

SUSIN I-TORK INDIA PRIVATE LIMITED

An ISO 9001 - 2015 Certified Company



ITG SERIES

**Mechanical Worm Gear Actuator
Declutchable**



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SUSIN I-TORK INDIA PRIVATE LIMITED

Susin Group was founded by Mr. Muthukumar in 1992, as a company specialized in the design, manufacture and installation of Valve automation products to different industries. In 2006 the company stepped into marketing to manufacturing, and to focus more on valve automation industrial requirements. We are providing complete automation solution to all kind of Valve Industries where we equipped to support in pneumatic, hydraulic, electrical & mechanical actuators. susin produces various range of critical products in different applications.

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ITG Series

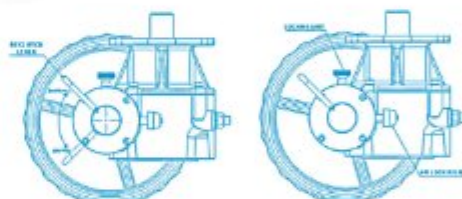
Application

ITG Series is engineered to deliver precise and reliable 0 to 90° manual override control for shut-off valves equipped with pneumatic rotary actuators. Designed for critical applications across various industries, ITG Series ensures smooth, dependable operation in systems utilizing both double-acting and spring-return actuators. With its declutchable manual override mechanism, ITG Series allows operators to seamlessly switch to manual control when needed- ensuring uninterrupted performance during pneumatic failure, commissioning, or maintenance activities. Each unit is configured for inline mounting between the valve and actuator, and comes equipped with a universal actuator mounting flange for flexible and adaptable installation. To suit diverse application requirements, ITG Gear Box are also available with a plain, machinable drive shaft and drive bush, providing a robust and customizable interface between the actuator, gearbox, and valve.



Features

- Torque Range 60 to 28000Nm with Gear Reduction Attachment
- $\pm 5^\circ$ Stroke Adjustment
- IP Rating-IP54, IP55, IP65 and IP67M
- Temperature Range -20°C to +85°C (Standard)
- -45°C to +120°C (Low Temperature)
- Ductile Iron Housing (Cast Iron Optional)
- Steel Input Shaft (Stainless Steel Optional)
- Bearing Construction
- Epoxy & PU Coating for Housing and Powder Coated Hand Wheel
- Integrated Air Relief System



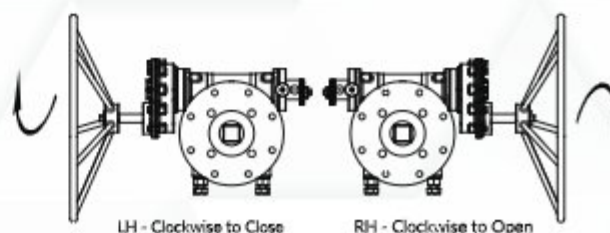
Engage/Disengage Mechanism of ITG

- Make sure lever position should be in auto mode when ITG gear box connect with pneumatic actuator.
- Pull the locking unit holder.
- Rotate the lever to "Manual" position, Now we can operate through handwheel.
- Make sure gears are fully disengaged from worm gear.
- For pneumatic operation lever must be placed in "Auto" position.



MOV Flange (For Electrical Actuator)

- Worm gear actuator can provide with electrically operated actuators with ISO-5210 mounting dimensions.



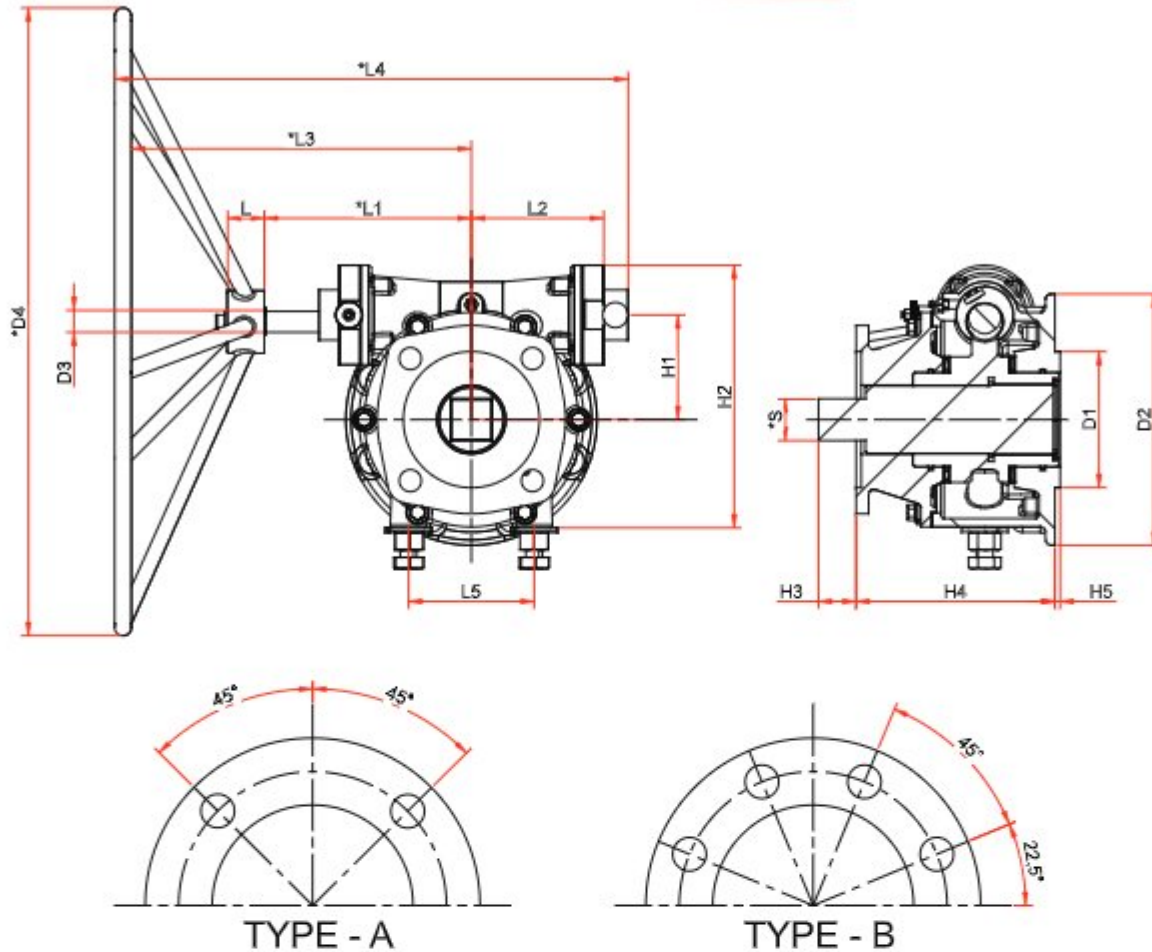
MODEL NO	Maximum Output Torque		M.A ±10%	Gear Ratio	Valve Mounting ISO 5211		Actuator Mounting ISO 5211		No of Turns	*Recommended Hand Wheel Dia (mm)	*Rim Pull Effort In Kg	Approx Unit Weight (Kg)
	Nm	Ft-lbs			Standard	Option	Standard	Option				
ITG-012	60	44.25	6.00	30:1	F05	F07	F05	NA	7.50	Ø100	20.41	4.5
ITG-025	125	92.20	7.00	36:1	F07	F05	F07	NA	9.00	Ø200	18.22	5
ITG-045	300	221.27	8.00	40:1	F10	F07	F10	NA	10.00	Ø250	30.61	5.5
ITG-080	650	479.42	10.00	36:1	F12	F10	F12	F10	9.00	Ø400	33.16	14.5
ITG-100	800	590.05	10.00	36:1	F12	F10	F12	F10	9.00	Ø500	32.65	15
ITG-200	1600	1180.10	11.00	40:1	F14	F12	F14	F12	10.00	Ø500	59.37	25
ITG-300	2600	1917.66	16.50	52:1	F16	F20	F16	F20	13.00	Ø600	53.60	39
ITG-400	3600	2655.22	16.50	52:1	F16	F20	F16	F20	13.00	Ø600	74.21	57
ITG-650	5600	4130.35	17.00	48:1	F20	F16	F20	F16	12.00	Ø600	112.04	67
ITG-900	8000	5900.50	18.50	62:1	F25	F30	F25	F30	15.50	Ø710	124.30	110
ITG-1200	10500	7744.40	19.50	68:1	F30	F25	F30	F25	17.00	Ø710	154.77	121
ITG-1500	13500	9957.09	20.00	58:1	F30	F25	F30	F25	14.50	Ø800	172.19	135
ITG-1800	16000	11800.99	20.00	62:1	F30	F25	F30	F25	15.50	Ø850	192.08	155
ITG-2400	21000	15488.81	20.00	56:1	F35	F30	F35	F30	14.00	Ø900	238.10	180
ITG-3200	28000	20651.74	21.00	58:1	F35	F30	F35	F30	14.50	Ø900	302.34	230

MODEL NO	Maximum Output Torque		M.A ±10%	Gear Ratio	Valve Mounting ISO 5211		Actuator Mounting ISO 5211		No of Turns	*Recommended Hand Wheel Dia (mm)	*Rim Pull Effort In Kg	Approx Unit Weight (Kg)
	Nm	Ft-lbs			Standard	Option	Standard	Option				
ITG-400-1S	3600	2655.22	37.46	130:1	F16	F20	F16	F20	32.50	Ø600	32.69	67
ITG-650-1S	5600	4130.35	47.60	144:1	F20	F16	F20	F16	36.00	Ø600	40.02	77
ITG-900-1S	8000	5900.50	51.80	186:1	F25	F30	F25	F30	46.50	Ø710	44.39	120
ITG-1200-1S	10500	7744.40	54.60	204:1	F30	F25	F30	F25	51.00	Ø710	55.28	131
ITG-1500-1S	13500	9957.09	76.00	232:1	F30	F25	F30	F25	58.00	Ø850	42.65	145
ITG-1800-1S	16000	11800.99	76.00	248:1	F35	F30	F30	F25	62.00	Ø850	50.55	170
ITG-2400-1S	21000	15488.81	76.00	224:1	F35	F30	F35	F30	56.00	Ø900	62.66	205
ITG-3200-1S	28000	20651.74	79.80	232:1	F35	F30	F35	F30	58.00	Ø900	79.56	240

MODEL NO	Maximum Output Torque		M.A ±10%	Gear Ratio	Valve Mounting ISO 5211		Actuator Mounting ISO 5211		No of Turns	*Recommended Hand Wheel Dia (mm)	*Rim Pull Effort In Kg	Approx Unit Weight (Kg)
	Nm	Ft-lbs			Standard	Option	Standard	Option				
ITG-900-2S	8000	5900.50	145.04	558:1	F25	F30	F25	F30	139.5	Ø710	15.85	135
ITG-1200-2S	10500	7744.40	152.88	612:1	F30	F25	F30	F25	153.0	Ø710	19.74	141
ITG-1500-2S	13500	9957.09	156.80	522:1	F30	F25	F30	F25	130.5	Ø850	20.67	155
ITG-1800-2S	16000	11800.99	288.80	992:1	F35	F30	F30	F25	248.0	Ø850	13.30	188
ITG-2400-2S	21000	15488.81	288.80	896:1	F35	F30	F35	F30	224.0	Ø900	16.49	215
ITG-3200-2S	28000	20651.74	303.24	928:1	F35	F30	F35	F30	232.0	Ø900	20.94	270

Note : The Recommended Handwheel Can Be Customized. Any Change In The Handwheel Size Will Also Change The Rim Pull Effort Value.

Mentioned Specifications & Dimensions Are Subject To Change Without Prior Notice For Quality Improvements.



DIMENSION DATA

ISO 5211 Flange Mounting Details

All dimensions are in mm

MODEL	TYPE	Valve Mounting ISO 5211		Actuator Mounting ISO 5211		L	*L1	L2	*L3	*L4	L5	H1	H2	H3	H4	H5	*S	D1	D2	D3	*D4
		FLANGE	PCD	FLANGE	PCD																
ITG-012	A	F07	Ø70	F07	Ø70	20	86	45	121	176	44	37	92	18	99	-	SQ 11	-	-	Ø12	Ø110
ITG-025		F07	Ø70	F07	Ø70	20	100	53	129	205	49.5	44	112.5	18.5	107.5	-	SQ 17	-	-	Ø15	Ø200
ITG-045		F10	Ø102	F10	Ø102	24	107.5	66	150	241.5	61.5	49	122	22	121	-	SQ 22	-	-	Ø15	Ø250
ITG-080		F12	Ø125	F12	Ø125	23	150	88.5	220.5	347	80	63.7	161.2	24.5	147.5	3	SQ 27	70	123	17	400
ITG-100		F12	Ø125	F12	Ø125	23	150	88.5	220.5	347	80	63.7	161.2	24.5	147.5	3	SQ 27	70	123	17	400
ITG-200		F14	Ø140	F14	Ø140	38	249.5	111.75	295	444	104	80	210	34	162	4	SQ 36	100	166	17	400
ITG-300	B	F16	Ø165	F16	Ø165	35	197.8	126.5	325.6	468	120	93.5	251	36	190	5	SQ 40	130	240	20	600
ITG-400		F16	Ø165	F16	Ø165	35	175.5	143.5	315.5	502	145	117.5	285	80	190.2	5	SQ 46	130	250	20	600
ITG-650		F20	Ø205	F20	Ø205	38	260	156	337	580	180	126	311.5	43	238.5	5	SQ 48	130	290	30	600
ITG-900		F25	Ø254	F25	Ø254	40	329	193	447.8	688	180	154	379	53	255.5	5	SQ 55	230	350	23	560
ITG-1200		F30	Ø298	F30	Ø298	40	337.5	185.5	467.5	715	200	168	403	80	276.5	5	SQ 55	230	360	25	710
ITG-1500		F30	Ø298	F30	Ø298	40	360	200	520	750	220	180	420	80	300	5	SQ 55	250	380	25	710
ITG-1800		F30	Ø298	F30	Ø298	35	430	206	543	790	250	190	450	128.5	307.5	5	Ø110	230	350	35	800
ITG-2400		F35	Ø356	F35	Ø356	40	430	210	560	820	280	220	480	130	320	5	Ø120	250	380	35	800
ITG-3200		F35	Ø356	F35	Ø356	45	480	250	600	860	320	260	540	140	350	5	Ø150	280	420	35	800

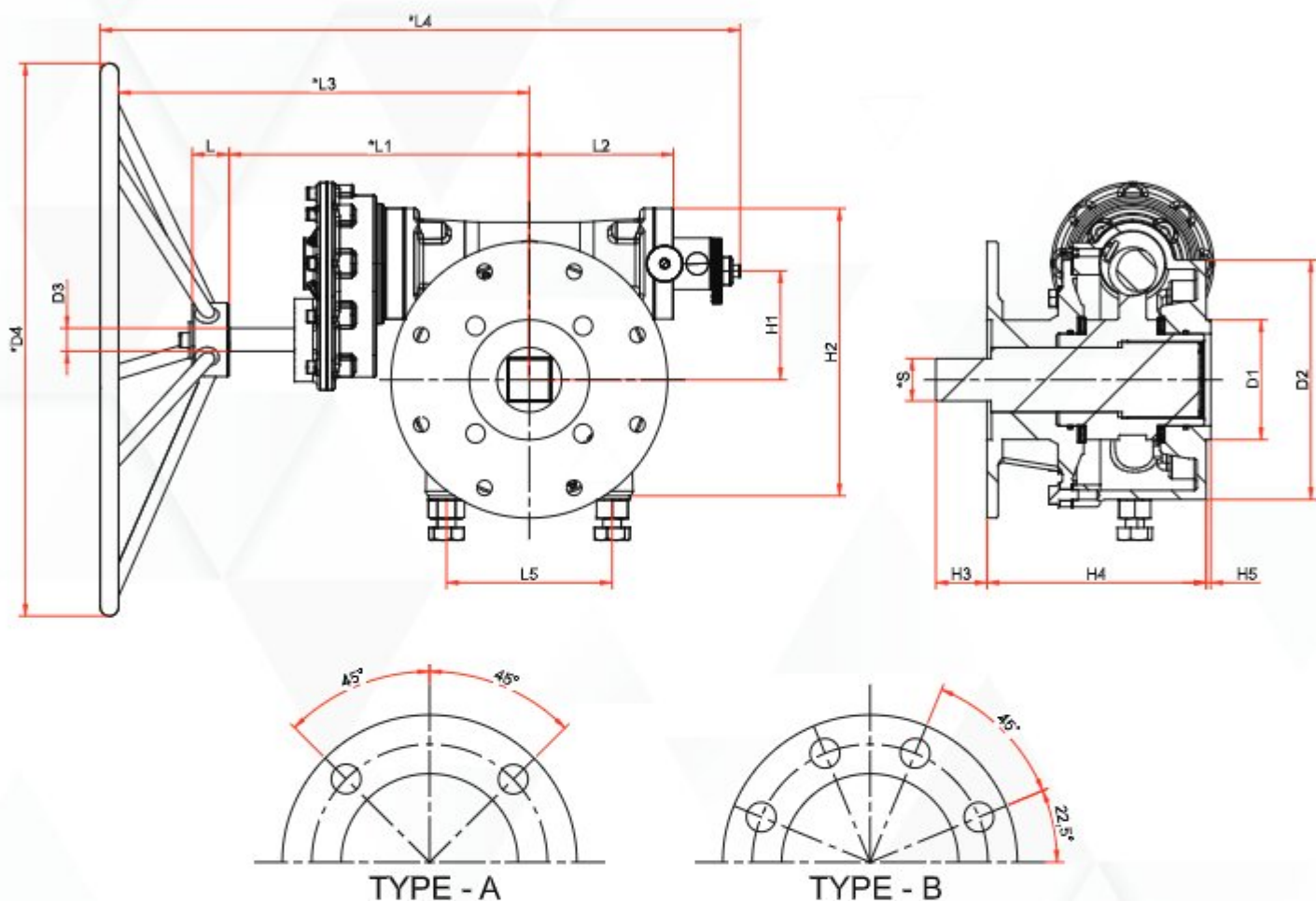
*L1, *L3, *L4, *S and *D4 is Customized.

L, L2, L5, H1, H2, H3, H4, H5, D1, D2 and D3 is Standard.

Mentioned specifications & dimensions are subject to change without prior notice for quality improvements

Declutchable Worm Gear Actuator With Single Stage Helical Gear Reduction Attachment

ITG Series



ISO 5211 Flange Mounting Details

DIMENSION DATA

All dimensions are in mm

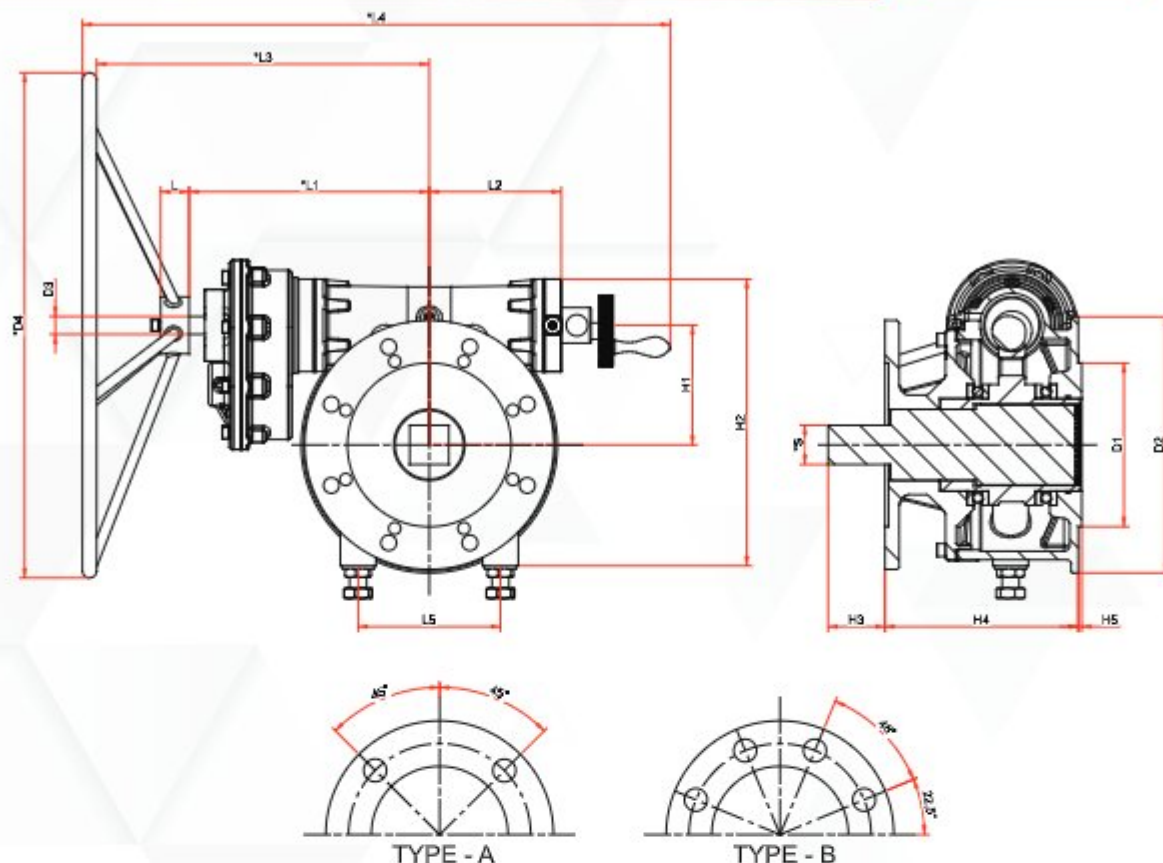
MODEL	TYPE	Valve Mounting ISO 5211		Actuator Mounting ISO 5211		L	*L1	L2	*L3	*L4	L5	H1	H2	H3	H4	H5	*S	D1	D2	D3	*D4
		FLANGE	PCD	FLANGE	PCD																
ITG-400-1S	B	F16	Ø125	F16	Ø125	35	275.5	143.5	415.5	602	145	117.5	285	80	190.2	5	SQ 46	130	250	20	600
ITG-650-1S		F20	Ø205	F20	Ø205	38	360	156	437	680	180	126	311.5	43	238.5	5	SQ 48	130	290	30	600
ITG-900-1S		F25	Ø254	F25	Ø254	40	429	193	547.8	788	180	154	379	53	255.5	5	SQ 55	230	360	23	560
ITG-1200-1S		F30	Ø298	F30	Ø298	40	437.5	185.5	567.5	815	200	168	403	80	276.5	5	SQ 55	230	360	25	710
ITG-1500-1S		F30	Ø298	F30	Ø298	40	460	200	620	850	220	180	420	80	300	5	SQ 55	250	380	25	710
ITG-1800-1S		F30	Ø296	F30	Ø296	35	530	206	643	890	250	190	450	128.5	307.5	5	Ø110	230	360	35	800
ITG-2400-1S		F35	Ø356	F35	Ø356	40	530	210	660	920	280	220	480	130	320	5	Ø120	250	380	35	800
ITG-3200-1S		F35	Ø356	F35	Ø356	45	580	250	700	960	320	260	540	140	350	5	Ø150	280	420	35	800

*L1, *L3, *L4, *S and *D4 Is Customized.
L, L2, L5, H1, H2, H3, H4, H5, D1, D2 and D3 Is Standard.

Mentioned specifications & dimensions are subject to change without prior notice for quality improvements

Declutchable Worm Gear Actuator With Double Stage Helical Gear Reduction Attachment

ITG Series



DIMENSION DATA

ISO 5211 Flange Mounting Details

All dimensions are in mm

MODEL	TYPE	Valve Mounting ISO 5211		Actuator Mounting ISO 5211		L	*L1	L2	*L3	*L4	L5	H1	H2	H3	H4	H5	*S	D1	D2	D3	*D4
		FLANGE	PCD	FLANGE	PCD																
ITG-900-2S	B	F25	Ø254	F25	Ø254	40	479	193	597.8	838	180	154	379	53	255.5	5	SQ 55	230	350	23	560
ITG-1200-2S		F30	Ø298	F30	Ø298	40	487.5	185.5	617.5	865	200	168	403	80	276.5	5	SQ 55	230	360	25	710
ITG-1500-2S		F30	Ø298	F30	Ø298	40	510	200	670	900	220	180	420	80	300	5	SQ 55	250	380	25	710
ITG-1800-2S		F30	Ø298	F30	Ø298	35	580	206	693	940	250	190	450	128.5	307.5	5	Ø110	230	350	35	800
ITG-2400-2S		F35	Ø356	F35	Ø356	40	580	210	710	970	280	220	480	130	320	5	Ø120	250	380	35	800
ITG-3200-2S		F35	Ø356	F35	Ø356	45	630	250	750	1010	320	260	540	140	350	5	Ø150	280	420	35	800

*L1, *L3, *L4, *S and *D4 is Customized.

L, L2, L5, H1, H2, H3, H4, H5, D1, D2 and D3 is Standard.

Mentioned specifications & dimensions are subject to change without prior notice for quality improvements

HANDWHEEL

- Varies type of casting, fabricated handwheels & chain wheels.
- High quality material has been used for best construction.
- Quick Response** : With hand wheels, you can quickly open or close valves in response to changing conditions, maintenance needs.
- Visual Positioning** : Hand wheels have markings or indicators that show the position of the valve. This visual reference allows operators to determine the valve's status at a glance.



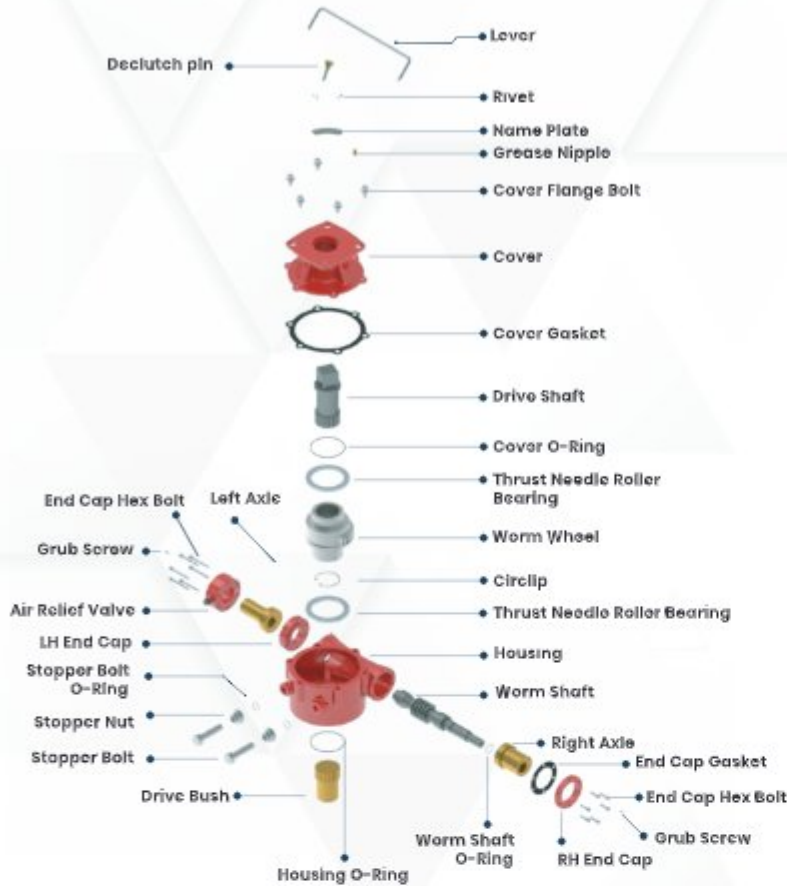
Casting Hand Wheel
Ranges from 4" to 16"



Chain Hand Wheel
Ranges from 4" to 24"



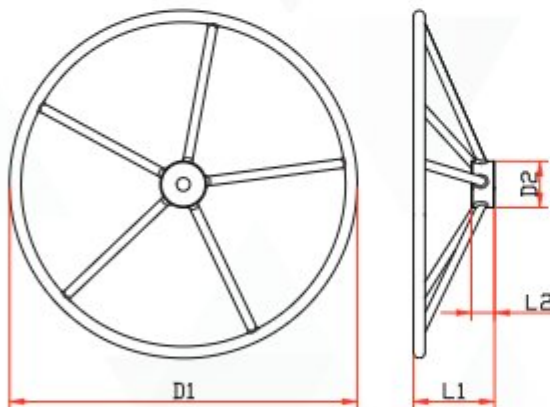
Fabricated Hand Wheel
Ranges from 4" to 40"



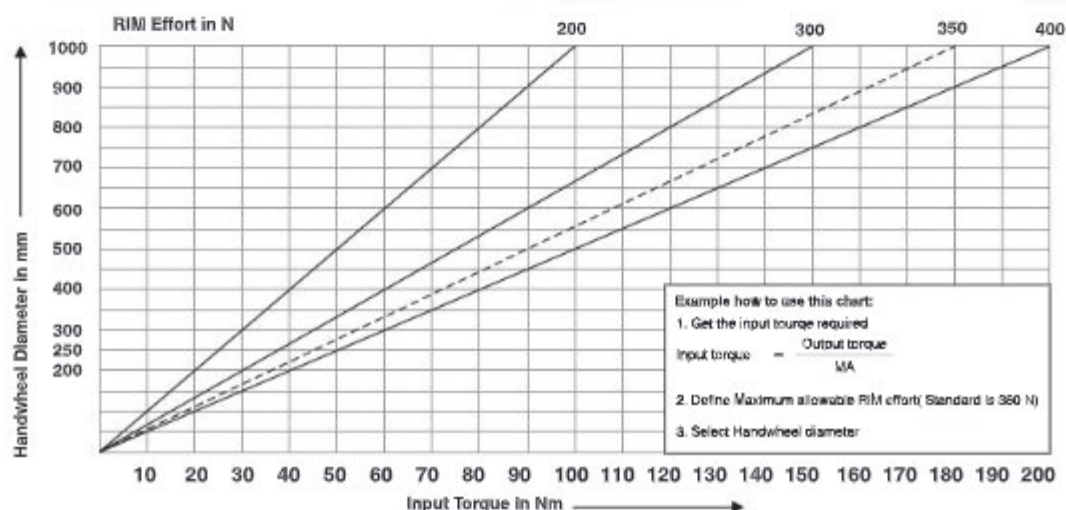
Material of Construction

S.No	Description	Material		Qty
		Standard	ASTM	
1	Housing	Ductile Iron	A536-65-45-12	1
2	Cover	Ductile Iron	A536-65-45-12	1
3	Worm Wheel	Ductile Iron	A536-80-55-06	1
4	Worm Shaft	Carbon Steel	A576-1045	1
5	Air Relief Valve	Aluminium Alloy	----	1
6	RH End Cap	Ductile Iron	A536 65 45 12	1
7	LH End Cap	Ductile Iron	A536-65-45-12	1
8	Right Axle	Carbon Steel	A576-1045	1
9	Left Axle	Carbon Steel	A576-1045	1
10	Drive Bush	Carbon Steel	A576-1045	1
11	Drive Shaft	Carbon Steel	A576-1045	1
12	Handwheel	Ductile Iron	A536-65-45-12	1
13	Lever	Carbon Steel	A576-1045	1
14	Cover Gasket	NBR	----	1
15	End Cap Gasket	NBR	----	2
16	Fasteners	GR 8.8 (Customized)		

All dimensions are in mm



S.NO	WHEEL OD D1	HEIGHT L1	BUSH DIA D2	BUSH LENGTH L2	NO. OF SPOKES
01	100	80	50	25	3
02	200	80	50	25	3
03	250	90	70	35	3
04	300	90	70	35	5
05	400	90	70	35	5
06	500	100	70	35	5
07	600	100	70	35	5
08	710	100	70	35	5
09	800	130	80	45	6
10	900	130	80	45	6
11	1000	130	90	60	6



Other Products



Pneumatic Actuators
(Rotary & Linear types)



Electrical Actuators
(Rotary & Linear types)



Hydraulic Actuators
(Rotary & Linear types)

ITG Series



Susin Group Global Presence



MANUFACTURING FACILITIES

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