rotork®
Gears

AB-PR Quarter-turn

Cast Iron Housing Gearboxes

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 283.224 lbf.in output
- Rugged construction
- Axial thrust bearings
- Stroke: 0 - 90° (± 5° adjustable).

Options

- Padlockable Flange
- Limit switches
- High Temperature to +392 °F
- Low Temperature to -76°F
- 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 3 feet for 72 hours according to EN60529:1991/14.2.8

  CS type suitable for continuous submerged duty up to a maximum depth of 66 feet

  G type sealed to IP68 for buried service applications
- Temperature:

  -4 to +250 °F

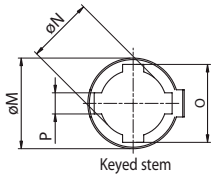
Type	Ratio	Torque lbf.in		M.A. ±15%	Max.Stem Height (inch)	Weight lb
		Output	Input			
AB150	40 : 1	1328	138	9.6	1.91 /*1.98	5 / *7
AB210	37 : 1	2921	252	11.6	2.13	8 / *12
AB215	37 : 1	4425	381	11.6	2.13	8 / *12
AB550	34 : 1	8851	738	12	3.11	19 / *25
AB880	38 : 1	17702	1341	13.2	3.23	31 / *38
AB1250	55 : 1	28765	1514	19	3.58	49 / *61
AB1950	52 : 1	48679	2562	19	4.37/*4.48	71 / *99
AB2000	109 : 1	39828	1207	33	4.37	53 / *60
AB1950/PR4	217 : 1	61955	939	66	4.37 /*4.48	85 / *115
AB3000/PR4	243 : 1	79657	983	81	4.76 /*4.84	108 / *123
AB3000/PR6	348 : 1	97358	918	106	4.76 /*4.84	112 / *126
AB6800/PR4	326 : 1	110634	1152	96	4.76 /*5.59	138 / *204
AB6800/PR6	468 : 1	150463	1075	140	4.76 /*5.59	142 / *208
A200/PR10	729 : 1	230120	1096	210	6.49	296
A250/PR10	729 : 1	283224	1259	225	6.65	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.

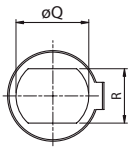
Type	Dimensions Maximum (Inserts)						
	ØM	ØN	O	P	ØQ	R	S
AB150	0.98	0.59	0.77	0.20	0.71	0.55	0.55
AB210	1.27	0.79	1.01	0.24	0.87	0.67	0.67
AB215	1.27	0.79	1.01	0.24	0.87	0.67	0.67
AB550	1.78	1.18	1.44	0.31	1.43	1.06	1.06
AB880	2.36	1.73	1.99	0.47	1.90	1.42	1.42
AB1250	2.36	1.73	1.99	0.47	1.90	1.42	1.42
AB1950	TBC	TBC	TBC	TBC	TBC	TBC	TBC

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

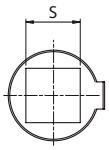
Inserts Valve Stem Variations



Keyed stem



Flat head stem



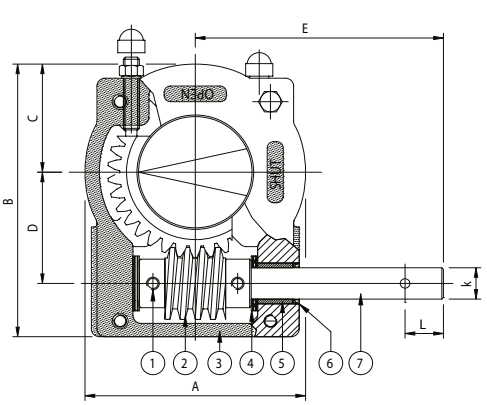
Square stem 90°

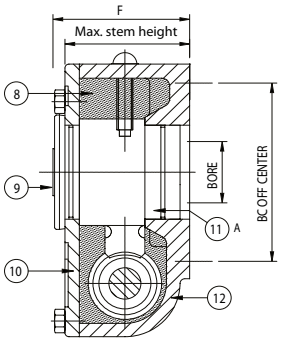
Material specification for Rotork AB-PR Quarter-turn Gear Series

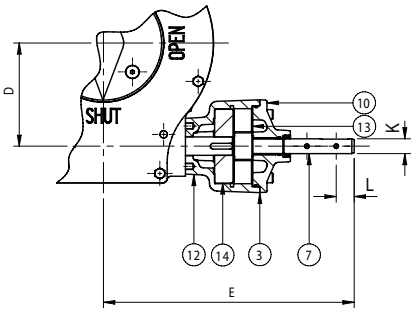
No.	Description	Material	Notes
1	Set-screw	Carbon Steel	DIN915 / grade 12.9
2	Worm	Carbon Steel	C45 / AISI1045
3	Gasket	Liquid seal	-
4	Axial-Bearing	Hardened Steel	-
5	Bushing	P10, P14	PAP
6	Oil-seal	Nitrile	-
7	Shaft	Protected Steel	C45 / AISI1045 (For PR the material is 40Cr Low Alloy Steel)
8	Grease	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

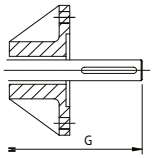
Note: Due to the company's policy of continuous improvement, Rotork Gears reserves the right to change specification details without prior notice.
Protected steel and stainless steel available. Ductile Iron housing available as option.

AB-PR Quarter-turn Gearboxes

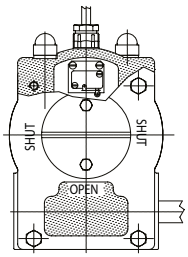








Option : Mounting flange for buried service in combination with an extension/bevel



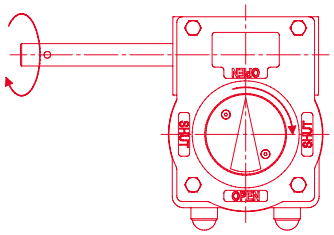
Rotork Gears series AB-LX with 1 or 2, V3 Limitswitches acc. UL/VDS/APSAD/FM specifications. Available in the sizes 150LX, 210LX, 550LX and 880LX.

Type	A	B	C	D	E	F	G	ØK	L	Valve Connection	Bore Max.	Max. Square Bore AF
AB150	3,15	4,88	2,28	1,67	3,92	2,15	-	0,47	0,55	FA04-FA05-FA07	0,78	0.67
AB150 LB	3,70	4,88	2,28	1,67	3,92	2,22	-	0,47	0,55	FA10	0,78	0.67
AB210	4,02	5,02	1,89	2,05	6,26	2,48	5,75	0,59	0,55	FA05-FA07-FA10	1,18	0.94
AB210 LB	5,91	6,10	2,95	2,05	6,26	2,48	NP	0,59	0,55	FA12	1,18	0.94
AB215	4,02	5,02	1,89	2,05	6,26	2,48	5,75	0,59	0,55	FA05-FA07-FA10	1,18	0.94
AB215 LB	5,91	6,10	2,95	2,05	6,26	2,48	NP	0,59	0,55	FA12	1,18	0.94
AB550	5,43	6,85	2,72	2,80	7,91	3,46	6,69	0,79	0,95	FA07-FA10-FA12-FA14	1,77	1.50
AB550 LB	8,27	6,85	2,72	2,80	7,91	3,46	7.20	0,79	0,95	FA16	1,77	1.50
AB880	7,87	8,90	3,94	3,39	7,44	3,64	7,17	0,79	0,95	FA10-FA12-FA14-FA16	2,36	1.81
AB880 LB	10,24	10,07	5,11	3,39	7,44	3,64	NP	0,79	0,95	8.65" with 8x 5/8"UNC	2,36	1.81
AB1250	8,66	10,16	4,33	4,11	9,06	4,02	7,87	0,79	0,95	FA10-FA12-FA14-FA16	2,56	1.97
AB1250 LB	11,22	11,44	5,61	4,11	9,06	4,02	NP	0,79	0,95	FA25	2,56	1.97
AB1950	11,22	12,70	5,61	5,12	10,83	4,96	8,03	0,98	1,10	FA12-FA14-FA16-FA25	3,15	2.36
AB1950 LB	13,8	14	6,9	5,12	10,83	5,07	9,13	0,98	1,10	FA30	3,15	2.36
AB2000	8,44	10,04	4,17	2,09	9,13	4,76	-	0,79	0,95	FA12-FA14-FA16	3,15	2.36
AB2000 LB	11,22	11,54	5,59	2,09	9,13	4,76	9,13	0,79	0,95	FA16-FA25	3,15	2.36
AB1950/PR4	11,22	12,70	5,61	5,12	11,85	4,96	11,85	0,79	0,95	FA12-FA14-FA16-FA25	3,15	2.36
AB1950LB/PR4	13,8	14	6,9	5,12	12,95	5,07	12,95	0,79	0,95	FA30	3,15	2.36
AB3000/PR4	11,52	13,25	5,58	5,51	12,36	6,02	12,36	0,79	0,95	FA16-FA25	3,94	2.95
AB3000LB/PR4	13,81	14,66	6,89	5,51	12,38	6,10	12,38	0,79	0,95	FA30	3,94	2.95
AB3000/PR6	11,52	13,25	5,58	5,51	12,36	6,02	12,36	0,79	0,95	FA16-FA25	3,94	2.95
AB3000LB/PR6	13,81	14,66	6,89	5,51	12,38	6,10	12,38	0,79	0,95	FA30	3,94	2.95
AB6800/PR4	14,57	16	6,69	7,17	13,94	6,26	13,94	0,79	0,95	FA16-FA25-FA30	3,94	2.95
AB6800BB/PR4*	14,57	16	6,69	7,17	13,94	6,26	13,94	0,79	0,95	FA25-FA30	4,56	3.56
AB6800LB/PR4	16,34	17,52	8,17	7,17	13,94	7,60	13,94	0,79	0,95	FA35	3,94	2.95
AB6800BBLB/PR4*	16,34	17,52	8,17	7,17	13,94	7,60	13,94	0,79	0,95	FA35	4,56	3.56
AB6800/PR6	14,57	16	6,69	7,17	13,94	6,26	13,94	0,79	0,95	FA16-FA25-FA30	3,94	2.95
AB6800BB/PR6*	14,57	16	6,69	7,17	13,94	6,26	13,94	0,79	0,95	FA25-FA30	4,56	3.56
AB6800LB/PR6	16,34	17,52	8,17	7,17	13,94	7,60	13,94	0,79	0,95	FA35	3,94	2.95
AB6800BBLB/PR6*	16,34	17,52	8,17	7,17	13,94	7,60	13,94	0,79	0,95	FA35	4,56	3.56
A200/PR10	17,32	19,35	8,17	8,22	14,74	8,46	14,74	0,79	0,95	FA25-FA30-FA35	6,29	4.52
A250/PR10	20,08	23	9,25	10,08	16,32	8,80	16,32	0,79	0,95	FA25-FA30-FA35-FA40	6,29	4.52

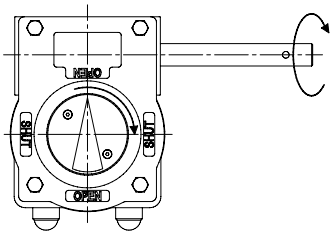
LB is large base housing. BB is Big Bore. NP means not possible with large base housing. All dimensions in inches.

Customer Drive and Orientation Options

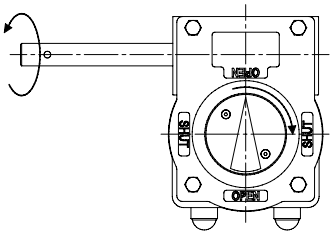
Input Shaft Projection Without Input Reducer



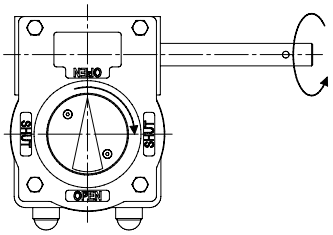
Left Hand (A2)
Clockwise In / Clockwise Out
Standard Build



Right Hand (B1)
Clockwise In / Clockwise Out

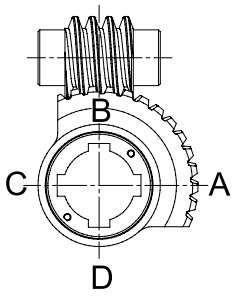


Left Hand (A1)
Anti-Clockwise In / Clockwise Out

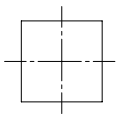


Right Hand (B2)
Anti-Clockwise In / Clockwise Out

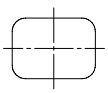
Keyway and Drive Positions Shown in Closed Position



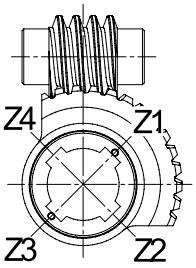
Keyway In Closed Position
On Center



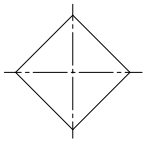
Square Bore
Parallel
(Flats on Center)



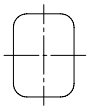
Slotted Bore
Flats Across
Flowline



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 3 feet	72 hours to a depth of 3 feet in clean water.	Buried service	Continuously submerged to a depth of 66 feet.
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

rotork®

Keeping the World Flowing

AB-PR Quarter-turn

Cast Iron Housing Gearboxes

Handwheel Selection Chart

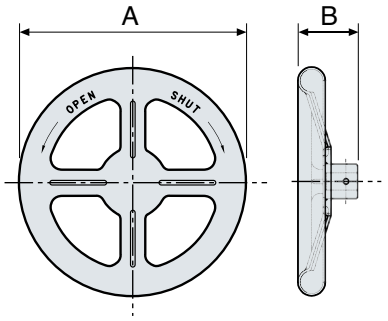
Input Torque

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

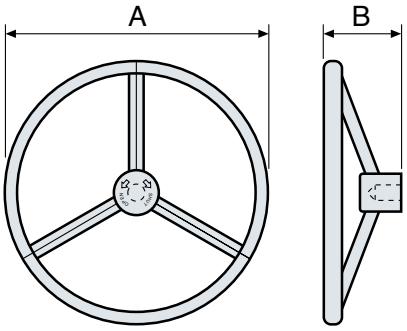
Dimensions

Type	A	B
PS100-12	Ø4″	1,38″
PS125-12	Ø5″	1,34″
PS125-15		1,89″
PS160-12	Ø6″	1,89″
PS160-15		1,93″
PS200-12	Ø8″	2,00″
PS200-15		2,05″
PS200-20		2,48″
PS250-12	Ø10″	2,48″
PS250-15		2,48″
PS250-20		2,76″

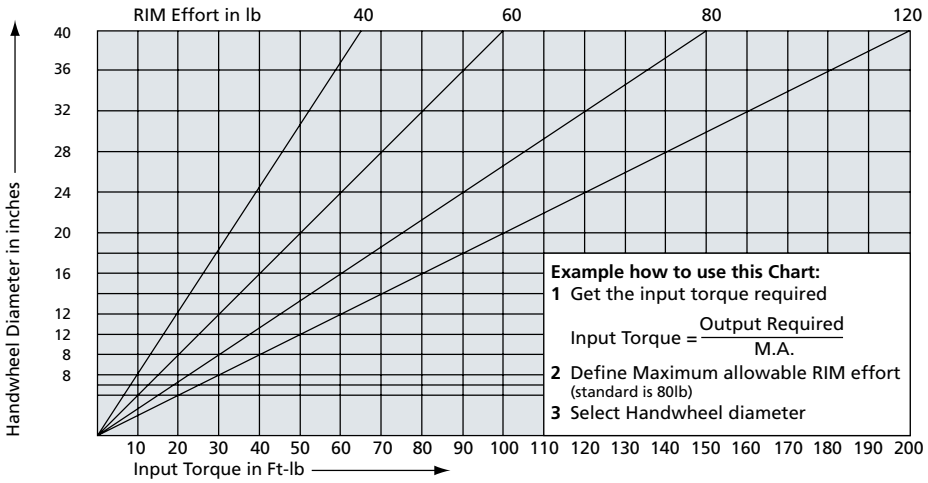
Type	A	B
SG200	Ø8″	3,15″
SG250	Ø10″	4,33″
SG300	Ø12″	4,53″
SG350	Ø14″	4,72″
SG400	Ø16″	5,12″
SG450	Ø18″	5,91″
SG500	Ø20″	5,91″
SG600	Ø24″	5,91″
SG700	Ø28″	5,91″
SG800	Ø32″	5,91″
SG900	Ø36″	6,30″
SG1000	Ø40″	6,30″



PS series handwheel



SG series handwheel



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