



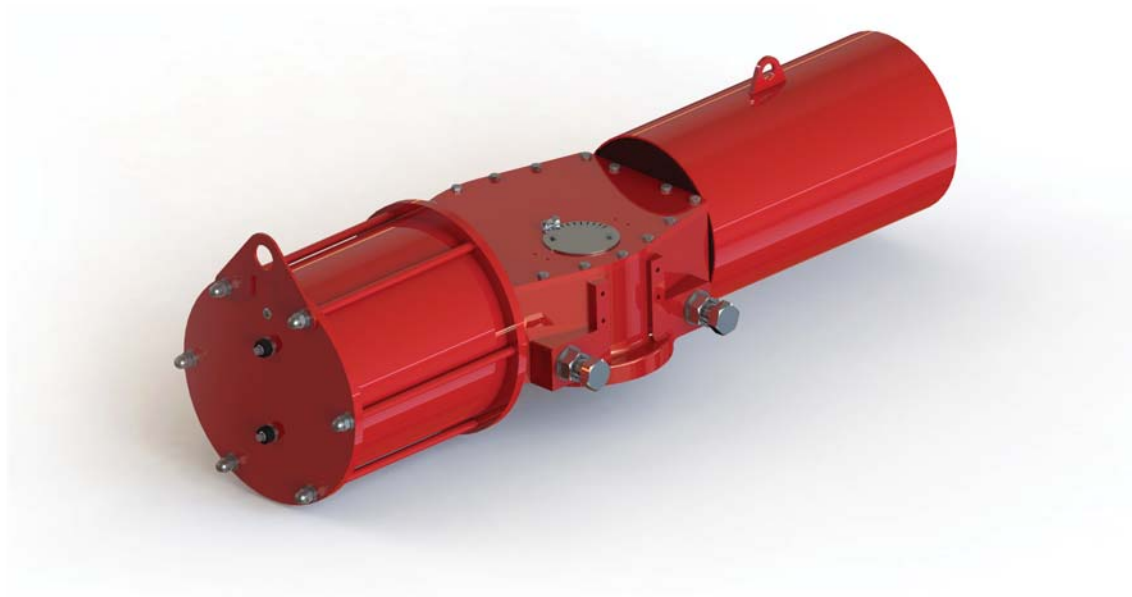
Heavy-Duty Pneumatic Actuator IS & IC Series



INNOBIZ CE
기술혁신형중소기업

Heavy-Duty Pneumatic Actuator IS & IC Series

- *The IS & IC series of Heavy Duty scotch yoke actuators are designed to suit a wide range of valves and damper applications and offer a wide range of torques to enable operation of ball, butterfly, plug valves and dampers or any device that requires a quarter turn operation for on-off or modulating service.*
- *IS series has a symmetrical design yoke that produces maximum torque at both ends of the 90° cycle.*
- *IC series has a canted design yoke that produces maximum torque at either the close or open end.*
- *Both series of actuators have a complete range of options & accessories for control and monitoring, including Manual Handwheel (Jackscrew), Hydraulic Overrides, Declutch Gearboxes, Limit switches, Solenoid Valves, Positioners and other control accessories.*
- *The modular design and construction provides maximum convenience during installation, maintenance and storage.*



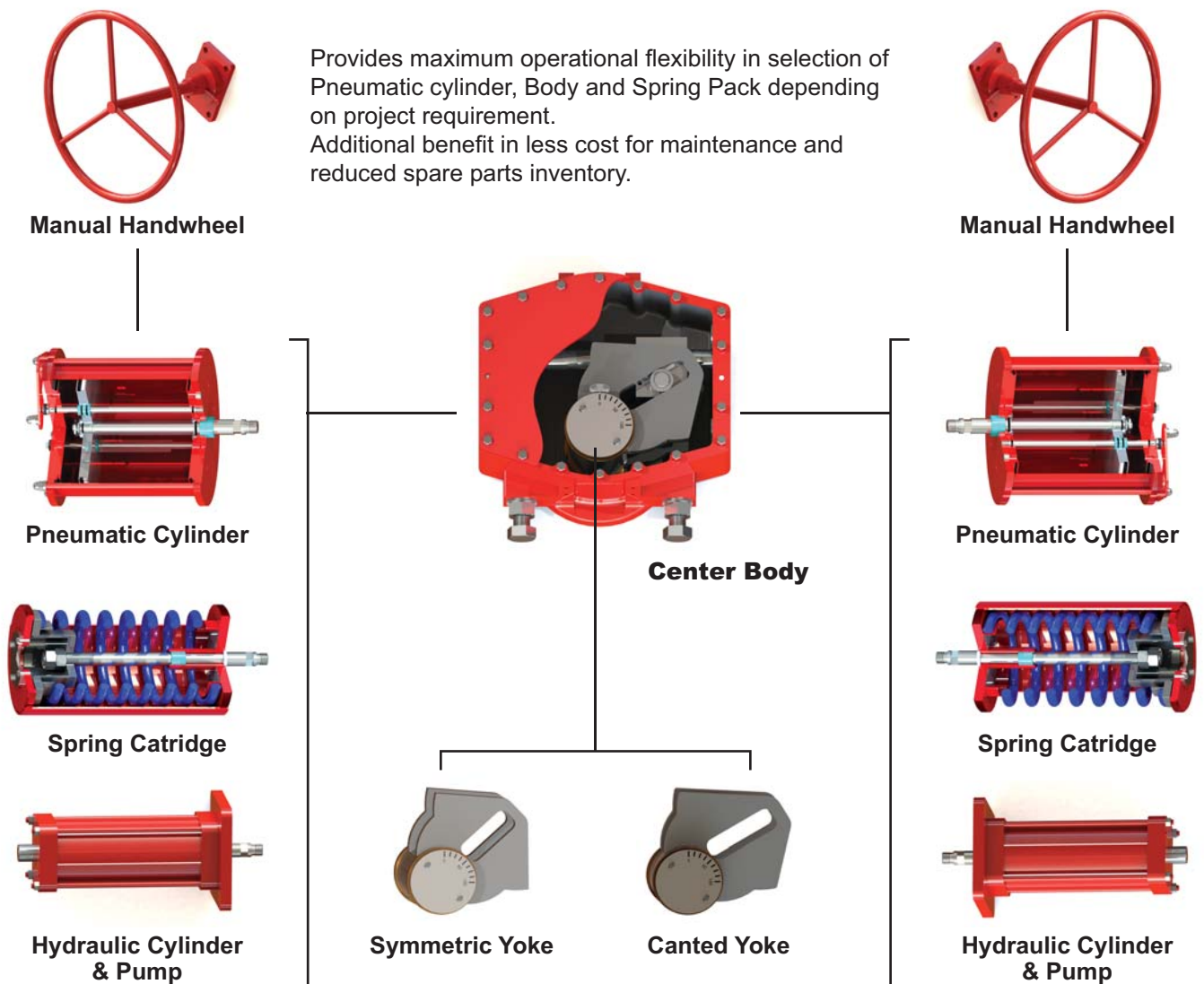
Standard IS & IC series actuator are provided with below features.

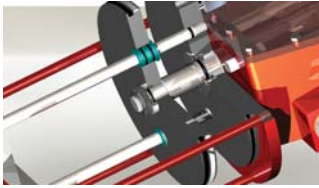
- Two years standard warranty.
- IP66 for water ingress protection and corrosion resistance.
- Interchangeable modular construction - an advantage for inventory, service, maintenance
- Standard operating pressure: 40 to 100 PSIG (2.8 to 7 Bar)
- Standard operating temperature: -20°C to +80°C with high and low temperature optional trims available.
- Mounting dimension is to meet with ISO5211

Optional

- Different temperature range : -30°C to 100°C
- Different pressure range: Max. 10 Bar
- Manual operation : Hydraulic or Handwheel (jackscrew), Declutchable gear box
- Different mounting dimension: (MSS-SP101 or others on request)

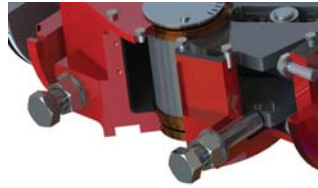
MODULAR CONSTRUCTION





Guide Bar for Safety Increased

Two piston guide bars provided (Up & Down) preventing piston sag due to abrasion after long life cycle. Engineered plastic bush with long life durability and low abrasion characteristics enables smooth operation at low pressure.



Travel Stop / Adjustment And Indicator

Travel stop/adjustment can be set in the range of $-5^{\circ} \sim +95^{\circ}$ of stroke ($\pm 5^{\circ}$). The travel stops are designed in the vertical position in order to bear great shock. Indicator with pointer and angle meter for easy determination of actuator position.



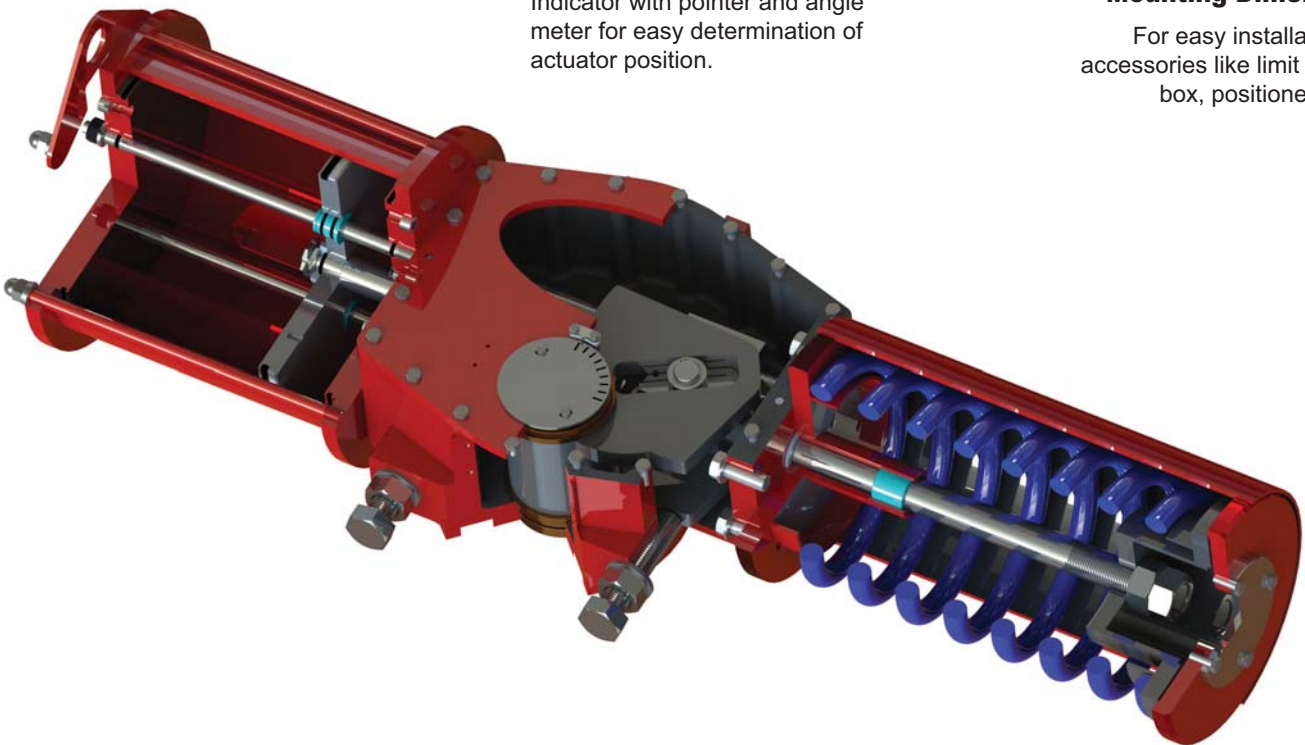
Piston Guide Ring

High quality Back-up Ring to prevent any possible leakage and ensure long lifespan.



Standard NAMUR Mounting Dimension

For easy installation of accessories like limit switch box, positioners etc.



Replaceable Bearing

Surface heat-treated Slide Pin, Slide Bearing, and Yoke Slide provides semi-permanent lifespan with strong durability of abrasion.



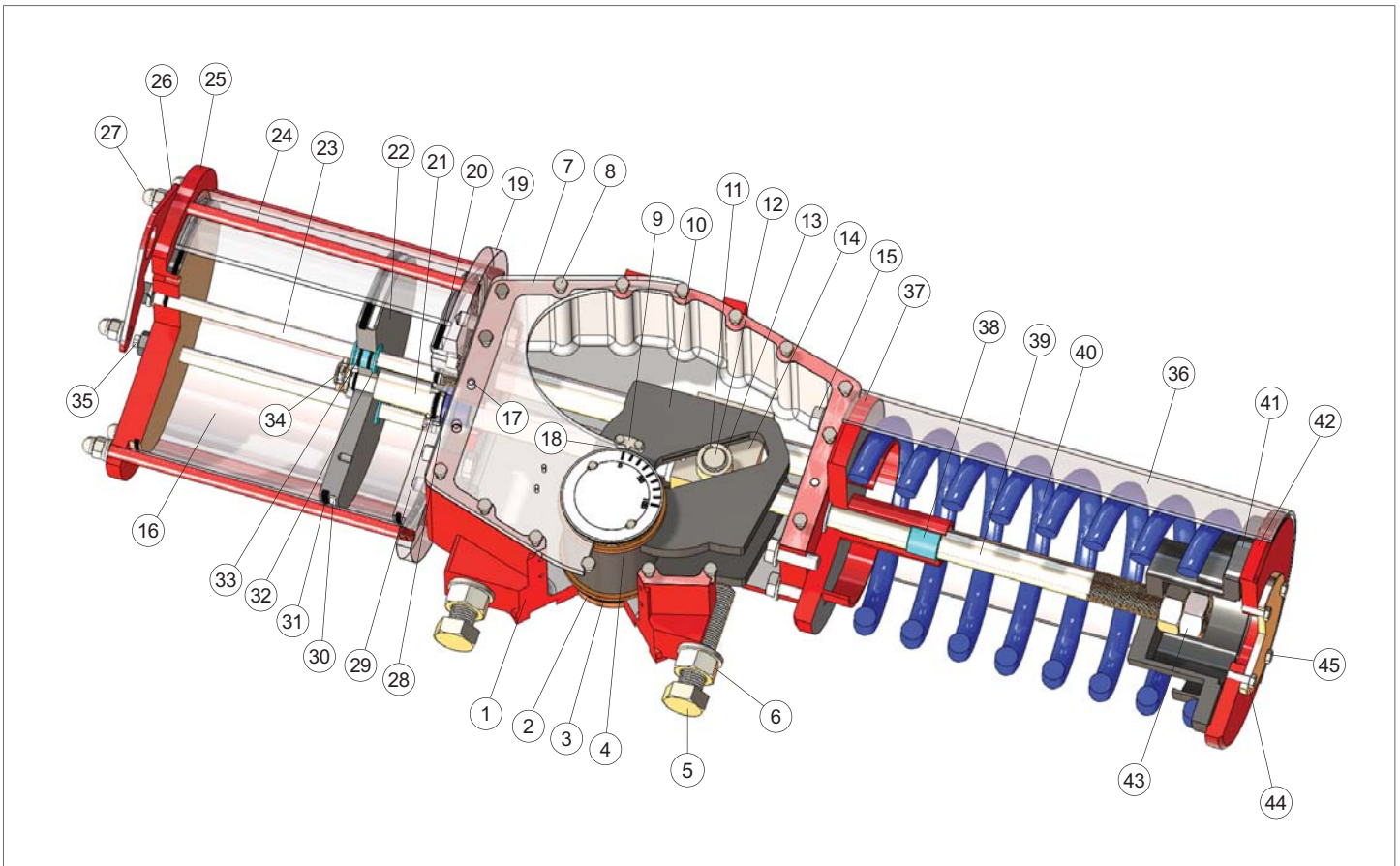
Spring Rod Guide

Hard anodized Aluminum casting and external epoxy powder coated against severe industrial environment.



Adaption

In order for direct mounting valve and actuator without separate coupler and bracket, bore diameter for valve shaft is increased, so that it can accept thicker diameter shaft rather than standard. Mounting flange as per ISO5211

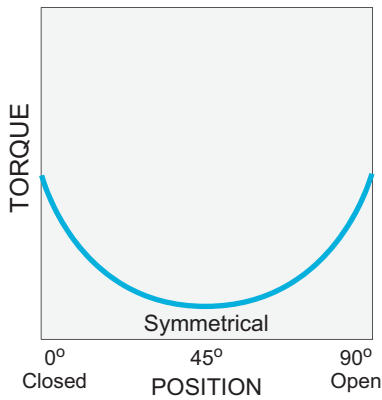


NO	DESCRIPTION	MATERIAL
1	BODY	A395
2	LOWER BUSHING	B139
3	O-RING	NBR
4	UPPER BUSHING	B139
5	STOPPER BOLT	CARBON STEEL
6	STOPPER NUT	CARBON STEEL
7	CENTER BODY COVER	A283
8	CENTER BODY COVER BOLT	CARBON STEEL
9	POINTER	A240
10	YOKE	CARBON STEEL
11	SNAP RING	CARBON STEEL
12	SLIDE PIN	CARBON STEEL
13	SLIDE ROLLER	CARBON STEEL
14	SLIDE BLOCK	CARBON STEEL
15	FRONT COVER BOLT	CARBON STEEL
16	CYLINDER	A53
17	COVER FIXING PIN	CARBON STEEL
18	POSITION INDICATOR	CARBON STEEL
19	CYLINDER FRONT COVER	CARBON STEEL
20	COVER O-RING	NBR
21	PISTON ROD	CARBON STEEL
22	PISTON	CARBON STEEL
23	PISTION GUIDE BAR	CARBON STEEL

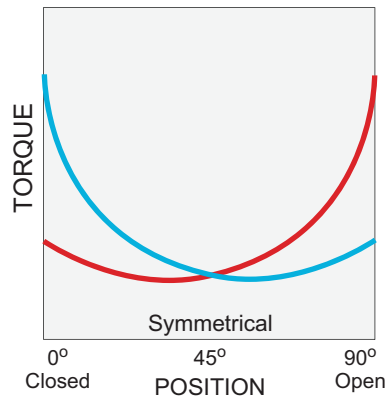
NO	DESCRIPTION	MATERIAL
24	TIE BOLT	CARBON STEEL
25	CYLINDER END COVER	CARBON STEEL
26	LIFTING LUG	CARBON STEEL
27	TIE BOLT NUT	CARBON STEEL
28	FRONT COVER BUSHING	ENGINEERING PLASTIC
29	O-RING	NBR
30	BACK-UP RING	PTFE
31	PISTON O-RING	NBR
32	PISTON GUIDE BUSHING	ENGINEERING PLASTIC
33	PISTON GUIDE BUSHING O-RING	NBR
34	PISTON LOCK BOLT	CARBON STEEL
35	PISTON GUIDE BAR NUT	CARBON STEEL
36	SPRING CASE	A120
37	SPRING CASE FRONT COVER	CARBON STEEL
38	SPRING ROD GUIDE BUSHING	ENGINEERING PLASTIC
39	SPRING ROD	CARBON STEEL
40	SPRING	CARBON STEEL
41	SPRING RETAINER	CARBON STEEL
42	SPRING CASE END COVER	CARBON STEEL
43	SPRING ROD LOCK NUT	CARBON STEEL
44	COVER	CARBON STEEL
45	COVER BOLT	CARBON STEEL

SYMMETRIC TECHNICAL DATA

Double Acting Actuator



Spring Return Actuator



Symmetric Yoke



Torque Curve — Air Torque — Spring Torque

Double Acting

Unit : Nm

MODEL	2.8 Bar			4.2 Bar			5.5 Bar			7 Bar		
	Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End
ISD 02-20	1,418	724	1,413	2,127	1,087	2,119	2,785	1,423	2,775	3,545	1,811	3,532
ISD 02-25	2,215	1,132	2,207	3,323	1,698	3,311	4,352	2,223	4,336	5,539	2,830	5,518
ISD 02-30	3,190	1,630	3,178	4,785	2,445	4,768	6,267	3,202	6,243	7,976	4,075	7,946
ISD 02-35	3,978	2,032	3,963	5,967	3,049	5,945	7,814	3,992	7,785	9,945	5,081	9,908
ISD 03-35	4,680	2,391	4,663	7,020	3,587	6,994	9,193	4,697	9,159	11,700	5,978	11,657
ISD 03-38	6,181	3,158	6,159	9,272	4,737	9,238	12,142	6,203	12,097	15,453	7,895	15,396
ISD 03-43	7,891	4,032	7,862	11,837	6,047	11,793	15,500	7,919	15,443	19,728	10,079	19,655
ISD 04-43	10,258	5,241	10,221	15,388	7,862	15,331	20,151	10,295	20,076	25,646	13,103	25,552
ISD 04-48	12,752	6,515	12,705	19,128	9,773	19,058	25,049	12,798	24,957	31,881	16,288	31,763
ISD 04-53	15,517	7,928	15,460	23,276	11,892	23,190	30,480	15,572	30,368	38,793	19,819	38,650
ISD 05-53	19,098	9,757	19,028	28,647	14,636	28,541	37,514	19,166	37,376	47,745	24,393	47,569
ISD 05-58	22,834	11,666	22,750	34,252	17,499	34,125	44,853	22,916	44,688	57,086	29,166	56,876
ISD 05-63	26,905	13,746	26,805	40,357	20,618	40,208	52,848	27,000	52,654	67,262	34,364	67,014
ISD 06-63	33,631	17,182	33,507	50,446	25,773	50,260	66,060	33,750	65,817	84,077	42,955	83,767
ISD 06-68	39,135	19,994	38,991	58,703	29,992	58,487	76,873	39,275	76,590	97,839	49,986	97,478
ISD 06-73	45,057	23,020	44,891	67,586	34,530	67,337	88,505	45,218	88,179	112,643	57,550	112,228

SYMMETRIC TECHNICAL DATA

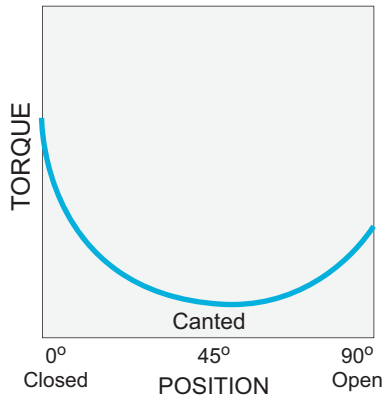
Spring Return (Fail closed or Fail open)

Unit : Nm

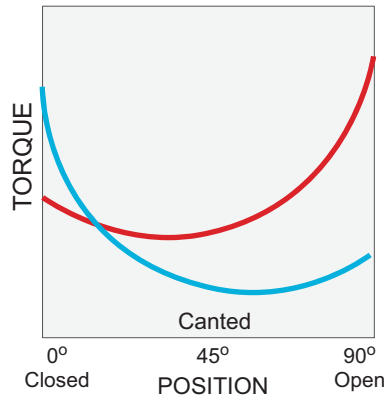
MODEL	SPRING CODE	SPRING TORQUE (Nm)			Air Torque : Air Supply Pressure											
					2.8 Bar			4.2 Bar			5.5 Bar			7 Bar		
		Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End
ISR 02-20	2SA	1,022	479	700	696	216	321	1,384	535	900	2,022	831	1,438			
	2SB	1,443	677	989				1,103	361	554	1,742	657	1,092	2,479	998	1,713
	2SC	1,825	856	1,251				849	203	241	1,488	499	779	2,225	841	1,399
ISR 02-25	2SB	1,443	677	989	1,189	401	627	2,264	899	1,532	3,262	1,361	2,372			
	2SC	1,825	856	1,251	935	243	313	2,010	741	1,218	3,008	1,203	2,059			
	2SD	2,180	1,022	1,495				1,774	594	927	2,772	1,057	1,767	3,923	1,590	2,737
	2SE	2,710	1,271	1,858							2,419	838	1,333	3,571	1,372	2,303
ISR 02-30	2SD	2,180	1,022	1,495	1,645	535	818	3,192	1,252	2,122	4,629	1,918	3,332			
	2SE	2,710	1,271	1,858	1,293	316	384	2,840	1,033	1,687	4,277	1,699	2,897			
	2SF	3,422	1,605	2,346				2,366	739	1,103	3,803	1,405	2,313	5,461	2,174	3,710
	2SG	3,801	1,782	2,605				2,115	583	793	3,552	1,249	2,003	5,209	2,018	3,399
ISR 02-35	2SF	3,422	1,605	2,346	1,583	376	444	3,513	1,271	2,069	5,304	2,101	3,578			
	2SG	3,801	1,782	2,605				3,261	1,115	1,758	5,053	1,945	3,267			
	2SH	4,514	2,117	3,094				2,787	820	1,173	4,578	1,650	2,682	6,645	2,609	4,423
ISR 03-35	3SA	4,388	2,006	2,807	1,817	339	226	4,087	1,391	2,137	6,194	2,368	3,913			
	3SB	5,089	2,327	3,255				3,652	1,109	1,562	5,759	2,085	3,338	8,191	3,213	5,386
	3SC	5,579	2,551	3,569				3,348	911	1,161	5,455	1,888	2,936	7,887	3,016	4,984
ISR 03-38	3SB	5,089	2,327	3,255	2,838	731	877	5,836	2,121	3,402	8,620	3,411	5,747			
	3SC	5,579	2,551	3,569	2,534	534	476	5,532	1,924	3,000	8,316	3,214	5,345			
	3SD	6,569	3,004	4,203				4,917	1,525	2,188	7,701	2,816	4,533	10,913	4,304	7,238
ISR 03-43	3SE	7,212	3,298	4,614	3,179	646	533	7,006	2,420	3,757	10,560	4,067	6,750			
	3SF	7,982	3,650	5,106				6,528	2,110	3,125	10,082	3,757	6,118	14,183	5,658	9,572
	3SG	8,874	4,058	5,677				5,975	1,751	2,393	9,529	3,398	5,386	13,629	5,299	8,840
ISR 04-43	4SA	8,847	3,994	5,458	4,657	1,098	1,126	9,632	3,404	5,317	14,252	5,545	9,208			
	4SB	10,171	4,591	6,274	3,865	572	41	8,840	2,878	4,231	13,460	5,019	8,122	18,791	7,490	12,612
	4SC	11,200	5,056	6,909				8,224	2,469	3,387	12,844	4,611	7,279	18,175	7,081	11,768
ISR 04-48	4SB	10,171	4,591	6,274	6,284	1,693	2,078	12,469	4,560	7,287	18,212	7,222	12,124			
	4SC	11,200	5,056	6,909	5,668	1,284	1,234	11,853	4,151	6,443	17,596	6,813	11,281			
	4SD	12,141	5,480	7,490				11,290	3,777	5,672	17,033	6,439	10,509	23,659	9,511	16,090
ISR 04-53	4SE	13,130	5,927	8,100	7,195	1,761	1,910	14,721	5,249	8,249	21,709	8,488	14,135			
	4SF	14,892	6,722	9,187	6,141	1,061	466	13,666	4,549	6,804	20,655	7,788	12,690	28,718	11,525	19,481
	4SG	15,511	7,002	9,569				13,296	4,303	6,297	20,284	7,542	12,182	28,348	11,279	18,974
ISR 05-53	5SA	15,701	7,312	10,566	8,276	2,151	2,728	17,538	6,445	10,529	26,139	10,431	17,773			
	5SB	17,570	8,183	11,824				16,318	5,679	8,996	24,919	9,665	16,240	34,843	14,265	24,599
	5SC	19,627	9,141	13,208				14,976	4,836	7,310	23,577	8,822	14,554	33,501	13,422	22,913
ISR 05-58	5SB	17,570	8,183	11,824	10,680	3,065	4,248	21,755	8,198	13,575	32,038	12,965	22,237			
	5SC	19,627	9,141	13,208	9,338	2,223	2,561	20,412	7,356	11,889	30,696	12,122	20,550	42,562	17,622	30,544
	5SD	22,018	10,254	14,817				18,851	6,376	9,928	29,135	11,142	18,589	41,001	16,642	28,583
ISR 05-63	5SE	25,287	11,777	17,017	9,591	1,733	1,245	22,639	7,781	12,235	34,756	13,397	22,440			
	5SF	27,110	12,626	18,244				21,450	7,034	10,741	33,566	12,650	20,946	47,547	19,130	32,721
	5SG	29,317	13,654	19,730				20,009	6,129	8,930	32,125	11,745	19,136	46,106	18,225	30,911
ISR 06-63	6SA	30,302	13,623	18,473	14,703	3,132	2,628	31,014	10,693	16,366	46,160	17,713	29,122			
	6SB	35,111	15,784	21,405				28,170	8,790	12,422	43,316	15,810	25,179	60,792	23,910	39,898
	6SC	37,495	16,856	22,858				26,761	7,847	10,468	41,907	14,867	23,224	59,383	22,967	37,943
ISR 06-68	6SB	35,111	15,784	21,405	17,199	3,705	3,182	36,180	12,502	19,168	53,805	20,672	34,013			
	6SC	37,495	16,856	22,858				34,770	11,559	17,213	52,395	19,729	32,058	72,731	29,154	49,186
	6SD	42,483	19,098	25,899				31,820	9,586	13,123	49,445	17,755	27,968	69,782	27,181	45,096
ISR 06-73	6SE	45,300	20,365	27,616				38,770	12,465	18,070	59,062	21,870	35,160			
	6SF	46,128	20,737	28,121				38,281	12,138	17,391	58,573	21,543	34,482	81,986	32,395	54,202
	6SG	50,288	22,607	30,657				35,821	10,492	13,980	56,113	19,897	31,071	79,527	30,749	50,791

CANTED TECHNICAL DATA

Double Acting Actuator



Spring Return Actuator



Canted Yoke



Torque Curve — Air Torque — Spring Torque

Double Acting

Unit : Nm

MODEL	2.8 Bar			4.2 Bar			5.5 Bar			7 Bar		
	Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End
ICD 02-20	2,191	654	1,104	3,287	981	1,656	4,304	1,285	2,169	5,478	1,636	2,761
ICD 02-25	3,424	1,022	1,725	5,135	1,533	2,588	6,725	2,008	3,389	8,559	2,556	4,313
ICD 02-30	4,930	1,472	2,484	7,395	2,208	3,727	9,684	2,891	4,880	12,325	3,680	6,211
ICD 02-35	6,148	1,835	3,098	9,221	2,753	4,647	12,075	3,605	6,085	15,369	4,589	7,745
ICD 03-35	7,232	2,159	3,645	10,849	3,239	5,467	14,206	4,242	7,159	18,081	5,398	9,112
ICD 03-38	9,552	2,852	4,814	14,329	4,278	7,221	18,764	5,602	9,456	23,881	7,130	12,035
ICD 03-43	12,195	3,641	6,145	18,292	5,461	9,218	23,954	7,152	12,071	30,487	9,102	15,364
ICD 04-43	15,853	4,733	7,989	23,780	7,100	11,984	31,140	9,298	15,693	39,633	11,833	19,973
ICD 04-48	19,707	5,884	9,931	29,560	8,826	14,897	38,710	11,558	19,508	49,267	14,710	24,828
ICD 04-53	23,980	7,160	12,084	35,969	10,739	18,127	47,103	14,064	23,737	59,949	17,899	30,211
ICD 05-53	29,513	8,812	14,873	44,270	13,218	22,310	57,973	17,309	29,215	73,783	22,030	37,183
ICD 05-58	35,288	10,536	17,783	52,932	15,804	26,675	69,315	20,696	34,931	88,219	26,340	44,458
ICD 05-63	41,578	12,414	20,953	62,366	18,621	31,429	81,670	24,384	41,157	103,944	31,035	52,382
ICD 06-63	51,972	15,517	26,191	77,958	23,276	39,287	102,088	30,481	51,447	129,930	38,793	65,478
ICD 06-68	60,479	18,057	30,478	90,718	27,086	45,717	118,798	35,470	59,868	151,197	45,143	79,195
ICD 06-73	69,630	20,790	35,090	104,445	31,184	52,635	136,773	40,837	68,926	174,075	51,974	87,725
ICD 08-73	66,375	21,538	37,892	99,563	32,307	56,839	130,380	42,307	74,432	165,938	53,845	94,731

CANTED TECHNICAL DATA

Spring Return (Fail closed)

Unit : Nm

MODEL	SPRING CODE	SPRING TORQUE (Nm)			Air Torque : Air Supply Pressure											
					2.8 Bar			4.2 Bar			5.5 Bar			7 Bar		
		Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End
ICR 02-20	2CA	830	407	981	1,210	247	274	2,306	574	826	3,323	878	1,339			
	2CB	1,077	529	1,273				2,014	452	579	3,031	756	1,092	4,205	1,107	1,684
	2CC	1,265	621	1,495							2,809	664	904	3,983	1,015	1,496
ICR 02-25	2CC	1,265	621	1,495	1,929	401	460	3,640	912	1,323	5,230	1,387	2,124			
	2CG	1,525	748	1,802	1,622	274	200	3,333	785	1,063	4,923	1,260	1,864			
	2CD	1,921	942	2,269				2,866	591	667	4,456	1,066	1,468	6,290	1,614	2,392
ICR 02-30	2CE	2,247	1,102	2,655							4,070	906	1,142	5,904	1,454	2,066
	2CG	1,525	748	1,802	3,128	724	959	5,593	1,460	2,202	7,882	2,143	3,355			
	2CE	2,247	1,102	2,655	2,275	370	237	4,740	1,106	1,480	7,029	1,789	2,633			
ICR 02-35	2CF	3,022	1,483	3,571				3,824	725	705	6,113	1,408	1,858	8,754	2,197	3,189
	2CH	3,161	1,551	3,736							5,948	1,340	1,719	8,589	2,129	3,050
	2CE	2,247	1,102	2,655	3,493	733	851	6,566	1,651	2,400	9,420	2,503	3,838			
ICR 03-35	2CH	3,161	1,551	3,736				5,485	1,202	1,486	8,339	2,054	2,924			
	2CI	3,820	1,874	4,514				4,707	879	827	7,561	1,731	2,265	10,855	2,715	3,925
	3CA	3,029	1,448	3,283	3,949	711	616	7,566	1,791	2,438	10,923	2,794	4,130			
ICR 03-38	3CB	4,266	2,040	4,623				6,226	1,199	1,201	9,583	2,202	2,893	13,458	3,358	4,846
	3CC	3,624	1,733	3,928				6,921	1,506	1,843	10,278	2,509	3,535	14,153	3,665	5,488
	3CC	3,624	1,733	3,928	5,624	1,119	1,190	10,401	2,545	3,597	14,836	3,869	5,832			
ICR 03-43	3CD	5,050	2,415	5,473				8,856	1,863	2,171	13,291	3,187	4,406	18,408	4,715	6,985
	3CE	4,708	2,251	5,102				9,227	2,027	2,513	13,662	3,351	4,748	18,779	4,879	7,327
	3CD	4,708	2,251	5,102	7,093	1,390	1,437	13,190	3,210	4,510	18,852	4,901	7,363			
ICR 04-43	3CF	5,810	2,778	6,297	5,898	863	335	11,995	2,683	3,408	17,657	4,374	6,261	24,190	6,324	9,554
	3CG	6,814	3,258	7,384				10,908	2,203	2,404	16,570	3,894	5,257	23,103	5,844	8,550
	4CA	5,849	2,813	6,468	9,385	1,920	2,140	17,312	4,287	6,135	24,672	6,485	9,844			
ICR 04-48	4CB	7,810	3,756	8,637	7,216	977	179	15,143	3,344	4,174	22,503	5,542	7,883	30,996	8,077	12,163
	4CC	8,619	4,146	9,532				14,248	2,954	3,365	21,608	5,152	7,074	30,101	7,687	11,354
	4CC	8,619	4,146	9,532	10,175	1,738	1,312	20,028	4,680	6,278	29,178	7,412	10,889			
ICR 04-53	4CD	10,408	5,006	11,510				18,050	3,820	4,489	27,200	6,552	9,100	37,757	9,704	14,420
	4CE	11,014	5,297	12,179				17,381	3,529	3,883	26,531	6,261	8,494	37,088	9,413	13,814
	4CE	11,014	5,297	12,179	11,801	1,863	1,070	23,790	5,442	7,113	34,924	8,767	12,723			
ICR 05-53	4CF	11,991	5,768	13,261	10,719	1,392	93	22,708	4,971	6,136	33,842	8,296	11,746	46,688	12,131	18,220
	4CG	13,797	6,636	15,257				20,712	4,103	4,330	31,846	7,428	9,940	44,692	11,263	16,414
	5CA	13,375	6,416	14,657	14,856	2,396	1,498	29,613	6,802	8,935	43,316	10,893	15,840			
ICR 05-58	5CB	15,746	7,553	17,255				27,015	5,665	6,564	40,718	9,756	13,469	56,528	14,477	21,437
	5CC	16,959	8,135	18,584				25,686	5,083	5,351	39,389	9,174	12,256	55,199	13,895	20,224
	5CC	16,959	8,135	18,584	16,704	2,401	824	34,348	7,669	9,716	50,731	12,561	17,972			
ICR 05-63	5CD	20,809	9,982	22,804				30,128	5,822	5,866	46,511	10,714	14,122	65,415	16,358	23,649
	5CE	19,577	9,391	21,453				31,479	6,413	7,098	47,862	11,305	15,354	66,766	16,949	24,881
	5CE	19,577	9,391	21,453	20,125	3,023	1,376	40,913	9,230	11,852	60,217	14,993	21,580			
ICR 06-63	5CF	21,864	10,488	23,959				38,407	8,133	9,565	57,711	13,896	19,293	79,985	20,547	30,518
	5CG	24,755	11,755	26,853				35,513	6,866	6,674	54,817	12,629	16,402	77,091	19,280	27,627
	6CA	26,707	12,631	27,843				50,115	10,645	12,580	74,245	17,850	24,740			
ICR 06-68	6CB	29,021	13,726	30,256				47,702	9,550	10,266	71,832	16,755	22,426	99,674	25,067	36,457
	6CC	32,571	15,405	33,958				44,000	7,871	6,716	68,130	15,076	18,876	95,972	23,388	32,907
	6CC	32,571	15,405	33,958				56,760	11,681	13,146	84,840	20,065	27,297			
ICR 06-73	6CD	35,678	16,874	37,197				53,521	10,212	10,039	81,601	18,596	24,190	114,000	28,269	43,517
	6CE	39,207	18,543	40,875				49,843	8,543	6,510	77,923	16,927	20,661	110,322	26,600	39,988
	6CE	39,207	18,543	40,875				63,570	12,641	13,428	95,898	22,294	29,719			
ICR 08-73	6CF	42,578	20,137	44,390				60,055	11,047	10,057	92,383	20,700	26,348	129,685	31,837	45,147
	6CG	46,418	21,953	48,393				56,052	9,231	6,217	88,380	18,884	22,508	125,682	30,021	41,307
	8CA	38,508	18,449	41,651				57,912	13,858	18,331	88,729	23,858	35,924	124,287	35,396	56,223

CANTED TECHNICAL DATA

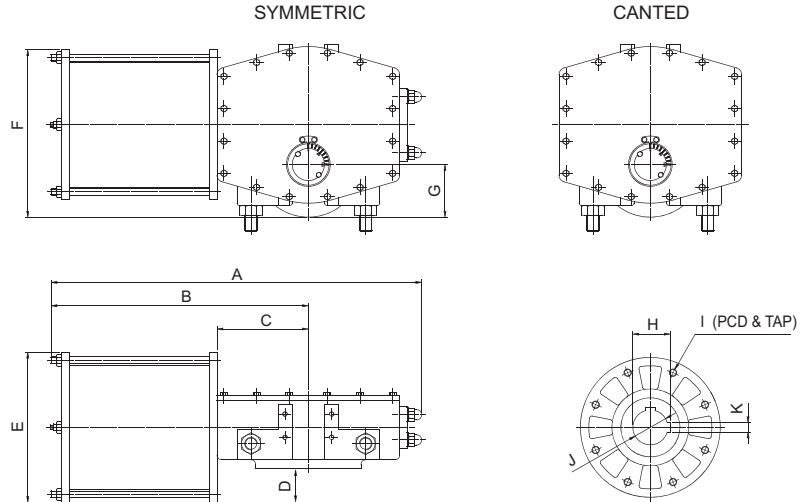
Spring Return (Fail open)

Unit : Nm

MODEL	SPRING CODE	SPRING TORQUE (Nm)			Air Torque : Air Supply Pressure											
					2.8 Bar			4.2 Bar			5.5 Bar			7 Bar		
		Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End	Start	Run	End
ICR 02-20	2CA	1,647	407	494	610	247	544	1,162	574	1,640	1,675	878	2,657			
	2CB	2,138	529	642	462	125	53	1,014	452	1,149	1,527	756	2,166	2,119	1,107	3,340
	2CC	2,511	621	753							1,416	664	1,793	2,008	1,015	2,967
ICR 02-25	2CC	2,511	621	753	972	401	913	1,835	912	2,624	2,636	1,387	4,214			
	2CG	3,025	748	908	817	274	399	1,680	785	2,110	2,481	1,260	3,700			
	2CD	3,811	942	1,144				1,444	591	1,324	2,245	1,066	2,914	3,169	1,614	4,748
	2CE	4,458	1,102	1,338				1,250	431	677	2,051	906	2,267	2,975	1,454	4,101
ICR 02-30	2CG	3,025	748	908	1,576	724	1,905	2,819	1,460	4,370	3,972	2,143	6,659			
	2CE	4,458	1,102	1,338	1,146	370	472	2,389	1,106	2,937	3,542	1,789	5,226			
	2CF	5,997	1,483	1,800				1,927	725	1,398	3,080	1,408	3,687	4,411	2,197	6,328
	2CH	6,273	1,551	1,883				1,844	657	1,122	2,997	1,340	3,411	4,328	2,129	6,052
ICR 02-35	2CE	4,458	1,102	1,338	1,760	733	1,690	3,309	1,651	4,763	4,747	2,503	7,617			
	2CH	6,273	1,551	1,883				2,764	1,202	2,948	4,202	2,054	5,802	5,862	3,038	9,096
	2CI	7,580	1,874	2,275				2,372	879	1,641	3,810	1,731	4,495	5,470	2,715	7,789
ICR 03-35	3CA	5,887	1,448	1,689	1,956	711	1,345	3,778	1,791	4,962	5,470	2,794	8,319			
	3CB	8,291	2,040	2,379				3,088	1,199	2,558	4,780	2,202	5,915	6,733	3,358	9,790
	3CC	7,043	1,733	2,021				3,446	1,506	3,806	5,138	2,509	7,163	7,091	3,665	11,038
ICR 03-38	3CC	7,043	1,733	2,021	2,793	1,119	2,509	5,200	2,545	7,286	7,435	3,869	11,721			
	3CD	9,814	2,415	2,816				4,405	1,863	4,515	6,640	3,187	8,950	9,219	4,715	14,067
	3CE	9,149	2,251	2,625				4,596	2,027	5,180	6,831	3,351	9,615	9,410	4,879	14,732
ICR 03-43	3CE	9,149	2,251	2,625	3,520	1,390	3,046	6,593	3,210	9,143	9,446	4,901	14,805			
	3CF	11,530	2,778	3,173				6,045	2,683	6,762	8,898	4,374	12,424	12,191	6,324	18,957
	3CG	13,521	3,258	3,721				5,497	2,203	4,771	8,350	3,894	10,433	11,643	5,844	16,966
ICR 04-43	4CA	11,367	3,695	3,328	4,661	1,038	4,486	8,656	3,405	12,413	12,365	5,603	19,773			
	4CB	15,178	4,934	4,444				7,540	2,166	8,602	11,249	4,364	15,962	15,529	6,899	24,455
	4CC	16,751	5,446	4,905				7,079	1,654	7,029	10,788	3,852	14,389	15,068	6,387	22,882
ICR 04-48	4CC	16,751	5,446	4,905	5,026	438	2,956	9,992	3,380	12,809	14,603	6,112	21,959			
	4CD	20,227	6,576	5,922				8,975	2,250	9,333	13,586	4,982	18,483	18,906	8,134	29,040
	4CE	21,404	6,958	6,267				8,630	1,868	8,156	13,241	4,600	17,306	18,561	7,752	27,863
ICR 04-53	4CE	21,404	6,958	6,267	5,817	202	2,576	11,860	3,781	14,565	17,470	7,106	25,699			
	4CF	23,304	7,576	6,823				11,304	3,163	12,665	16,914	6,488	23,799	23,388	10,323	36,645
	4CG	26,813	8,717	7,851				10,276	2,022	9,156	15,886	5,347	20,290	22,360	9,182	33,136
ICR 05-53	5CA	25,994	6,416	7,542	7,331	2,396	3,519	14,768	6,802	18,276	21,673	10,893	31,979			
	5CB	30,601	7,553	8,879				13,431	5,665	13,669	20,336	9,756	27,372	28,304	14,477	43,182
	5CC	32,958	8,135	9,562				12,748	5,083	11,312	19,653	9,174	25,015	27,621	13,895	40,825
ICR 05-58	5CC	32,958	8,135	9,562	8,221	2,401	2,330	17,113	7,669	19,974	25,369	12,561	36,357			
	5CD	40,441	9,982	11,734				14,941	5,822	12,491	23,197	10,714	28,874	32,724	16,358	47,778
	5CE	38,046	9,391	11,039				15,636	6,413	14,886	23,892	11,305	31,269	33,419	16,949	50,173
ICR 05-63	5CE	38,046	9,391	11,039	9,914	3,023	3,532	20,390	9,230	24,320	30,118	14,993	43,624			
	5CF	42,491	10,488	12,328				19,101	8,133	19,875	28,829	13,896	39,179	40,054	20,547	61,453
	5CG	47,622	11,755	13,817				17,612	6,866	14,744	27,340	12,629	34,048	38,565	19,280	56,322
ICR 06-63	6CA	51,902	12,631	14,327	11,864	2,886	70	24,960	10,645	26,056	37,120	17,850	50,186			
	6CB	56,400	13,726	15,569				23,718	9,550	21,558	35,878	16,755	45,688	49,909	25,067	73,530
	6CC	63,300	15,405	17,473				21,814	7,871	14,658	33,974	15,076	38,788	48,005	23,388	66,630
ICR 06-68	6CC	63,300	15,405	17,473				28,244	11,681	27,418	42,395	20,065	55,498	61,722	29,738	87,897
	6CD	69,388	16,874	19,140				26,577	10,212	21,380	40,728	18,596	49,460	60,055	28,269	81,859
	6CE	76,195	18,543	21,033				24,684	8,543	14,523	38,835	16,927	42,603	58,162	26,600	75,002
ICR 06-73	6CE	76,195	18,543	21,033				31,602	12,641	28,250	47,893	22,294	60,578	66,692	33,431	97,880
	6CF	82,747	20,137	22,841				29,794	11,047	21,698	46,085	20,700	54,026	64,884	31,837	91,328
	6CG	90,209	21,953	24,901				27,734	9,231	14,236	44,025	18,884	46,564	62,824	30,021	83,866
ICR 08-73	8CA	66,063	18,449	24,278				32,561	13,858	33,500	50,154	23,858	64,317	70,453	35,396	99,875

DIMENSION

< DOUBLE ACTING >

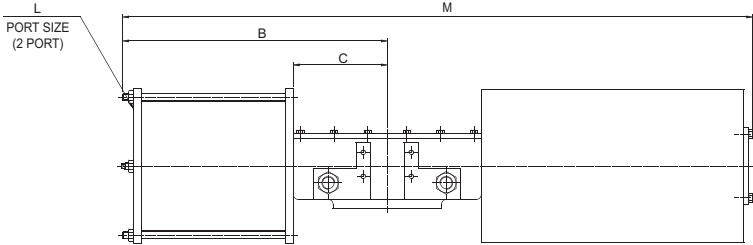
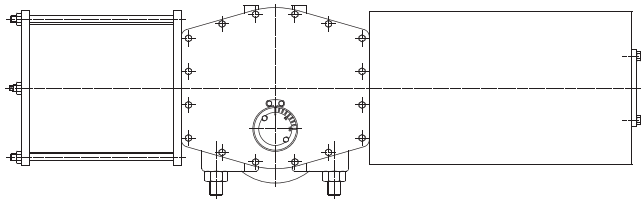


Symmetric IS Series Dimension

MODEL	A	B	C	D	E	F	G
ISD 02-20 (ISR)	755	516	196	48	272	370	145
ISD 02-25 (ISR)	755	516	196	73	322	395	145
ISD 02-30 (ISR)	755	516	196	98	373	420	145
ISD 02-35 (ISR)	755	516	196	117	410	445	145
ISD 03-35 (ISR)	935	653	236	92	410	490	175
ISD 03-38 (ISR)	935	653	236	118	461	505	175
ISD 03-43 (ISR)	935	653	236	143	512	530	175
ISD 04-43 (ISR)	1105	763	287	128	514	640	190
ISD 04-48 (ISR)	1105	763	287	153	564	657	190
ISD 04-53 (ISR)	1105	763	287	184	625	682	190
ISD 05-53 (ISR)	1310	904	343	157	625	710	230
ISD 05-58 (ISR)	1310	904	343	183	675	732	230
ISD 05-63 (ISR)	1310	904	343	210	730	760	230
ISD 06-63 (ISR)	1610	1124	415	192	745	830	260
ISD 06-68 (ISR)	1610	1124	415	217	795	850	260
ISD 06-73 (ISR)	1610	1124	415	243	847	875	260

Canted IC Series Dimension

MODEL	A	B	C	D	E	F	G
ICD 02-20 (ICR)	800	516	196	48	272	370	145
ICD 02-25 (ICR)	800	516	196	73	322	395	145
ICD 02-30 (ICR)	800	516	196	98	373	420	145
ICD 02-35 (ICR)	800	516	196	117	410	445	145
ICD 03-35 (ICR)	985	653	236	92	410	490	175
ICD 03-38 (ICR)	985	653	236	118	461	505	175
ICD 03-43 (ICR)	985	653	236	143	512	530	175
ICD 04-43 (ICR)	1215	763	295	128	514	640	205
ICD 04-48 (ICR)	1215	763	295	153	564	657	205
ICD 04-53 (ICR)	1215	763	295	184	625	682	205
ICD 05-53 (ICR)	1435	904	345	157	625	710	240
ICD 05-58 (ICR)	1435	904	345	183	675	732	240
ICD 05-63 (ICR)	1435	904	345	210	730	760	240
ICD 06-63 (ICR)	1710	1124	415	192	745	830	260
ICD 06-68 (ICR)	1710	1124	415	217	795	850	260
ICD 06-73 (ICR)	1710	1124	415	243	847	875	260



< SPRING RETURN >



H	I		J		K	L	M	
	PCD	TAP/DP	DIA	DP			4.2 Bar	5.5 Bar
54	165	M20/25	50	156	14	1/2" NPT	1280	1280
54	165	M20/25	50	156	14	1/2" NPT	1280	1280
54	165	M20/25	50	156	14	1/2" NPT	1280	1280
54	165	M20/25	50	156	14	1/2" NPT	1280	1280
80/85	254	M16/27	75/80	204	20	1/2" NPT	1475	1475
80/85	254	M16/27	75/80	204	20	1/2" NPT	1475	1475
80/85	254	M16/27	75/80	204	20	1/2" NPT	1475	1475
95.4/105.4	298	M20/34	90/100	234	22	3/4" NPT	1860	1860
95.4/105.4	298	M20/34	90/100	234	22	3/4" NPT	1860	1860
95.4/105.4	298	M20/34	90/100	234	22	3/4" NPT	1860	1860
117.4/127.4/137.4	356	M30/43	110/120/130	279	32	3/4" NPT	2240	2240
117.4/127.4/137.4	356	M30/43	110/120/130	279	32	3/4" NPT	2240	2240
117.4/127.4/137.4	356	M30/43	110/120/130	279	32	3/4" NPT	2240	2240
137.4/147.4/157.4	406	M36/53	130/140/150	326	32	3/4" NPT	2695	2695
137.4/147.4/157.4	406	M36/53	130/140/150	326	32	3/4" NPT	2695	2695
137.4/147.4/157.4	406	M36/53	130/140/150	326	32	3/4" NPT	2695	2695

H	I		J		K	L	M	
	PCD	TAP/DP	DIA	DP			4.2 Bar	5.5 Bar
54	165	M20/25	50	156	14	1/2" NPT	1325	1325
54	165	M20/25	50	156	14	1/2" NPT	1325	1325
54	165	M20/25	50	156	14	1/2" NPT	1325	1325
54	165	M20/25	50	156	14	1/2" NPT	1325	1325
80/85	254	M16/27	75/80	204	20	1/2" NPT	1510	1510
80/85	254	M16/27	75/80	204	20	1/2" NPT	1510	1510
80/85	254	M16/27	75/80	204	20	1/2" NPT	1510	1510
95.4/105.4	298	M20/34	90/100	234	22	3/4" NPT	1935	1935
95.4/105.4	298	M20/34	90/100	234	22	3/4" NPT	1935	1935
95.4/105.4	298	M20/34	90/100	234	22	3/4" NPT	1935	1935
117.4/127.4/137.4	356	M30/43	110/120/130	279	32	3/4" NPT	2320	2320
117.4/127.4/137.4	356	M30/43	110/120/130	279	32	3/4" NPT	2320	2320
117.4/127.4/137.4	356	M30/43	110/120/130	279	32	3/4" NPT	2320	2320
137.4/147.4/157.4	406	M36/53	130/140/150	326	32	3/4" NPT	2750	2750
137.4/147.4/157.4	406	M36/53	130/140/150	326	32	3/4" NPT	2750	2750
137.4/147.4/157.4	406	M36/53	130/140/150	326	32	3/4" NPT	2750	2750

ACCESSORIES

ITS Series Position Monitoring Switch Box

ITS 100 Series (Weather Proof)



SPECIFICATION	STANDARD OPTION
Enclosure	Weather proof IP67, O-ring sealed
Outside coating	Epoxy-Polyester inside and outside
Ambient temperature	-20°C ~ +80°C
Cable entries	2 - PT1/2", other standard threads
Terminal block	8 nos of terminal strips
Position indicator	Dome type 0°~90°
Mounting bracket	Stainless steel acc. to VDI/VDE 3845, NAMUR, SS1, SS2 as option
Switches(Sensors)	2-SPDT mechanical switch(Form C)

ITS 300 Series (Explosion Proof)

Suitable for valves and actuators in hazardous area applications conforms to EN50014 and 50018, also suitable in Zone 1 and 2

Ex d : IECEx, ATEX, NEPSI, KC certified



SPECIFICATION	STANDARD OPTION
Enclosure	Explosion proof Ex d IIC T6, IP67, O-ring sealed
Outside coating	Epoxy-Polyester outside against corrosion
Ambient temperature	-20°C ~ +60°C
Cable entries	2 - PF3/4", other standard threads
Terminal block	8 nos of terminal strips
Position indicator	Dome type 0°~90°
Mounting bracket	Stainless steel acc. to VDI/VDE 3845, NAMUR, SS1, SS2 as option
Switches(Sensors)	2-SPDT mechanical switch(Form C)

ITS 500 Series

Special stainless steel housing (316L or Duplex) for extremely corrosive environmental conditions & for off-shore applications.

Other specifications are shared with the ITS 300 series except for enclosure & coating.

Ex d : IECEx, ATEX, NEPSI, KC certified



Model number Legend

ITS

1

0

0

1: Weather proof

3: Explosion proof

5: Special material housing (316L, Duplex)

0: Mechanical switches

1 : Proximity sensors

0 : 2 - SPDT

1 : 3 - SPDT

2 : 4 - SPDT

3 : 2 - SPST

4 : 2 - DPDT

5 : 2 - SPDT + output(0~1Kohm)

6 : 2 - SPDT + output(4-20mA)

0 : Autonics (PSN17-5DNU-NPN etc)

1 : P & F (NJ2-V3-N)

M: Monas I-sensor

S: Other type sensors

- Model numbers in Green are applicable to ITS100, 300 and 500 series

- Model numbers in Red are applicable to ITS300 and 500 series

The details of this catalog are subject to change without prior notification.

 **CONTROLS Co., Ltd.**

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Heavy-Duty Pneumatic Actuator

IS & IC Series