

DUNCAN HEAVY DUTY SCOTCH YOKE ACTUATOR SERIES-S

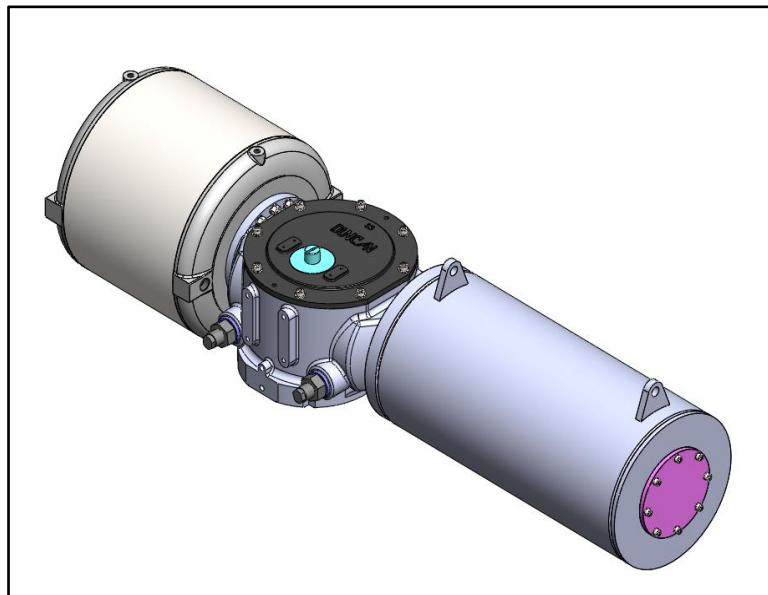
DUNCAN Scotch Yoke actuator is manufactured in many different model number combinations of actuator sizes, cylinder diameters, and double or spring return action are available for installation on quarter turn valves in modulating control and on-off service.

Scotch Yoke actuators are provided with modular design. A pneumatic cylinder can be attached to either or both sides. A spring cylinder can also fit to either side for ESD (emergency shutdown) applications. With large stock or finished and semi-finished components always available, actuators can be assembled and supplied with very fast and reliable deliveries.

The Scotch yoke actuator's robust design ensures a long life in harsh environments due to unique features such as its internal tie-rod & flexi joint mechanism.

Features and benefits:

- Suitable for on/off, applications in general service, protective service, and safety applications e.g. ESD.
- Ductile cast iron centre body, fabricated carbon steel power cylinder and spring module provides rugged actuator construction.
- Modular design allows the flexibility of configuring the actuator in either fail open or fail close functions. In case of need an easy on-site modification can be done by interchanging the spring and pneumatic modules.
- Ball bearing, flexi joint and the hardened yoke thrust pin bearing are all incorporated into the actuator for longer lifetime, smoother operation.
- Internal tie rods providing highest corrosion protection and the best performance.
- The vent valve has built in non-return function for IP67.
- Secondary vent valve for detecting possible leakages in the rod seal area of pneumatic cylinder.
- Springs are non-buckling, lifetime lubricated and coated.
- Full range of accessories: switchboxes, positioners, safety solenoids (ESD, PST) and customized control panels.



TECHNICAL SPECIFICATIONS

Output Torque:

Spring Return Model

Spring end: : 1114 Nm - 17891 Nm

Air Brake @ 4 bar : 773 Nm - 26744 Nm

Double Acting Model

Air Brake @ 4 bar : 2145 Nm - 49154 N

Certifications:

ATEX, CE, PED, SIL 3 on request

Control Options:

Quarter turns On/Off, Direct Acting, Spring Return

Temperature Range:

Normal Temp. Range : -20° to +80 °C,

High Temp. Range : -20° to +125 °C

Low temperature range: -45° to +80 °C

Power Source:

Pneumatic

Maximum Allowable Operating Pressure:

Depending on Model (refer MOP table)

Enclosure Rating:

IP 66 & IP 67

Mounting:

ISO 5211/1 and VDI/VDE 3845

Supply Media:

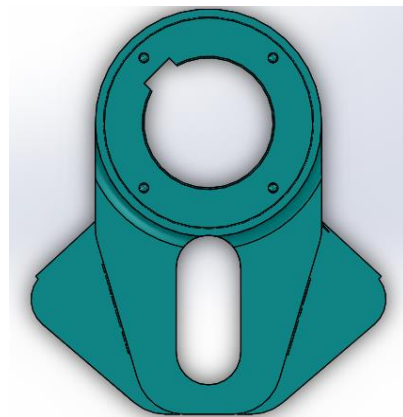
Dry Compressed Air, Inert Gas (Nitrogen)

Testing Standard:

Tested in compliance with EN-15714-1

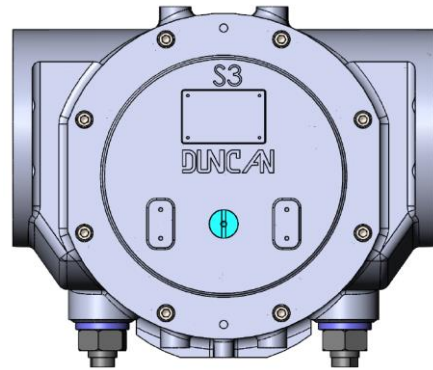
SYMMETRICAL YOKE

The symmetrical yoke provides a balanced torque output curve seen most often in relation to scotch yoke actuators. This is the best choice in applications where the torque requirements at the seat break out and end positions are similar. As the name suggests, the output torque curve is symmetrical about the mid rotation point.



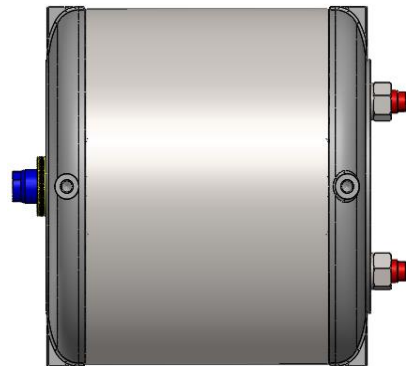
TORQUE MODULE

- Integral single piece cast housing for rigidity.
- Integral travel stops.
- NAMUR mounting for shaft driven accessories, standardized across models.
- Relief vent prevents ingress and over pressurization.
- Flexi joint mechanism.



PRESSURE MODULE

- Corrosion protected internal tie rods designed for long seal life and reliability.
- Honed and hard chrome plated cylinder barrel for wear and corrosion protection and enhanced seal performance.
- Quad ring and U-cup seals for dynamic sealing.
- Wear strips for better guidance of piston.



ACCESSORIES

Add to the versatility of the S-Series by choosing the applicable accessories from Duncan's complete line of positioners, status monitors and solenoids. The combination of actuators and accessories offer the best compatibility, economy and quality performance in the flow control industry.

ACTUATOR, SERIES-S TECHNICAL DATA

Stroke volume, dm³ - Single Acting actuator (90°-stroke)

CYL. DIM.	200	250	300	350	400	500	600	700	800
ACTUATOR	STROKE VOLUME (dm3)								
S1	6.8	8	13	18	-	-	-	-	-
S2	-	11	16	22	29	-	-	-	-
S3	-	-	19	26	34	54	-	-	-
S4	-	-	-	31	41	65	94	-	-
S5	-	-	-	-	-	64	93	128	167

Stroke volume, dm³ – Double Acting actuator (90°-stroke)

CYL. DIM.	200	250	300	350	400	500	600	700	800
ACTUATOR	STROKE VOLUME (dm3)								
S1	13	18	26	35	-	-	-	-	-
S2	-	22	32	44	58	-	-	-	-
S3	-	-	38	53	69	109	-	-	-
S4	-	-	-	63	83	131	189	-	-
S5	-	-	-	-	-	129	187	256	335

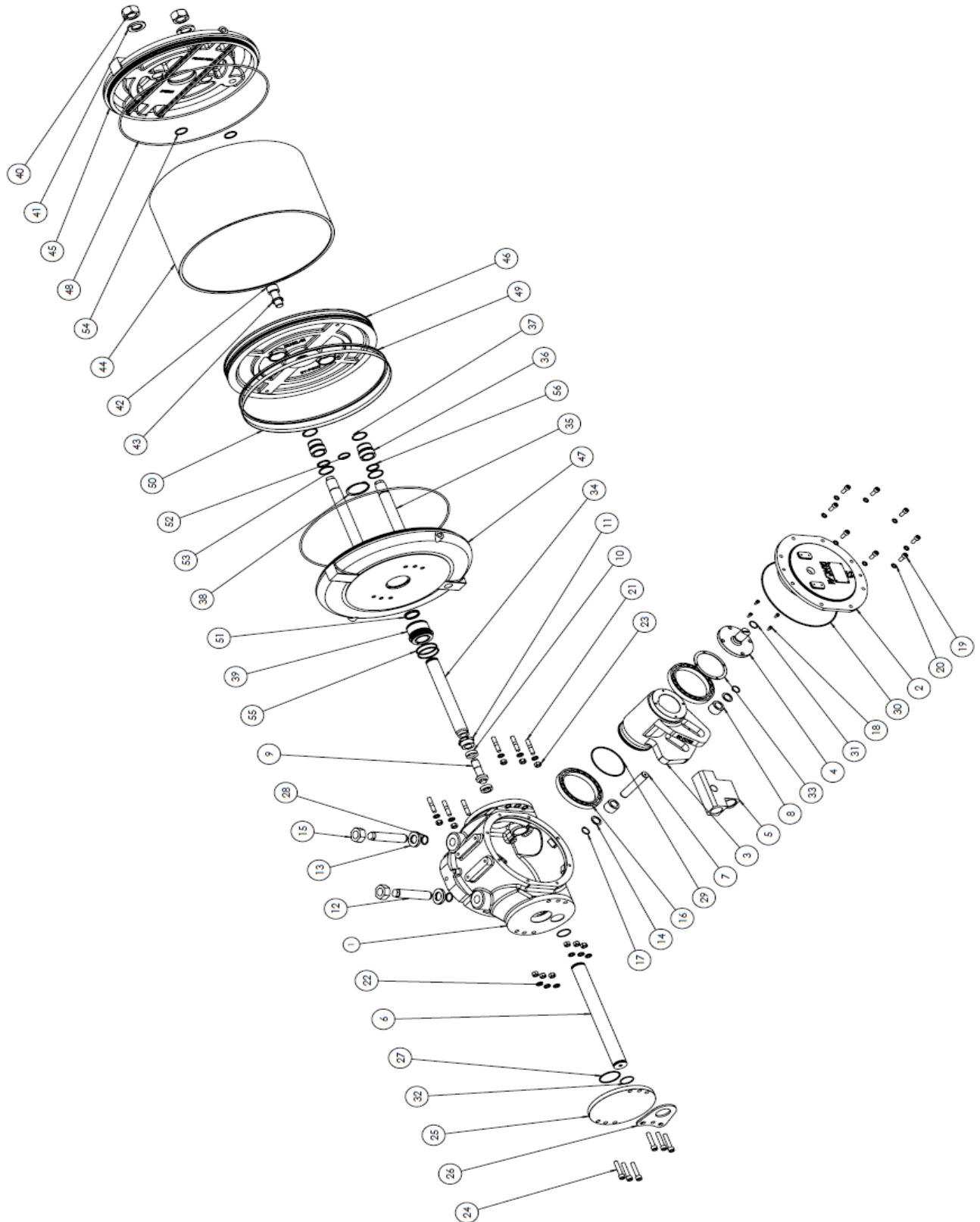
MAXIMUM OPERATING PRESSURE (DOUBLE ACTING)

Cyl. Dim	Ø200	Ø250	Ø300	Ø350	Ø400	Ø500	Ø600	Ø700	Ø800
MAXIMUM OPERATING PRESSURE (BAR)									
S1	8	8	6	4.5	-	-	-	-	-
S2	-	8	7	5	4	-	-	-	-
S3	-	-	8	8	6	4	-	-	-
S4	-	-	-	8	8	7	5	-	-
S5	-	-	-			8	7	5	4

Note: For Actuator output torque, please consult Duncan.

EXPLODED VIEWS AND PARTS LIST.

EXPLODED VIEW FOR DOUBLE ACTING ACTUATOR



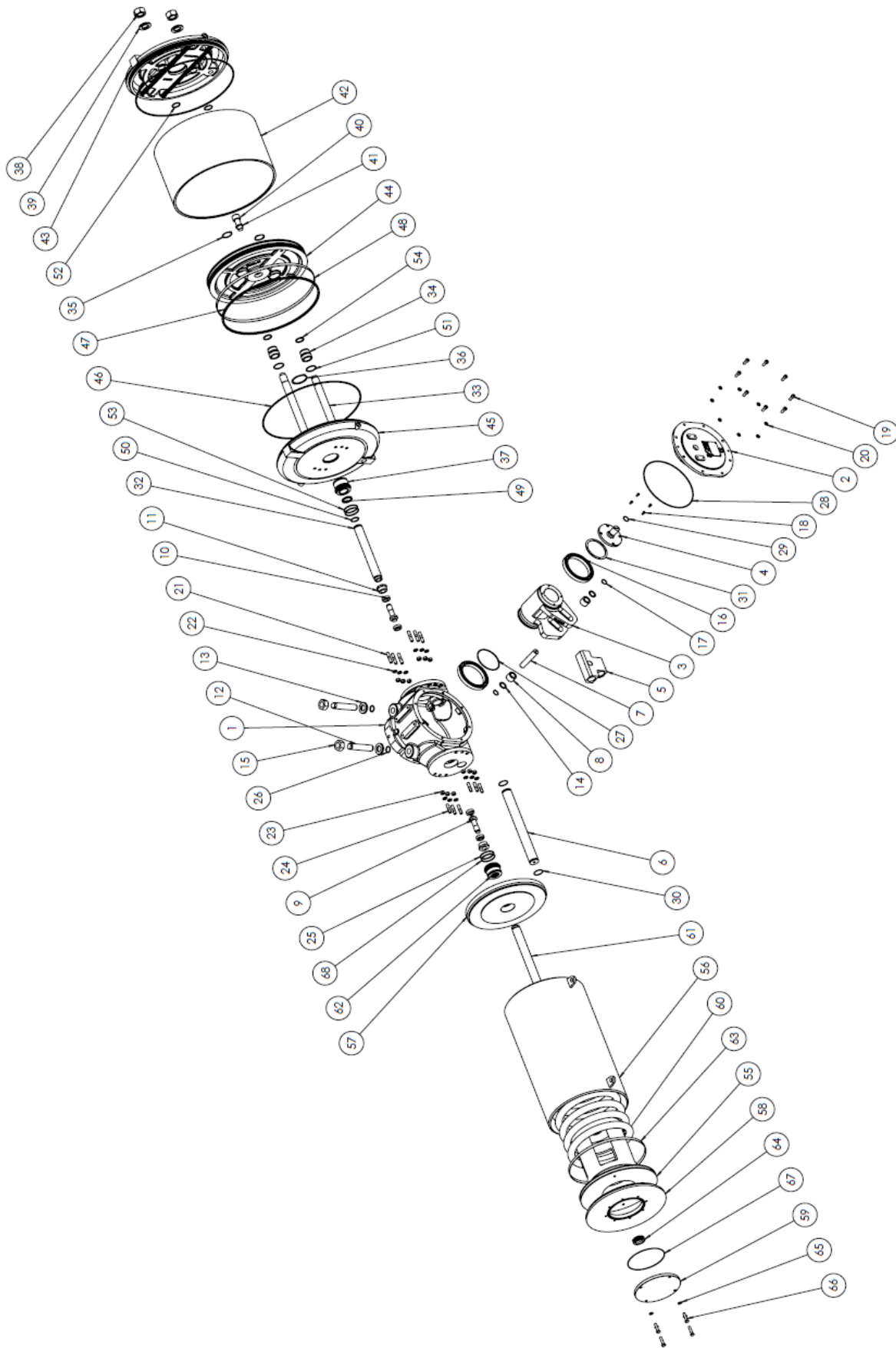
DOUBLE ACTING BILL OF MATERIAL

ITEM	DESCRIPTION	MATERIAL	QTY
1	CENTRAL BLOCK	DUCTILE IRON	1
2	CENTRAL BLOCK COVER	DUCTILE IRON	1
3	YOKE	DUCTILE IRON	1
4	YOKE INSERT	DUCTILE IRON	1
5	CARRIER ASSEMBLY	ALLOY STEEL	1
6	GUIDE ROD	ALLOY STEEL	1
7	YOKE PIN	ALLOY STEEL	1
8	YOKE PIN BEARING	STAINLESS STEEL	2
9	FLEX SPERICAL BOLT	ALLOY STEEL	1
10	FLEX SPERICAL WASHER	ALLOY STEEL	2
11	FLEX NUT	ALLOY STEEL	1
12	STROKE ADJ. BOLT	ALLOY STEEL	2
13	STOPER BOLT WASHER	ALLOY STEEL	2
14	YOKE PIN WASHER	STAINLESS STEEL	2
15	HEX NUT	ALLOY STEEL	2
16	BALL BEARING	ALLOY STEEL	2
17	EXTERNAL CIRCLIP	STAINLESS STEEL	2
18	ALLEN BOLT	ALLOY STEEL	4
19	ALLEN BOLT	ALLOY STEEL	8
20	SPRING WASHER	ALLOY STEEL	8
21	STUD	ALLOY STEEL	6
22	SPRING WASHER	ALLOY STEEL	12
23	HEX NUT	ALLOY STEEL	12
24	ALLEN BOLT	ALLOY STEEL	6
25	BLIND CAP	STEEL	1
26	LIFTING PLATE	STEEL	1
27*	O-RING	NBR / VITON	1
28*	O-RING	NBR / VITON	2
29*	O-RING	NBR / VITON	1

ITEM	DESCRIPTION	MATERIAL	QTY
30*	O-RING	NBR / VITON	1
31*	O-RING	NBR / VITON	1
32*	O-RING	NBR / VITON	2
33*	GASKET	NBR / VITON	1
34	PNEUMATIC PISTON ROD	ALLOY STEEL	1
35	PNEUMATIC TIE ROD	ALLOY STEEL	2
36	BUSH	PHOSPHOR-BRONZE/GM	2
37	EXTERNAL CIRCLIP	STAINLESS STEEL	2
38	EXTERNAL CIRCLIP	STAINLESS STEEL	1
39	GLAND ASSEMBLY	STEEL+PB	1
40	HEX NUT	ALLOY STEEL	2
41	SPRING WASHER	ALLOY STEEL	2
42	ALLEN BOLT	ALLOY STEEL	1
43	SPRING WASHER	ALLOY STEEL	1
44	TUBE	CARBON STEEL	1
45	REAR COVER	DUCTILE IRON	1
46	PISTON	DUCTILE IRON	1
47	FRONT COVER	DUCTILE IRON	1
48*	O-RING	NBR / VITON	2
49*	QUAD RING	NBR / VITON	1
50*	WEAR STRIP	PTFE	1
51*	ROD SEAL	NBR / VITON	1
52*	O-RING	NBR / VITON	1
53*	O-RING	NBR / VITON	2
54*	O-RING	NBR / VITON	2
55*	O-RING	NBR / VITON	2
56*	QUAD RING	NBR / VITON	2

NOTE: * MARKED COMPONENT ARE THE PARTS OF THE SEAL KIT

EXPLODED VIEW OF SINGLE ACTING ACTUATOR



SINGLE ACTING PART LIST

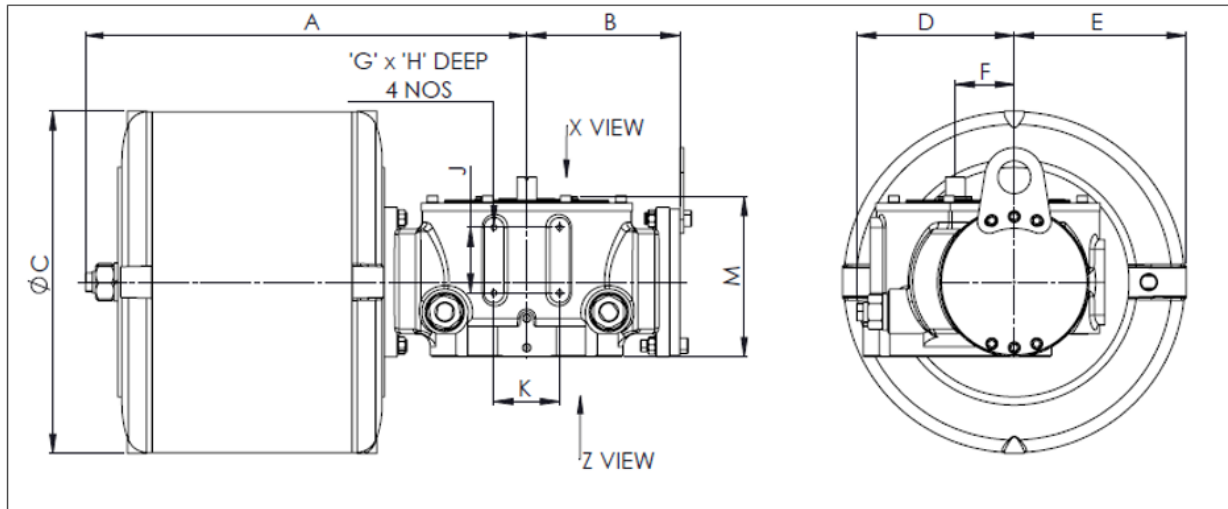
ITEM	DESCRIPTION	MATERIAL	QTY
1	CENTRAL BLOCK	DUCTILE IRON	1
2	CENTRAL BLOCK COVER	DUCTILE IRON	1
3	YOKE	DUCTILE IRON	1
4	YOKE INSERT	DUCTILE IRON	1
5	CARRIER ASSEMBLY	ALLOY STEEL	1
6	GUIDE ROD	ALLOY STEEL	1
7	YOKE PIN	ALLOY STEEL	1
8	YOKE PIN BEARING	STAINLESS STEEL	2
9	FLEX SPERICAL BOLT	ALLOY STEEL	2
10	FLEX SPERICAL WASHER	ALLOY STEEL	4
11	FLEX NUT	ALLOY STEEL	2
12	STROKE ADJ. BOLT	ALLOY STEEL	2
13	STOPER BOLT WASHER	ALLOY STEEL	2
14	YOKE PIN WASHER	STAINLESS STEEL	2
15	HEX NUT	ALLOY STEEL	2
16	BALL BEARING	ALLOY STEEL	2
17	EXTERNAL CIRCLIP	STAINLESS STEEL	2
18	ALLEN BOLT	ALLOY STEEL	4
19	ALLEN BOLT	ALLOY STEEL	8
20	SPRING WASHER	ALLOY STEEL	8
21	STUD	ALLOY STEEL	6
22	SPRING WASHER	ALLOY STEEL	12
23	HEX NUT	ALLOY STEEL	12
24	STUD	ALLOY STEEL	6
25*	O-RING	NBR / VITON	1
26*	O-RING	NBR / VITON	2
27*	O-RING	NBR / VITON	1
28*	O-RING	NBR / VITON	1
29*	O-RING	NBR / VITON	1
30*	O-RING	NBR / VITON	2
31*	GASKET	NBR / VITON	1
32	PNEUMATIC PISTON ROD	ALLOY STEEL	1
33	PNEUMATIC TIE ROD	ALLOY STEEL	2

ITEM	DESCRIPTION	MATERIAL	QTY
34	BUSH	PHOSPHOR-BRONZE/GM	2
35	EXTERNAL CIRCLIP	STAINLESS STEEL	2
36	EXTERNAL CIRCLIP	STAINLESS STEEL	1
37	GLAND ASSEMBLY	STEEL+PB	2
38	HEX NUT	ALLOY STEEL	2
39	SPRING WASHER	ALLOY STEEL	2
40	ALLEN BOLT	ALLOY STEEL	1
41	SPRING WASHER	ALLOY STEEL	1
42	TUBE	CARBON STEEL	1
43	REAR COVER	DUCTILE IRON	1
44	PISTON	DUCTILE IRON	1
45	FRONT COVER	DUCTILE IRON	1
46*	O-RING	NBR / VITON	2
47*	QUAD RING	NBR / VITON	1
48*	WEAR STRIP	PTFE	1
49*	ROD SEAL	NBR / VITON	1
50*	O-RING	NBR / VITON	1
51*	O-RING	NBR / VITON	2
52*	O-RING	NBR / VITON	2
53*	O-RING	NBR / VITON	2
54*	QUAD RING	NBR / VITON	2
55	SPRING GUIDE FOR	SG IRON /ALLOY STEEL	1
56	SPRING CAN	ALLOY STEEL	1
57	SPRING CAN FC	ALLOY STEEL	1
58	SPRING CAN RC	ALLOY STEEL	1
59	SPRING CAN COVER PLATE	ALLOY STEEL	1
60	SPRING	SPRING STEEL	1
61	SPRING ROD	ALLOY STEEL	1
62	SPRING GLAND ASSEMBLY	STEEL	1
63	PTFE STRIP	PTFE	1
64	LOCK NUT	ALLOY STEEL	2
65	SPRING WASHER	ALLOY STEEL	4
66	HEX BOLT	ALLOY STEEL	4
67*	O-RING	NBR / VITON	1
68*	O-RING	NBR / VITON	1

NOTE: * MARKED COMPONENT ARE THE PARTS OF THE SEAL KIT

DIMENSIONS AND WEIGHTS.

DIMENSION FOR DOUBLE ACTING ACTUATOR

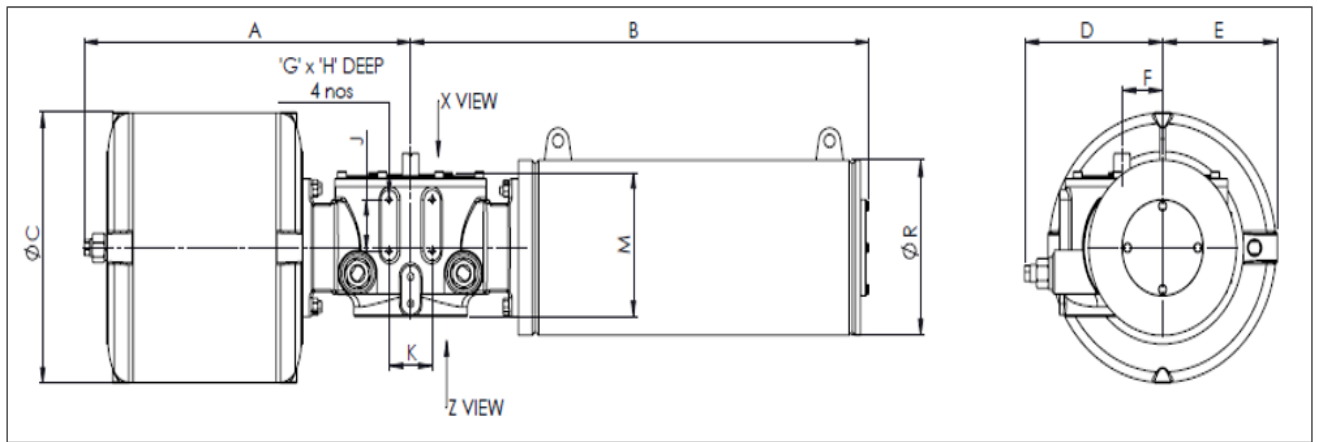


DIMENSION FOR DOUBLE ACTING CYLINDER												
MODEL	A	B	C	D	E	F	G	H	J	K	M	P
S1-200	463	172	221	220	108	60	M10	13.5	60	60	200	1/2" NPT
S1-250	479	172	266	220	133	60	M10	13.5	60	60	200	1/2" NPT
S1-300	490	172	322	220	160	60	M10	13.5	60	60	200	1/2" NPT
S1-350	500	172	372	220	185	60	M10	13.5	60	60	200	1/2" NPT
S2-250	551	205	266	255	133	75	M10	13.5	80	80	225	1/2" NPT
S2-300	561	205	322	255	160	75	M10	13.5	80	80	225	1/2" NPT
S2-350	575	205	375	255	185	75	M10	13.5	80	80	225	1/2" NPT
S2-400	599	205	422	255	212	75	M10	13.5	80	80	225	3/4" NPT
S3-300	619	233	322	240	160	90	M10	13.5	100	100	244	1/2" NPT
S3-350	627	233	372	240	185	90	M10	13.5	100	100	244	1/2" NPT
S3-400	667	233	422	240	212	90	M10	13.5	100	100	244	3/4" NPT
S3-500	667	233	522	240	262	90	M10	13.5	100	100	244	3/4" NPT
S4-350	720	281	372	320	185	108	M12	15	100	100	317	1/2" NPT
S4-400	750	281	422	320	212	108	M12	15	100	100	317	3/4" NPT
S4-500	755	281	522	320	262	108	M12	15	100	100	317	3/4" NPT
S4-600	770	281	622	320	310	108	M12	15	100	100	317	3/4" NPT
S5-500	832	306	522	408	262	130	M12	15	100	100	342	3/4" NPT
S5-600	847	306	622	408	310	130	M12	15	100	100	342	3/4" NPT
S5-700	861	306	722	408	360	130	M12	15	100	100	342	1" NPT
S5-800	861	306	822	408	410	130	M12	15	100	100	342	1-1/2" NPT

WEIGHTS FOR DOUBLE ACTING ACTUATOR

CYL. DIM.	200	250	300	350	400	500	600	700	800
ACTUATOR	Weight (Kg)								
S1	75	87	113	138	-	-	-	-	-
S2	-	121	142	172	206	-	-	-	-
S3	-	-	172	201	240	298	-	-	-
S4	-	-	-	302	339	398	482	-	-
S5	-	-	-	-	-	469	554	680	820

DIMENSION OF SINGLE ACTING ACTUATOR



DIMENSION FOR SINGLE ACTING CYLINDER													
MODEL	A	B	C	D	E	F	G	H	J	K	M	P	R
S1-P200-SR4	463	726	221	220	108	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P250-SR4	479	726	266	220	133	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P300-SR4	490	726	322	220	160	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P350-SR4	500	726	372	220	185	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P200-SR4	463	726	221	220	108	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P250-SR3	479	726	266	220	133	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P300-SR3	490	726	322	220	160	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P350-SR3	500	726	372	220	185	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P200-SR4	463	726	221	220	108	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P250-SR2	479	726	266	220	133	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P300-SR2	490	726	322	220	160	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P350-SR2	500	726	372	220	185	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P200-SR4	463	726	221	220	108	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P250-SR1	479	726	266	220	133	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P300-SR1	490	726	322	220	160	60	M10	13.5	60	60	200	1/2" NPT	273
S1-P350-SR1	500	726	372	220	185	60	M10	13.5	60	60	200	1/2" NPT	273

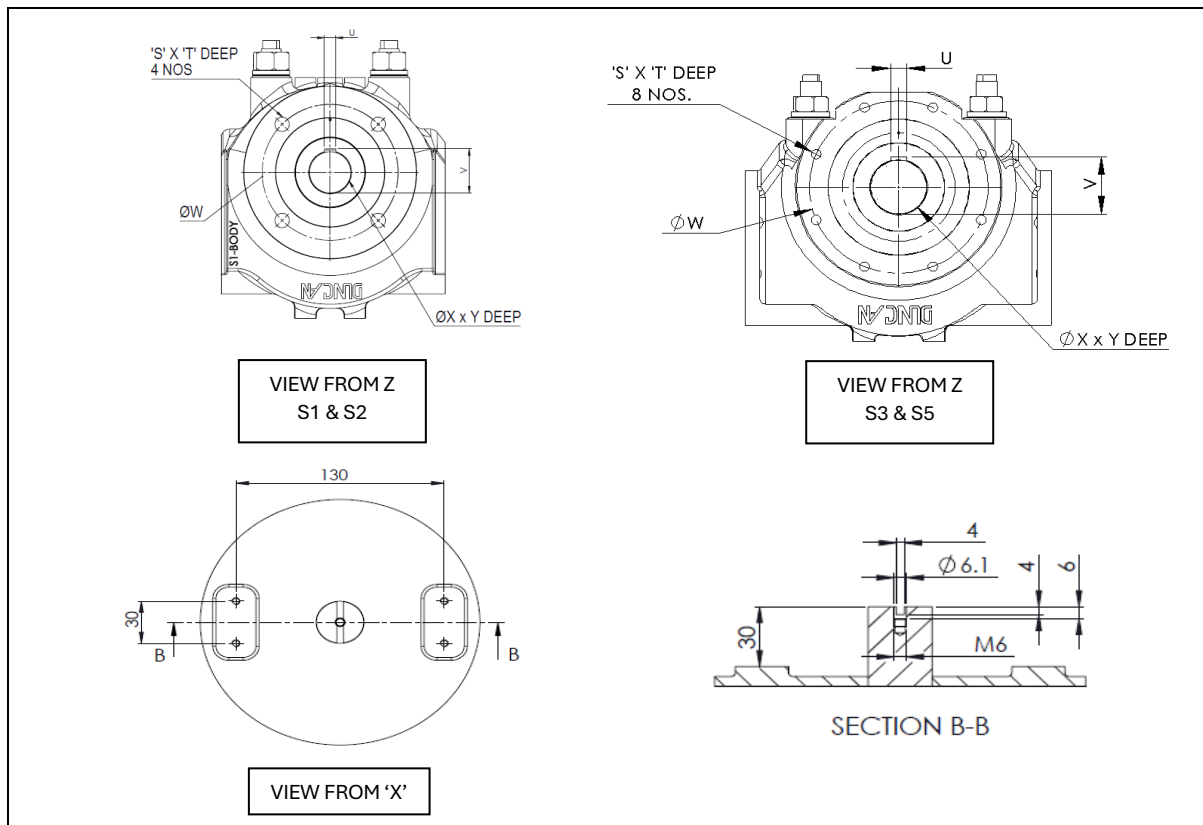
DIMENSION FOR SINGLE ACTING CYLINDER													
MODEL	A	B	C	D	E	F	G	H	J	K	M	P	R
S2-P250-SR4	551	850	266	255	133	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P300-SR4	561	850	322	255	160	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P350-SR4	575	850	375	255	185	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P400-SR4	599	850	422	255	212	75	M10	13.5	80	80	225	3/4" NPT	324
S2-P250-SR3	551	850	266	255	133	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P300-SR3	561	850	322	255	160	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P350-SR3	575	850	375	255	185	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P400-SR3	599	850	422	255	212	75	M10	13.5	80	80	225	3/4" NPT	324
S2-P250-SR2	551	850	266	255	133	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P300-SR2	561	850	322	255	160	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P350-SR2	575	850	375	255	185	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P400-SR2	599	850	422	255	212	75	M10	13.5	80	80	225	3/4" NPT	324
S2-P250-SR1	551	850	266	255	133	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P300-SR1	561	850	322	255	160	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P350-SR1	575	850	375	255	185	75	M10	13.5	80	80	225	1/2" NPT	324
S2-P400-SR1	599	850	422	255	212	75	M10	13.5	80	80	225	3/4" NPT	324
S3-P300-SR4	619	1157	322	240	160	90	M10	13.5	100	100	244	1/2" NPT	356
S3-P350-SR4	627	1157	372	240	185	90	M10	13.5	100	100	244	1/2" NPT	356
S3-P400-SR4	667	1157	422	240	212	90	M10	13.5	100	100	244	3/4" NPT	356
S3-P500-SR4	667	1157	522	240	262	90	M10	13.5	100	100	244	3/4" NPT	356
S3-P300-SR3	619	1157	322	240	160	90	M10	13.5	100	100	244	1/2" NPT	356
S3-P350-SR3	627	1157	372	240	185	90	M10	13.5	100	100	244	1/2" NPT	356
S3-P400-SR3	667	1157	422	240	212	90	M10	13.5	100	100	244	3/4" NPT	356
S3-P500-SR3	667	1157	522	240	262	90	M10	13.5	100	100	244	3/4" NPT	356
S3-P300-SR2	619	1157	322	240	160	90	M10	13.5	100	100	244	1/2" NPT	356
S3-P350-SR2	627	1157	372	240	185	90	M10	13.5	100	100	244	1/2" NPT	356
S3-P400-SR2	667	1157	422	240	212	90	M10	13.5	100	100	244	3/4" NPT	356
S3-P500-SR2	667	1157	522	240	262	90	M10	13.5	100	100	244	3/4" NPT	356
S3-P300-SR1	619	1157	322	240	160	90	M10	13.5	100	100	244	1/2" NPT	356
S3-P350-SR1	627	1157	372	240	185	90	M10	13.5	100	100	244	1/2" NPT	356
S3-P400-SR1	667	1157	422	240	212	90	M10	13.5	100	100	244	3/4" NPT	356
S3-P500-SR1	667	1157	522	240	262	90	M10	13.5	100	100	244	3/4" NPT	356
S4-P350-SR4	720	1230	372	320	185	108	M12	15	100	100	317	1/2" NPT	457
S4-P400-SR4	750	1230	422	320	212	108	M12	15	100	100	317	3/4" NPT	457
S4-P500-SR4	755	1230	522	320	262	108	M12	15	100	100	317	3/4" NPT	457

DIMENSION FOR SINGLE ACTING CYLINDER													
	A	B	C	D	E	F	G	H	J	K	M	P	R
S4-P600-SR4	770	1230	622	320	310	108	M12	15	100	100	317	3/4" NPT	457
S4-P350-SR3	720	1230	372	320	185	108	M12	15	100	100	317	1/2" NPT	457
S4-P400-SR3	750	1230	422	320	212	108	M12	15	100	100	317	3/4" NPT	457
S4-P500-SR3	755	1230	522	320	262	108	M12	15	100	100	317	3/4" NPT	457
S4-P600-SR3	770	1230	622	320	310	108	M12	15	100	100	317	3/4" NPT	457
S4-P350-SR2	720	1230	372	320	185	108	M12	15	100	100	317	1/2" NPT	457
S4-P400-SR2	750	1230	422	320	212	108	M12	15	100	100	317	3/4" NPT	457
S4-P500-SR2	755	1230	522	320	262	108	M12	15	100	100	317	3/4" NPT	457
S4-P600-SR2	770	1230	622	320	310	108	M12	15	100	100	317	3/4" NPT	457
S4-P350-SR1	720	1230	372	320	185	108	M12	15	100	100	317	3/4" NPT	457
S4-P400-SR1	750	1230	422	320	212	108	M12	15	100	100	317	3/4" NPT	457
S4-P500-SR1	755	1230	522	320	262	108	M12	15	100	100	317	3/4" NPT	457
S4-P600-SR1	770	1230	622	320	310	108	M12	15	100	100	317	3/4" NPT	457
S5-P500-SR4	832	1196	522	408	262	130	M12	15	100	100	342	3/4" NPT	585
S5-P600-SR4	847	1196	622	408	310	130	M12	15	100	100	342	3/4" NPT	585
S5-P700-SR4	861	1196	722	408	360	130	M12	15	100	100	342	1" NPT	585
S5-P800-SR4	861	1196	822	408	410	130	M12	15	100	100	342	1" NPT	585
S5-P500-SR3	832	1196	522	408	262	130	M12	15	100	100	342	3/4" NPT	585
S5-P600-SR3	847	1196	622	408	310	130	M12	15	100	100	342	3/4" NPT	585
S5-P700-SR3	861	1196	722	408	360	130	M12	15	100	100	342	1" NPT	585
S5-P800-SR3	861	1196	822	408	410	130	M12	15	100	100	342	1" NPT	585
S5-P500-SR2	832	1196	522	408	262	130	M12	15	100	100	342	3/4" NPT	585
S5-P600-SR2	847	1196	622	408	310	130	M12	15	100	100	342	3/4" NPT	585
S5-P700-SR2	861	1196	722	408	360	130	M12	15	100	100	342	1" NPT	585
S5-P800-SR2	861	1196	822	408	410	130	M12	15	100	100	342	1" NPT	585
S5-P500-SR1	832	1196	522	408	262	130	M12	15	100	100	342	3/4" NPT	585
S5-P600-SR1	847	1196	622	408	310	130	M12	15	100	100	342	3/4" NPT	585
S5-P700-SR1	861	1196	722	408	360	130	M12	15	100	100	342	1" NPT	585
S5-P800-SR1	861	1196	822	408	410	130	M12	15	100	100	342	1" NPT	585

WEIGHTS FOR SINGLE ACTING ACTUATOR

CYL. DIM.	200	250	300	350	400	500	600	700	800
ACTUATOR	Weight (Kg)								
S1-SR1	136	150	175	202	-	-	-	-	-
S1-SR2	135	150	173	201	-	-	-	-	-
S1-SR3	135	148	172	199	-	-	-	-	-
S1-SR4	132	147	170	198	-	-	-	-	-
S2-SR1	-	197	218	247	282	-	-	-	-
S2-SR2	-	195	217	246	280	-	-	-	-
S2-SR3	-	194	215	244	279	-	-	-	-
S2-SR4	-	194	215	243	275	-	-	-	-
S3-SR1	-	-	331	360	404	457	-	-	-
S3-SR2	-	-	330	358	402	452	-	-	-
S3-SR3	-	-	328	355	401	448	-	-	-
S3-SR4	-	-	325	354	401	445	-	-	-
S4-SR1	-	-	-	504	541	600	684	-	-
S4-SR2	-	-	-	500	537	590	675	-	-
S4-SR3	-	-	-	498	533	585	670	-	-
S4-SR4	-	-	-	495	530	578	665	-	-
S5-SR1	-	-	-	-	-	847	932	1045	1123
S5-SR2	-	-	-	-	-	835	920	1028	1105
S5-SR3	-	-	-	-	-	828	914	1012	1098
S5-SR4	-	-	-	-	-	818	900	1005	1085

MOUNTING FACE DIMENSION WITH ISO BORE



DIMENSION (MM)								MOUNTING FACE
ACTUATOR	S	T	U	V	ØW	ØX	Y	
S1	M20	30	14	53.8	165	50	166	F16
S2	M20	30	18	64.4	165	60	183	F16
S3	M16	24	22	85.4	254	80	202	F25
S4	M20	30	28	106.4	298	100	273	F30
S5	M30	45	40	169.4	356	160	280	F35

CAUTION

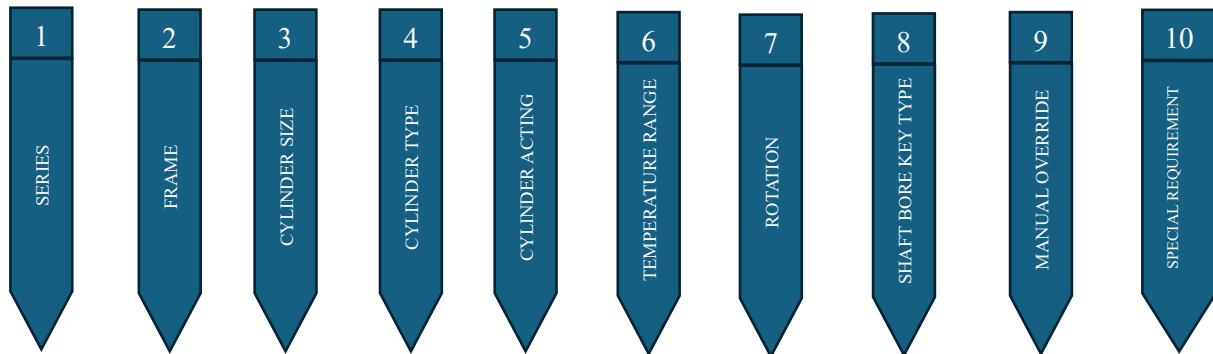
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For any specific application, users are kindly requested to contact DUNCAN Engineering Limited for technical advice, or to carry out their own study and evaluation for providing suitability of these products to such an application failure to follow this request could result in property damage and/or personal injury, for which we shall not be liable.

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ORDER CODIFICATION



1 **SERIES**
S

2 **FRAME**
1,2,3,4,5

3 CYLINDER SIZE	AVAILABLE FRAME SIZE
200	1
250	1 / 2
300	1/2/3
350	1/2/3/4
400	2/3/4
500	3/4/5
600	4/5
700	700
800	800

4 **CYLINDER TYPE**
0- SINGLE ACTING
2- DUAL CYLINDER
3- TANDEM CYLINDER

5 **CYLINDER ACTING**

0DA	DOUBLE ACTING
SR1-SR5	SINGLE ACTING

6 **TEMPERATURE RANGE**

N	-20°C TO 80°C
H	-20°C TO 125°C
L	-45°C TO 80°C

7 **ROTATION**
00- DOUBLE ACTING
FC- FAIL TO CLOSE (CW)
FO- FAIL TO OPEN (CCW)

8 **SHAFT BORE KEY TYPE**
D -ISO BORE WITH SINGLE KEYWAY

9 **MANUAL OVERRIDE**
00 – NA
HM- HYDRAULIC MANUAL
OVERRIDE
SH- SIDE HAND WHEEL MANUAL
OVERRIDE

10 **SPECIAL REQUIREMENT**

XXX – OTHER THAN SPECIFIED
(IF APPLICABLE)