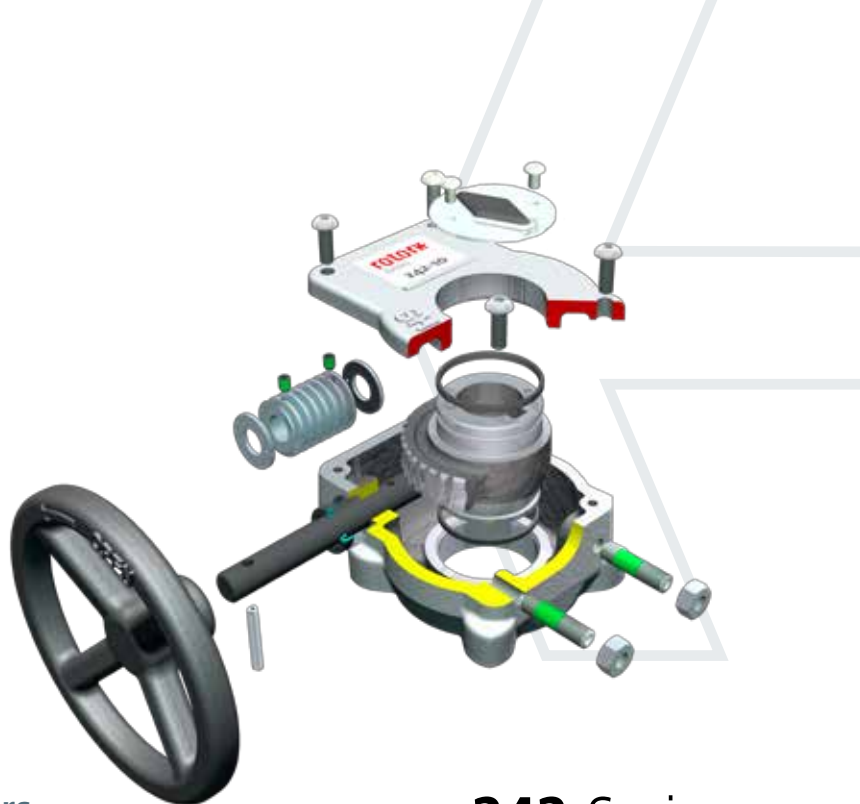


rotork®

Gears



Manual Quarter-turn Gear Operators

The 242 range has been designed to optimise robustness and durability, whilst minimising non-structural mass and reducing the overall gearbox envelope by using the latest lean engineering principles and analytical design tools. The 242 series is based on the design and quality of the FB series which was designed to meet strict specifications. The 242's simple, rugged construction makes it the gearbox of choice for low torque applications.

Application

The 242 series quarter-turn worm gearboxes are intended for the operation of ball, butterfly, plug and any other quarter-turn valves. They are well suited for applications in power, waterworks, gas pipelines, HVAC and most general industrial applications.

242 Series

Manual Quarter-turn Gear Operators

Features

- Cast handwheels (on smaller sizes)
- PTFE thrust washers
- Cast iron housing
- Ductile iron quadrant
- Stroke 0-90° ($\pm 5^\circ$ adjustable at open and closed)
- Pre-applied silicon seal on stop bolts
- Special protection of the input shaft
- Stainless steel position indicator
- Zinc plated fasteners

Environmental Specification

- Sealed to IP67
- Temperature range: -40 to 250 °F

Options

- Padlockable flange
- Stainless steel input shaft & fasteners
- Namur mounting
- Memory stop
- Westlock mounting
- IP68

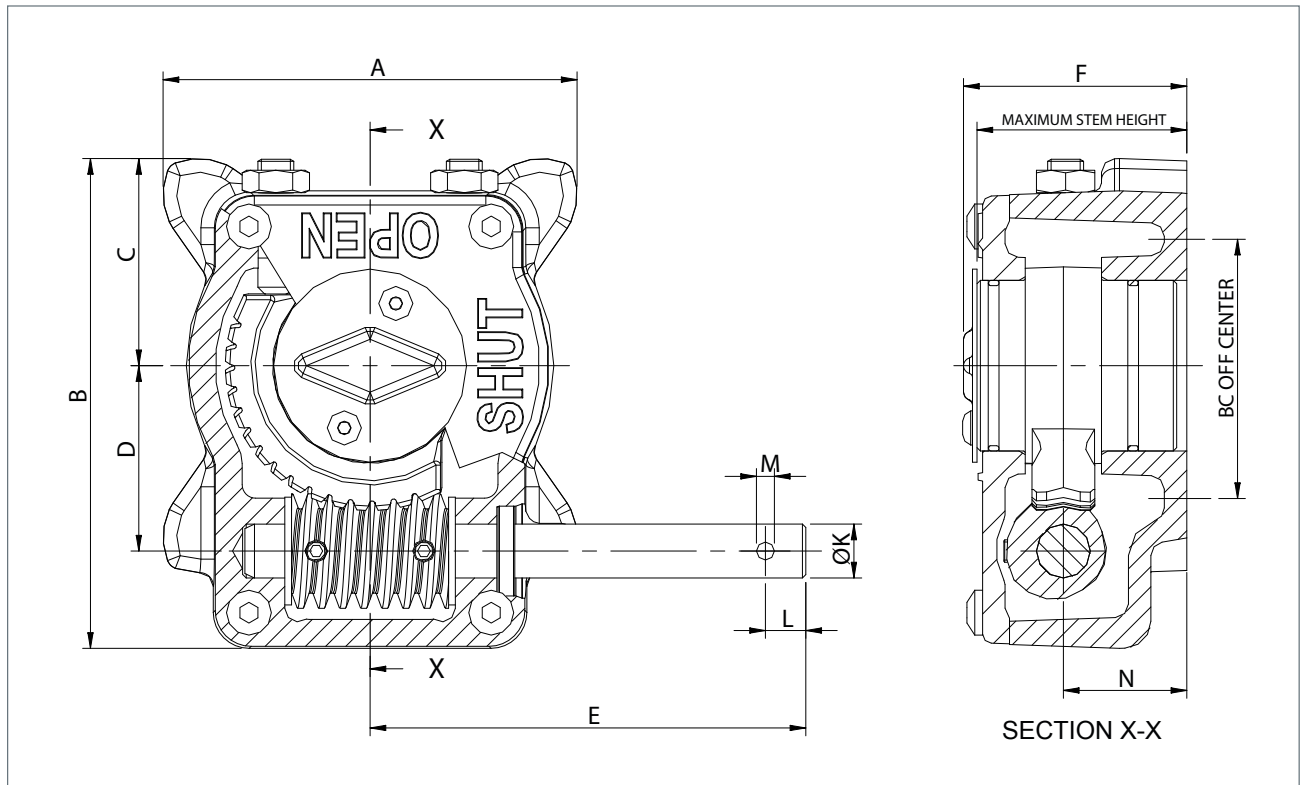
242 Series

Material specification for Rotork Gears 242 Series

Description	Material Description	UK Standard	International Standard	American Standard
Gearcase and cover	Cast iron (Grey)	BS EN 1563 EN-GJL-250	ISO 185 JL/250	ASTM A45 35
Quadrant	Ductile iron (SG / Nodular)	BS EN 1563 EN-GJS-400-15	ISO 683 36CrNiMo6	ASTM A536 60-40-18
Worm	Carbon steel	BS EN 10083 C45	ISO 683 C45	AISI 1045
Input shaft	Electrophoretic coated carbon steel	BS EN 10083 C45	ISO 683 C45	AISI 1045
Seals	Nitrile rubber	-	ISO 1629 NBR 70 Shore A	-
Fasteners	Zinc plated alloy steel	-	ISO 898 10.9	-
Indicator	Stainless steel	BS970 304S11	ISO16143-2 X2CrNi18-9	AISI 304
Handwheel (up to 200mm)	Ductile iron	BS EN 1563 EN-GJS-400-15	ISO 683 36CrNiMo6	ASTM A536 60-40-18
Handwheel (over 200mm)	Fabricated structural steel	BS EN 10277-2 1.0122	ISO 4997 CR220	ASTM A283 GrC
Handwheel pin	Carbon steel	BS1449 CS70	ISO 4960 CS70	AISI 1070
Input shaft bearings	Low friction bush	Proprietary: Polytetrafluoroethylene steel-backed		
Lubricant	Grease	Proprietary: Calcium soap base with extreme pressure additives		
Finish	Grey primer paint	Proprietary: Polyvinyl butyral, phenolic epoxy resin		

Type	Output Torque lbf.in	Ratio:1	M.A. * $\pm 10\%$	Weight excl. Handwheel lbs.	Max Stem Bore ANSI Square Key inch	Max Stem Bore ANSI Rect. Key inch	Max DD inch	Max Stem Height inch	MSS Base Options	
242-10	M	1460	40	10	2.2	$\emptyset 0.78 + 0.24K$	$\emptyset 0.812 + 0.25K$	$\emptyset 1 \times 0.75AF$	1.44	FA05 + FA07
242-20	S	2655	40	10	3.3	$\emptyset 0.95 + 0.32K$	$\emptyset 1 + 0.312K$	$\emptyset 1.22 \times 0.86AF$	1.58	FA07
	M				4.2				1.81	FA07 + FA10
242-30	S	5753	40	10	7.5	$\emptyset 1.42 + 0.39K$	$\emptyset 1.437 + 0.375K$	$\emptyset 1.73 \times 1.22AF$	1.99	FA07 + FA10
	M				8.6				2.22	FA07 + FA10 + FA12
	L				9					FA14 ONLY
242-40	S	10621	40	10	12.6	$\emptyset 1.85 + 0.55K$	$\emptyset 1.75 + 0.5K$	$\emptyset 2.21 \times 1.57AF$	2.46	FA10 + FA12
	M				13.1				2.61	FA10 + FA12 OR FA14
242-45	M	17702	50	15	17.4	$\emptyset 2.17 + 0.625K$	$\emptyset 2.35 + 0.625K$	$\emptyset 2.75 \times 2AF$	2.77	FA14
	L				19.8				3.21	FA16

*The published M.A. is achieved after a few cycles.
The static safety factor is 1.5.



Type	A Gearbox Width	B Gearbox Length	C	D Centre Distance	E Mid Gearbox - End Shaft	F Height	ØK Shaft Diameter	L Hole Distance	M Diameter Hole	N
242-10M	2.60	3.23	1.18	1.34	3.07	1.57	0.39	0.35	0.14	0.78
242-20S	3.15	3.94	1.49	1.62	3.82	1.74	0.47	0.35	0.16	0.87
242-20M	3.63	3.98	1.49	1.62	3.82	1.97	0.47	0.35	0.16	1.11
242-30S	4.22	5.16	1.93	2.17	4.68	2.13	0.63	0.55	0.19	1.11
242-30M	4.53	5.21	1.89	2.17	4.68	2.36	0.63	0.55	0.19	1.34
242-30L	5.16	5.87	1.89	2.17	4.68	2.36	0.63	0.55	0.19	1.34
242-40S	5.32	6.42	2.36	2.72	6.26	2.64	0.78	0.95	0.24	1.34
242-40M	5.32	6.42	2.36	2.72	6.26	2.79	0.78	0.95	0.24	1.49
242-45M	6.14	7.09	2.56	3.19	6.26	2.95	0.78	0.95	0.24	1.65
242-45L	6.14	7.56	3.03	3.19	6.26	3.39	0.78	0.95	0.24	2.08

All dimensions in inches.

Handwheel Selection Chart

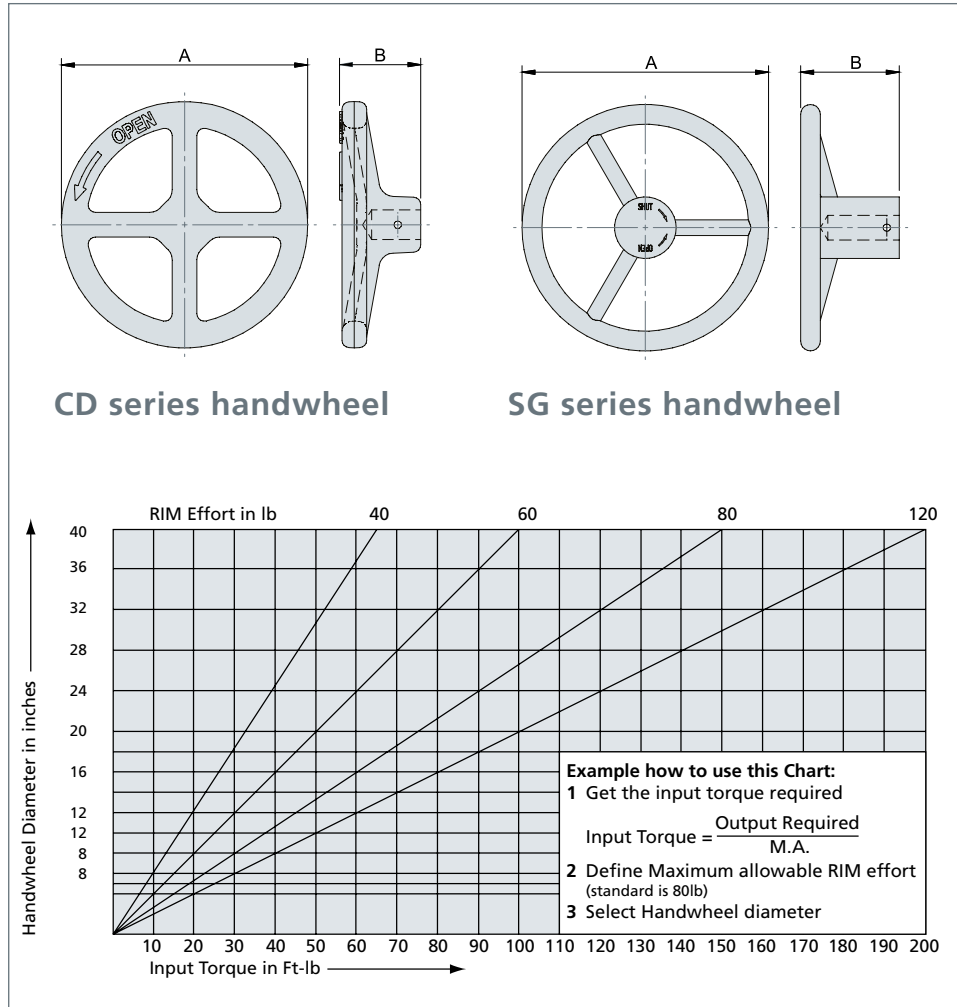
Input Torque

Type	M.A. ± 10%
242-10	10
242-20	10
242-30	10
242-40	10
242-45	15

Dimensions

Type	A	B
CD50-10	Ø1,97"	0,91"
CD100-10	Ø3,94"	1,30"
CD100-12		
CD200-12	Ø7,87"	2,60"
CD200-16		

Type	A	B
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"



Rotork Gears UK
9 Brown Lane West
Holbeck, Leeds LS12 6BH
England
tel +44 (0)113 256 7922
email sales@rotorkgears.com

Rotork Gears BV
Nijverheidstraat 25
7581 PV Losser
P.O. Box 98, 7580 AB Losser
The Netherlands
tel +31 (0)53 - 5388677
fax +31 (0)53 - 5383939
email info@rotorkgears.nl

Rotork Gears India
165/166, Bommasandra
Jigani Link Road
Kiadb Industrial Area, Anekal
Thaluk
Jigani Hobli, Bangalore 562106
India
tel +91 80 3098 1600
fax +91 80 3098 1610
email sales@rotork.co.in

Rotork Gears Americas
1811 Brittmoore
Houston, Texas 77043, USA
tel +1 713 9837381
fax +1 713 8568022
email gears@rotorkgears.com

Rotork Gears Shanghai
No. 260 Lian Cao Road
Xin Mei Urban Industrial Park
Min Hang District
Shang Hai 201108
China
tel 0086 21 33236200
fax 0086 21 64348388
email info@rotorkgears.com.cn

Rotork Valvekits
Brookside Way
Nunn Park
Huthwaite
Nottinghamshire NG17 2NL
England
tel +44 (0)1623 440211
fax +44 (0)1623 440214
email sales@rotorkvalvekits.com

Rotork Valvekits Americas
Rotork Tulsa, Inc.
4433 West 49th Street, Suite D
Tulsa, OK 74107, USA
tel +1 (918) 259-8100
fax +1 (918) 259-9167
email usasales@rotorkvalvekits.com

Rotork Gears S.R.L.
Viale Europa 17
20090 Cusago (MI)
Italy
tel +39 0290 16711
fax +39 0290 390368
email rg srl.sales@rotork.com

Roto Hammer Industries
Rotork Tulsa, Inc.
4433 West 49th Street, Suite D
Tulsa, OK 74107, USA
tel +1 (918) 446-3500
fax +1 (918) 446-6218
email sales@rotohammer.com

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

www.rotork.com