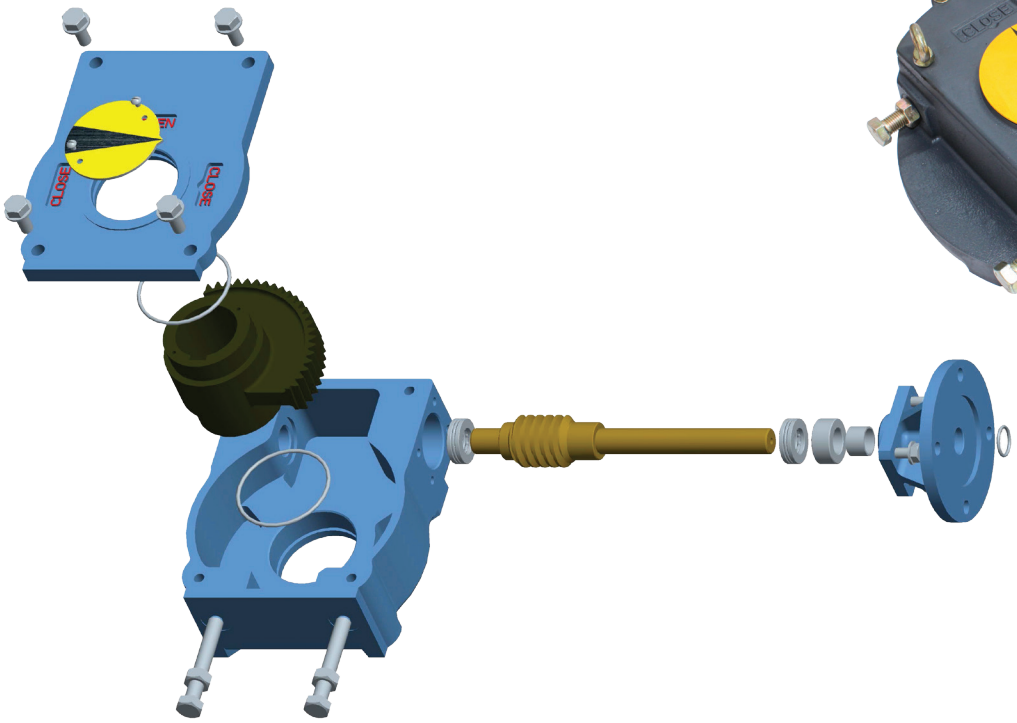
Quarter-turn Worm Gear Operators for Electrical Actuation

IS-EA Series



Description

- Robust design, heavy duty gearboxes with aesthetically pleasing look
- Widely used on valves for oil and gas, chemical, power, waterworks, sewage, gas pipelines, HVAC, etc.
- 27 models up to a torque of 325,000 Nm and F-60 mounting base
- Design based on the AT-IS series
- Ductile iron casing and alloy steel worm shafts
- Angular contact bearings to handle high loads and higher speed
- Epoxy primer coating is standard
- Removable Insert / adaptor option available for easy stocking of gears
- Comprehensive gear ratios combined with a selection of auxiliary input spur gear reducers

Features

- Housing material options (carbon steel / 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)
- IP-67 standard enclosure (IP-68 available on request)
- Namur mounting option available for limit switch box fitment
- Standard input flanges (for actuator mounting) to ISO 5211 are available. However, equivalent standards like MSS and DIN can also be supplied
- New ratios can be designed to meet any requirement

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

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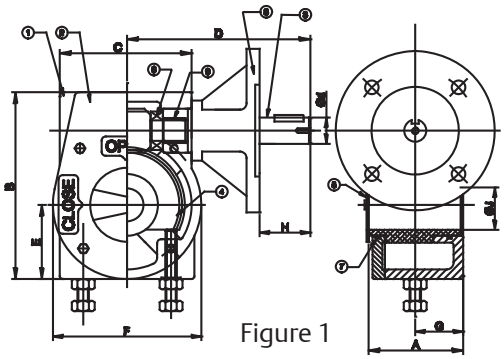
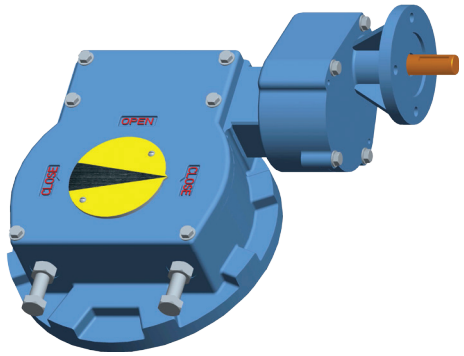


Figure 1



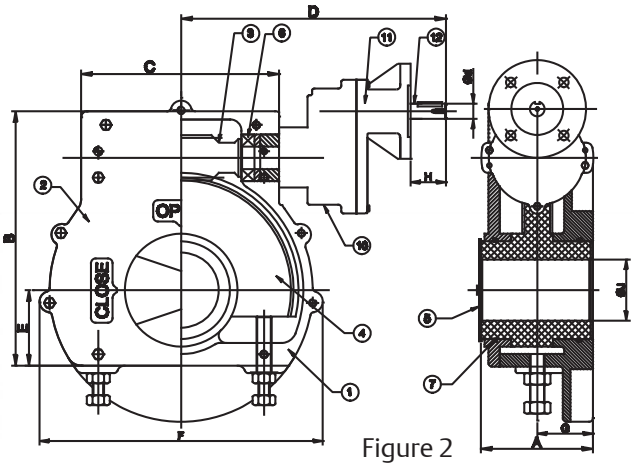
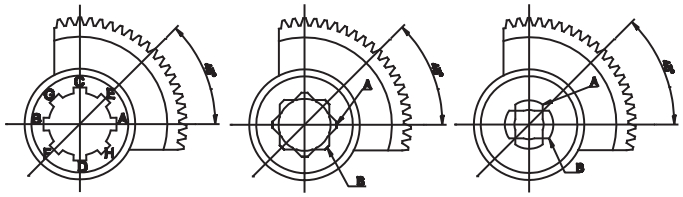


Figure 2



View From Top At Close Position

Sr. No.	Description	Material	US Standard	IS Standard
1	Housing	Ductile Iron	ASTM A536 60-40-18	SG 400/12
2	Top Cover	Ductile Iron	ASTM A536 60-40-18	SG 400/12
3	Worm Shaft	Carbon steel	ASTM A322 4140	40Cr4Mo3
4	Worm Wheel	Ductile Iron	ASTM A70-50 05	SGI 500/7
5	Indicator	Carbon Steel	ASTM A576 1045	45C8
6	Thrust Bearing	Special steel	ASTM a295 52100	-
7	'O' Ring	NBR (Buna-N)	NBR (Buna-N)	Nitrile
8	Actuation Flange	Ductile Iron	ASTM A536 60-40-18	SG 400/12
9	Sintered Bush	Bronze	B148 C95800	-
10	Spur Housing	Ductile Iron	ASTM A536 60-40-18	SG 400/12
11	Spur Cover	Ductile Iron	ASTM A536 60-40-18	SG 400/12
12	Spur Pinion	Ductile Iron	ASTM A536 60-40-18	SG 400/12
13	Fasteners	Carbon steel	ASTM A322 4140	40Cr4Mo3

Note:

Refer to Figure (1) for models up to "AT-90E-IS"

Refer to Figure (2) for models above "AT-90E-IS"

Model	Output Torque (Nm) ±10%	Ratio	Mech. Advantage ±10%	Turns To Close	ISO 5211 Mounting	Max Drive Bore Ø	Actuator Mounting Flange Detail		A	B	C	D	E	F	G	H
							Standard Mounting Ød	Optional Mounting Ød								
AT-20E-IS	200	33:1	8	8.25	F05, F07	20	F10/Ø20	-	56.5	110	82	149	36	90	26	55
AT-25E-IS	400	40:1	10.5	10	F07, F10	30	F10/Ø20	-	69	136	98	158	54	108	35	55
AT-30E-IS	600	40:1	10	10	F07, F10, F12	32	F10/Ø20	-	77	143	95	131	45	128	42.4	45
AT-40E-IS	850	44:1	11.5	11	F10, F12, F14	45	F10/Ø20	-	93	176	116	173	70	140	47	55
AT-50E-IS	1250	48:1	12.5	12	F10, F12, F14, F16	50	F10/Ø20	-	89	198	152	148	64	200	51.8	45
AT-60E-IS	1700	60:1	15	15	F12, F14, F16	50	F10/Ø20	-	92	214	156	188	83	176	46	55
AT-80E-IS	2400	80:1	22	20	F14, F16, F25	80	F10/Ø20	-	119.5	245	232	342	84	300	64	55
AT-70E-IS	3000	73:1	16	18.25	F14, F16, F25	80	F10/Ø20	-	118	265	206	227	85	300	62	60
AT-90E-IS	3500	90:1	24	22.5	F16, F25	90	F10/Ø20	F14/Ø25	133	305	268	259	100	342	78	60
AT-80/1/S1E-IS	4000	264:1	60	66	F14, F16, F25	80	F10/Ø20	F14/Ø25	122	265	206	329	85	290	64	49
AT-70/3/S1E-IS	5000	292:1	65	73	F14, F16, F25	80	F10/Ø20	F14/Ø25	118	265	206	327	85	300	62	49
AT-90/1/S1E-IS	6500	300:1	70	75	F16, F25	90	F10/Ø20	F14/Ø25	133	305	268	359	100	342	78	49
AT-100/1/S1E-IS	8500	300:1	75	75	F25, F30	100	F10/Ø20	F14/Ø25	151	348	263	356	110	377	76	49
AT-150/1/S2E-IS	12500	450:1	100	112.5	F25, F30	100	F14/Ø25	F16/Ø30	151	348	263	402	110	377	76	55
AT-250/2/S2E-IS	18000	456:1	120	114	F25, F30, F35	120	F14/Ø25	F16/Ø30	157	424	334	435	133	469	88	55
AT-300/1/S3E-IS	24000	902:1	210	225.5	F30, F35	135	F14/Ø25	F16/Ø30	157	424	334	473	133	469	88	60
AT-350/2/S3E-IS	30000	1114:1	253	287.5	F30, F35	135	F14/Ø25	F16/Ø30	157	424	334	473	133	469	88	60
AT-450/1/S3E-IS	40000	1175:1	275	294	F30, F35, F40	150	F14/Ø25	F16/Ø30	203	650	595	516	162	592	104	60
AT-500/1/S3E-IS	45000	1261:1	287	325.5	F30, F35, F40	150	F14/Ø25	F16/Ø30	203	650	595	600	199	706	103	60
AT-600/1/S3.5E-IS	55000	1545:1	340	386.25	F30, F35, F40	150	F16/Ø30	-	203	650	595	673	199	710	105	60
AT-750/1/S4E-IS	65000	1826:1	400	447	F40, F48	200	F16/Ø35	-	203	650	595	707	199	706	103	60
AT-1000/1/S4E-IS	85000	2635:1	600	656	F40, F48	200	F16/Ø35	-	203	650	595	707	199	706	103	60
AT-1500/1/S5E-IS	135000	4224:1	860	1056	F40, F48, F60	250	F16/Ø35	-	313	890	729	805	276	960	170	60
AT-2000/1/S5E-IS	180000	5498:1	1210	1374.5	F40, F48, F60	250	F16/Ø35	-	313	890	729	805	276	960	170	60
AT-2500/1/S6E-IS	225000	7440:1	1630	1860	F48, F60	260	F16/Ø40	-	385	1154	1110	1013	350	1292	175	60
AT-3000/1/S6E-IS	275000	9300:1	2045	2325	F48, F60	260	F16/Ø45	-	385	1154	1110	1013	350	1292	175	60
AT-3500/1/S6E-IS	325000	11284:1	2462	2621	F48, F60	260	F16/Ø40	-	385	1154	1110	1013	350	1292	175	60