

rotork® Gears



AB-PR Quarter-turn Gear Series

The Rotork Gears Series 'AB-PR' quarter-turn gear operators are rugged, industrial grade products manufactured with cast iron housing components.

All models in this series feature a polyurethane coating and high performance axial bearings. These gear operators are well suited for applications in chemical, power, waterworks, HVAC and most general industrial applications.

Application

Rotork Gears series 'AB-PR' operators are quarter-turn devices intended for the operation of ball, plug and butterfly valves as well as power and process dampers.

The handwheels are available in a variety of sizes for smooth and easy operation.

Features

- Cast iron housing (ductile iron optional)
- Protected steel input shaft (stainless steel optional)
- 15 models up to 32.000 Nm (283.224 lbf.in) output
- Rugged construction
- Axial thrust bearings
- Stroke: 0 - 90° ($\pm 5^\circ$ adjustable).

AB-PR Quarter-turn Cast Iron Housing Gearboxes

Options

- Padlockable Flange
- Limit switches
- High Temperature to +200 °C
- Low Temperature to -60 °C
- Chainwheels
- Flexible Extensions
- Remote Position Indicator (ECL)
- Firesafe to ISO 10497
- Interlock Safety System
- Oxygen and Food Grade grease applications

Environmental Specification

- Standard Enclosure:
N type sealed to IP67 for standard environment
- Optional Enclosure:
W type sealed to IP68 for submerged applications up to depth 1 metre for 72 hours according to EN60529:1991/14.2.8
CS type suitable for continuous submerged duty up to a maximum depth of 15 metres
G type sealed to IP68 for buried service applications
- Temperature:
-20 to +120 °C (-4 to +250 °F)

AB-PR Quarter-turn Gearboxes

Type	Ratio	Torque Nm (lbf.in)		M.A. ±15%	Max.Stem Height (mm)	Weight kg (lbs)
		Output	Input			
AB150	40 : 1	150 (1328)	16 (138)	9.6	48.5/*50.5	2 (5) / *3 (7)
AB210	37 : 1	330 (2921)	28 (252)	11.6	54	4 (8) / *6 (12)
AB215	37 : 1	500 (4425)	43 (381)	11.6	54	4 (8) / *6 (12)
AB550	34 : 1	1000 (8851)	83 (738)	12	79	9 (19) / *12 (25)
AB880	38 : 1	2000 (17702)	152 (1341)	13.2	82	14 (31) / *17 (38)
AB1250	55 : 1	3250 (28765)	171 (1514)	19	91	22 (49) / *28 (61)
AB1950	52 : 1	5500 (48679)	289 (2562)	19	111 /*114	32 (71) / *45 (99)
AB2000	109 : 1	4500 (39828)	136 (1207)	33	111	24 (53) / *27 (60)
AB1950/PR4	217 : 1	7000 (61955)	106 (939)	66	111 /*114	39 (85) / *52 (115)
AB3000/PR4	243 : 1	9000 (79657)	111 (983)	81	121 /*123	49 (108) / *55.7 (123)
AB3000/PR6	348 : 1	11000 (97358)	104 (918)	106	121 /*123	51 (112) / *57 (126)
AB6800/PR4	326 : 1	12500 (110634)	130 (1152)	96	121 /*142	62.5 (138) / *92.5 (204)
AB6800/PR6	468 : 1	17000 (150463)	121 (1075)	140	121 /*142	64.2 (142) / *94.2 (208)
A200/PR10	729 : 1	26000 (230120)	124 (1096)	210	165	134.4 (296)
A250/PR10	729 : 1	32000 (283224)	142 (1259)	225	169	219.4 (484)

*Dimensions if the large base housing is used.

The static safety factor is 1.5.

The published M.A. is achieved after a few cycles.

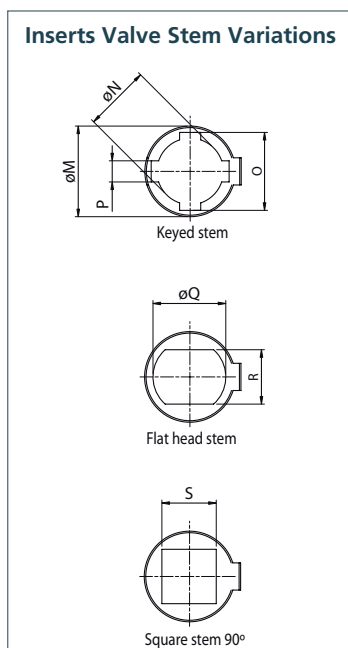
Type	Dimensions Maximum (Inserts)						
	ØM	ØN	O	P	ØQ	R	S
AB150	25 (0.98)	15 (0.59)	19.6 (0.77)	5 (0.2)	18.1 (0.71)	14 (0.55)	14 (0.55)
AB210	32.15 (1.27)	20 (0.79)	25.6 (1.01)	6 (0.24)	22.2 (0.87)	17 (0.67)	17 (0.67)
AB215	32.15 (1.27)	20 (0.79)	25.6 (1.01)	6 (0.24)	22.2 (0.87)	17 (0.67)	17 (0.67)
AB550	45.3 (1.78)	30 (1.18)	36.6 (1.44)	8 (0.31)	36.2 (1.43)	27 (1.06)	27 (1.06)
AB880	60 (2.36)	44 (1.73)	50.6 (1.99)	12 (0.47)	48.2 (1.90)	36 (1.42)	36 (1.42)
AB1250	60 (2.36)	44 (1.73)	50.6 (1.99)	12 (0.47)	48.2 (1.90)	36 (1.42)	36 (1.42)
AB1950	TBC	TBC	TBC	TBC	TBC	TBC	TBC

Inserts are not retained in the gearbox, please specify if required.

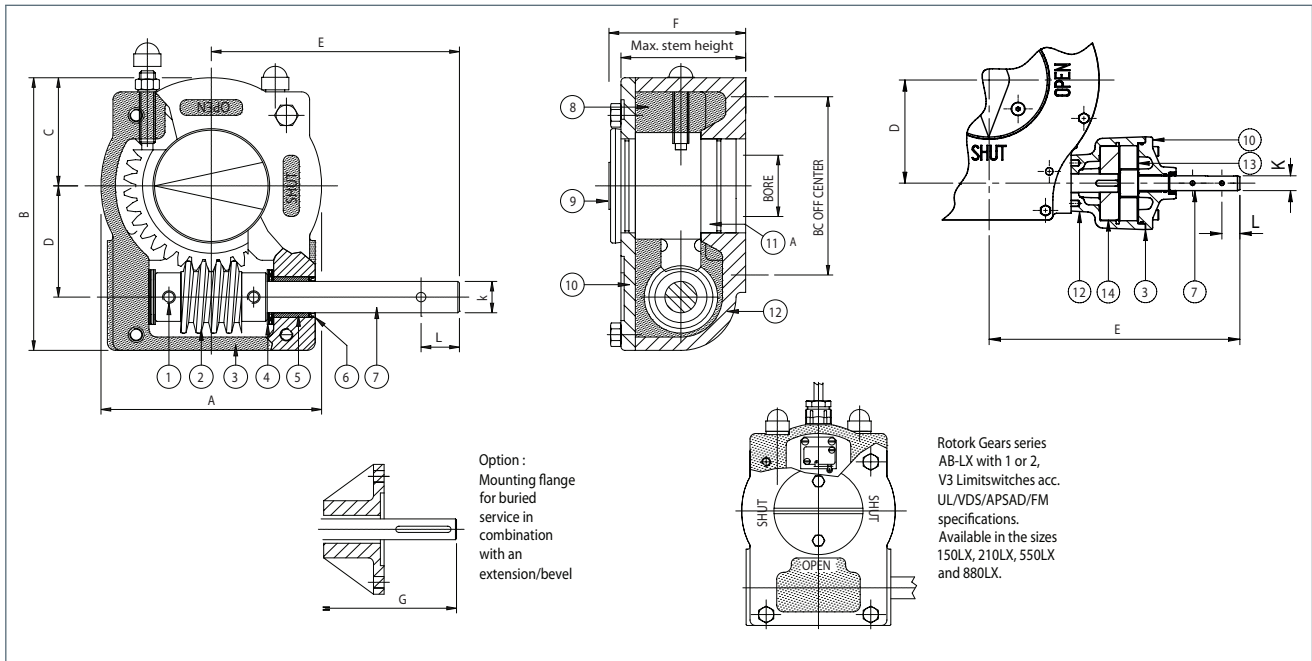
Material specification for Rotork AB-PR Quarter-turn Gear Series

No.	Description	Material	Notes
1	Set-screw	Carbon Steel	DIN915 / grade 12.9
2	Worm	Carbon Steel	C45 / AISI1045
3	Gasket	Liquid seal	-
4	Axial-Bearing	Hardened Steel	-
5	Bushing	P10, P14	PAP
6	Oil-seal	Nitrile	-
7	Shaft	Protected Steel	C45 / AISI1045 (For PR the material is 40Cr Low Alloy Steel)
8	Grease	Renolit CLX2	-
9	Position indicator	Scanblend FS7 PC/ASA	-
10	Coverplate	Cast Iron	GG25 / ASTM A48-40
11	Quadrant	Ductile Iron	GGG40 / ASTM D60-40-18
11A	Quadrant AB215 / AB1250 / A200	Ductile Iron	GGG50 / ASTM D70-50-05
12	Body	Cast Iron	GG25 / ASTM A48-40
13	Gear	Carbon Steel	C45 / AISI1045
14	Carrier	Steel	EN8 / GB/T 699 GRADE 45

Note: Due to the company's policy of continuous improvement, Rotork Gears reserves the right to change specification details without prior notice. Protected steel and stainless steel available. Ductile Iron housing available as option.



AB-PR Quarter-turn Gearboxes

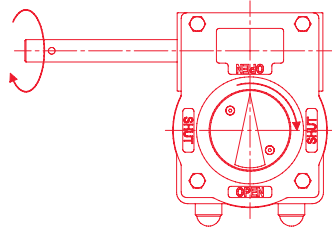


Type	A	B	C	D	E	F	G	ØK	L	Valve Connection BC acc. ISO 5211	Bore Max.	Max. Square Bore AF
AB150	80 (3,15)	124 (4,88)	58 (2,28)	42,5 (1,67)	99,5 (3,92)	54,5 (2,15)	-	12 (0,47)	14 (0,55)	F04-F05-F07	20 (0,78)	17 (0,67)
AB150 LB	94 (3,70)	124 (4,88)	58 (2,28)	42,5 (1,67)	99,5 (3,92)	56,5 (2,22)	-	12 (0,47)	14 (0,55)	F10	20 (0,78)	17 (0,67)
AB210	102 (4,02)	127,5 (5,02)	48 (1,89)	52 (2,05)	159 (6,26)	63 (2,48)	146 (5,75)	15 (0,59)	14 (0,55)	F05-F07-F10	30 (1,18)	24 (0,94)
AB210 LB	150 (5,91)	155 (6,10)	75 (2,95)	52 (2,05)	159 (6,26)	63 (2,48)	NP	15 (0,59)	14 (0,55)	F12	30 (1,18)	24 (0,94)
AB215	102 (4,02)	127,5 (5,02)	48 (1,89)	52 (2,05)	159 (6,26)	63 (2,48)	146 (5,75)	15 (0,59)	14 (0,55)	F05-F07-F10	30 (1,18)	24 (0,94)
AB215 LB	150 (5,91)	155 (6,10)	75 (2,95)	52 (2,05)	159 (6,26)	63 (2,48)	NP	15 (0,59)	14 (0,55)	F12	30 (1,18)	24 (0,94)
AB550	138 (5,43)	174 (6,85)	69 (2,72)	71 (2,80)	201 (7,91)	88 (3,46)	170 (6,69)	20 (0,79)	24 (0,95)	F07-F10-F12-F14	45 (1,77)	38 (1,50)
AB550 LB	210 (8,27)	174 (6,85)	69 (2,72)	71 (2,80)	201 (7,91)	88 (3,46)	183 (7,20)	20 (0,79)	24 (0,95)	F16	45 (1,77)	38 (1,50)
AB880	200 (7,87)	226 (8,90)	100 (3,94)	86 (3,39)	189 (7,44)	92,5 (3,64)	182 (7,17)	20 (0,79)	24 (0,95)	F10-F12-F14-F16	60 (2,36)	46 (1,81)
AB880 LB	260 (10,24)	256 (10,07)	130 (5,11)	86 (3,39)	189 (7,44)	92,5 (3,64)	NP	20 (0,79)	24 (0,95)	PCD 220 8 x M16	60 (2,36)	46 (1,81)
AB1250	220 (8,66)	258 (10,16)	110 (4,33)	104,5 (4,11)	230 (9,06)	102 (4,02)	200 (7,87)	20 (0,79)	24 (0,95)	F10-F12-F14-F16	65 (2,56)	50 (1,97)
AB1250 LB	285 (11,22)	291 (11,44)	143 (5,61)	104,5 (4,11)	230 (9,06)	102 (4,02)	NP	20 (0,79)	24 (0,95)	F25	65 (2,56)	50 (1,97)
AB1950	285 (11,22)	322,5 (12,70)	142,5 (5,61)	130 (5,12)	275 (10,83)	126 (4,96)	204 (8,03)	25 (0,98)	28 (1,10)	F12-F14-F16-F25	80 (3,15)	60 (2,36)
AB1950 LB	350 (13,8)	355 (14)	175 (6,9)	130 (5,12)	275 (10,83)	129 (5,07)	232 (9,13)	25 (0,98)	28 (1,10)	F30	80 (3,15)	60 (2,36)
AB2000	214 (8,44)	255 (10,04)	106 (4,17)	53 (2,09)	232 (9,13)	121 (4,76)	-	20 (0,79)	24 (0,95)	F12-F14-F16	80 (3,15)	60 (2,36)
AB2000 LB	285 (11,22)	293 (11,54)	142 (5,59)	53 (2,09)	232 (9,13)	121 (4,76)	232 (9,13)	20 (0,79)	24 (0,95)	F16-F25	80 (3,15)	60 (2,36)
AB1950/PR4	285 (11,22)	322,5 (12,70)	142,5 (5,61)	130 (5,12)	301 (11,85)	126 (4,96)	301 (11,85)	20 (0,79)	24 (0,95)	F12-F14-F16-F25	80 (3,15)	60 (2,36)
AB1950LB/PR4	350 (13,8)	355 (14)	175 (6,9)	130 (5,12)	329 (12,95)	129 (5,07)	329 (12,95)	20 (0,79)	24 (0,95)	F30	80 (3,15)	60 (2,36)
AB3000/PR4	293 (11,52)	337 (13,25)	142 (5,58)	140 (5,51)	314 (12,36)	153 (6,02)	314 (12,36)	20 (0,79)	24 (0,95)	F16-F25	100 (3,94)	75 (2,95)
AB3000LB/PR4	351 (13,81)	372 (14,66)	175 (6,89)	140 (5,51)	314 (12,38)	155 (6,10)	314 (12,38)	20 (0,79)	24 (0,95)	F30	100 (3,94)	75 (2,95)
AB3000/PR6	293 (11,52)	337 (13,25)	142 (5,58)	140 (5,51)	314 (12,36)	153 (6,02)	314 (12,36)	20 (0,79)	24 (0,95)	F16-F25	100 (3,94)	75 (2,95)
AB3000LB/PR6	351 (13,81)	372 (14,66)	175 (6,89)	140 (5,51)	314 (12,38)	155 (6,10)	314 (12,38)	20 (0,79)	24 (0,95)	F30	100 (3,94)	75 (2,95)
AB6800/PR4	370 (14,57)	407 (16)	170 (6,69)	182 (7,17)	354 (13,94)	159 (6,26)	354 (13,94)	20 (0,79)	24 (0,95)	F16-F25-F30	100 (3,94)	75 (2,95)
AB6800BB/PR4	370 (14,57)	407 (16)	170 (6,69)	182 (7,17)	354 (13,94)	159 (6,26)	354 (13,94)	20 (0,79)	24 (0,95)	F25-F30	120 (4,56)	90 (3,56)
AB6800LB/PR4	415 (16,34)	445 (17,52)	207,5 (8,17)	182 (7,17)	354 (13,94)	193 (7,60)	354 (13,94)	20 (0,79)	24 (0,95)	F35	100 (3,94)	75 (2,95)
AB6800BBLB/PR4	415 (16,34)	445 (17,52)	207,5 (8,17)	182 (7,17)	354 (13,94)	193 (7,60)	354 (13,94)	20 (0,79)	24 (0,95)	F35	120 (4,56)	90 (3,56)
AB6800/PR6	370 (14,57)	407 (16)	170 (6,69)	182 (7,17)	354 (13,94)	159 (6,26)	354 (13,94)	20 (0,79)	24 (0,95)	F16-F25-F30	100 (3,94)	75 (2,95)
AB6800BB/PR6	370 (14,57)	407 (16)	170 (6,69)	182 (7,17)	354 (13,94)	159 (6,26)	354 (13,94)	20 (0,79)	24 (0,95)	F25-F30	120 (4,56)	90 (3,56)
AB6800LB/PR6	415 (16,34)	445 (17,52)	207,5 (8,17)	182 (7,17)	354 (13,94)	193 (7,60)	354 (13,94)	20 (0,79)	24 (0,95)	F35	100 (3,94)	75 (2,95)
AB6800BBLB/PR6	415 (16,34)	445 (17,52)	207,5 (8,17)	182 (7,17)	354 (13,94)	193 (7,60)	354 (13,94)	20 (0,79)	24 (0,95)	F35	120 (4,56)	90 (3,56)
A200/PR10	440 (17,32)	492 (19,35)	207,5 (8,17)	209 (8,22)	374,5 (14,74)	215 (8,46)	374,5 (14,74)	20 (0,79)	24 (0,95)	F25-F30-F35	160 (6,29)	115 (4,52)
A250/PR10	510 (20,08)	585 (23)	235 (9,25)	256 (10,08)	414,5 (16,32)	224 (8,80)	414,5 (16,32)	20 (0,79)	24 (0,95)	F25-F30-F35-F40	160 (6,29)	115 (4,52)

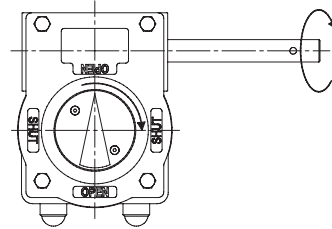
LB is large base housing. BB is Big Bore. NP means not possible with large base housing. FA Valve connection available. All dimensions in millimetres (inches).

Customer Drive and Orientation Options

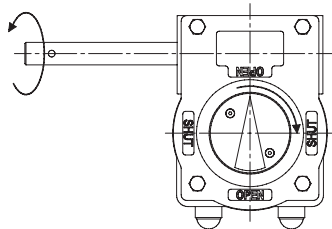
Input Shaft Projection
Without Input Reducer



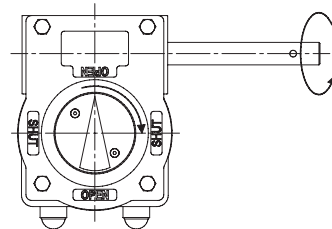
Left Hand (A2)
Clockwise In / Clockwise Out
Standard Build



Right Hand (B1)
Clockwise In / Clockwise Out

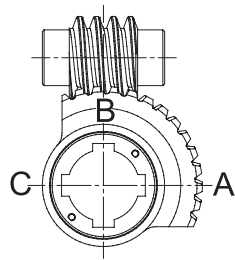


Left Hand (A1)
Anti-Clockwise In / Clockwise Out

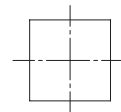


Right Hand (B2)
Anti-Clockwise In / Clockwise Out

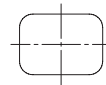
Keyway and Drive Positions
Shown in Closed Position



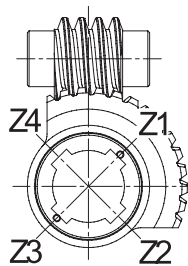
Keyway In Closed Position
On Center



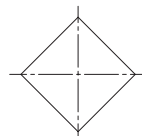
Square Bore
Parallel
(Flats on Center)



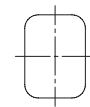
Slotted Bore
Flats Across
Flowline



Keyway In Closed Position
Off Center



Square Bore
Diagonal
(Flats Off Center)



Slotted Bore
Flats On
Flowline

AB-PR Quarter-turn Gearboxes



AB880 + Soldo Switchbox +
Direct Mount Chainwheel



AB1950 + MW100 90° Bevel
+ extension + ECL + HW



A200N PR10

IP RATING AND SPECIFICATION FOR AB-PR SERIES GEARBOXES

Service:	Standard Duty	Marinised Duty	Buried Service Duty	Continuous Submerged Duty
Duty	N	W	G	CS
IP Rating	IP67	IP68	IP68	IP68
Time and Depth	30 min to a depth of 1 metre	72 hours to a depth of 1 metre in clean water.	Buried service	Continuously submerged to a depth of 15 metres.
Input Shafts	C45 Carbon Steel or 40Cr Low Alloy Steel, Electrophoresis protection	Stainless Steel 303 or Stainless Steel 431	Stainless Steel 303 or Stainless Steel 431	Stainless Steel 316 or F53 Super Duplex
Fasteners	Steel	Stainless Steel A4	Stainless Steel A4	Stainless Steel A4
Position Indicator	FS7 (plastic) up to AB3000 and Metal for A6800 and above	Powder coated Metal with O-Ring	Metal Non-rotating plate	Non-rotating plate. If indication is required it will be in SS316

Handwheel Selection Chart

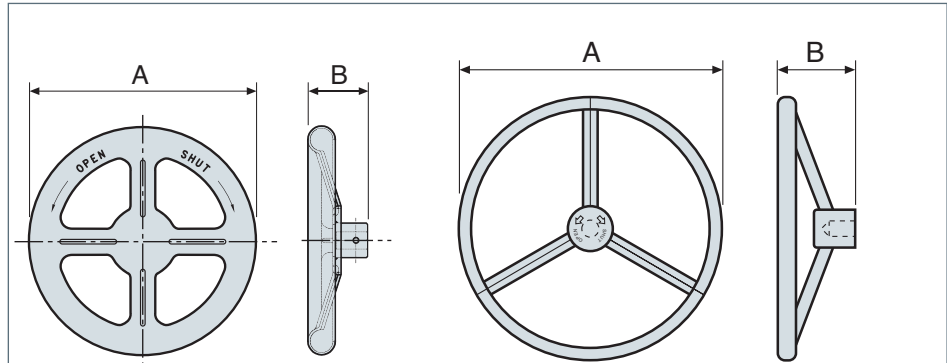
Input Torque

Type	M.A. ± 15%
AB150	9.6
AB210	11.6
AB215	11.6
AB550	12
AB880	13.2
AB1250	19
AB1950	19
AB2000	33
AB1950/PR4	66
AB3000/PR4	81
AB3000/PR6	106
AB6800/PR4	96
AB6800/PR6	140
A200/PR10	210
A250/PR10	225

Dimensions

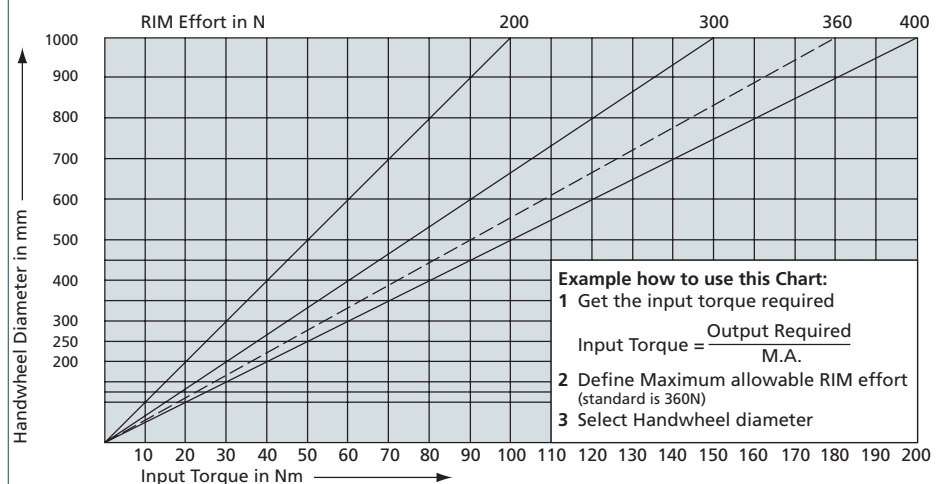
Type	A	B
PS100-12	Ø100 (4")	35 (1,38")
PS125-12	Ø125 (5")	34 (1,34")
PS125-15		48 (1,89")
PS160-12	Ø160 (6")	48 (1,89")
PS160-15		49 (1,93")
PS200-12	Ø200 (8")	51 (2,00")
PS200-15		52 (2,05")
PS200-20		63 (2,48")
PS250-12	Ø250 (10")	63 (2,48")
PS250-15		63 (2,48")
PS250-20		70 (2,76")

Type	A	B
SG200	Ø200 (8")	80 (3,15")
SG250	Ø250 (10")	110 (4,33")
SG300	Ø300 (12")	115 (4,53")
SG350	Ø350 (14")	120 (4,72")
SG400	Ø400 (16")	130 (5,12")
SG450	Ø450 (18")	150 (5,91")
SG500	Ø500 (20")	150 (5,91")
SG600	Ø600 (24")	150 (5,91")
SG700	Ø700 (28")	150 (5,91")
SG800	Ø800 (32")	150 (5,91")
SG900	Ø900 (36")	160 (6,30")
SG1000	Ø1000 (40")	160 (6,30")



PS series handwheel

SG series handwheel



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A full listing of the Rotork sales and service network is available on our website.

www.rotork.com