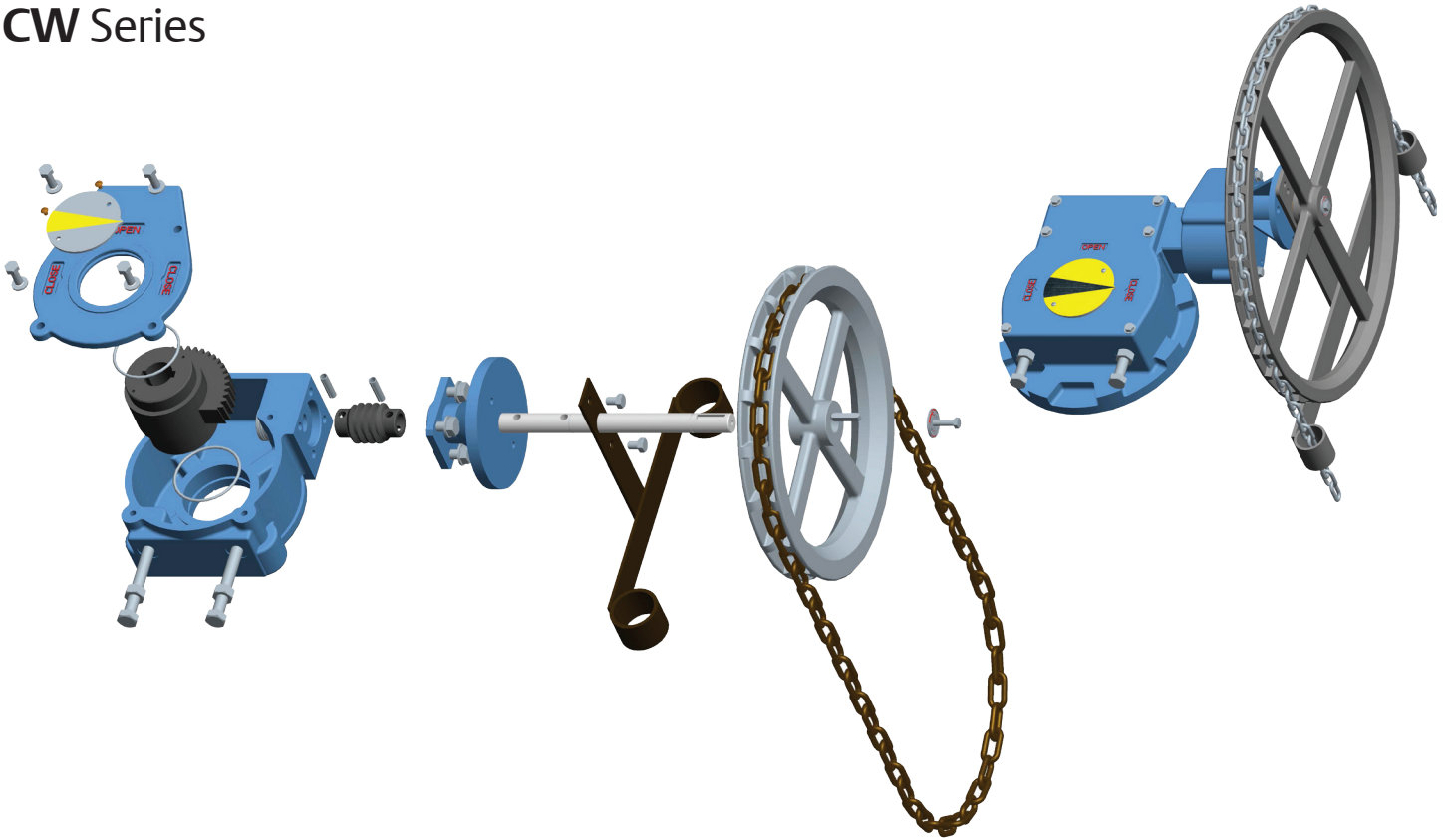


Quarter-turn Worm Gear Operators for Chainwheel Operation

CW Series



Description

- Gearbox series designed for chainwheel operation
- Design based on IS-EA series and adopts all features of this series
- 27 models up to a torque of 325,000 Nm and F-60 mounting base
- Ductile iron casing and alloy steel worm shafts
- Angular contact bearings to handle high loads and higher speed
- All models have optimized lengths of input shafts supported in bearings so as to minimize the cantilever load of the chain wheel, chain guard and chain
- Widely used on valves for oil and gas, chemical, power, waterworks, sewage, gas pipelines, HVAC, etc.
- Epoxy primer coating is standard

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)
- Chainwheel material is ductile iron and chain guard is carbon steel. Both are powder coated
- Chain is in carbon steel (zinc plated) with option in stainless steel

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 Chainwheel Operation

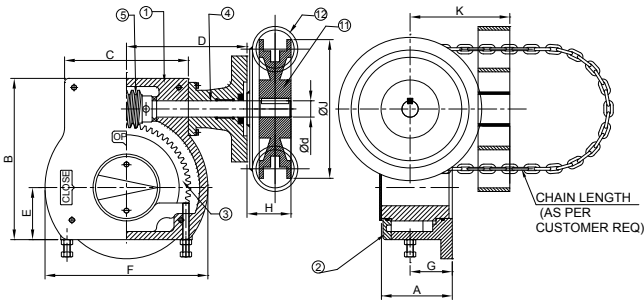


Figure 1

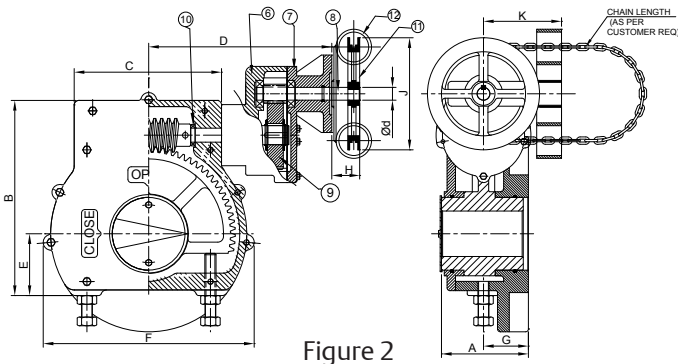
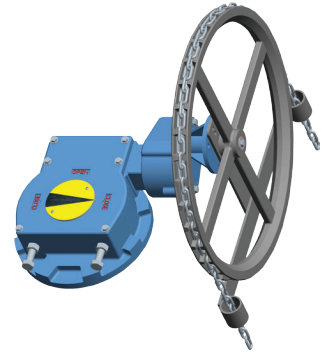
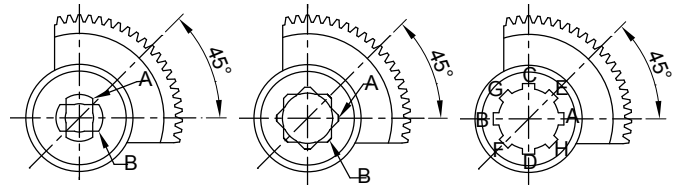


Figure 2



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 Wheel	Ductile Iron	ASTM A70-50 05	SGI 500/7
4	Input Shaft	Carbon steel	ASTM A576 1045	45C8
5	Worm	Carbon steel	ASTM A576 1045	45C8
6	Spur Housing	Ductile Iron	ASTM A536 60-40-18	SG 400/12
7	Spur Cover	Ductile Iron	ASTM A536 60-40-18	SG 400/12
8	Spur Pinion	Carbon steel	ASTM A322 4140	40Cr4Mo3
9	Spur Gear	Carbon steel	ASTM A322 4140	40Cr4Mo3
10	Thrust Bearing	Special steel	ASTM a295 52100	-
11	Chain Wheel	Ductile Iron	ASTM A536 60-40-18	SG 400/12
12	Chain Guard	Alloy steel	-	IS 2062
13	'O' Ring	NBR (Buna-N)	NBR (Buna-N)	Nitrile

Note:

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

Model	Rated Output Torque (Nm)	Mech. Advantage ±10%	Ratio	Turns To Close	ISO 5211 Mounting	Max. Drive Bore	Approx. Unit Weight (Kg)	Ød	A	B	C	D	E	F	G	H	J	K
AT 20-CW	250	8	33:1	8.25	F05,F07	20	3.2	18	56.5	110	82	92	36	90	26	40	6"	112
AT 25-CW	500	10	40:1	10	F07,F10	30	5.5	18	69	136	98	105	54	108	35	48.5	9"	130
AT 30-CW	700	10	40:1	10	F10,F12	32	7	20	80	143	95	112	45	128	39	51	12"	160
AT 40-CW	1000	11	44:1	11	F10,F12,F14	45	10.5	20	93	176	116	120	70	140	47	51	12"	160
AT 50-CW	1500	12.5	48:1	12	F10,F12,F14,F16	50	12.2	20	88	198	138	139	81	168	44.5	51	15"	160
AT 60-CW	2000	14	60:1	15	F10,F12,F14,F16	50	15	20	92	214	156	135	85	176	46	51	15"	160
AT 70-CW	3500	18.25	73:1	18.25	F14,F16	80	38	25	118	265	268	165	85	250	62	55	20"	195
					F25		40							300				
AT 80-CW	2800	20	80:1	20	F12,F14,F16	60	32.5	25	122	245	207	168	83.5	244	64	55	20"	195
					F25	80	300											
AT 90-CW	4000	22.5	90:1	22.5	F16,F25	90	60.5	25	133	305	268	197	100	342	78	57	24"	250
AT 80/1/S1-CW	4500	58	264:1	66	F12,F14,F16	60	40	25	122.5	245	232	280	84	244	64	55	20"	195
					F25	80	119.5		300									
AT 70/3/S1-CW	6000	65	292:1	73	F14,F16	80	46.5	25	113	268	206	278	85	300	62	55	20"	195
				F25	49		300											
AT 90/1/S1-CW	8000	70	300:1	75	F16,F25	90	72	25	133	305	268	310	100	340	78	57	24"	250
AT 100/1/S1-CW	10000	70	300:1	75	F25, F30	100	82	25	151	348	263	307	110	377	76	57	24"	250
AT 150/1/S2-CW	15000	100	450:1	112.5	F25, F30	100	92	25	151	348	263	342	110	377	76	57	24"	250
AT 250/2/S2-CW	22500	120	456:1	114	F25, F30, F35	110	145	25	157	424	334	380	133	469	88	57	24"	250
AT 350/2/S3-CW	30000	253	1114:1	278.5	F25, F30, F35	150	165	25	157	424	334	422	133	469	88	57	24"	250
AT 450/2/S3-CW	40000	270	1175:1	293.75	F30, F35, F40	150	292	25	200	608	425	466	162	592	100	57	24"	250
AT 500/1/S3-CW	50000	287	1261:1	315.25	F30, F35, F40	150	380	25	203	650	595	550	199	706	103	57	24"	250
AT 600/1/S3.5-CW	60000	340	1545:1	386.25	F30, F35, F40	150	425	25	203	650	595	612	199	706	103	57	24"	250
AT 750/1/S4-CW	75000	400	1826:1	456.5	F40, F48	200	450	25	203	650	595	647	199	706	103	57	24"	250
AT 1000/1/S4-CW	100000	600	2635:1	658.75	F40, F48	200	460	25	203	650	595	647	199	706	103	57	24"	250

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