

TSS SERIES



CONTENTS

NITROGEN GAS SPRING



TSS0750	86
TSS1500	88
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TOSS STANDARD

■ 일반 제원

- 충전재
질소가스 (N₂)
- 최대 충전 압력
150 bar (at 20℃)
- 최소 충전 압력
25 bar (at 20℃)
- 작동 온도
0 to 80℃
- 온도에 따른 압력 증가량
±0.3% / ℃
- 분당 최대 스트로크 왕복
~50 to 100 (at 20℃)
- 피스톤 로드 속도
0 ~ 0.8 m/s
- 로드 표면처리
도금 열처리
- 실린더 표면처리
흑산화 피막

■ Model별 제원

종류 TYPE	Stroke (mm)	실린더 외경 Φ(mm)	Rod 외경 Φ(mm)	초기하중 (N)	최대하중 (N)	최대충전압력
TSS0750	10~200	50	25	7,350	11,800	150Bar
TSS1500	10~300	75	36	15,150	22,000	150Bar
TSS3000	10~300	95	50	29,400	47,000	150Bar
TSS5000	10~300	120	65	49,650	84,300	150Bar

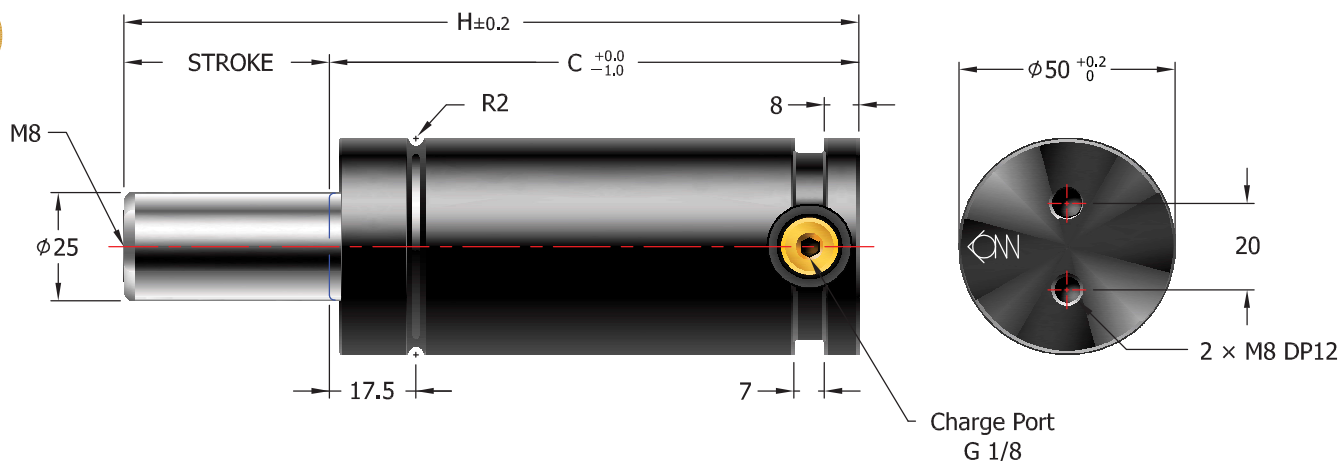
※ 상기 사양은 성능개선을 위해 예고없이 변경될 수 있습니다.





TSS0750

NITROGEN GAS SPRING



규격 표기법

GAS SPRING

MOUNT

REPAIR KIT

TSS0750
MODEL

SP0750

RCS0750

× 050 S(F) - (MSA) - 150
STROKE 단독형-S 일체형 마운트 (선택사항) 충전압력 (Bar)

※ 충전압력은 별도 요구시만 명시하고 지정표기가 없을 경우 표준충전압력 150bar 로 충전됩니다.

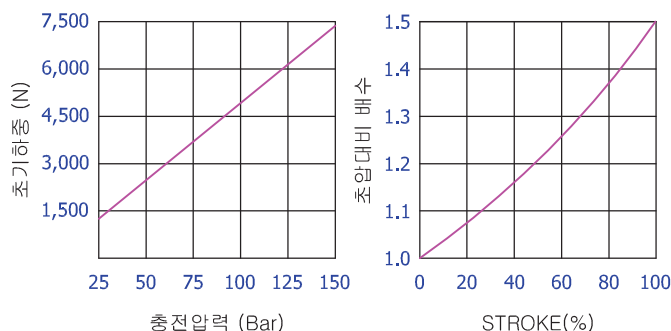
TSS0750

Stroke		H	C	Force(N) (150 bar / +20 ℃)		Gas vol. (cm ³)	Weight (kg)
(mm)	(inch)			Initial	End force*		
10	0.39	90	80	7,350	9,500	21.4	1.00
12.7	0.50	95.4	82.7		9,800	24.7	1.00
15	0.59	100	85		10,000	27.6	1.02
20	0.79	110	90		10,300	33.9	1.06
25	0.98	120	95		10,600	40.2	1.12
30	1.18	130	100		10,800	46.5	1.16
35	1.38	140	105		10,900	52.8	1.20
38	1.50	146	108		11,000	56.5	1.24
40	1.57	150	110		11,000	59.0	1.26
45	1.77	160	115		11,100	65.3	1.30
50	1.97	170	120		11,200	71.6	1.36
60	2.36	190	130		11,300	84.2	1.45
63	2.48	196	133		11,300	87.9	1.48
70	2.76	210	140		11,400	96.7	1.52
75	2.95	220	145		11,400	103.0	1.60
80	3.15	230	150		11,500	109.3	1.64
90	3.54	250	160		11,500	121.8	1.74
100	3.94	270	170		11,600	134.4	1.82
125	4.92	320	195		11,700	165.8	2.04
150	5.91	370	220		11,700	197.2	2.30
160	6.30	390	230		11,700	209.8	2.37
175	6.89	420	245		11,800	228.6	2.52
200	7.87	470	270		11,800	260.0	2.76

* = at full stroke

※ 기타 특수한 규격은 당사에 문의 바랍니다.

■ 충전압력/압축량 대비 하중변화도표



■ TSS0750의 충전 압력(Bar) 계산식

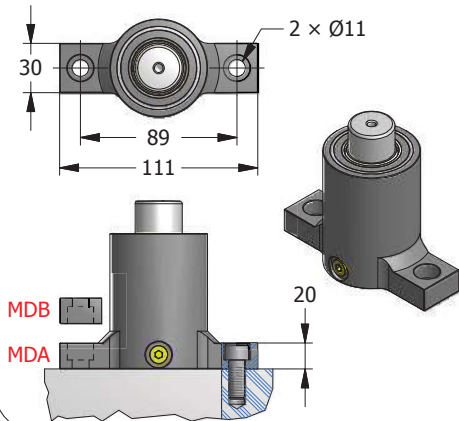
$$\text{충전압력(Bar)} = \frac{\text{초기하중(N)}}{49.1}$$

ex) 필요한 초기하중 6,000N인 GAS SPRING의 충전압력은?

$$122(\text{Bar}) = \frac{6,000(\text{N})}{49.1}$$

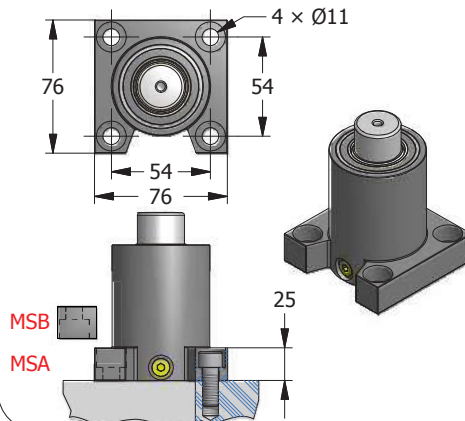
MD MOUNT

일체형



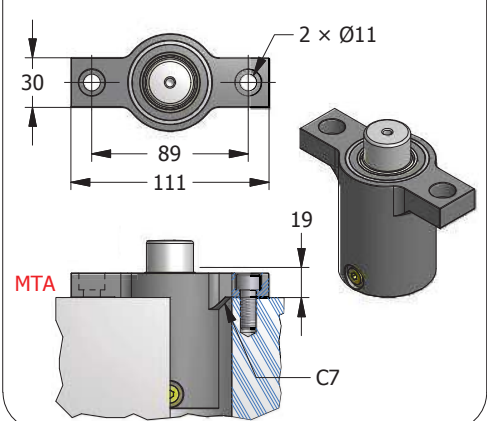
MS MOUNT

일체형



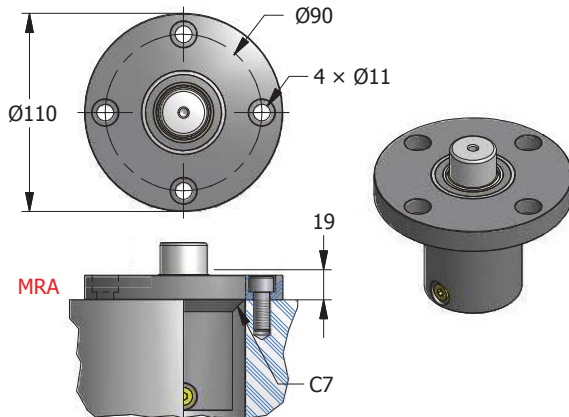
MT MOUNT

일체형



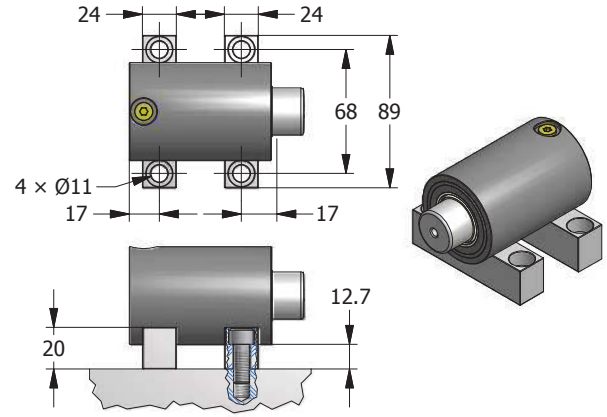
MR MOUNT

일체형

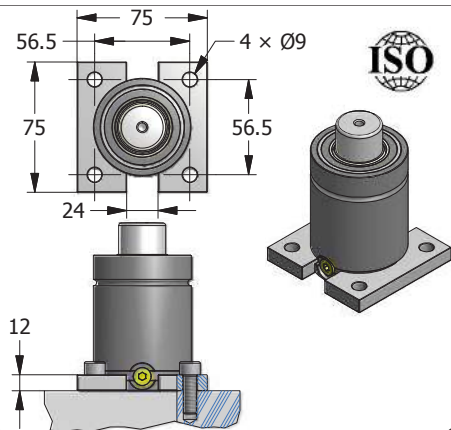


MK MOUNT

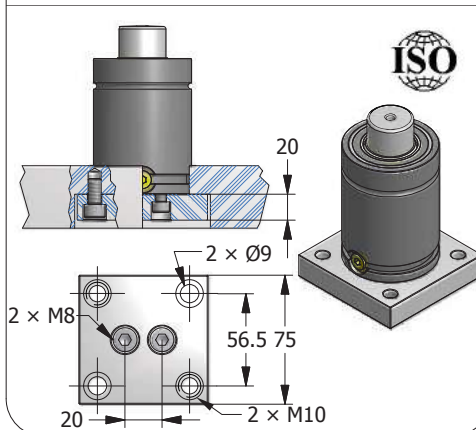
일체형



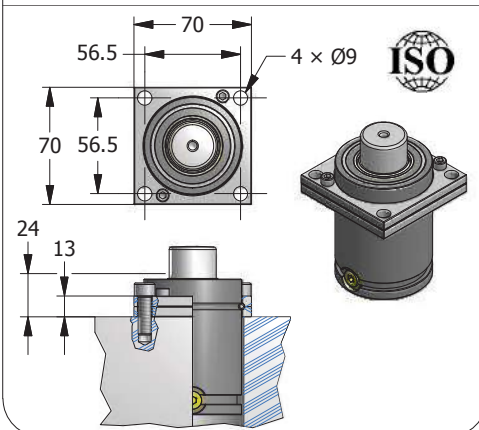
SP0750 MOUNT



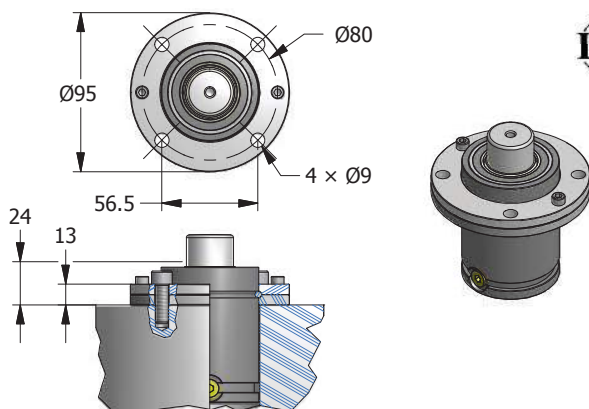
SB0750 MOUNT



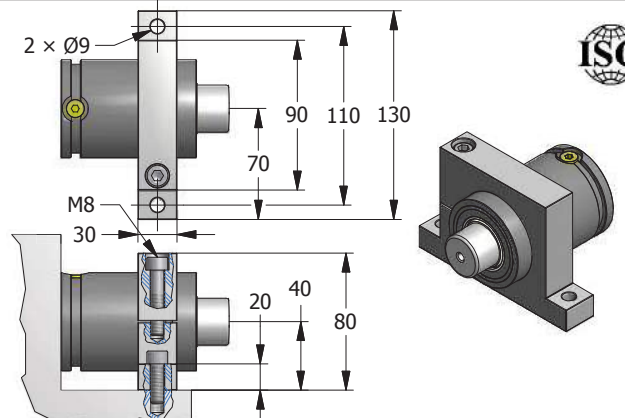
ST0750 MOUNT

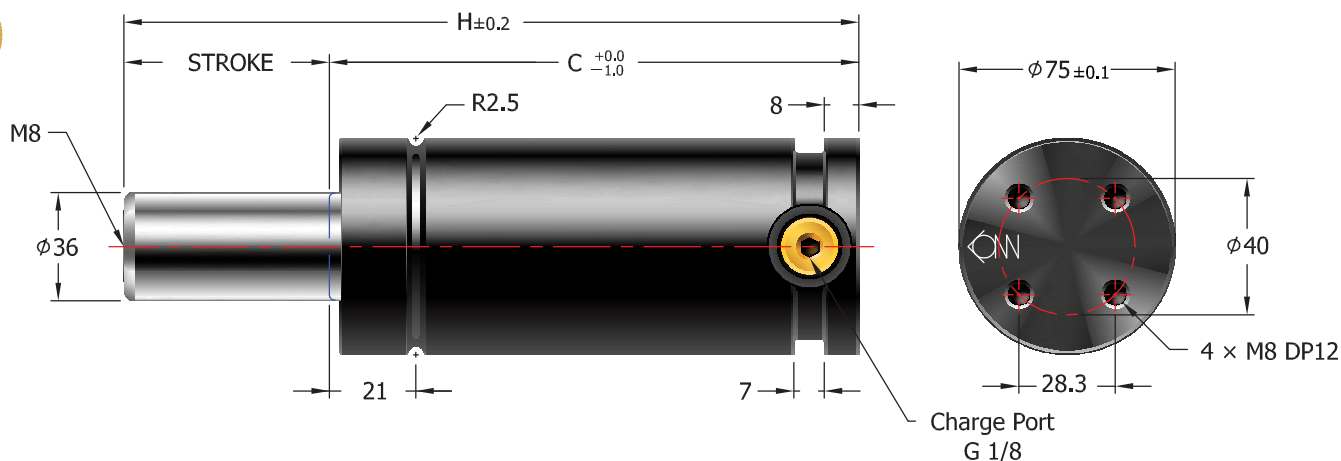


SR0750 MOUNT



SC0750 MOUNT





규격 표기법

GAS SPRING

MOUNT

REPAIR KIT

TSS1500
MODEL

SP1500

RCS1500

× 050
STROKE

STROKE

$$\frac{S(F)}{\text{단독형}-S}$$

다독형-S

배과형-F

- (MSA)
일체형 마운트
(선택사항)

일체형 마우트

(선택사항)

150
충전압력
(Bar)

충전압력

(Bar)

※ 충전압력은 별도 요구시만 명시하고 지정표기가 없을 경우 표준충전압력 150bar로 충전됩니다.

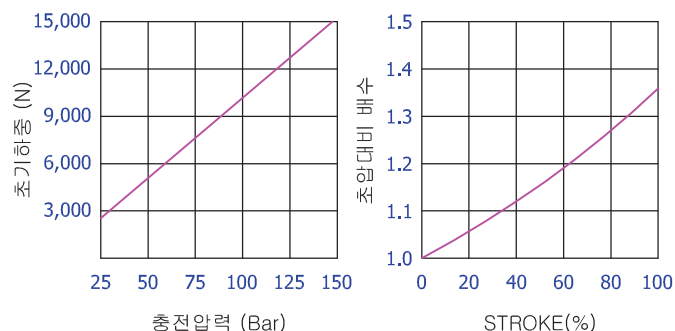
TSS1500

Stroke		H	C	Force (N) (150 bar / +20 ℃)		Gas vol. (cm³)	Weight (kg)
(mm)	(inch)			Initial	End force*		
10	0.39	122	112	15,150	17,800	68.5	3.06
13	0.51	127.4	114.4		18,300	76.0	3.09
15	0.59	132	117		18,500	84.1	3.13
20	0.79	142	122		19,000	99.7	3.24
25	0.98	152	127		19,400	115.3	3.33
30	1.18	162	132		19,700	130.9	3.42
35	1.38	172	137		20,000	146.4	3.50
38	1.50	178	140		20,100	155.8	3.59
40	1.57	182	142		20,200	162.0	3.62
45	1.77	192	147		20,400	177.6	3.70
50	1.97	202	152		20,500	193.2	3.80
60	2.36	222	162		20,800	224.3	3.99
63	2.48	228	165		20,800	233.7	4.06
70	2.76	242	172		20,900	255.5	4.16
75	2.95	252	177		21,000	271.1	4.28
80	3.15	262	182		21,100	286.6	4.34
90	3.54	282	192		21,200	317.8	4.56
100	3.94	302	202		21,300	349.0	4.73
125	4.92	352	227		21,500	426.8	5.20
150	5.91	402	252		21,600	504.7	5.62
160	6.30	422	262		21,700	535.9	5.80
175	6.89	452	277		21,700	582.6	6.16
200	7.87	502	302		21,800	660.5	6.50
250	9.84	602	352		21,900	816.3	7.39
300	11.8	702	402	22,000	972.1	8.27	

* = at full stroke

※ 기타 특수한 규격은 당사에 문의 바랍니다.

■ 충전압력/압축량 대비 하중변화도표



■ TSS1500의 충전 압력(Bar) 계산식

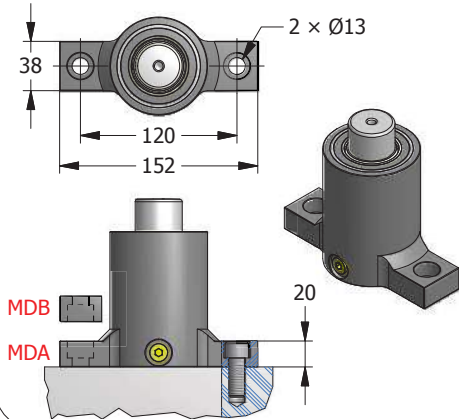
$$\text{충전압력(Bar)} = \frac{\text{초기하중(N)}}{101.7}$$

ex) 필요한 초기하중 12,000N인 GAS SPRING의
충전압력은?

$$118(\text{Bar}) = \frac{12,000(\text{N})}{101.7}$$

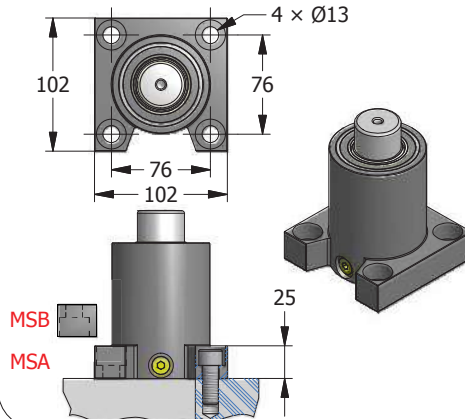
MD MOUNT

일체형



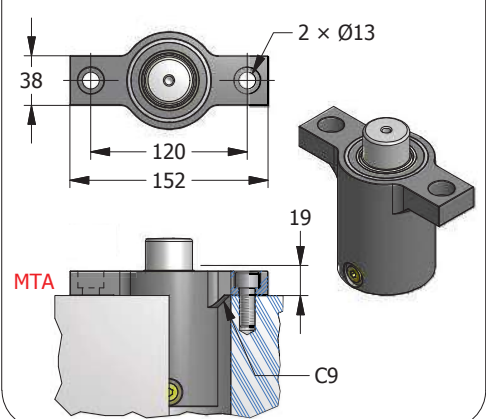
MS MOUNT

일체형



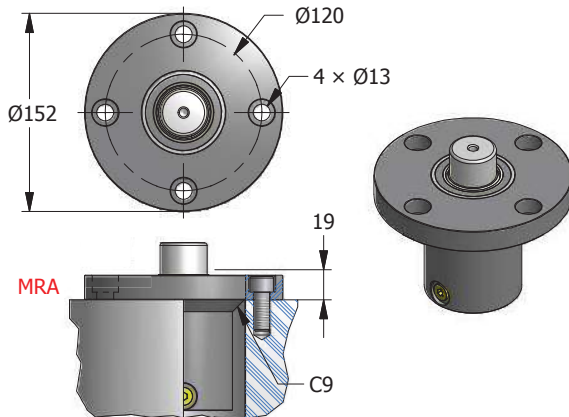
MT MOUNT

일체형



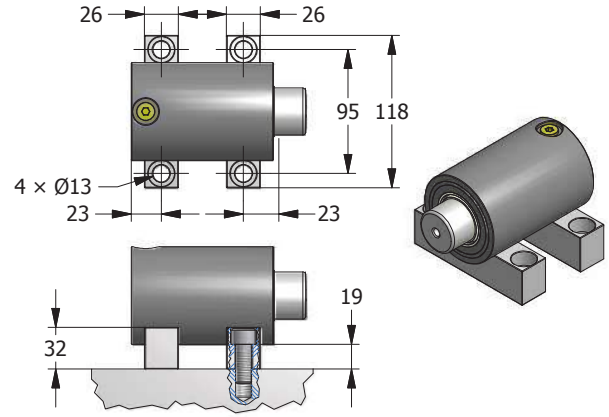
MR MOUNT

일체형

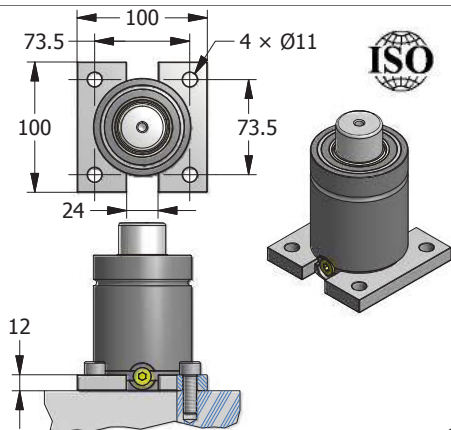


MK MOUNT

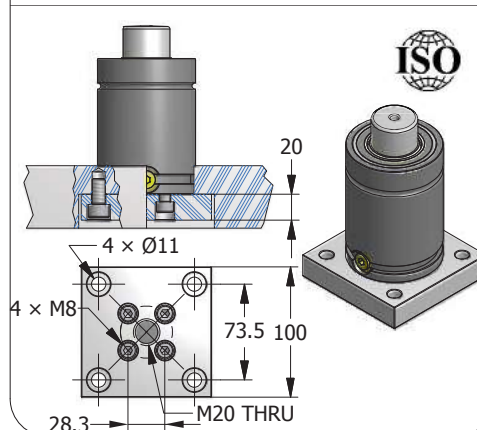
일체형



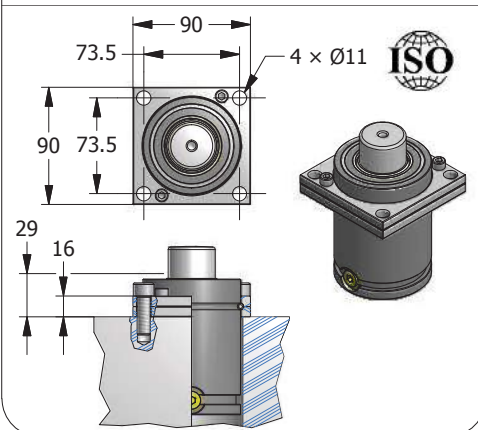
SP1500 MOUNT



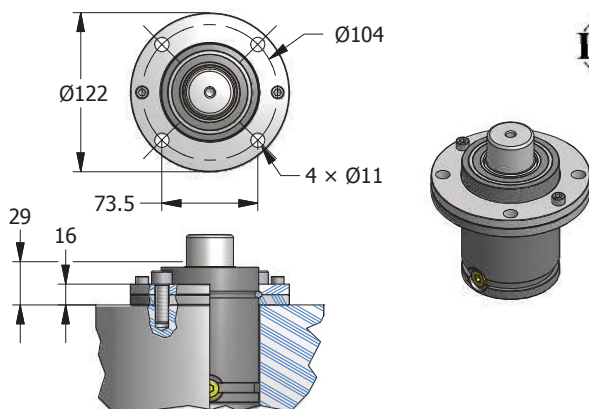
SB1500 MOUNT



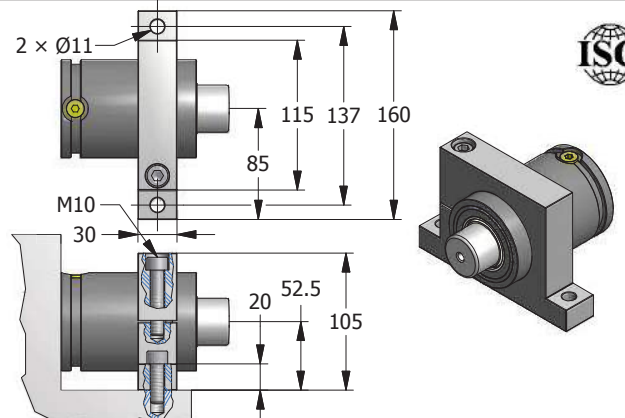
ST1500 MOUNT



SR1500 MOUNT



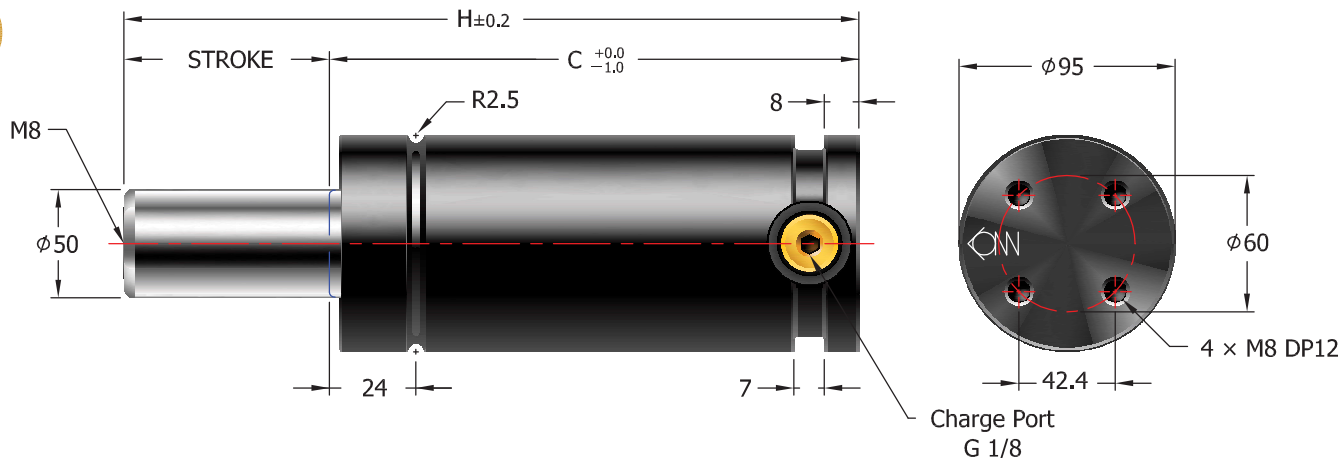
SC1500 MOUNT





TSS3000

NITROGEN GAS SPRING



규격 표기법

GAS SPRING

MOUNT

REPAIR KIT

TSS3000
MODEL

SP3000

RCS3000

× 050 S(F) - (MSA) - 150
STROKE 단독형-S 일체형 마운트 (선택사항) 충전압력 (Bar)

※ 충전압력은 별도 요구시만 명시하고 지정표기가 없을 경우 표준충전압력 150bar 로 충전됩니다.

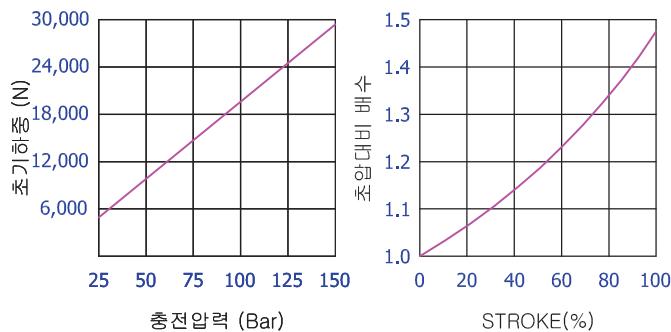
TSS3000

Stroke		H	C	Force (N) (150 bar / +20 ℃)		Gas vol. (cm ³)	Weight (kg)
(mm)	(inch)			Initial	End force*		
10	0.39	122	112	29,400	35,700	110.5	5.07
13	0.51	127.5	114.5		37,100	123.1	5.08
15	0.59	132	117		37,500	135.6	5.18
20	0.79	142	122		38,900	160.8	5.38
25	0.98	152	127		39,900	185.9	5.54
30	1.18	162	132		40,800	211.0	5.69
35	1.38	172	137		41,400	236.1	5.85
38	1.50	178	140		41,800	251.2	5.90
40	1.57	182	142		42,000	261.2	5.93
45	1.77	192	147		42,500	286.4	6.16
50	1.97	202	152		42,900	311.5	6.22
60	2.36	222	162		43,600	361.7	6.52
63	2.48	228	165		43,700	376.8	6.70
70	2.76	242	172		44,100	412.0	6.94
75	2.95	252	177		44,300	437.1	7.10
80	3.15	262	182		44,500	462.2	7.26
90	3.54	282	192		44,800	512.4	7.51
100	3.94	302	202		45,100	562.7	7.86
125	4.92	352	227		45,600	688.3	8.66
150	5.91	402	252		46,000	813.9	9.45
160	6.30	422	262		46,100	864.1	9.76
175	6.89	452	277		46,300	939.5	10.23
200	7.87	502	302		46,500	1065.1	11.01
250	9.84	602	352		46,800	1316.3	12.53
300	11.8	702	402		47,000	1567.5	14.14

* = at full stroke

※ 기타 특수한 규격은 당사에 문의 바랍니다.

■ 충전압력/압축량 대비 하중변화도표



■ TSS3000의 충전 압력(Bar) 계산식

$$\text{충전압력(Bar)} = \frac{\text{초기하중(N)}}{196.2}$$

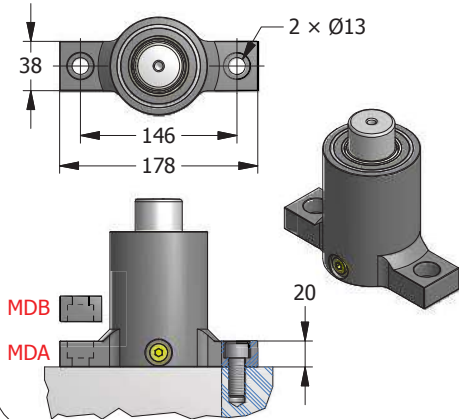
ex) 필요한 초기하중 25,000N인 GAS SPRING의 충전압력은?

$$127(\text{Bar}) = \frac{25,000(\text{N})}{196.2}$$



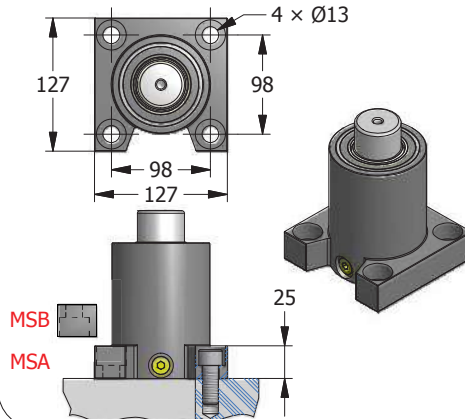
MD MOUNT

일체형



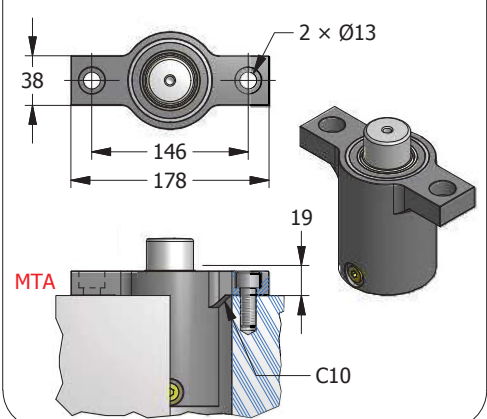
MS MOUNT

일체형



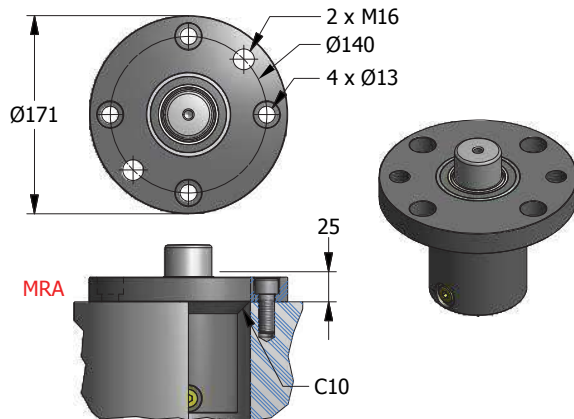
MT MOUNT

일체형



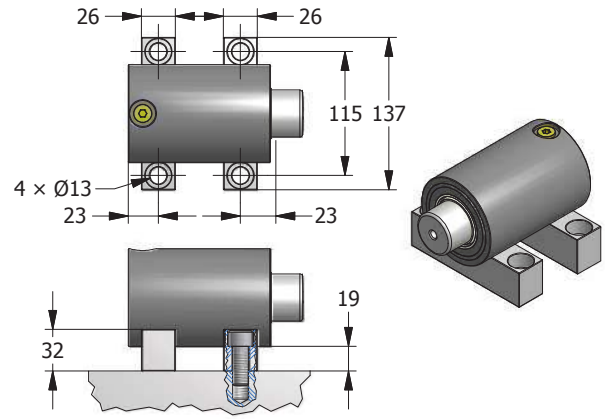
MR MOUNT

일체형

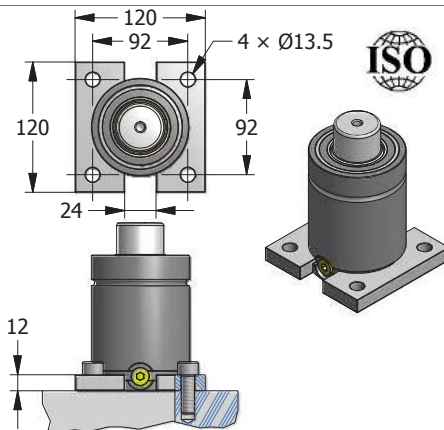


MK MOUNT

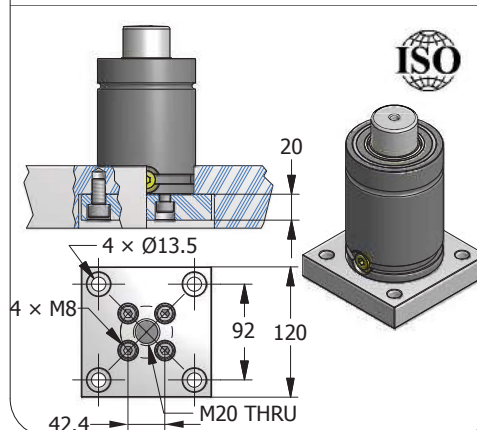
일체형



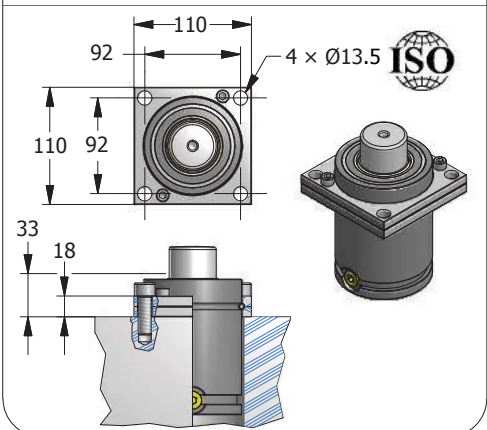
SP3000 MOUNT



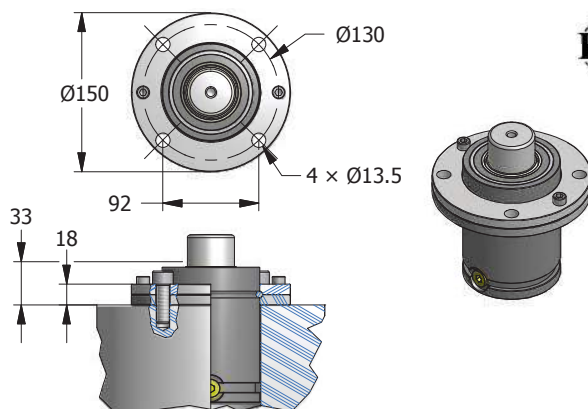
SB3000 MOUNT



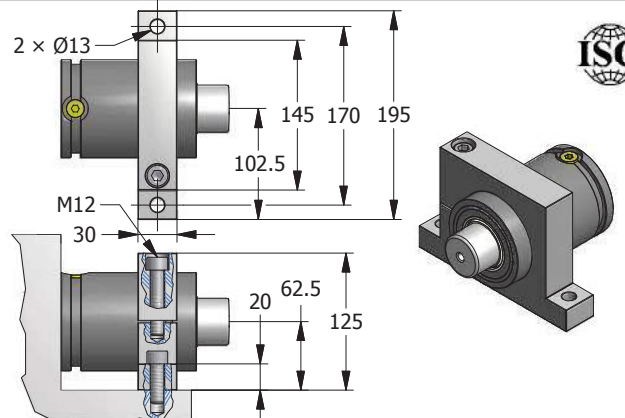
ST3000 MOUNT



SR3000 MOUNT



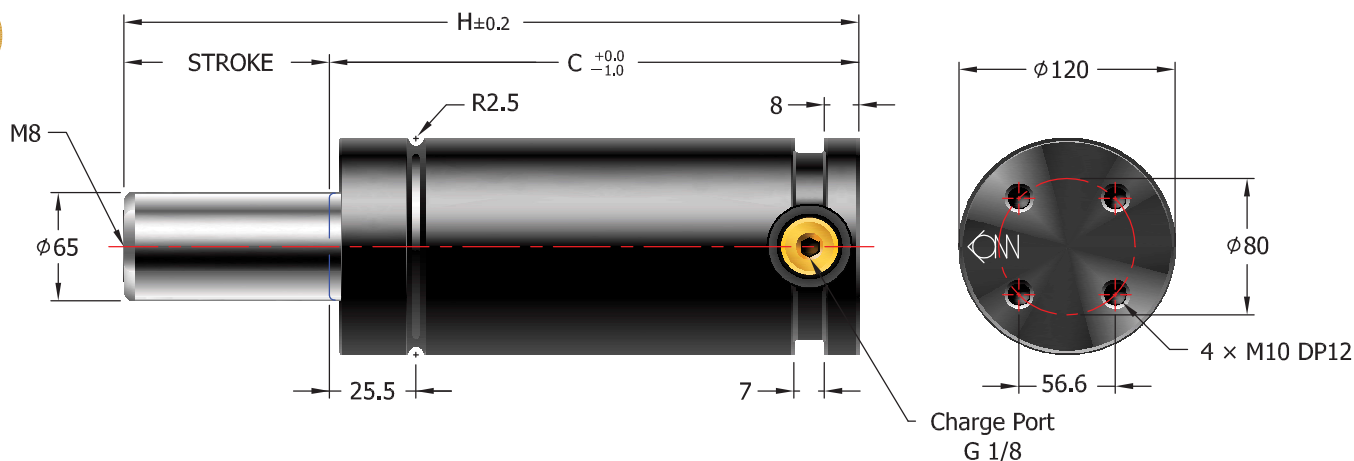
SC3000 MOUNT





TSS5000

NITROGEN GAS SPRING



규격 표기법

GAS SPRING

TSS5000
MODEL

× 050
STROKE

S(F) —
단독형-S
배관형-F

(MSA) —
일체형 마운트
(선택사항)

150
충전압력
(Bar)

MOUNT

SP5000

REPAIR KIT

RCS5000

※ 충전압력은 별도 요구시만 명시하고 지정표기가 없을 경우 표준충전압력 150bar 로 충전됩니다.

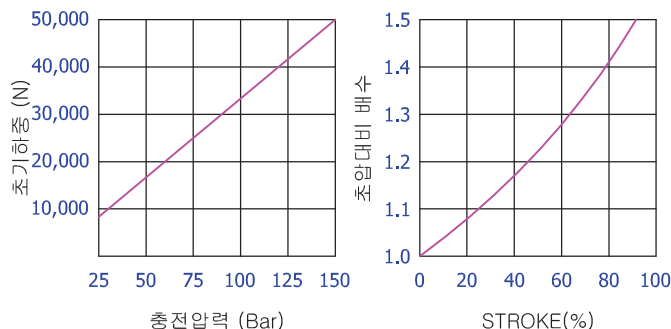
TSS5000

Stroke		H	C	Force (N) (150 bar / +20 ℃)		Gas vol. (cm ³)	Weight (kg)
(mm)	(inch)			Initial	End force*		
10	0.39	121.5	111.5	49,650	65,400	137.4	8.22
13	0.51	127.5	114.5		67,800	160.9	8.37
15	0.59	132	117		68,500	180.6	8.47
20	0.79	142	122		71,000	219.8	8.72
25	0.98	152	127		73,000	259.1	9.00
30	1.18	162	132		74,400	298.3	9.21
35	1.38	172	137		75,600	337.6	9.68
38	1.50	178	140		76,200	361.1	9.71
40	1.57	182	142		76,500	376.8	9.71
45	1.77	192	147		77,300	416.1	9.95
50	1.97	202	152		78,000	455.3	10.34
60	2.36	222	162		79,100	533.8	10.69
63	2.48	228	165		79,300	557.4	10.84
70	2.76	242	172		79,900	612.3	11.19
75	2.95	252	177		80,200	651.6	11.44
80	3.15	262	182		80,500	690.8	11.97
90	3.54	282	192		81,000	769.3	12.18
100	3.94	302	202		81,400	847.8	12.67
125	4.92	352	227		82,200	1044.1	13.91
150	5.91	402	252		82,800	1240.3	15.14
160	6.30	422	262		83,000	1318.8	15.63
175	6.89	452	277		83,200	1436.6	16.38
200	7.87	502	302		83,500	1632.8	17.61
250	9.84	602	352		84,000	2025.3	20.08
300	11.81	702	402		84,300	2417.8	22.55

* = at full stroke

※ 기타 특수한 규격은 당사에 문의 바랍니다.

■ 충전압력/압축량 대비 하중변화도표



■ TSS5000의 충전 압력(Bar) 계산식

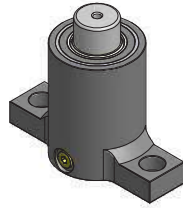
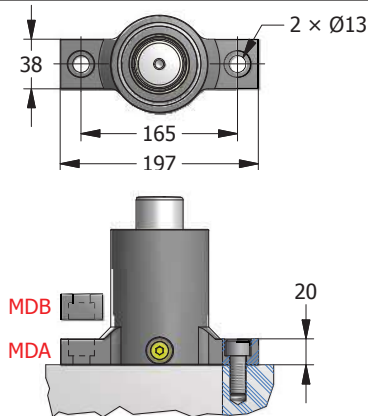
$$\text{충전압력(Bar)} = \frac{\text{초기하중(N)}}{331.7}$$

ex) 필요한 초기하중 38,000N인 GAS SPRING의 충전압력은?

$$115(\text{Bar}) = \frac{38,000(\text{N})}{331.7}$$

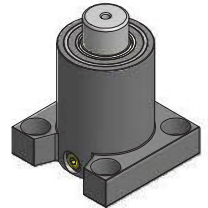
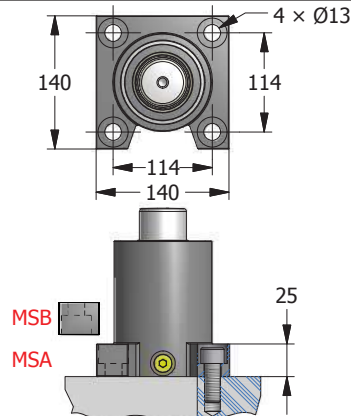
MD MOUNT

일체형



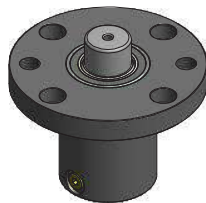
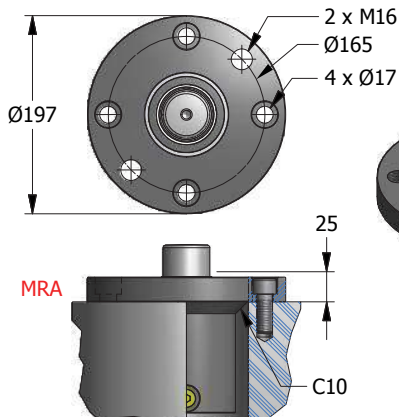
MS MOUNT

일체형



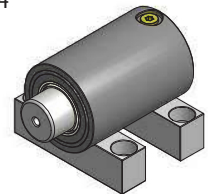
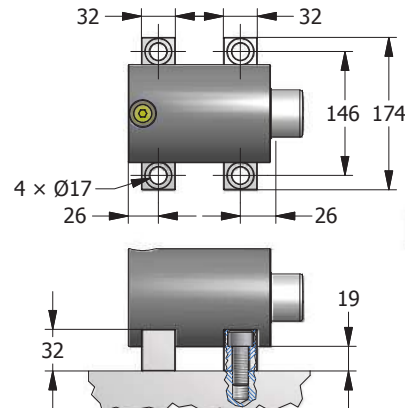
MR MOUNT

일체형

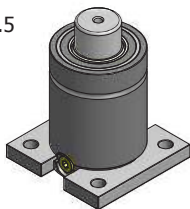
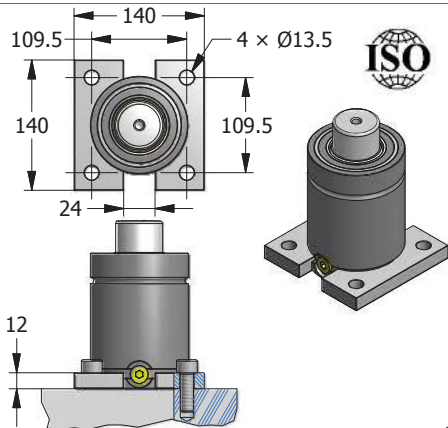


MK MOUNT

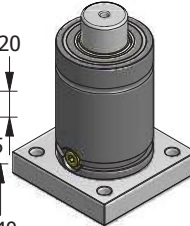
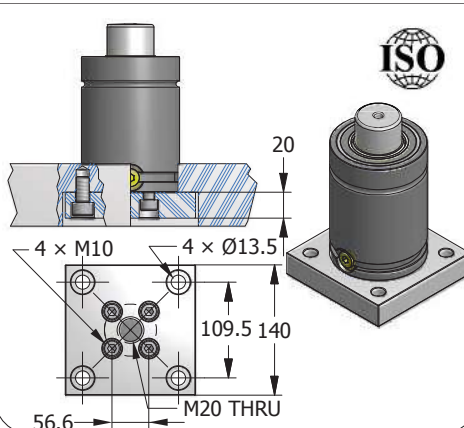
일체형



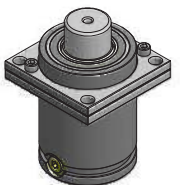
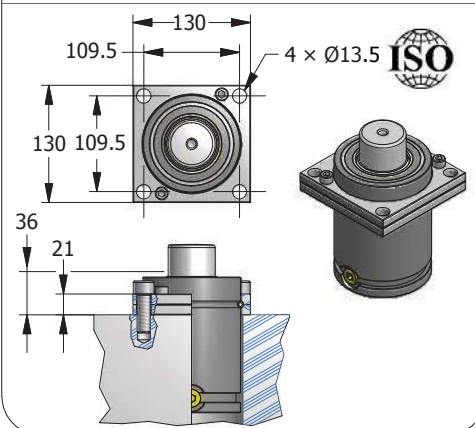
SP5000 MOUNT



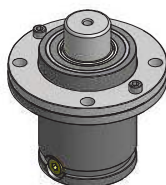
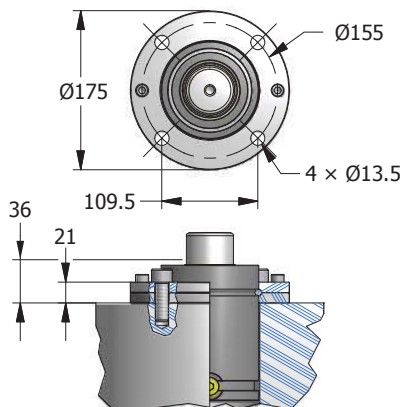
SB5000 MOUNT



ST5000 MOUNT



SR5000 MOUNT



SC5000 MOUNT

