

Service Water Circulator Pumps



Riotherm C 20-10



Riotherm C 40-70

Fields of Application

- Hot-water supply systems
- Hot-water heating systems
- Heat recovery systems
- Cooling circuits in air-conditioning systems

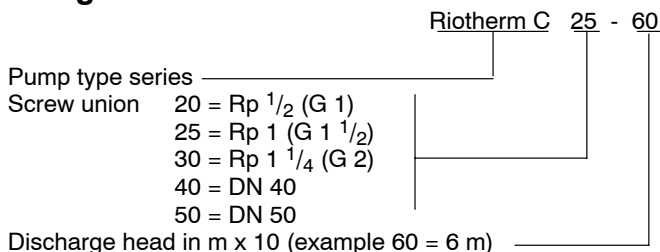
Fluid Handled

- Heated drinking water, recommended temperature range up to 65 °C.
- Clean water and/or water treated in accordance with the relevant regulations, not containing aggressive, abrasive or solid substances. Water mixed with commercial antifreeze agents based on glycols (mixture ratio max. 1 : 1) with inhibitors (antirust). If the glycol content exceeds 20 %, the operating data must be checked and verified.

Operating Data

	Screw-ended pumps	Flanged pumps
Rp	1/2, 1 and 1 1/4	DN 40 and DN 50
Q	up to 28 m ³ /h, 7.8 l/s	
H	up to 5.6 m	up to 7.5 m
P ₁	up to 99 W	up to 625 W
p	up to 10 bar	up to 10 bar
t	heating water: - 10 °C up to +110 °C service water up to 18 °dH 65 °C	- 10 °C up to +110 °C up to 20 °dH 80 °C short term (2 h) + 110 °C

Designation



Design

Maintenance-free wet rotor pump (glandless) flanged or screw-ended.

Materials

Volute casing	bronze / GG
Shaft	ceramics / chrome steel
Impeller	plastic
Bearings	graphite

Bearings

Graphite plain bearings lubricated by the fluid handled.

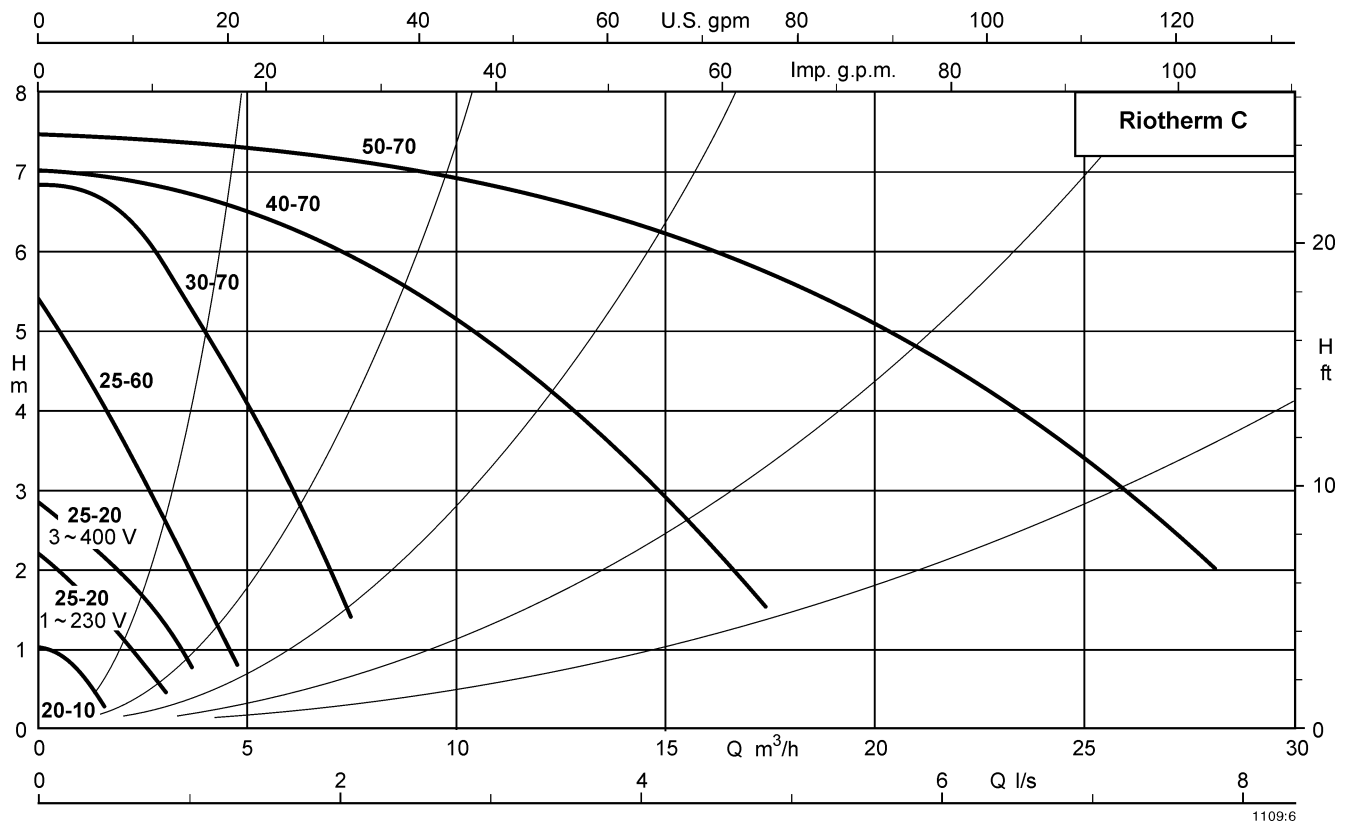
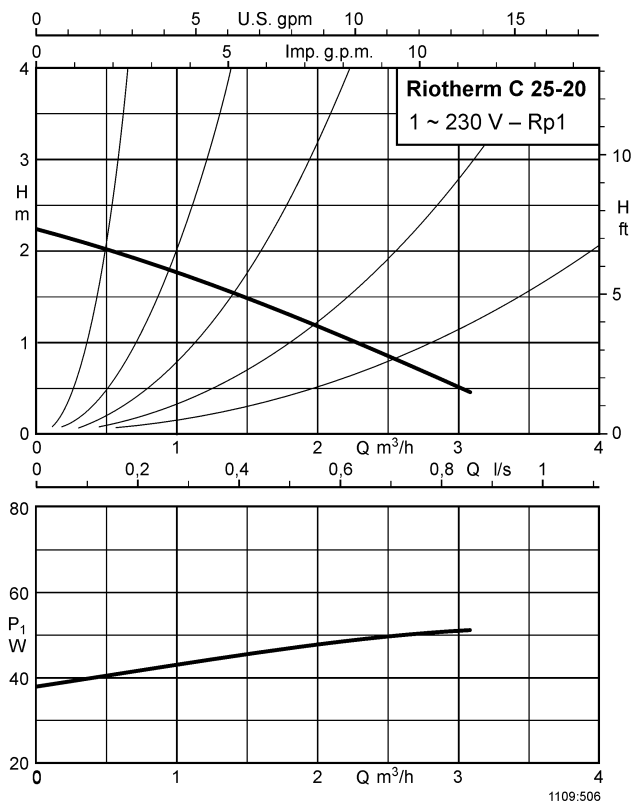
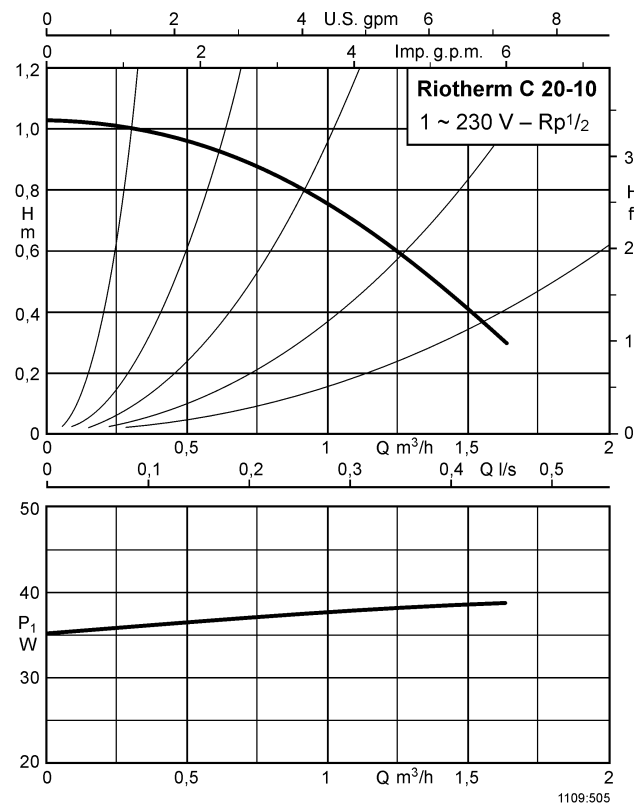
Drive

Rp 1/2 and Rp 1

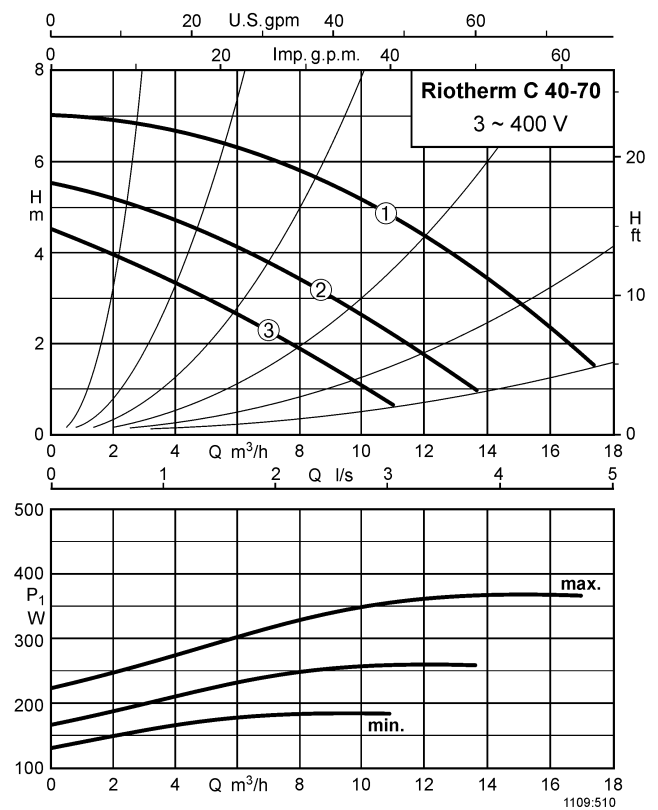
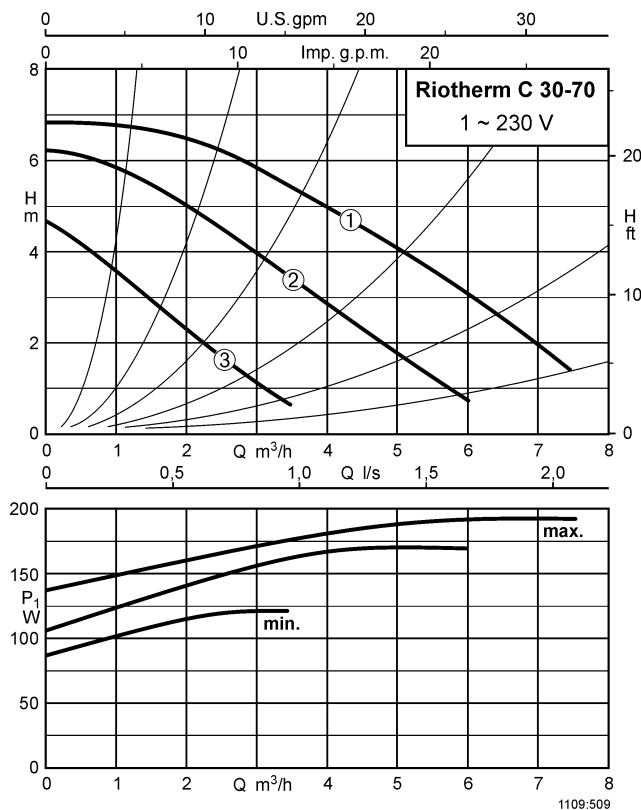
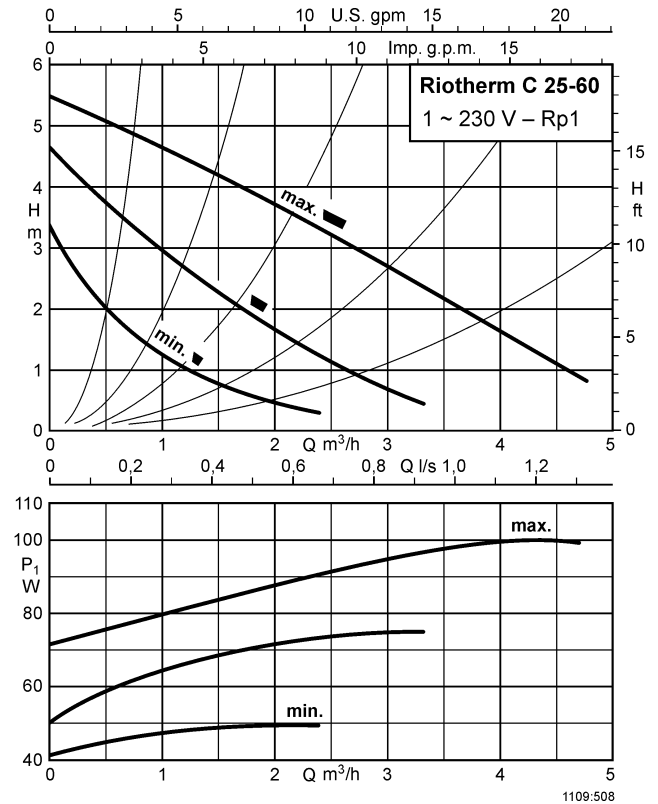
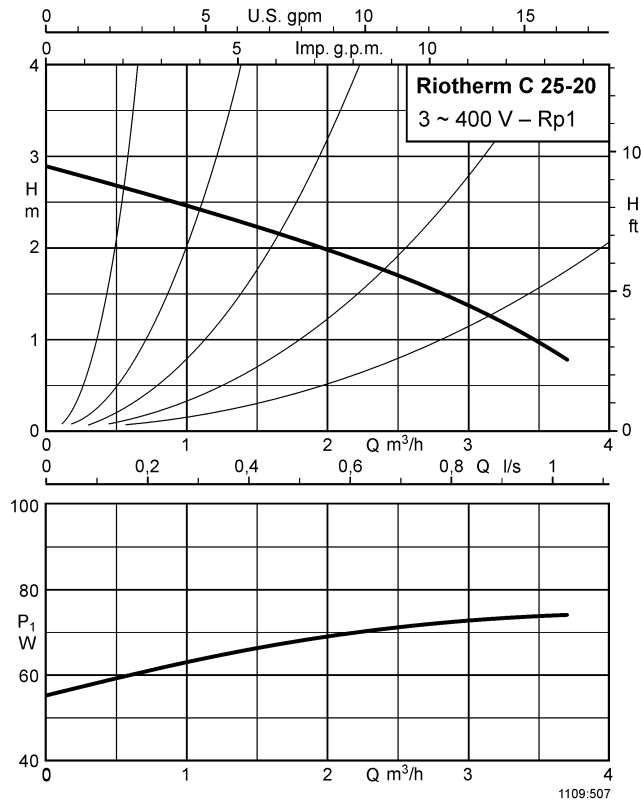
Overload-proof canned motor (additional motor protection is not required), IP 44, thermal class F.

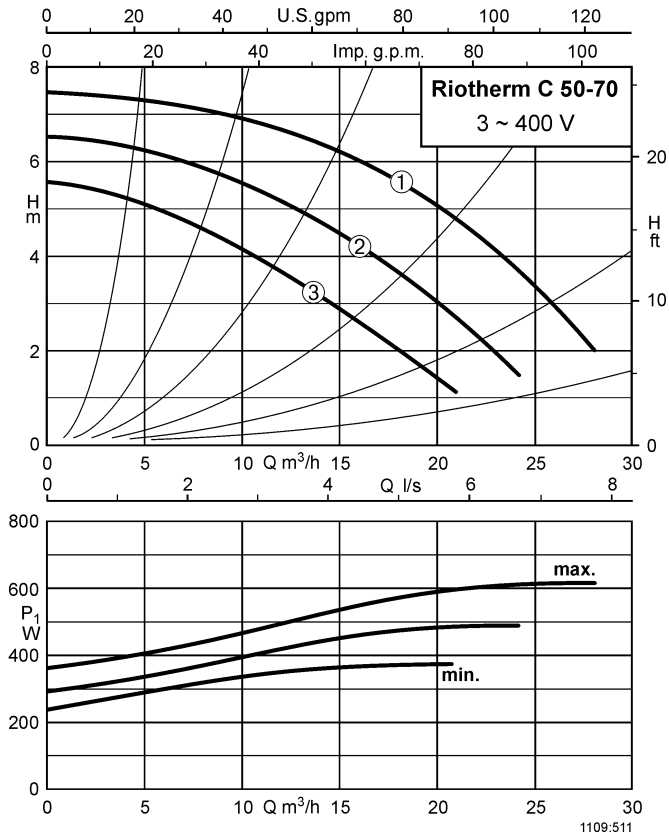
Rp 1 1/4, DN 40 and DN 50

Canned motor, IP 43, thermal class F, radio interference suppression class N.

Selection Chart

Individual Characteristic Curves


Individual Characteristic Curves



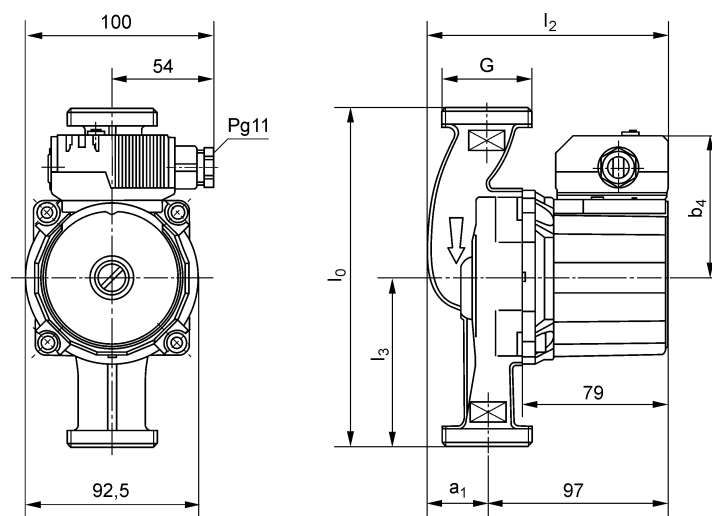

Minimum Pressure at the Suction Nozzle

Installation height	Temperature in °C	bar
≤ 300 m	50	0.05
	75	0.3
	90	0.6
	110	1.3
>300 m		+0.01 bar/100 m

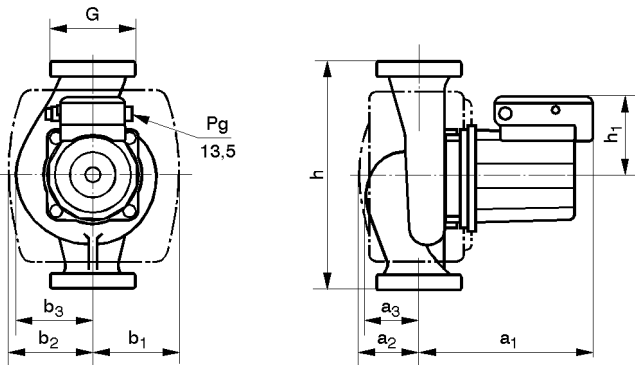
Technical Data

Riotherm C	Casing material	ISO 7/1	ISO 228	Speed level	Speed	Power input	Rated current			Ident. No.	kg
		Rp/DN	G		1/min	P ₁ in W	1~230 V I in A	3~230 V I in A	3~400 V I in A		
20-10	Bronze	1/2	1	-	1700	36 - 38	0.18	-	-	29 130 388	2.2
25-20	Bronze	1	1 1/2	-	2300	38 - 49	0.22	-	-	29 130 389	2.4
25-20	Bronze	1	1 1/2	-	2650	55 - 72	-	-	0.16	29 130 390	2.7
25-60	Bronze	1	1 1/2	1	2700	73 - 99	0.41	-	-	29 130 391	2.8
				2	2500	52 - 74	0.32	-			
				3	2100	39 - 49	0.22	-			
30-70	Bronze	1 1/4	2	1	2800	140 - 195	0.95	-	-	29 130 392	5.0
				2	2300	110 - 175	0.87	-			
				3	1800	95 - 120	0.62	-			
40-70	GG	40	-	1	2600	220 - 370	-	1.31	0.76	29 130 393	11.0
				2	2100	165 - 260	-	0.81	0.47		
				3	1800	130 - 185	-	0.57	0.33		
50-70	GG	50	-	1	2800	360 - 625	-	2.13	1.23	29 130 394	16.0
				2	2450	290 - 495	-	1.51	0.87		
				3	2150	245 - 380	-	1.17	0.68		

	for Riotherm C	Ident. No.	Weight
	40-70 50-70		kg
Switch plug 3~230 V	x	01 084 050	0.2

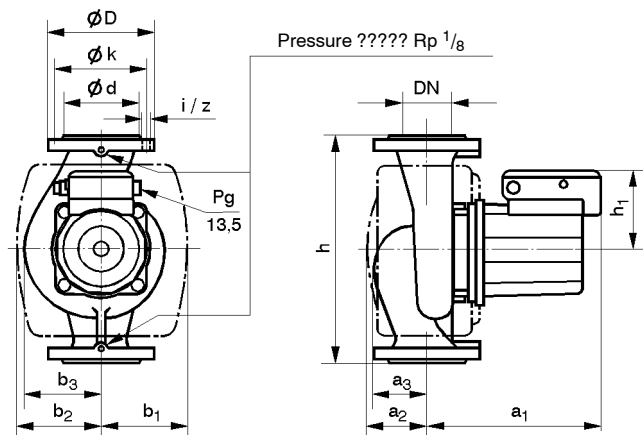
Outline Drawings


Riotherm C	l ₀	l ₂	l ₃	a ₁	b ₄
20-10	140	130	70	34	73
25-20	180	130	70	34	73
25-60	180	130	90	33	76


Dimension Table

Riotherm C	a ₁	a ₂	a ₃	b ₁	b ₂	b ₃	h	h ₁
30-70	171	63	40	90	90	66	180	92

Flanges PN 6 to DIN 2531, flanges PN 16 to DIN 2533

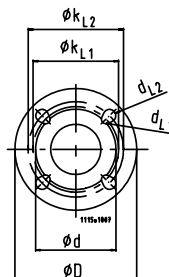

Dimension Table

Riotherm C	a ₁	a ₂	a ₃	b ₁	b ₂	b ₃	h	h ₁
40-70	190	70	47	98	98	78	250	103
50-70	222	90	63	115	115	91	280	110

Flanges PN 6 to DIN 2531, flanges PN 16 to DIN 2533

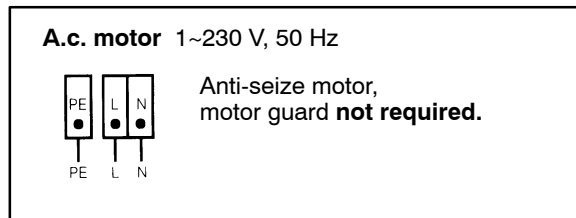
Flange Dimensions

Adapter flange	ØD	Ød	Ø _{k_{L1}} /k _{L2}		n x d _{L1} /d _{L2}	
			PN 6	PN 10	PN 6	PN 10
DN 40	150	88	100	110	4xØ14	4xØ19
DN 50	165	102	110	125	4xØ14	4xØ19

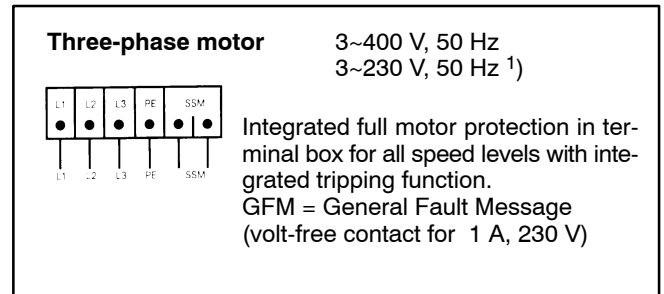


Wiring Diagram Riotherm C

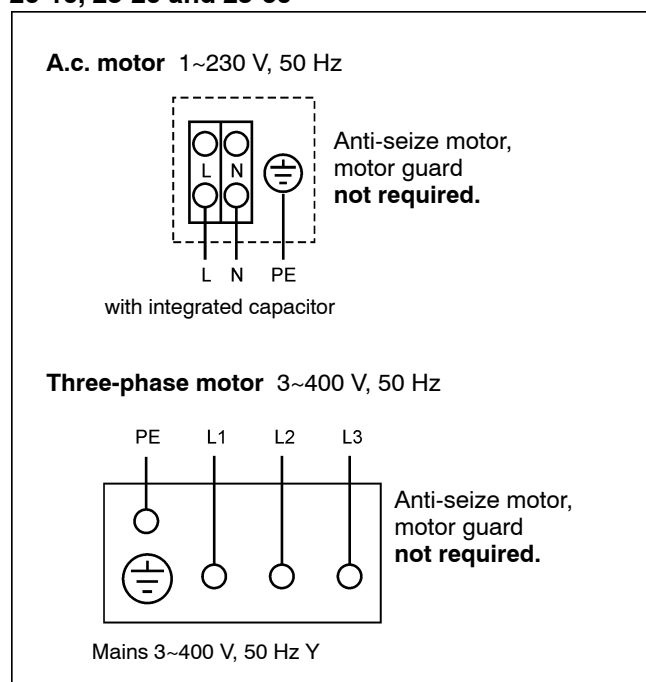
**for size:
30-70**



**for sizes:
40-70 and 50-70**



**for sizes
20-10, 25-20 and 25-60**



¹⁾ with switch plug (see accessories, page 5)

Universal use

Cable entry possible at either side



Reliable operation

- Impeller made of glass-fibre reinforced plastic
- Shaft made of ceramics material / corrosion resistant nickel steel
- Wear resistant carbon plain bearings, protected against brief dry running
- Seizure resistant motor

Energy saving


Heat insulation as a standard (from Riotherm C 30-70)



Reliable operation

- Impeller made of glass-fibre reinforced plastic
- Wear resistant carbon plain bearings, protected against brief dry running
- Seizure resistant motor (Riotherm C 30-70)
- Integrated full motor protection (from Riotherm C 40-70)

Accessories

		Screw union		Ident No.	~kg
		Pipe end	Pump end		
 <p>Screw union sets with internal thread union end made of gun metal union nut made of brass</p>		Rp 1/2	G 1	18 040 915	0.5
		Rp 1	G 1 1/2	18 040 916	0.7
		Rp 1 1/4	G 2	18 040 917	0.9

Subject to technical modifications without prior notice.

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