hood
723	Flange	837	Capacitor
73-3	Hose connection	901	Hexagon head bolt
733	Pipe clamp	920	Nut
800	Motor	A 17	Overflow hole
81-2	Plug		