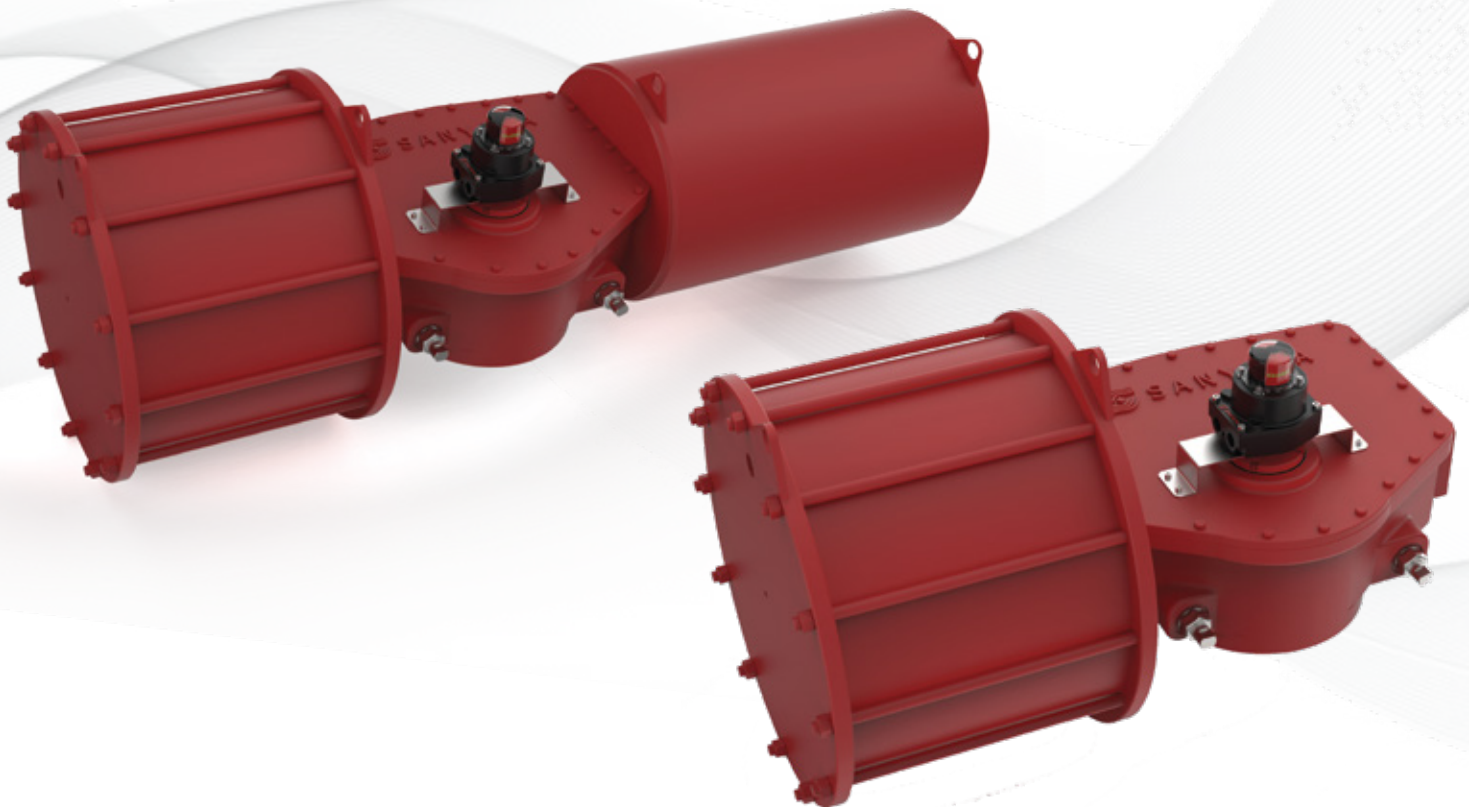




Solutions that turn
things around for you



SAFEAir Series Large Pneumatic Actuators

Scotch Yoke Symmetric and Canted





» About Sanyata

Sanyata Actuation and Fluid Engineering (S.A.F.E.), is an innovative actuation start-up focused on creating an all new and exciting range of actuation products. End users and valve OEMs will find optimally engineered products that are fit for purpose across a wide range of applications. All products reflect our deeply held passion for design innovation and a commitment to world-class manufacturing.

Specialist actuator manufacturer with unwavering focus on serving valve OEMs and end users.

» SAFEAir Pneumatic Actuators

The SAFEAir pneumatic range of actuators provide the user with the widest selection of actuators with the shortest heights, superb weight/torque ratios, with several accessories included as standard. Packed with several innovative features, the entire range has been rigorously tested and comes with all the right credentials for your valve application. The lead times for these products are amongst the shortest of any major manufacturer and we are the first to offer a seamless online ordering experience.

Reliable Nickel plated cylinder provides high wear and corrosion resistance, thus ensuring consistent performance over an extended operating life.

Strong Best in class industry processes are used to manufacture these actuators which result in class leading torque/-weight ratios.

Compact Designed to provide high torque with minimum space and weight.

Safe Springs are enclosed in a separate welded container for additional safety and flexibility.

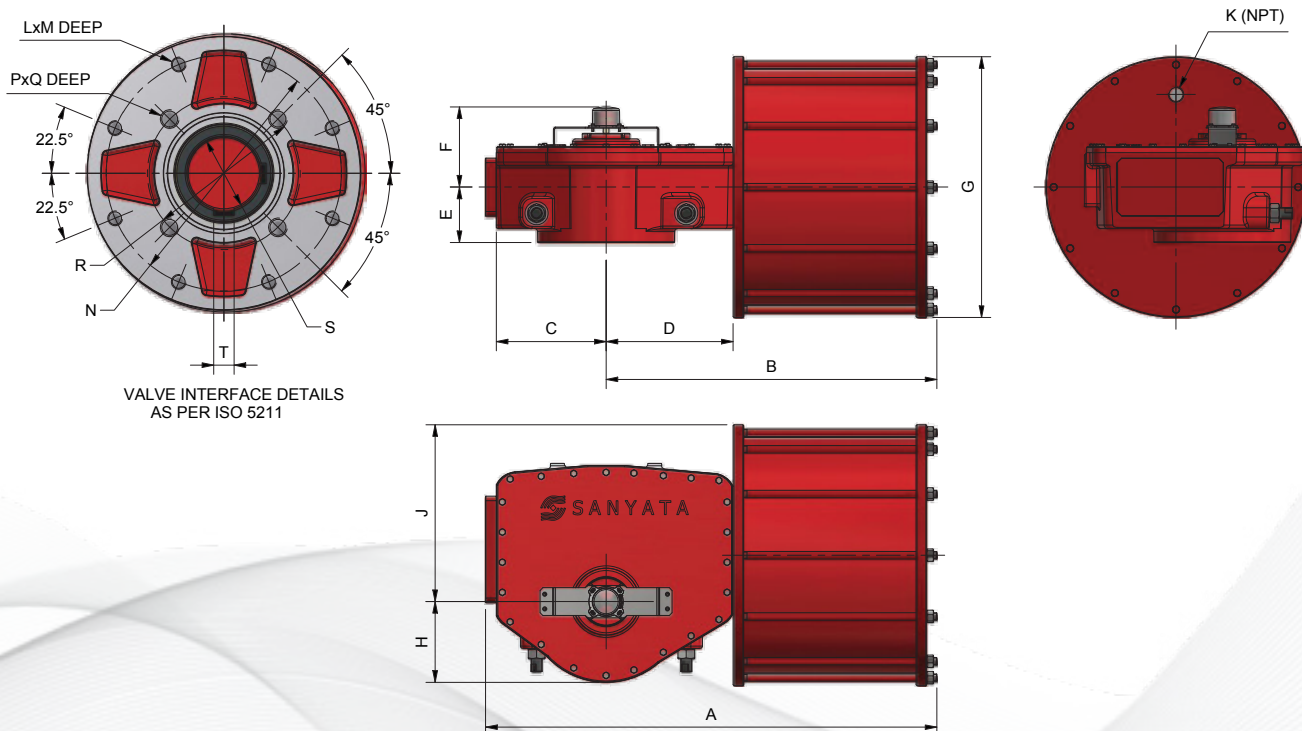
» Key Features

- Widest range of torque selections available, from 1000 N-m to 100,000 N-m (8850lb-in to 885,000 lb-in).
- One of the best torque to weight ratios in the market.
- Actuators are field convertible from double acting to single acting and vice versa.
- High visibility dome indicator and Double End Stops are standard, not a cost adder!
- Stop bolts are provided on the center body to avoid leakages.
- Various coating options are available to suit your process needs.





» Overall Dimensions



Large Pneumatic DA Dimensions																				
Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	ISO	Weight (Kg)
SY250	851	621	207	225	95	150	350	168	260	1/2'	M16	24	254	M20	30	165	65	18	F16/F25	164
SY260	851	621	207	225	95	150	405	168	288	1/2'	M16	24	254	M20	30	165	65	18	F16/F25	194
SY270	851	621	207	225	95	150	450	168	310	1/2'	M16	24	254	M20	30	165	65	18	F16/F25	222
SY280	974	714	237	274	120	173	460	174	330	1'	M16	24	254	M20	30	165	70	20	F16/F25	293
SY290	974	714	237	274	120	173	510	174	355	1'	M16	24	254	M20	30	165	70	20	F16/F25	328
SY300	974	714	237	274	120	173	563	174	382	1'	M16	24	254	M20	30	165	70	20	F16/F25	375
SY310	1225	887	304	342	134	190	563	193	412	1'	M20	30	298	M16	24	254	110	28	F25/F30	494
SY320	1225	887	304	342	134	190	621	193	441	1'	M20	30	298	M16	24	254	110	28	F25/F30	563
SY330	1225	887	304	342	134	190	680	193	467	1'	M20	30	298	M16	24	254	110	28	F25/F30	622
SY340	1461	1068	378	398	163	219	680	235	500	1'	M30	45	356	M20	30	298	120	32	F30/F35	826
SY350	1461	1068	378	398	163	219	740	235	530	1'	M30	45	356	M20	30	298	120	32	F30/F35	903
SY360	1461	1068	378	398	163	219	790	235	555	1'	M30	45	356	M20	30	298	120	32	F30/F35	980
SY370	1768	1292	454	494	202	237	790	260	595	1'	M30	54	406	-	-	-	160	40	F40	1362
SY380	1768	1292	454	494	202	237	845	260	623	1'	M30	54	406	-	-	-	160	40	F40	1460
SY390	1768	1292	454	494	202	237	895	260	648	1'	M30	54	406	-	-	-	160	40	F40	1573

⦿ Please contact Sanyata for dimensional details of spring return actuators.

⦿ For custom bore and keyway, please contact Sanyata.





» Technical Specification

Working Pressures

Max operating pressure - 7bar(102psig)

Design pressure - 10bar(145psig)

Working Environment

Standard: -30°C to 70°C (-58°F to 158°F) with NBR Seals

High Temperature: -15°C to 160°C (5°F to 320°F) with Viton Seals

Extended Temperature - 60°C to 200°C (-76°F to 392°F) with Silicone Seals

Food safe version also available

Endurance Testing

Designed and tested for life cycles according to EN15714-3
(certified by TUV Nord)

Valve Interface

Valve Flange Interface: ISO 5211 / DIN 3337

Valve Shaft Interface: ISO 5211

Air Supply Ports

EN ISO228 G1/8", G1/4", G1/2" based on the actuator size

Accessories

VDI/VDE3845 NAMUR

Lubrication

Lubricated for life

Centre body

High strength ductile iron center body

Manual Override

Hydraulic manual override is available as an option across all models.

Approvals and Industry Standards:

Management System in Accordance
with ISO 9001:2015

Valve flange: ISO 5211/DIN3337

Accessory flange: VDE/VDI 3845 (NAMUR)

Complies with EN60529 for IP68

European Directives: ATEX 2014/34/EU, PED and CE

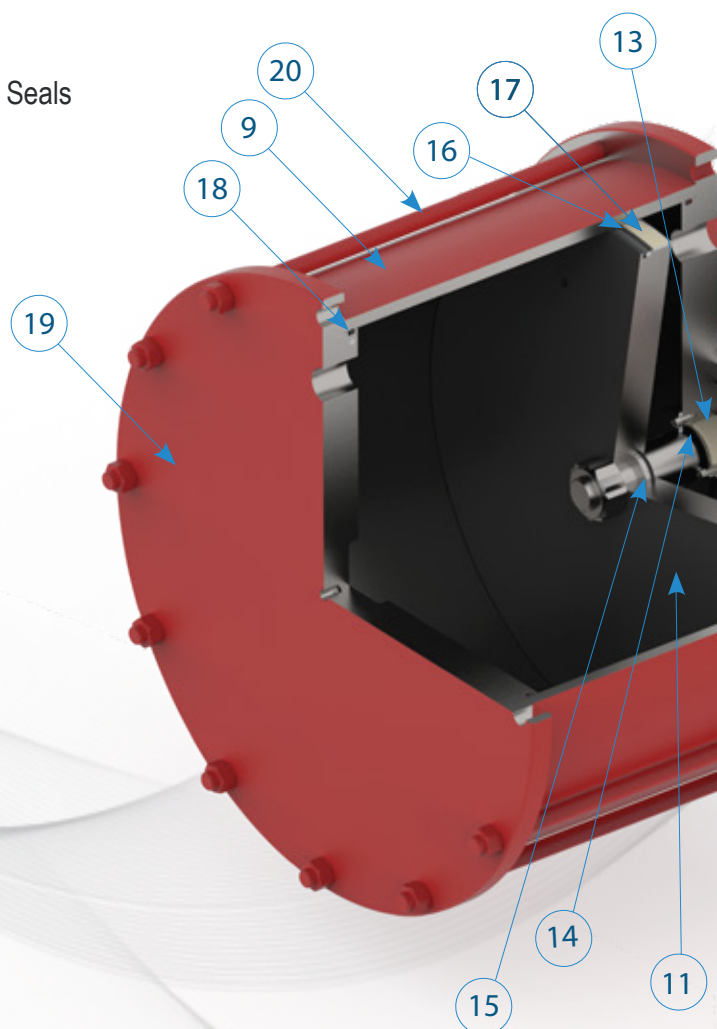
Coating Options:

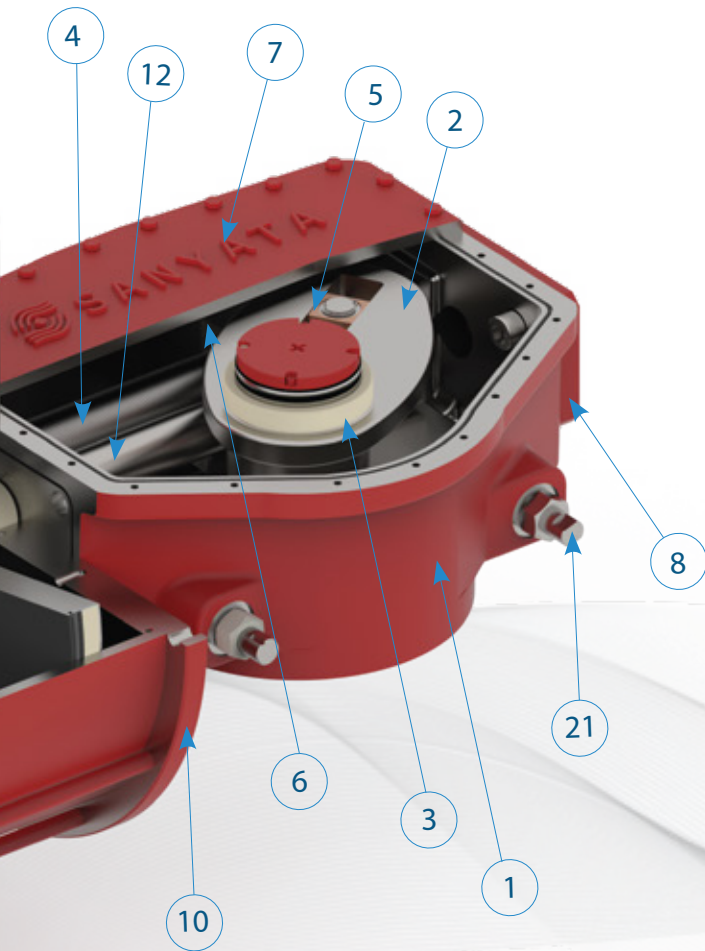
Epoxy Coating

Duraflon PTFE Coating

FDA Compliant Epoxy Polyester Coating

Powder Coating





ITEM	DESCRIPTION	MATERIAL
1	Center Body	Ductile Iron
2	Yoke	Ductile Iron
3	Yoke Bush	Bronze
4	Guide Rod	Steel
5	Sliding Block	Bronze
6	Guide Block	Steel
7	Top Cover	Ductile Iron
8	Cover Plate	Steel
9	Pneumatic Cylinder	Steel
10	Head Flange	Steel
11	Piston	Steel
12	Piston Rod	Steel
13	Bearing Bush	Bronze
14	O-Ring	Rubber
15	O-Ring	Rubber
16	O-Ring	Rubber
17	Wear Ring	PTFE
18	O-Ring	Rubber
19	Tail Flange	Steel
20	Tie Rod	Steel
21	Stop Bolt	Steel
22	Spring Cartridge	Steel
23	Spring	Steel
24	Connecting Rod	Steel



» Torque Data - Symmetric Yoke Double Acting

Model	Position	Symmetric Yoke Double Acting Pneumatic Torque (Nm)										
		2 bar	2.5 bar	3 bar	3.5 bar	4 bar	4.5 bar	5 bar	5.5 bar	6 bar	6.5 bar	7 bar
SY250	Start	1480	1850	2221	2591	2961	3331	3701	4071	4441	4811	5181
	45°	858	1073	1288	1502	1717	1931	2146	2360	2575	2790	3004
	End	1554	1943	2332	2720	3109	3497	3886	4275	4663	5052	5440
SY260	Start	2119	2649	3179	3708	4238	4768	5298	5827	6357	6887	7417
	45°	1229	1536	1843	2150	2457	2765	3072	3379	3686	3993	4300
	End	2225	2781	3338	3894	4450	5006	5563	6119	6675	7231	7788
SY270	Start	2799	3499	4198	4898	5598	6297	6997	7697	8396	9096	9796
	45°	1623	2029	2434	2840	3246	3651	4057	4463	4869	5274	5680
	End	2939	3673	4408	5143	5878	6612	7347	8082	8816	9551	10286
SY280	Start	3293	4116	4939	5762	6585	7409	8232	9055	9878	10701	11525
	45°	1909	2387	2864	3341	3818	4296	4773	5250	5728	6205	6682
	End	3457	4322	5186	6050	6915	7779	8643	9508	10372	11236	12101
SY290	Start	4204	5254	6305	7356	8407	9458	10509	11560	12611	13661	14712
	45°	2437	3047	3656	4265	4875	5484	6093	6703	7312	7921	8531
	End	4414	5517	6621	7724	8827	9931	11034	12138	13241	14345	15448
SY300	Start	5225	6532	7838	9144	10451	11757	13063	14370	15676	16983	18289
	45°	3030	3787	4545	5302	6060	6817	7575	8332	9089	9847	10604
	End	5487	6858	8230	9602	10973	12345	13717	15088	16460	17832	19203
SY310	Start	6793	8491	10190	11888	13586	15284	16983	18681	20379	22077	23776
	45°	3939	4923	5908	6893	7878	8862	9847	10832	11816	12801	13786
	End	7133	8916	10699	12482	14265	16048	17832	19615	21398	23181	24964
SY320	Start	8266	10332	12399	14465	16532	18598	20665	22731	24797	26864	28930
	45°	4793	5991	7189	8387	9585	10784	11982	13180	14378	15576	16775
	End	8679	10849	13019	15188	17358	19528	21698	23868	26037	28207	30377
SY330	Start	9883	12354	14825	17295	19766	22237	24708	27178	29649	32120	34591
	45°	5730	7163	8596	10028	11461	12894	14326	15759	17191	18624	20057
	End	10377	12971	15566	18160	20754	23349	25943	28537	31132	33726	36320
SY340	Start	12164	15205	18246	21287	24327	27368	30409	33450	36491	39532	42573
	45°	7053	8816	10579	12343	14106	15869	17632	19395	21159	22922	24685
	End	12772	15965	19158	22351	25544	28737	31930	35123	38316	41509	44702
SY350	Start	14332	17915	21498	25081	28664	32247	35830	39413	42996	46579	50161
	45°	8310	10388	12465	14543	16620	18698	20775	22853	24930	27008	29085
	End	15048	18811	22573	26335	30097	33859	37621	41383	45145	48907	52670
SY360	Start	16678	20847	25017	29186	33355	37525	41694	45864	50033	54203	58372
	45°	9670	12088	14505	16923	19340	21758	24175	26593	29011	31428	33846
	End	17512	21889	26267	30645	35023	39401	43779	48157	52535	56913	61291
SY370	Start	20847	26059	31271	36482	41694	46906	52118	57330	62541	67753	72965
	45°	12088	15110	18132	21154	24175	27197	30219	33241	36263	39285	42307
	End	21889	27362	32834	38307	43779	49251	54724	60196	65668	71141	76613
SY380	Start	24002	30002	36002	42003	48003	54004	60004	66004	72005	78005	84005
	45°	13917	17396	20875	24354	27833	31313	34792	38271	41750	45229	48709
	End	25202	31502	37802	44103	50403	56704	63004	69305	75605	81905	88206
SY390	Start	27378	34223	41067	47912	54756	61601	68445	75290	82134	88979	95824
	45°	15875	19843	23812	27781	31749	35718	39687	43655	47624	51592	55561
	End	28747	35934	43121	50307	57494	64681	71868	79054	86241	93428	100615

⊙ Please contact Sanyata for torque details and sizing of spring return versions

⊙ Torque values may vary by $\pm 10\%$



» Torque Data - Canted Yoke Double Acting

Model	Position	Canted Yoke Double Acting Pneumatic Torque (Nm)										
		2 bar	2.5 bar	3 bar	3.5 bar	4 bar	4.5 bar	5 bar	5.5 bar	6 bar	6.5 bar	7 bar
SYC250	Start	2879	2617	3140	3664	4187	4711	5234	5757	6281	6804	7327
	60°	1180	1073	1288	1502	1717	1931	2146	2360	2575	2790	3004
	End	1745	1586	1904	2221	2538	2856	3173	3490	3807	4125	4442
SYC260	Start	4121	3746	4495	5244	5994	6743	7492	8241	8990	9740	10489
	60°	1689	1536	1843	2150	2457	2765	3072	3379	3686	3993	4300
	End	2498	2271	2725	3179	3633	4088	4542	4996	5450	5904	6359
SYC270	Start	5442	4948	5937	6927	7916	8906	9895	10885	11874	12864	13853
	60°	2231	2029	2434	2840	3246	3651	4057	4463	4869	5274	5680
	End	3299	2999	3599	4199	4799	5399	5999	6599	7198	7798	8398
SYC280	Start	6403	5821	6985	8149	9313	10477	11642	12806	13970	15134	16298
	60°	2625	2387	2864	3341	3818	4296	4773	5250	5728	6205	6682
	End	3882	3529	4234	4940	5646	6352	7057	7763	8469	9175	9880
SYC290	Start	8174	7431	8917	10403	11889	13376	14862	16348	17834	19320	20806
	60°	3351	3047	3656	4265	4875	5484	6093	6703	7312	7921	8531
	End	4955	4505	5406	6307	7208	8108	9009	9910	10811	11712	12613
SYC300	Start	10161	9237	11085	12932	14780	16627	18475	20322	22169	24017	25864
	60°	4166	3787	4545	5302	6060	6817	7575	8332	9089	9847	10604
	End	6160	5600	6720	7840	8960	10080	11200	12320	13440	14559	15679
SYC310	Start	13209	12008	14410	16812	19214	21615	24017	26419	28820	31222	33624
	60°	5416	4923	5908	6893	7878	8862	9847	10832	11816	12801	13786
	End	8008	7280	8736	10192	11648	13104	14559	16015	17471	18927	20383
SYC320	Start	16073	14612	17534	20457	23379	26302	29224	32146	35069	37991	40914
	60°	6590	5991	7189	8387	9585	10784	11982	13180	14378	15576	16775
	End	9744	8858	10630	12401	14173	15945	17716	19488	21259	23031	24803
SYC330	Start	19218	17471	20965	24459	27953	31448	34942	38436	41930	45424	48918
	60°	7879	7163	8596	10028	11461	12894	14326	15759	17191	18624	20057
	End	11650	10591	12709	14828	16946	19064	21182	23301	25419	27537	29655
SYC340	Start	23653	21503	25803	30104	34404	38705	43005	47306	51606	55907	60207
	60°	9698	8816	10579	12343	14106	15869	17632	19395	21159	22922	24685
	End	14339	13035	15642	18249	20856	23463	26071	28678	31285	33892	36499
SYC350	Start	27869	25335	30402	35470	40537	45604	50671	55738	60805	65872	70939
	60°	11426	10388	12465	14543	16620	18698	20775	22853	24930	27008	29085
	End	16895	15359	18431	21502	24574	27646	30718	33789	36861	39933	43005
SYC360	Start	32431	29482	35379	41275	47172	53068	58965	64861	70757	76654	82550
	60°	13297	12088	14505	16923	19340	21758	24175	26593	29011	31428	33846
	End	19660	17873	21447	25022	28596	32171	35745	39320	42894	46469	50044
SYC370	Start	40538	36853	44223	51594	58965	66335	73706	81076	88447	95817	103188
	60°	16621	15110	18132	21154	24175	27197	30219	33241	36263	39285	42307
	End	24575	22341	26809	31277	35745	40214	44682	49150	53618	58086	62554
SYC380	Start	46672	42429	50915	59401	67887	76373	84858	93344	101830	110316	118802
	60°	19136	17396	20875	24354	27834	31313	34792	38271	41750	45229	48709
	End	28293	25721	30866	36010	41154	46298	51443	56587	61731	66875	72020
SYC390	Start	53238	48398	58078	67757	77437	87117	96796	106476	116156	125835	135515
	60°	21828	19843	23812	27781	31749	35718	39687	43655	47624	51592	55561
	End	32274	29340	35208	41076	46944	52812	58680	64548	70416	76284	82152

⊕ Please contact Sanyata for torque details and sizing of spring return versions

⊕ Torque values may vary by $\pm 10\%$





» Naming Scheme

SY

300

FC

4

N

C

2

1

S

1

X

Product Series

SY, SYC

Size

250, 260, 270, 280, 290, 300, 310,
320, 330, 340, 350, 360, 370, 380, 390

Action

DA: Double Acting

FC: Spring Return, Fail to Close (Clockwise)

FO: Spring Return, Fail to Open (Counter Clockwise)

Spring Set

X, 1, 2, 3, 4, 5, 6 (Use X for Double Acting)

Manual Override

Y: Yes

N: No

Material of Construction

C: Carbon Steel

Valve Flange Interface

8: F16 11: F35

9: F25 12: F40

10: F30

Valve Stem Interface

1: Double Square

2: Bore and Keyway

3: Double D

Environment

S: Standard Temp

E: Extended Temp

H: High Temp

F: Food Grade

Coating

2: Epoxy coating

3: Duraflon PTFE coating


4: FDA Compliant Epoxy Polyester coating


6: Powder coating


Specials

X-None

Contact

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