

# rotork®

## Gears



### ABM Quarter-Turn Gear Series For Use With Motorised Applications

The ABM series are rugged, industrial grade products manufactured with cast iron housing components, featuring a polyurethane coating and high performance axial bearings.

#### Application

The ABM operators are quarter-turn devices intended for the operation of ball, plug and butterfly valves as well as power and process dampers. These gear operators are well suited for applications in chemical, power, waterworks, HVAC and most general industrial applications. The ABM operators will support electric actuators weight up to 46 kg (101 lbs) and a speed up to 96 rpm.

## ABM Series

### Quarter-Turn Gearboxes For Use With Motorised Applications

#### Features

- F10 / FA10 input flange
- Ductile iron housing
- C45 carbon steel input shaft
- Rugged construction
- Axial thrust bearings
- Stroke: 0 - 90° ( $\pm 5^\circ$  adjustable)
- Removable insert
- ATEX approved

#### Environmental Specification

- Standard duty: IP67
- Temperature: -20 to +120 °C (-4 to +250 °F)

#### Options

- High temperature to +200 °C (392 °F)
- Low temperature to -60 °C (-76 °F)
- Firesafe to ISO 10497
- IP68: Marinised and buried

## ABM Series

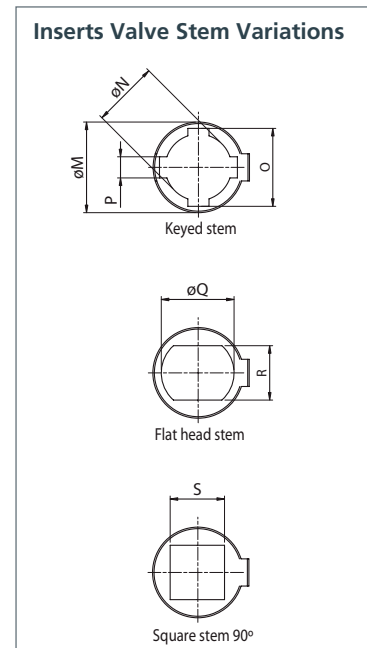
Type	Ratio	Max. Torque Nm (lbf.in)	M.A. $\pm 15\%$	Max. Stem Height mm (inch)	Weight kg (lbs)
AB550M	34 : 1	720 (6373)	12.0	79 (3.11)	11 (25)
AB880M	38 : 1	1440 (12745)	12.4	82 (3.23)	17 (38)
AB1250M	48 : 1	2000 (17702)	16.2	91 (3.58)	23 (51)
AB1250M/PR4	200.7 : 1	2000 (17702)	57.8	91 (3.58)	30 (65)

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

Type	Dimensions Maximum (Inserts)						
	$\varnothing M$	$\varnothing N$	O	P	$\varnothing Q$	R	S
AB550M	45.3 (1.78)	30 (1.18)	36.6 (1.44)	8 (0.31)	36.2 (1.43)	27 (1.06)	27 (1.06)
AB880M	60 (2.36)	44 (1.73)	50.6 (1.99)	12 (0.47)	48.2 (1.90)	36 (1.42)	36 (1.42)
AB1250M	60 (2.36)	44 (1.73)	50.6 (1.99)	12 (0.47)	48.2 (1.90)	36 (1.42)	36 (1.42)

The ABM Series can have the quadrant machined to suit the valve stem or delivered with a blank insert to be machined by others.

Note: The insert option will reduce the stem size acceptance.

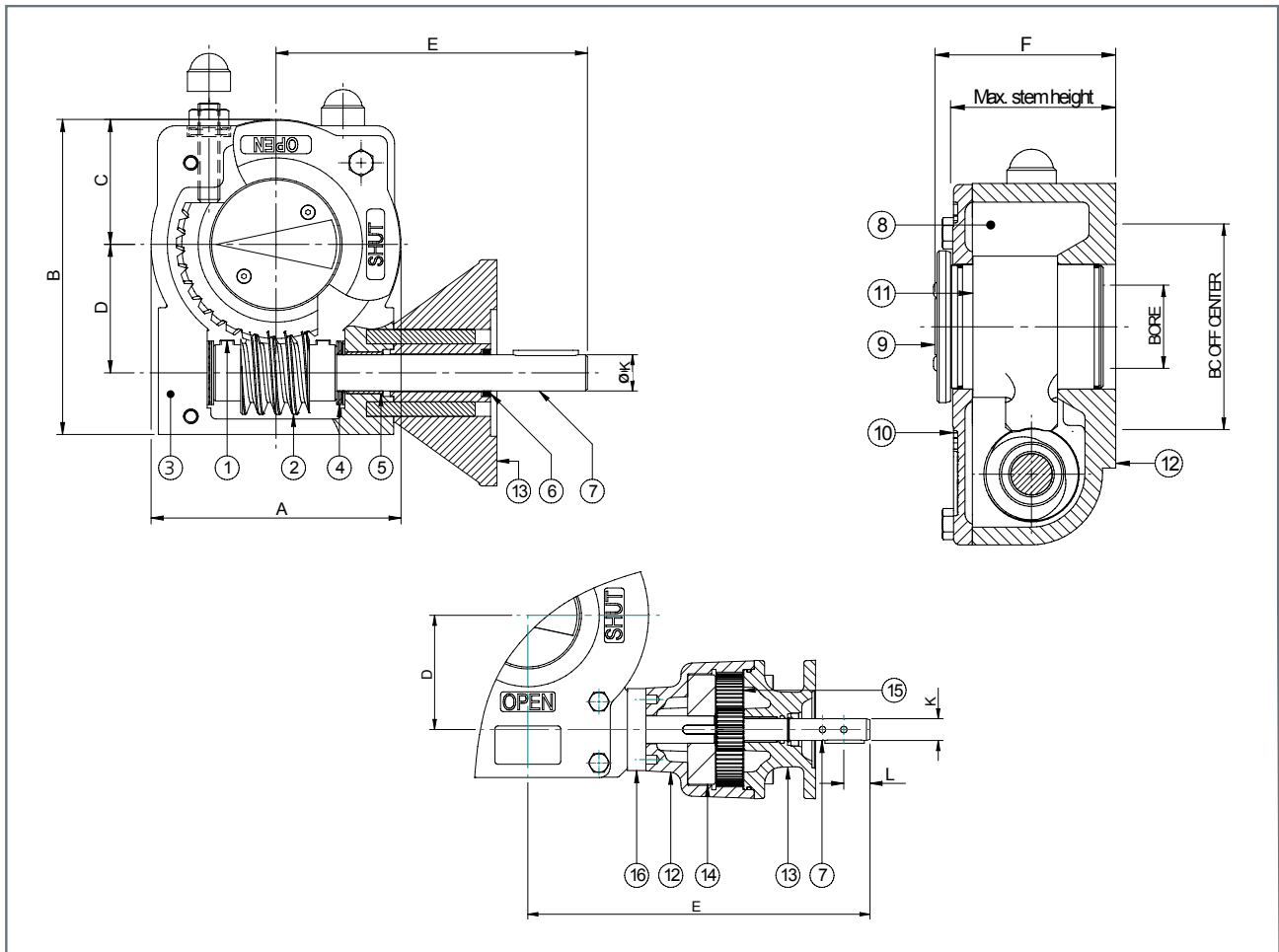


### Material specification for Rotork ABM Quarter-turn Gear Series

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	C45 carbon 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	Ductile iron	GGG40 / ASTM D60-40-18
11	Quadrant	Ductile iron	GGG40 / ASTM D60-40-18
12	Body	Ductile iron	GGG40 / ASTM D60-40-18
13	Cover + E-flange	Ductile iron	GGG40 / ASTM D60-40-18
14	Carrier	C45	BS970 080M40
15	Gear	Carbon Steel	C45 / AISI1045
16	Mounting plate	Steel	S235JR (1.0038 / EN10025-2)

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.

## Gearbox ABM Series



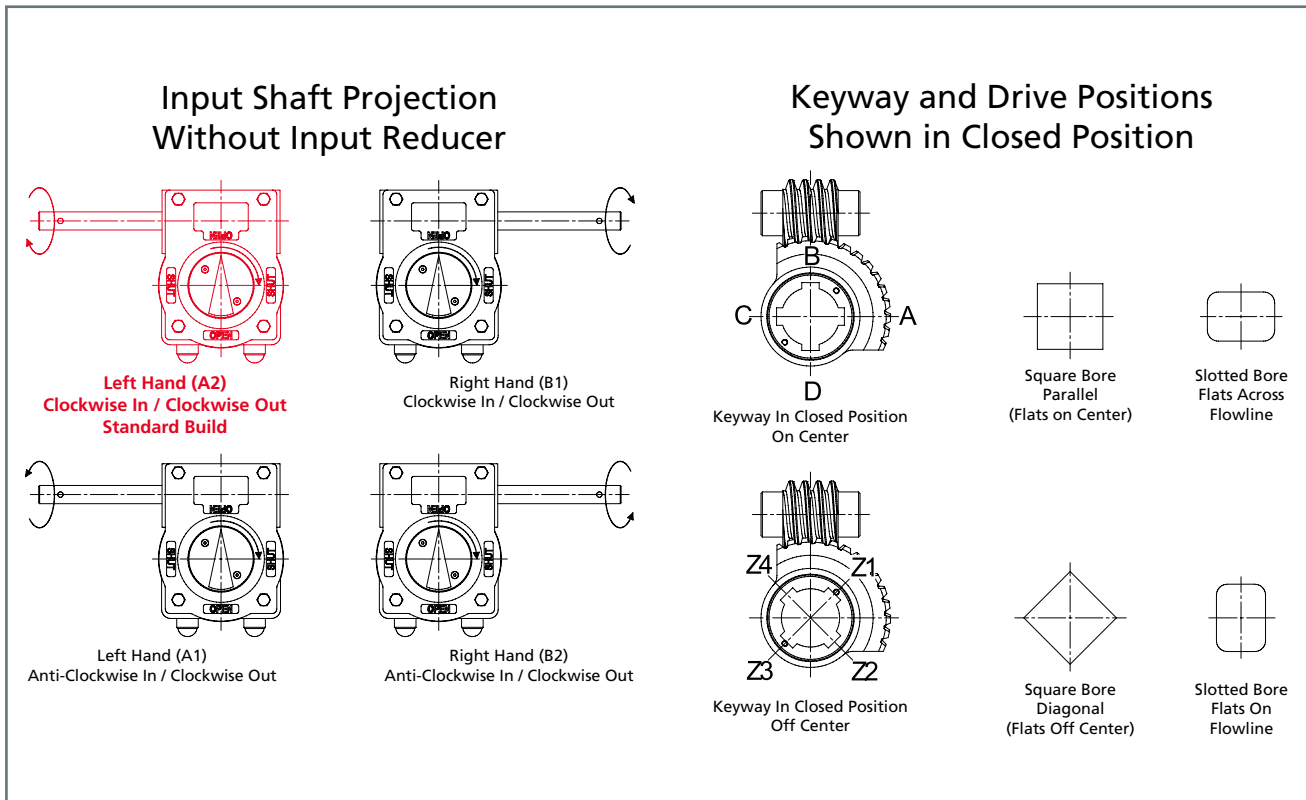
Type	A	B	C	D	E	F	ØK	Max Bore with insert		Max Bore in quadrant		Valve Connection BC acc. ISO 5211
								Square mm (inch)	Round mm (inch)	Square mm (inch)	Round mm (inch)	
AB550M	138 (5.43)	174 (6.85)	69 (2.72)	71 (2.80)	170 (6.69)	88 (3.46)	20 (0.79)	27 (1.06)	30 (1.18)	38 (1.49)	45 (1.77)	F07,F10,F12,F14 F16
AB880M	200 (7.87)	226 (8.90)	100 (3.94)	86 (3.39)	182 (7.17)	92.5 (3.64)	20 (0.79)	36 (1.42)	44 (1.73)	46 (1.81)	60 (2.36)	F10,F12,F14,F16
AB1250M	221 (8.69)	258 (10.16)	110 (4.33)	104.5 (4.11)	200 (7.87)	103 (4.05)	20 (0.79)	36 (1.42)	44 (1.73)	50 (1.97)	65 (2.56)	F10,F12,F14,F16
AB1250M/PR4	221 (8.69)	258 (10.16)	110 (4.33)	104.5 (4.11)	313 (12.32)	103 (4.05)	20 (0.79)	36 (1.42)	44 (1.73)	50 (1.97)	65 (2.56)	F10,F12,F14,F16

FA Valve connection available. All dimensions in millimetres (inches).

### IP RATING AND SPECIFICATION FOR ABM SERIES GEARBOXES

Service:	Standard Duty	Marinised Duty	Buried Service Duty
Duty	N	W	G
IP Rating	IP67	IP68	IP68
Time & Depth	30 min to a depth of 1 metre (3 feet)	72 hours to a depth of 1 metre (3 feet) in clean water	Buried service
Input Shafts	C45 Carbon Steel or 40Cr Low Alloy Steel, Electrophoresis protection	C45 Carbon Steel or 40Cr Low Alloy Steel, Electrophoresis protection	C45 Carbon Steel or 40Cr Low Alloy Steel, Electrophoresis protection
Fasteners	Steel	Stainless Steel A4	Stainless Steel A4
Position Indicator	FS7 (plastic)	Powder coated Metal with O-Ring	Metal Non-rotating plate

### Customer Drive and Orientation Options



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