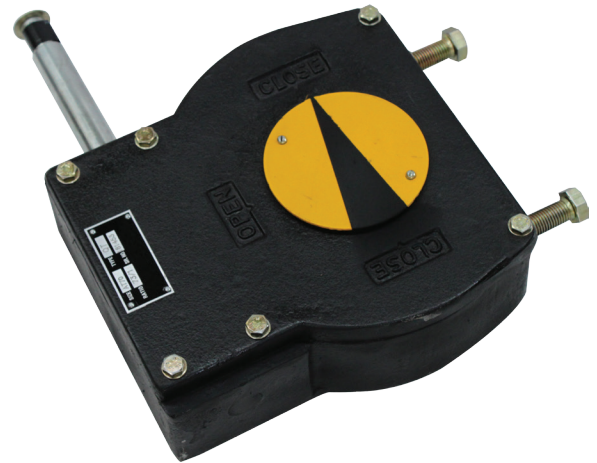
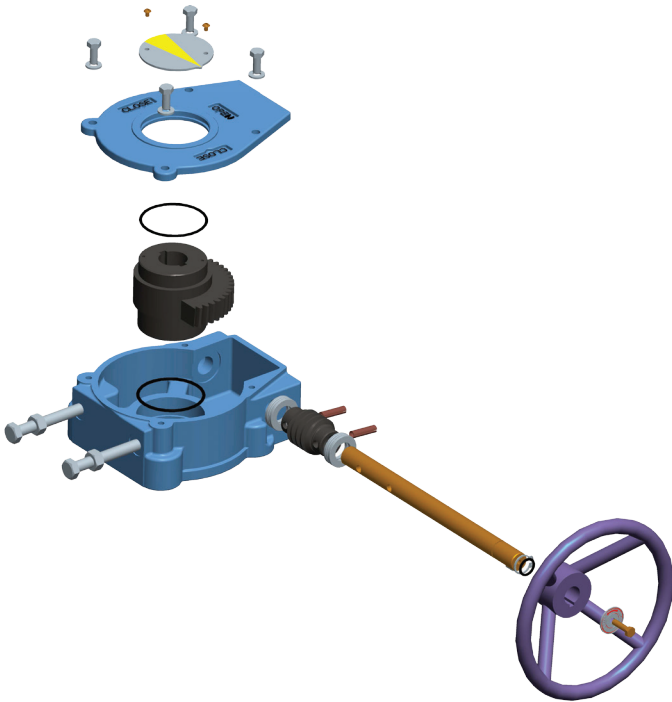


Quarter-turn Worm Gear Operators for Manual Operation

AT Series



Description

- Lean design whilst optimizing robustness and strength
- Used for less critical applications
- 27 models up to a torque of 350,000 Nm and F-60 mounting base
- Grease filled for life
- Fully sealed gearbox and completely enclosed gearing
- Cast iron casing and ductile iron quadrant
- Stroke 0-90° (+5° adjustable)
- Zinc plated fasteners
- High performance axial bearings
- Epoxy primer coating is standard for gearbox
- Powder coated handwheels for smooth and easy operation

Features

- Housing material options (ductile iron / carbon steel / stainless steel)
- Worm shaft, fasteners and hand wheel material option available in stainless steel
- Worm wheel material option available in aluminum bronze
- High temperature variant up to +200°C (+392°F) & low temperature variant up to -52°C (-61.6°F) available
- Marine application (all exposed shafts and fasteners in stainless steel)
- Finish painting is available on request
- IP-67 standard enclosure (IP-68 available on request)
- Padlock arrangement option available
- Namur mounting option available for limit switch box fitment
- Extension shaft for buried service available

Options

- Top mounted / top operated version (“handwheel, chainwheel or electric actuator” to be mounted / operated from the top of the gearbox and not from the side) of AT-IS, CW and IS-EA series (all models)
- Twin-shaft version available for some models of AT and AT-IS series to reduce no. of turns to close for manual operation (for models above AT-300/2/S3 and AT-300/1/S3-IS)
- Stainless steel version of gearboxes available for applications in highly corrosive environments as well as food and beverage, pharmaceutical and sanitary facilities. Option available for all models of AT, AT-IS, IS-EA and CW series
- Gearbox options as per API 6D specifications available for torques up to 3500 Nm
- Part turn 180° operated gearbox option available up to 15000 Nm

Quarter-turn Worm Gear Operators for Manual Operation

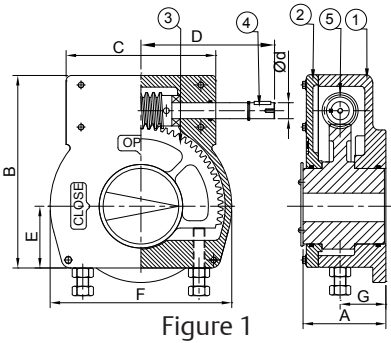


Figure 1

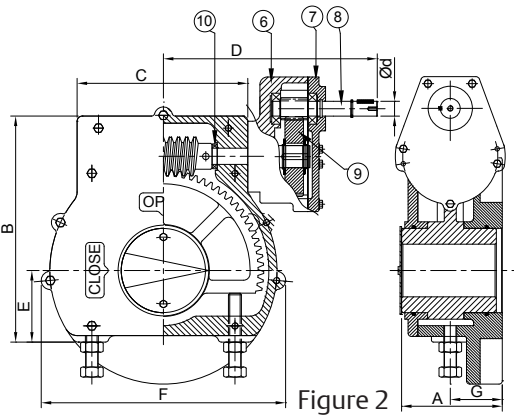
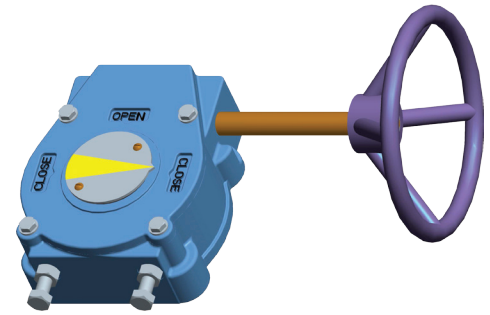
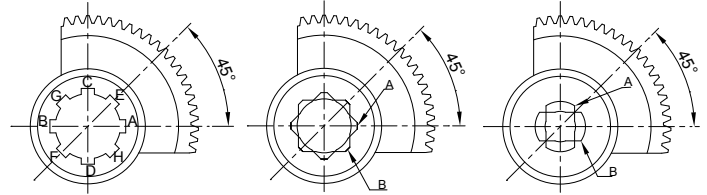


Figure 2



View From Top At Close Position

Note:

Refer to Figure (1) for Models up to "AT-90"
 Refer to Figure (2) for Models above "AT-90"

Sr. No.	Description	Material	US Standard	IS Standard
1	Housing	Cast Iron	ASTM A48-83 30A	IS 210 FG 200
2	Top Cover	Cast Iron	ASTM A48-83 30A	IS 210 FG 200
3	Worm Wheel	Ductile Iron	ASTM A70-50-05	SGI 500/7
4	Input Shaft	Carbon Steel	A576-1045	45C8
5	Worm	Carbon Steel	A576-1045	45C8
6	Spur Housing	Cast Iron	ASTM A48-83 30A	IS 210 FG 200
7	Spur Cover	Cast Iron	ASTM A48-83 30A	IS 210 FG 200
8	Spur Pinion	Carbon Steel	A322-4140	40CrMo3
9	Spur Gear	Ductile Iron	ASTM A70-50-05	SGI 500/7
10	Thrust Bearing	Special Steel	ASTM A295 52100	-

Model	Output Torque (Nm)	Mech. Advantage ±10%	Ratio	Turns To Close	ISO 5211 Mounting	Max Drive Bore	Approx. Unit Weight (Kg)	Recommended Handwheel (mm)	A	B	C	D	E	F	G	Ød
AT 20	250	8	33:1	8.25	F05, F07	20	2.7	Ø175	49.5	110	78	161	36	90	23	12
AT 25	500	10	40:1	10	F07, F10	30	5	Ø250	63	136	98	175	54	108	35	15
AT 30	700	10	40:1	10	F07, F10, F12	32	7	Ø350	74	143	95	201	45	128	39	20
AT 40	1000	11	44:1	11	F10, F12, F14	45	9.5	Ø350	86	176	116	210	70	140	47	20
AT 50	1500	12.5	48:1	12	F10, F12, F14, F16	50	12	Ø500	82	198	137	226	81	168	44.5	20
AT 60	2000	15	60:1	15	F10, F12, F14, F16	50	15	Ø500	86	214	156	242	83	176	46	20
AT 70	3500	18	73:1	18.25	F14, F16	80	33	Ø600	113	265	206	250	85	250	62	20
					F25											
AT 80	3000	22	80:1	20	F12, F14, F16	60	30	Ø500	122.5	245	232	253	84	244	64	20
					F25											
AT 90	4000	22.5	90:1	22.5	F16, F25	90	58	Ø600	133	305	268	249	100	350	78	20
AT 80/1/S1	4500	50	264:1	66	F12, F14, F16	60	38	Ø500	122.5	245	232	325	84	244	64	20
					F25											
AT 70/3/S1	6500	65	292:1	73	F14, F16	80	41	Ø600	113	265	206	324	85	250	62	20
					F25											
AT 90/1/S1	8000	70	300:1	75	F16, F25	90	65	Ø600	133	305	268	355	100	350	78	20
AT 100/1/S1	10000	75	300:1	75	F25, F30	100	74	Ø600	151	348	263	352	110	377	76	20
AT 150/1/S2	15000	100	450:1	112.5	F25, F30	100	84	Ø600	151	338	263	396	110	377	76	20
AT 250/2/S2	22500	120	456:1	114	F25, F30, F35	110	136	Ø600	157	424	334	430	133	469	88	20
AT 300/2/S3	28000	210	902:1	225.5	F25, F30, F35	150	140	Ø750	157	424	334	471	133	469	88	20
AT 350/2/S3	35000	253	1114:1	287.5	F25, F30, F35	150	160	Ø750	157	424	334	471	133	469	88	20
AT 450/1/S3	45000	270	1175:1	293.75	F30, F35, F40	150	292	Ø750	200	608	425	515	162	592	100	20
AT 500/1/S3	50000	287	1261:1	325.5	F30, F35, F40	150	380	Ø750	203	650	595	599	199	706	103	20
AT 600/1/S3.5	60000	340	1545:1	386.25	F30, F35, F40	150	425	Ø750	203	650	595	654	199	706	103	25
AT 750/1/S4	75000	400	1826:1	447	F40, F48	200	430	Ø750	203	650	595	656	199	706	103	25
AT 1000/1/S4	100000	600	2635:1	656	F40, F48	200	450	Ø750	203	650	595	656	199	706	103	25
AT 1500/1/S5	150000	860	4224:1	1056	F40, F48	250	1000	Ø900	313	890	729	789	276	960	170	30
AT 2000/1/S5	200000	1210	5498:1	1374.5	F40, F48	250	1200	Ø900	313	890	729	789	276	960	170	30
AT 2500/1/S6	250000	1630	7440:1	1860	F48, F60	260	1800	Ø900	385	1154	1006	963	350	1292	175	30
AT 3000/1/S6	300000	2045	9300:1	2325	F48, F60	260	2000	Ø900	385	1154	1006	963	350	1292	175	30
AT 3500/1/S6	350000	2482	11284:1	2821	F48, F60	260	2200	Ø1000	385	1154	1006	963	350	1292	175	30

Contact us at Gears@Emerson.com