



PRODUCT DETAILS



DUOBLE SEALING RING

Stable and anti-leakage

WEAR-RESISTANT STEEL BODY

High-pressure bearing



BALL SOCKET

Premium nylon material

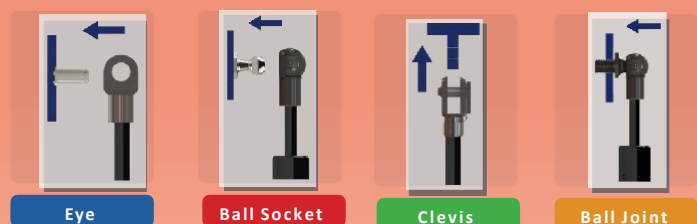


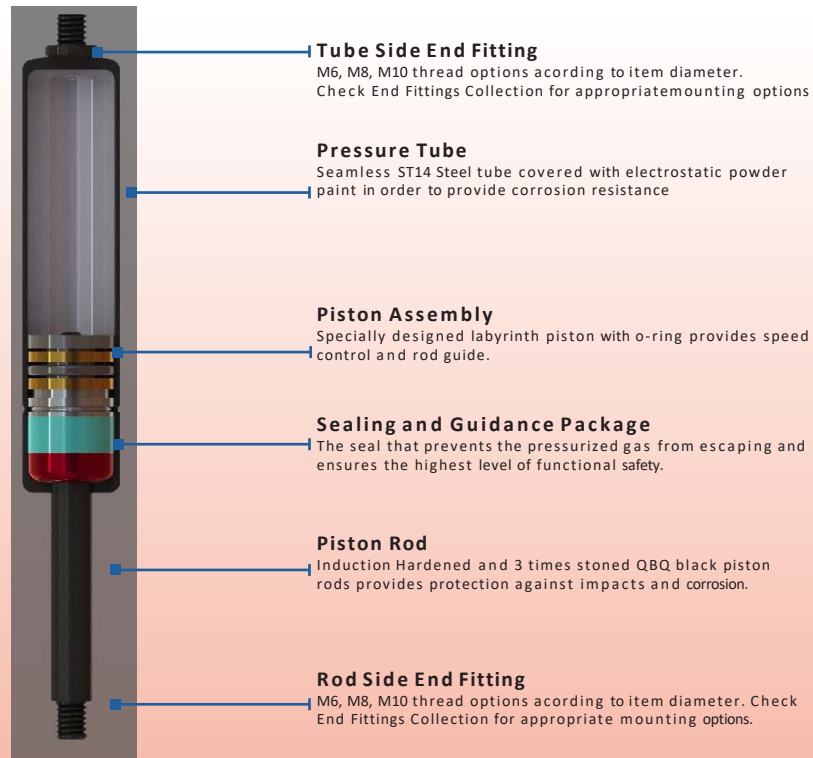


Gas Spring Variety



End Fitting Options





Endurance, Lifetime

Liftstrut Series Gas springs are designed in such a way that they can reach some 100,000 cycles via the whole stroke without problem. Which means without force loss, oil leakage. Besides, corrosion resistance is main expectation from gas springs. We provide our Liftstruts Series gas springs with above 120 hours salt duration.

Salt Spray Tests being occurred by officially registered laboratories according to TS EN ISO 9227 Corrosion tests in artificial atmospheres – Salt spray tests. 100 hours is acceptance criteria.

This standard describes the spraying of a salt solution in the chamber at 35°C or 50°C. Acetic acid or copper chloride can be added to the NaCl solution to accelerate the reaction. The fine salt fog condenses on the test samples and initiates corrosion. A salt spray chamber according to DIN EN ISO 9227 is supplied with a minimum volume of 400 litres.



Introduction Liftstrut Series

Liftstrut Series are most popular product group of Vistonidas. Main function of this type is lifting or counterbalancing lids, hatches or similar applications. Lift type gas springs are easy to observe in almost all industries, such as furniture, automotive, medical, aerospace, marine, machinery and etc.

How Does Gas Spring Work?

Gas Springs work based on the principle of compressed gas exerting force to generate a lifting or supporting motion. They consist of a cylinder filled with pressurized gas, typically nitrogen, and a piston rod that moves within the cylinder.

Here's how lift-type gas springs work:

Compressed Gas: The cylinder of the gas spring is filled with pressurized gas, which is typically nitrogen. The pressure of the gas inside the cylinder determines the force that the gas spring can exert.

Piston and Piston Rod: Inside the cylinder, there is a piston connected to a piston rod. The piston is designed to move freely within the cylinder, and the piston rod extends outward from the cylinder.

Extension: When force is applied to the piston rod, such as by pushing or pulling, the gas inside the cylinder compresses. This compression generates force, causing the piston rod to extend outward from the cylinder.

Compression and Energy Storage: As the piston rod extends, the gas inside the cylinder is compressed, storing potential energy within the gas spring.

Controlled Motion: Lift-type gas springs provide a controlled and damped extension and compression motion. The resistance to movement comes from the gas compression and, in some cases, additional damping features.

Support and Lifting: Lift-type gas springs are commonly used to support, lift, or assist in the movement of various objects, such as lids, hatches, doors, and adjustable components in furniture and machinery.

Release of Energy: When the force is released or the load on the piston rod is reduced, the gas spring will extend or compress to release the stored energy and return to its original position.

How to Measure Gas Spring

In case of custom design or ordering replacement gas springs there are some important parameters that need to be provided. These parameters are;

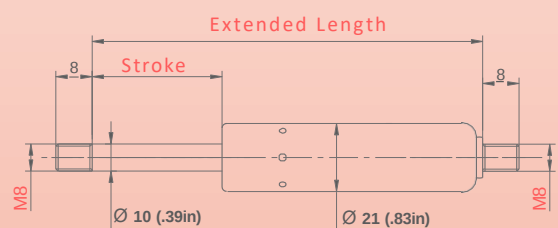
– **Extended Length (L)** ; it needs to be measure as gas spring fully extended or opened. If there is not end fitting on gas spring please measure excluding threads. If there are end fitting on gas spring please measure from center to center.

– **Stroke Length (s)** ; it is actually difference between fully extended and fully compressed length.

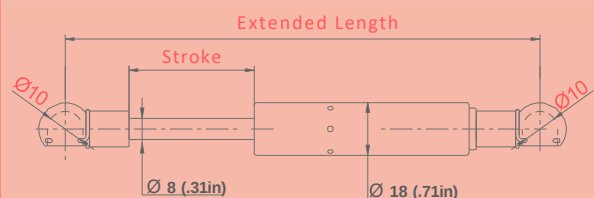
– **Pressure Rate (F1)** ; which can be considered as lifting power of gas spring. Each diameter range provides certain power capacity. F1 value can be stated as Newton (N) or Pound (lbs).

Dimension Parameters of gas springs are being measured by universal tools which calibrated periodically according to DIN 865/866 considering item drawing. Tolerance rate is ± 2 mm in accordance with TS 1980-2 EN 22768-2.

a. Measurement without end fittings

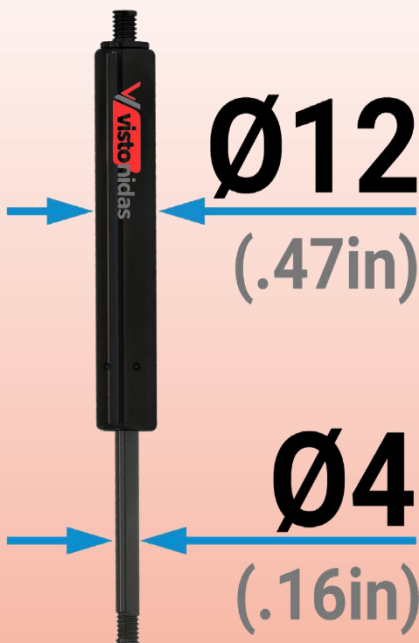


b. Measurement with end fittings





4-12 Liftstrut Series



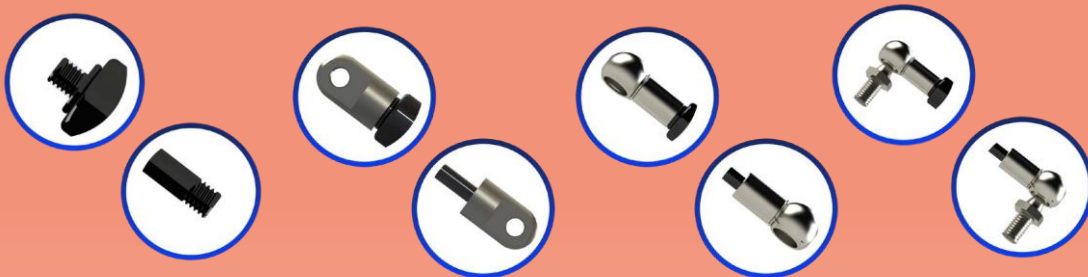
Rod- Tube Diameter

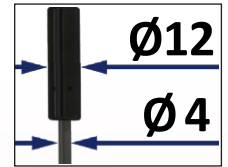
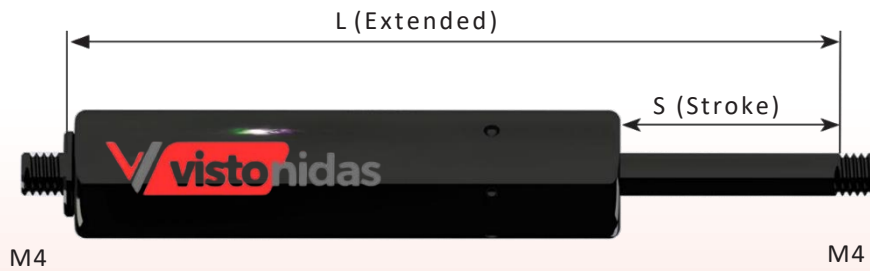
180 N
40 lbs

Maximum Pressure Capacity

End Fitting Options

End Fitting Options





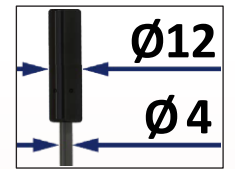
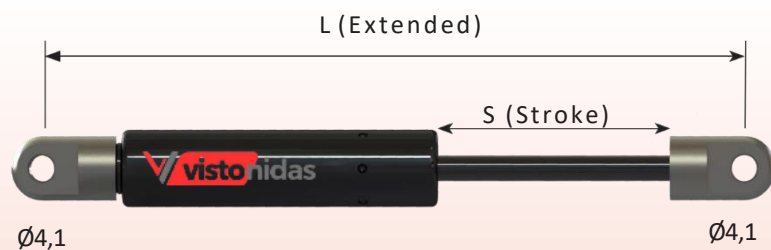
Max. Pressure
180N (40lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 100 000	20	72	0.79	2.83
300 100 001	20	100	0.79	3.94
300 100 002	30	92	1.18	3.62
300 100 003	40	112	1.57	4.41
300 100 004	40	120	1.57	4.72
300 100 005	50	132	1.97	5.20
300 100 006	60	152	2.36	5.98

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 100 007	80	192	3.15	7.56
300 100 008	80	200	3.15	7.87
300 100 009	90	218	3.54	8.58
300 100 010	100	232	3.94	9.13
300 100 011	100	249	3.94	9.80
300 100 012	120	272	4.72	10.70
300 100 013	150	332	5.90	13.10

End Fitting Options

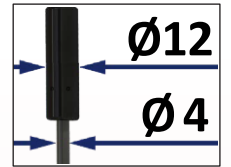
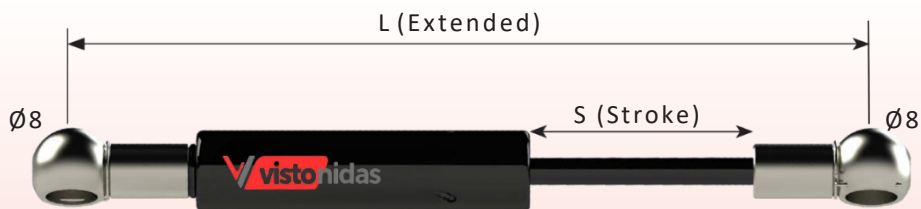




Max. Pressure
180N (40lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 101 000	20	96	0.79	3.78
300 101 001	20	115	0.79	4.53
300 101 002	20	124	0.79	4.88
300 101 003	30	116	1.18	4.57
300 101 004	35	142	1.38	5.60
300 101 005	40	136	1.57	5.35
300 101 006	40	144	1.57	5.67
300 101 007	50	156	1.97	6.14
300 101 008	50	166	1.97	6.53
300 101 009	60	176	2.36	6.93

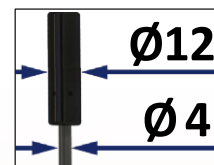
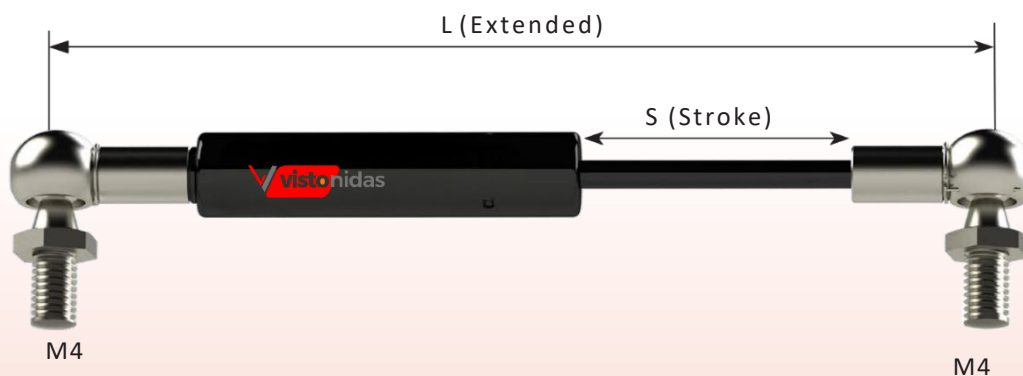
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 101 010	60	192	2.36	7.56
300 101 011	70	194	2.75	7.64
300 101 012	80	216	3.15	8.50
300 101 013	80	224	3.15	8.82
300 101 014	90	242	3.54	9.53
300 101 015	100	254	3.94	10
300 101 015	100	273	3.94	10.75
300 101 016	120	296	4.72	11.65
300 101 017	150	356	5.90	14.01



Max. Pressure
180N (40lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 102 000	20	108	0.79	4.25
300 102 001	20	136	0.79	5.35
300 102 002	30	128	1.18	5.04
300 102 003	40	148	1.57	5.83
300 102 004	40	156	1.57	6.14
300 102 005	50	168	1.97	6.61
300 102 006	60	188	2.36	7.40

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 102 007	80	228	3.15	8.98
300 102 008	80	236	3.15	9.29
300 102 009	90	254	3.54	10
300 102 010	100	268	3.94	10.55
300 102 011	100	285	3.94	11.22
300 102 012	120	308	4.72	12.12
300 102 013	150	368	5.90	14.49



Max. Pressure
180N (40lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 103 000	20	108	0.79	4.25
300 103 001	20	136	0.79	5.35
300 103 002	30	128	1.18	5.04
300 103 003	40	148	1.57	5.83
300 103 004	40	156	1.57	6.14
300 103 005	50	168	1.97	6.61
300 103 006	60	188	2.36	7.40

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 103 007	80	228	3.15	8.98
300 103 008	80	236	3.15	9.29
300 103 009	90	254	3.54	10
300 103 010	100	268	3.94	10.55
300 103 011	100	285	3.94	11.22
300 103 012	120	308	4.72	12.12
300 103 013	150	368	5.90	14.49



Liftstrut Series



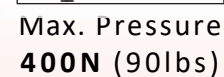
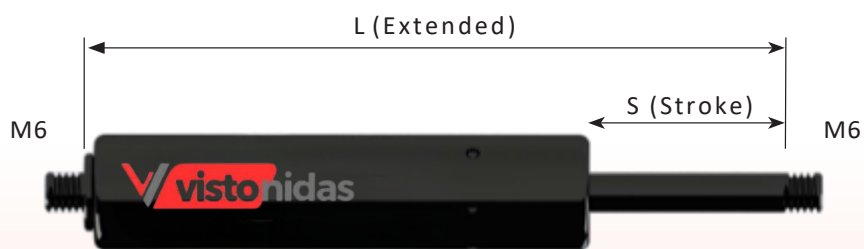
Rod- Tube Diameter

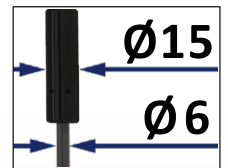
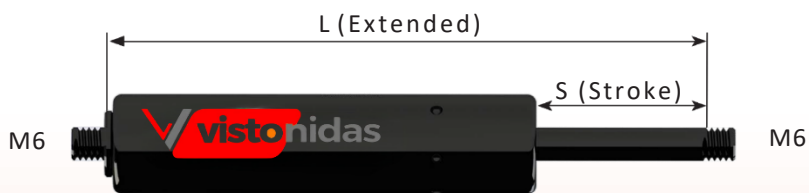
400 N
90 lbs

Maximum Pressure Capacity

End Fitting Options

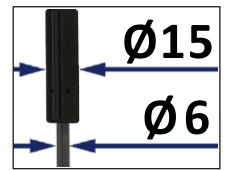
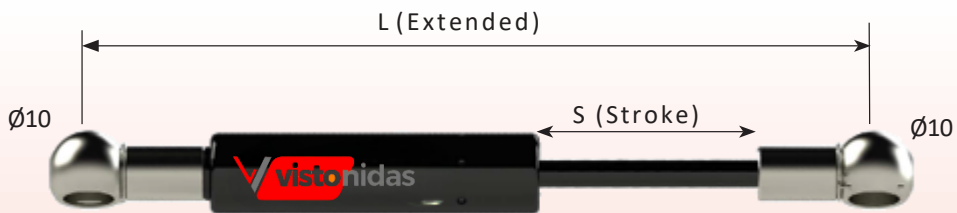


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Max. Pressure
400N (90lbs)

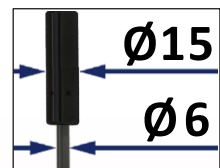
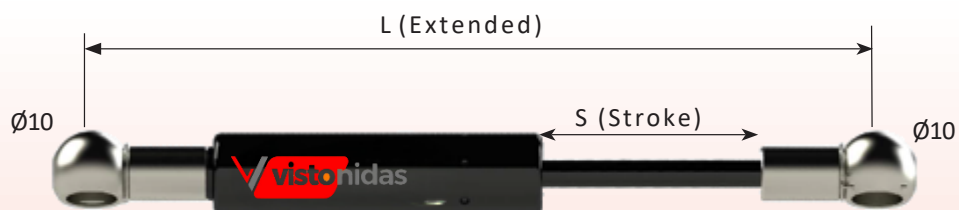
Item Code	S (mm)	L (mm)	S (inch)	L (inch)	Item Code	S (mm)	L (mm)	S (inch)	L
300 200 028	120	288	4.72	11.34	300 000 043	185	434	7.28	17.09
300 200 029	125	285	4.92	11.22	300 200 044	200	432	7.87	17.01
300 200 030	125	305	4.92	12	300 200 045	200	442	7.87	17.40
300 200 031	140	320	5.51	12.60	300 200 046	200	448	7.87	17.64
300 200 032	140	345	5.51	13.58	300 200 047	200	455	7.87	17.91
300 200 033	150	332	5.90	13.10	300 200 048	200	482	7.87	18.58
300 200 034	150	338	5.90						
300 200 035	150	342	5.90						
300 200 036	150	348	5.90						
300 200 037	150	364	5.90						
300 200 038	170	395	6.69						
300 200 039	170	400	6.69						
300 200 040	175	396	6.89						
300 200 041	175	405	6.89						
300 200 042	180	434	7.09						



Max. Pressure
400N (90lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 201 000	20	111	0.79	4.37
300 201 001	20	116	0.79	4.57
300 201 002	20	122	0.79	4.80
300 201 003	35	145	1.38	5.71
300 201 004	40	151	1.57	5.94
300 201 005	40	155	1.57	6.10
300 201 006	40	162	1.57	6.38
300 201 007	50	171	1.97	6.73
300 201 008	50	176	1.97	6.93
300 201 009	50	192	1.97	7.56
300 201 010	60	191	2.36	7.52
300 201 011	60	195	2.36	7.68

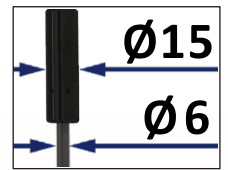
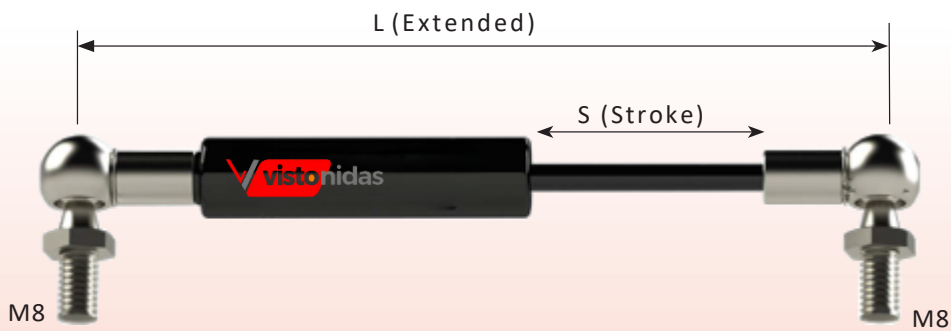
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 201 012	60	198	2.36	7.79
300 201 013	60	188	2.36	7.40
300 201 014	60	220	2.36	8.66
300 201 015	73	220	2.87	8.66
300 201 016	75	251	2.95	9.88
300 201 017	75	254	2.95	10
300 201 018	80	231	3.15	9.09
300 201 019	80	235	3.15	9.25
300 201 020	80	252	3.15	9.92
300 201 021	80	244	3.15	9.61
300 201 022	85	245	3.35	9.64
300 201 023	90	306	3.54	12.05



Max. Pressure
400N (90lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 201 024	90	255	3.54	10.04
300 201 025	100	271	3.94	10.67
300 201 026	100	275	3.94	10.83
300 201 027	100	292	3.94	11.50
300 201 028	110	295	4.33	11.61
300 201 029	120	311	4.72	12.24
300 201 030	120	317	4.72	12.48
300 201 031	120	332	4.72	13.07
300 201 032	135	354	5.31	13.94
300 201 033	140	356	5.51	14.01
300 201 034	140	381	5.51	15
300 201 035	150	371	5.90	14.61

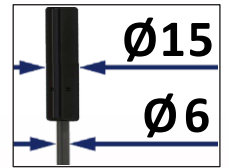
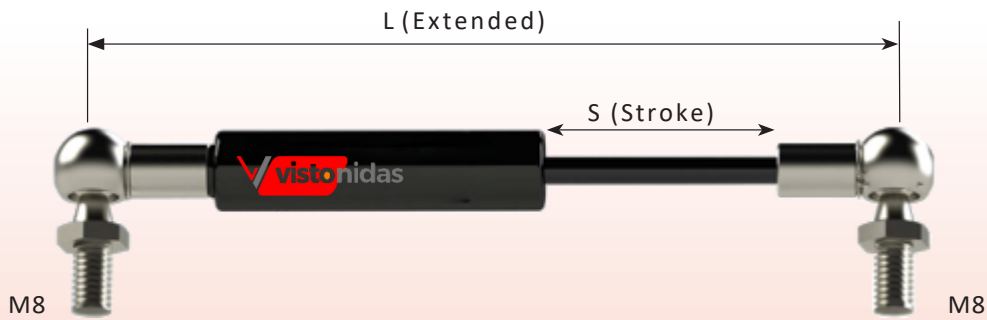
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 201 036	150	375	5.90	14.76
300 201 037	150	378	5.90	14.88
300 201 038	150	381	5.90	15
300 201 039	150	392	5.90	15.43
300 201 040	155	436	6.10	17.16
300 201 041	170	431	6.69	16.97
300 201 042	180	470	7.09	18.50
300 201 043	185	470	7.28	18.50
300 201 044	200	471	7.87	18.54
300 201 045	200	478	7.87	18.82
300 201 046	200	492	7.87	19.37
300 201 047	200	508	7.87	20



Max. Pressure
400N (90lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 202 000	20	111	0.79	4.37
300 202 001	20	116	0.79	4.57
300 202 002	20	122	0.79	4.80
300 202 003	35	145	1.38	5.71
300 202 004	40	151	1.57	5.94
300 202 005	40	155	1.57	6.10
300 202 006	40	162	1.57	6.38
300 202 007	50	171	1.97	6.73
300 202 008	50	176	1.97	6.93
300 202 009	50	192	1.97	7.56
300 202 010	60	191	2.36	7.52
300 202 011	60	195	2.36	7.68

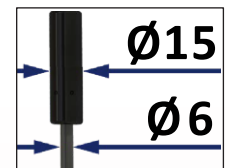
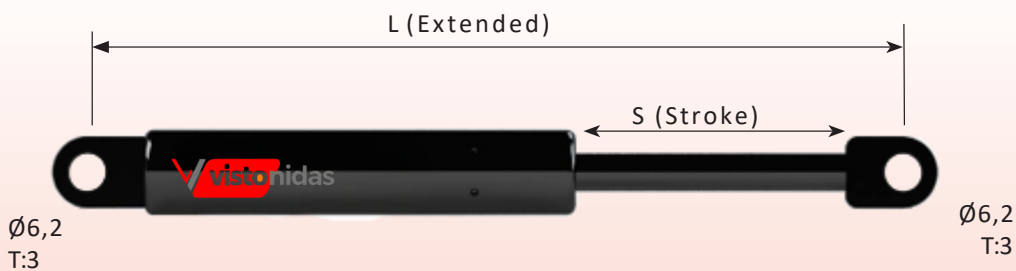
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 202 012	60	198	2.36	7.79
300 202 013	60	188	2.36	7.40
300 202 014	60	220	2.36	8.66
300 202 015	73	220	2.87	8.66
300 202 016	75	251	2.95	9.88
300 202 017	75	254	2.95	10
300 202 018	80	231	3.15	9.09
300 202 019	80	235	3.15	9.25
300 202 020	80	252	3.15	9.92
300 202 021	80	244	3.15	9.61
300 202 022	85	245	3.35	9.64
300 202 023	90	306	3.54	12.05



Max. Pressure
400N (90lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 202 024	90	255	3.54	10.04
300 202 025	100	271	3.94	10.67
300 202 026	100	275	3.94	10.83
300 202 027	100	292	3.94	11.50
300 202 028	110	295	4.33	11.61
300 202 029	120	311	4.72	12.24
300 202 030	120	317	4.72	12.48
300 202 031	120	332	4.72	13.07
300 202 032	135	354	5.31	13.94
300 202 033	140	356	5.51	14.01
300 202 034	140	381	5.51	15
300 202 035	150	371	5.90	14.61

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 202 036	150	375	5.90	14.76
300 202 037	150	378	5.90	14.88
300 202 038	150	381	5.90	15
300 202 039	150	392	5.90	15.43
300 202 040	155	436	6.10	17.16
300 202 041	170	431	6.69	16.97
300 202 042	180	470	7.09	18.50
300 202 043	185	470	7.28	18.50
300 202 044	200	471	7.87	18.54
300 202 045	200	478	7.87	18.82
300 202 046	200	492	7.87	19.37
300 202 047	200	508	7.87	20



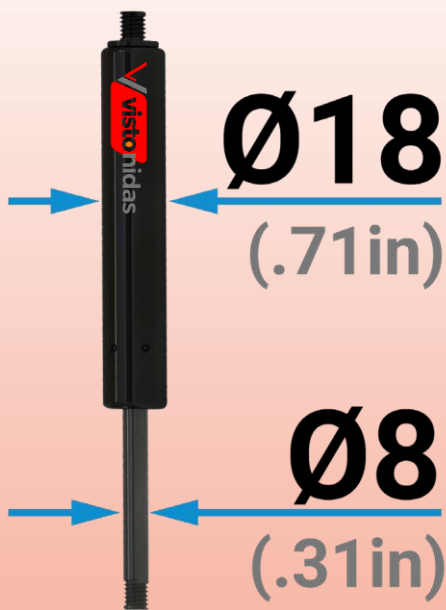
Max. Pressure
400N (90lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 203 000	20	106	0.79	4.17
300 203 001	40	146	1.57	5.75
300 203 002	45	160	1.77	6.30
300 203 003	50	155	1.97	6.10
300 203 004	55	179	2.16	7.05
300 203 005	60	186	2.36	7.32
300 203 006	75	205	2.95	8.07
300 203 007	80	226	3.15	8.90
300 203 008	100	265	3.94	10.43

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 203 009	110	306	4.33	12.05
300 203 010	120	305	4.72	12.01
300 203 011	125	305	4.92	12.01
300 203 012	150	355	5.90	13.98
300 203 013	150	366	5.90	14.41
300 203 014	175	405	6.89	15.94
300 203 015	180	432	7.09	17
300 203 016	200	455	7.87	17.91



Liftstrut Series 8-18



Rod- Tube Diameter

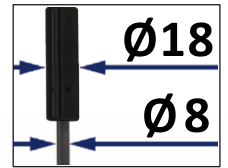
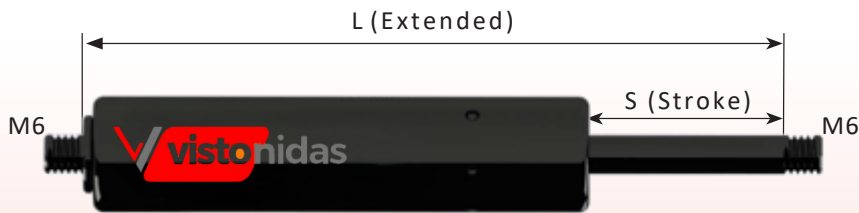
800 N

180 lbs

Maximum Pressure Capacity

End Fitting Options

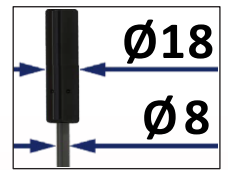
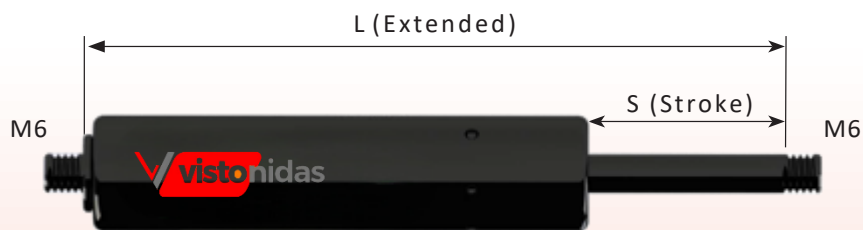




Max. Pressure
800N
(180lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 300 000	20	90	0.79	3.54
300 300 001	40	128	1.57	5.04
300 300 002	50	155	1.97	6.10
300 300 003	50	140	1.97	5.51
300 300 004	50	145	1.97	5.71
300 300 005	50	150	1.97	5.90
300 300 006	50	164	1.97	6.46
300 300 007	57	154	2.24	6.06
300 300 008	57	168	2.24	6.61
300 300 009	60	165	2.36	6.50
300 300 010	60	169	2.36	6.65
300 300 011	68	178	2.68	7.01
300 300 012	75	204	2.95	8.03
300 300 013	75	214	2.95	8.42
300 300 014	75	217	2.95	8.54

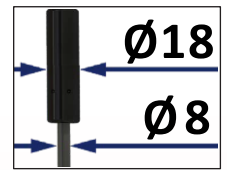
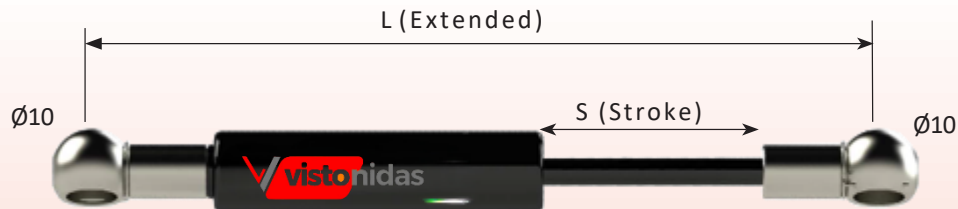
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 300 015	80	90	0.79	3.54
300 300 016	80	128	1.57	5.04
300 300 017	85	155	1.97	6.10
300 300 018	90	140	1.97	5.51
300 300 019	100	145	1.97	5.71
300 300 020	100	150	1.97	5.90
300 300 021	100	164	1.97	6.46
300 300 022	100	154	2.24	6.06
300 300 023	100	168	2.24	6.61
300 300 024	108	165	2.36	6.50
300 300 025	120	169	2.36	6.65
300 300 026	120	178	2.68	7.01
300 300 027	125	204	2.95	8.03
300 300 028	140	214	2.95	8.42
300 300 029	140	217	2.95	8.54



Max. Pressure
800N
(180lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 300 030	150	356	5.90	14.01
300 300 031	150	364	5.90	14.33
300 300 032	150	367	5.90	14.45
300 300 033	150	395	5.90	15.55
300 300 034	150	431	5.90	16.97
300 300 035	160	365	6.30	14.37
300 300 036	160	397	6.30	15.63
300 300 037	175	396	6.89	15.59
300 300 038	175	404	6.89	15.90
300 300 039	175	462	6.89	18.19
300 300 040	180	405	7.09	15.94
300 300 041	180	409	7.09	16.10
300 300 042	200	445	7.87	17.52
300 300 043	200	450	7.87	17.72
300 300 044	200	453	7.87	17.83
300 300 045	200	462	7.87	18.19

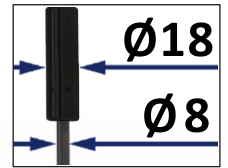
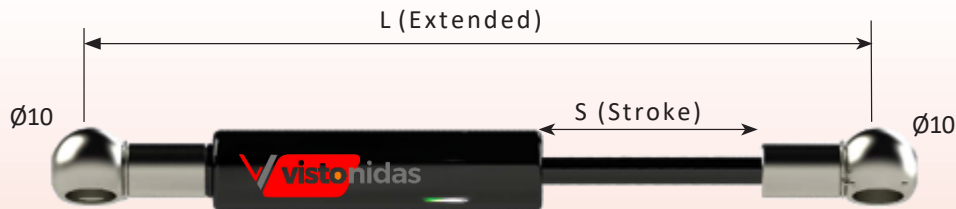
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 300 046	220	485	8.66	19.09
300 300 047	220	491	8.66	19.33
300 300 048	225	504	8.86	19.84
300 300 049	235	510	9.25	20.08
300 300 050	250	545	9.84	21.46
300 300 051	250	550	9.84	21.65
300 300 052	250	560	9.84	22.05
300 300 053	250	564	9.84	22.20
300 300 054	250	568	9.84	22.36
300 300 055	280	637	11.02	25.08
300 300 056	300	644	11.81	25.35
300 300 057	300	653	11.81	25.71
300 300 058	300	664	11.81	26.14



Max. Pressure
800N
(180lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 301 000	40	166	1.57	6.53
300 301 001	50	178	1.97	7.01
300 301 002	50	181	1.97	7.12
300 301 003	50	224	1.97	8.82
300 301 004	57	190	2.24	7.48
300 301 005	57	206	2.24	8.11
300 301 006	60	205	2.36	8.07
300 301 007	60	200	2.36	7.87
300 301 008	80	241	3.15	9.49
300 301 009	80	245	3.15	9.64
300 301 010	90	266	3.54	10.47
300 301 011	90	302	3.54	11.89

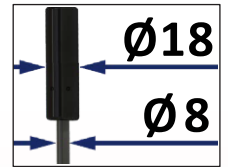
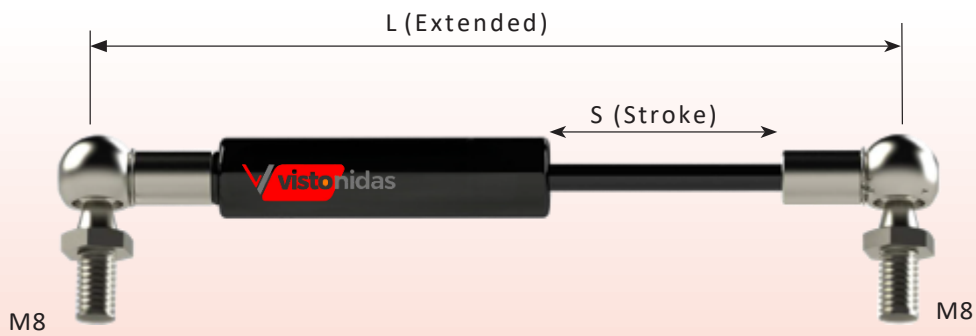
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 301 012	100	280	3.94	11.02
300 301 013	100	285	3.94	11.22
300 301 014	100	304	3.94	11.97
300 301 015	100	310	3.94	12.20
300 301 016	100	324	3.94	12.75
300 301 017	120	321	4.72	12.64
300 301 018	120	325	4.72	12.79
300 301 019	140	365	5.51	14.37
300 301 020	140	381	5.51	15
300 301 021	140	387	5.51	15.24
300 301 022	150	381	5.90	15
300 301 023	150	404	5.90	15.90



Max. Pressure
800N
(180lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 301 024	150	424	5.90	16.69
300 301 025	150	431	5.90	16.97
300 301 026	160	401	6.30	15.79
300 301 027	160	405	6.30	15.94
300 301 028	160	435	6.30	17.12
300 301 029	180	441	7.09	17.36
300 301 030	180	445	7.09	17.52
300 301 031	195	491	7.68	19.33
300 301 032	200	481	7.87	18.94
300 301 033	200	485	7.87	19.09
300 301 034	200	498	7.87	19.61
300 301 035	200	524	7.87	20.63

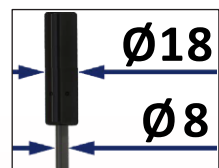
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 301 036	203	508	7.95	20
300 301 037	210	511	8.27	20.12
300 301 038	220	520	8.66	20.47
300 301 039	220	525	8.66	20.67
300 301 040	235	546	9.25	21.50
300 301 041	250	580	9.84	22.83
300 301 042	250	585	9.84	23.03
300 301 043	250	603	9.84	23.74
300 301 044	250	624	9.84	24.57
300 301 045	280	673	11.02	26.50
300 301 046	300	681	11.81	26.81
300 301 047	300	724	11.81	28.50



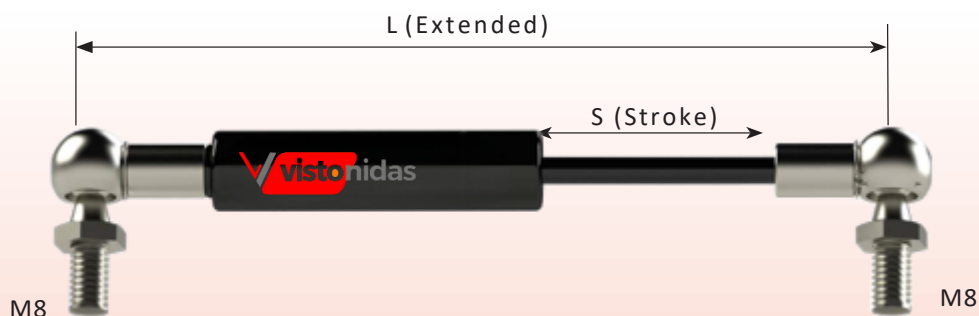
Max. Pressure
800N
(180lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 302 000	40	166	1.57	6.53
300 302 001	50	178	1.97	7.01
300 302 002	50	181	1.97	7.12
300 302 003	50	224	1.97	8.82
300 302 004	57	190	2.24	7.48
300 302 005	57	206	2.24	8.11
300 302 006	60	205	2.36	8.07
300 302 007	60	200	2.36	7.87
300 302 008	80	241	3.15	9.49
300 302 009	80	245	3.15	9.64
300 302 010	90	266	3.54	10.47
300 302 011	90	302	3.54	11.89

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 302 012	100	280	3.94	11.02
300 302 013	100	285	3.94	11.22
300 302 014	100	304	3.94	11.97
300 302 015	100	310	3.94	12.20
300 302 016	100	324	3.94	12.75
300 302 017	120	321	4.72	12.64
300 302 018	120	325	4.72	12.79
300 302 019	140	365	5.51	14.37
300 302 020	140	381	5.51	15
300 302 021	140	387	5.51	15.24
300 302 022	150	381	5.90	15
300 302 023	150	404	5.90	15.90

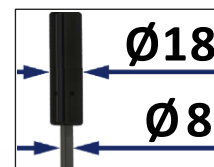


Max. Pressure
800N
(180lbs)

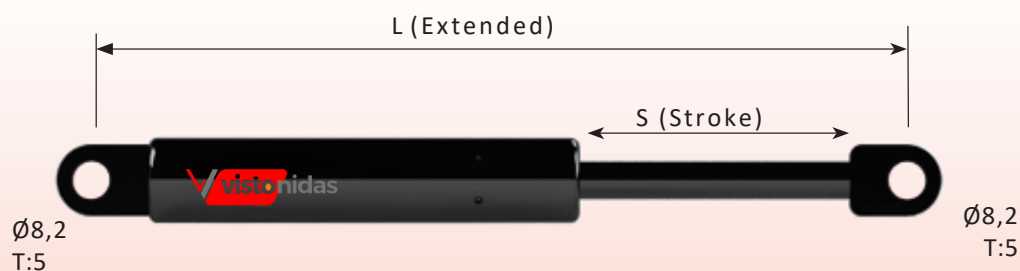


Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 302 024	150	424	5.90	16.69
300 302 025	150	431	5.90	16.97
300 302 026	160	401	6.30	15.79
300 302 027	160	405	6.30	15.94
300 302 028	160	435	6.30	17.12
300 302 029	180	441	7.09	17.36
300 302 030	180	445	7.09	17.52
300 302 031	195	491	7.68	19.33
300 302 032	200	481	7.87	18.94
300 302 033	200	485	7.87	19.09
300 302 034	200	498	7.87	19.61
300 302 035	200	524	7.87	20.63

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 302 036	203	508	7.95	20
300 302 037	210	511	8.27	20.12
300 302 038	220	520	8.66	20.47
300 302 039	220	525	8.66	20.67
300 302 040	235	546	9.25	21.50
300 302 041	250	580	9.84	22.83
300 302 042	250	585	9.84	23.03
300 302 043	250	603	9.84	23.74
300 302 044	250	624	9.84	24.57
300 302 045	280	673	11.02	26.50
300 302 046	300	681	11.81	26.81
300 302 047	300	724	11.81	28.50



Max. Pressure
800N
(180lbs)

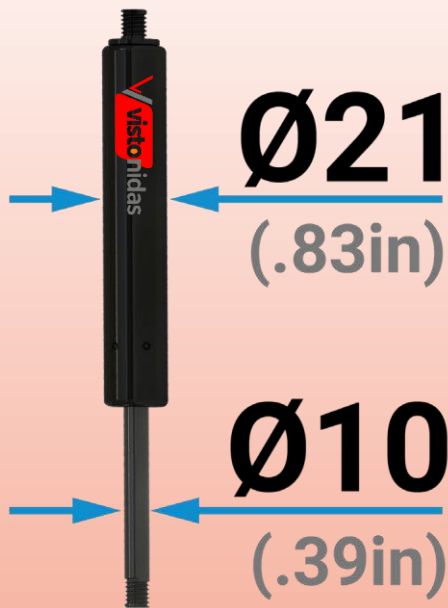


Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 303 000	40	159	1.57	6.26
300 303 001	60	206	2.36	8.11
300 303 002	80	246	3.15	9.68
300 303 003	100	286	4.94	11.26
300 303 004	120	326	5.72	12.83
300 303 005	133	355	6.24	13.98

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 303 006	140	366	7.51	14.41
300 303 007	160	406	8.30	15.98
300 303 008	180	446	9.09	17.56
300 303 009	200	486	10.87	19.13
300 303 010	220	526	11.66	20.71
300 303 011	250	586	12.84	23.07



Liftstrut Series 10-21



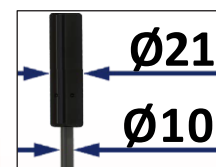
Rod- Tube Diameter

1200 N
270 lbs

Maximum Pressure Capacity

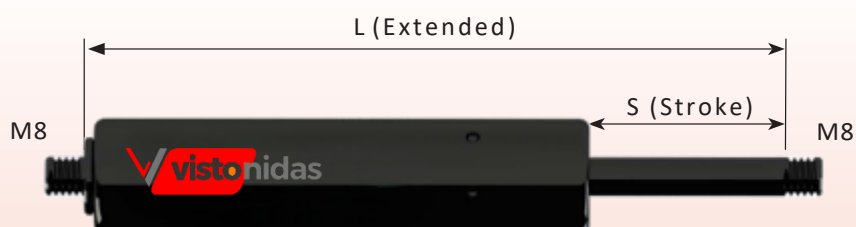
End Fitting Options





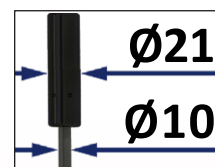
Max. Pressure

1200N
(270lbs)

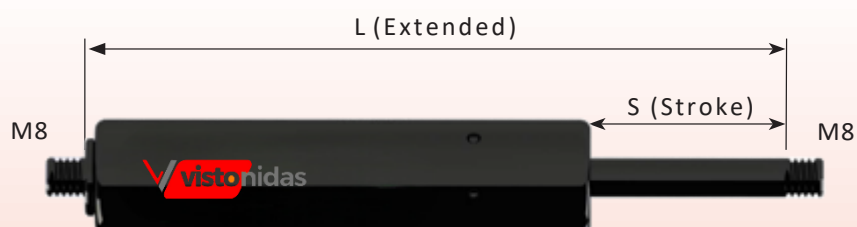


Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 400 000	50	145	1.97	5.71
300 400 001	50	154	1.97	6.06
300 400 002	50	164	1.97	6.46
300 400 003	100	245	3.94	9.64
300 400 004	100	248	3.94	9.76
300 400 005	100	253	3.94	9.96
300 400 006	100	264	3.94	10.39
300 400 007	125	304	4.92	11.97
300 400 008	150	344	5.90	13.54
300 400 009	150	349	5.90	13.74
300 400 010	150	354	5.90	13.94
300 400 011	150	364	5.90	14.33

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 400 012	150	367	5.90	14.45
300 400 013	168	406	6.61	15.98
300 400 014	175	405	6.89	15.94
300 400 015	200	445	7.87	17.52
300 400 016	200	449	7.87	17.68
300 400 017	200	456	7.87	17.95
300 400 018	200	464	7.87	18.27
300 400 019	250	545	9.84	21.46
300 400 020	250	548	9.84	21.57
300 400 021	250	552	9.84	21.73
300 400 022	250	564	9.84	22.20
300 400 023	275	603	10.83	23.74

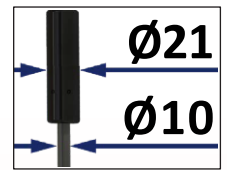
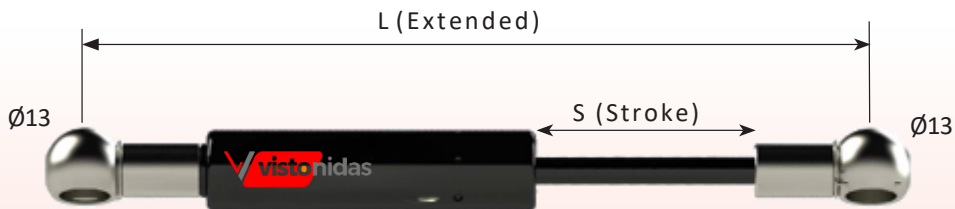


Max. Pressure
1200N
(270lbs)



Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 400 024	290	650	11.42	25.59
300 400 025	300	644	11.81	25.35
300 400 026	300	648	11.81	25.51
300 400 027	300	654	11.81	25.75
300 400 028	300	664	11.81	26.14
300 400 029	350	745	13.78	29.33
300 400 030	350	741	13.78	29.17
300 400 031	350	748	13.78	29.45
300 400 032	350	756	13.78	29.76
300 400 033	350	760	13.78	29.92
300 400 034	375	804	14.76	31.65
300 400 035	400	848	15.75	33.38

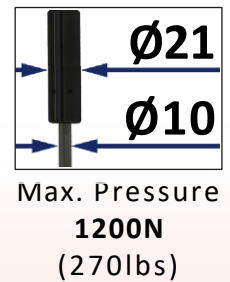
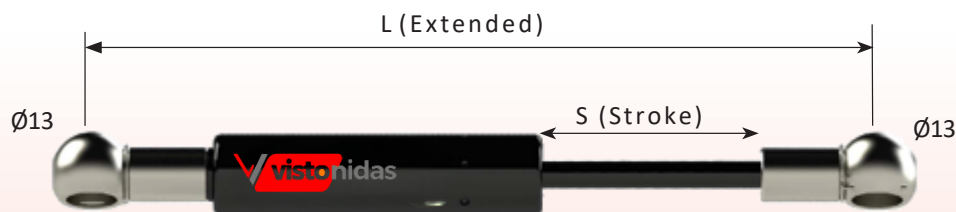
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 400 036	400	852	15.75	33.54
300 400 037	400	864	15.75	34.01
300 400 038	406	864	15.98	34.01
300 400 039	410	871	16.14	34.29
300 400 040	416	885	16.38	34.84
300 400 041	445	948	17.52	37.32
300 400 042	450	964	17.71	37.95
300 400 043	495	1048	19.49	41.26
300 400 044	500	1064	19.68	41.89
300 400 045	500	1080	19.68	42.52
300 400 046	510	1080	20.08	42.52



Max. Pressure
1200N
(270lbs)

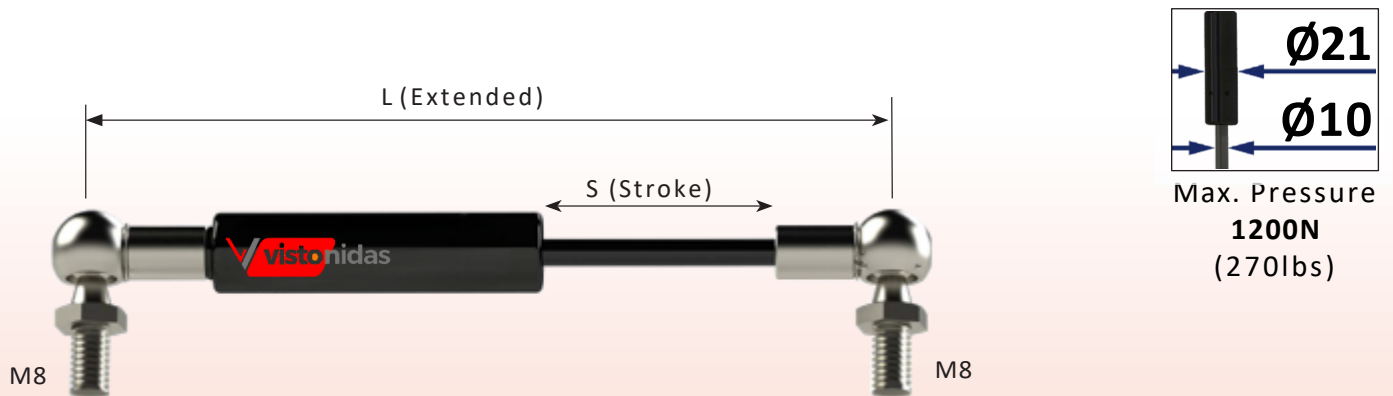
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 401 000	50	205	1.97	8.07
300 401 001	50	224	1.97	8.82
300 401 002	100	285	3.94	11.22
300 401 003	100	298	3.94	11.73
300 401 004	100	305	3.94	12
300 401 005	100	324	3.94	12.75
300 401 006	150	385	5.90	15.16
300 401 007	150	399	5.90	15.71
300 401 008	150	404	5.90	15.90
300 401 009	150	427	5.90	16.81
300 401 010	168	466	6.61	18.35
300 401 011	198	508	7.79	20

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 401 012	200	485	7.87	19.09
300 401 013	200	499	7.87	19.64
300 401 014	200	504	7.87	19.84
300 401 015	200	524	7.87	20.63
300 401 016	203	608	7.99	23.94
300 401 017	248	585	9.76	23.03
300 401 018	250	598	9.84	23.54
300 401 019	250	624	9.84	24.57
300 401 020	250	508	9.84	20
300 401 021	292	711	11.50	27.99
300 401 022	300	685	11.81	26.97
300 401 023	300	698	11.81	27.48



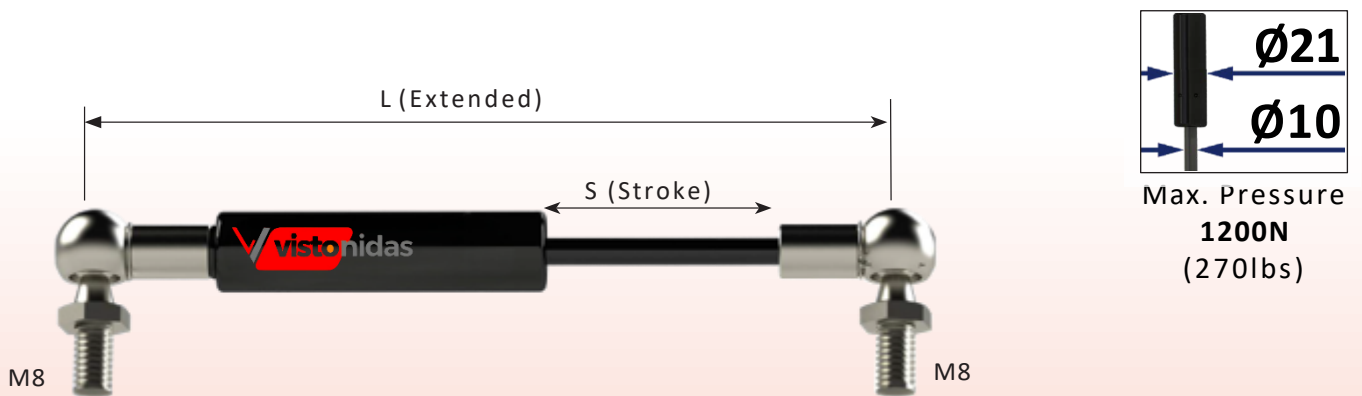
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 401 024	300	705	11.81	27.75
300 401 025	300	724	11.81	28.50
300 401 026	345	808	13.58	31.81
300 401 027	345	828	13.58	32.60
300 401 028	350	785	13.78	30.90
300 401 029	350	799	13.78	31.46
300 401 030	350	804	13.78	31.65
300 401 031	350	824	13.78	32.44
300 401 032	350	810	13.78	31.89
300 401 033	395	908	15.55	35.75
300 401 034	400	885	15.75	34.84
300 401 035	400	898	15.75	35.35

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 401 036	400	905	15.75	35.63
300 401 037	400	924	15.75	36.38
300 401 038	410	921	16.14	36.26
300 401 039	445	1008	17.52	39.68
300 401 040	450	1024	17.72	40.31
300 401 041	495	1108	19.49	43.62
300 401 042	500	1124	19.68	44.25
300 401 043	500	1130	19.68	44.49
300 401 044	510	1130	20.08	44.49



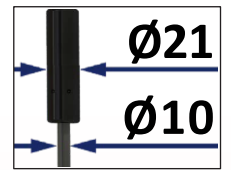
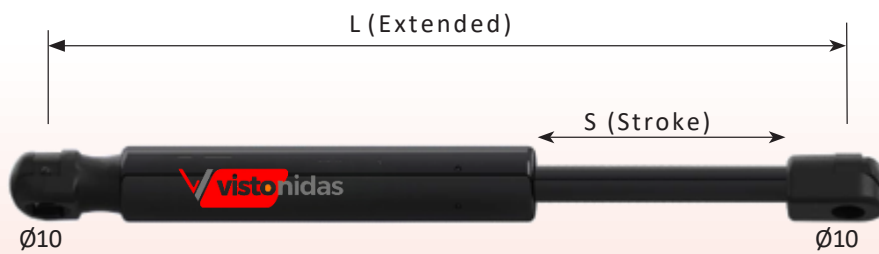
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 402 000	50	205	1.97	8.07
300 402 001	50	224	1.97	8.82
300 402 002	100	285	3.94	11.22
300 402 003	100	298	3.94	11.73
300 402 004	100	305	3.94	12
300 402 005	100	324	3.94	12.75
300 402 006	150	385	5.90	15.16
300 402 007	150	399	5.90	15.71
300 402 008	150	404	5.90	15.90
300 402 009	150	427	5.90	16.81
300 402 010	168	466	6.61	18.35
300 402 011	198	508	7.79	20

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 402 012	200	485	7.87	19.09
300 402 013	200	499	7.87	19.64
300 402 014	200	504	7.87	19.84
300 402 015	200	524	7.87	20.63
300 402 016	203	608	7.99	23.94
300 402 017	248	585	9.76	23.03
300 402 018	250	598	9.84	23.54
300 402 019	250	624	9.84	24.57
300 402 020	250	508	9.84	20
300 402 021	292	711	11.50	27.99
300 402 022	300	685	11.81	26.97
300 402 023	300	698	11.81	27.48



Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 402 024	300	705	11.81	27.75
300 402 025	300	724	11.81	28.50
300 402 026	345	808	13.58	31.81
300 402 027	345	828	13.58	32.60
300 402 028	350	785	13.78	30.90
300 402 029	350	799	13.78	31.46
300 402 030	350	804	13.78	31.65
300 402 031	350	824	13.78	32.44
300 402 032	350	810	13.78	31.89
300 402 033	395	908	15.55	35.75
300 402 034	400	885	15.75	34.84
300 402 035	400	898	15.75	35.35

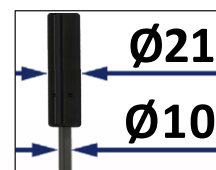
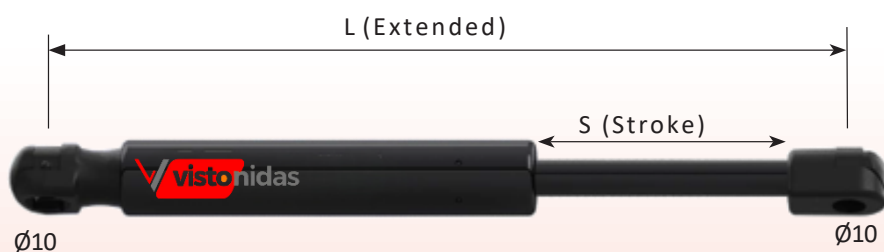
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 402 036	400	905	15.75	35.63
300 402 037	400	924	15.75	36.38
300 402 038	410	921	16.14	36.26
300 402 039	445	1008	17.52	39.68
300 402 040	450	1024	17.72	40.31
300 402 041	495	1108	19.49	43.62
300 402 042	500	1124	19.68	44.25
300 402 043	500	1130	19.68	44.49
300 402 044	510	1130	20.08	44.49



Max. Pressure
1200N
(270lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 403 000	50	205	1.97	8.07
300 403 001	50	224	1.97	8.82
300 403 002	100	285	3.94	11.22
300 403 003	100	298	3.94	11.73
300 403 004	100	305	3.94	12
300 403 005	100	324	3.94	12.75
300 403 006	150	385	5.90	15.16
300 403 007	150	399	5.90	15.71
300 403 008	150	404	5.90	15.90
300 403 009	150	427	5.90	16.81
300 403 010	168	466	6.61	18.35
300 403 011	198	508	7.79	20

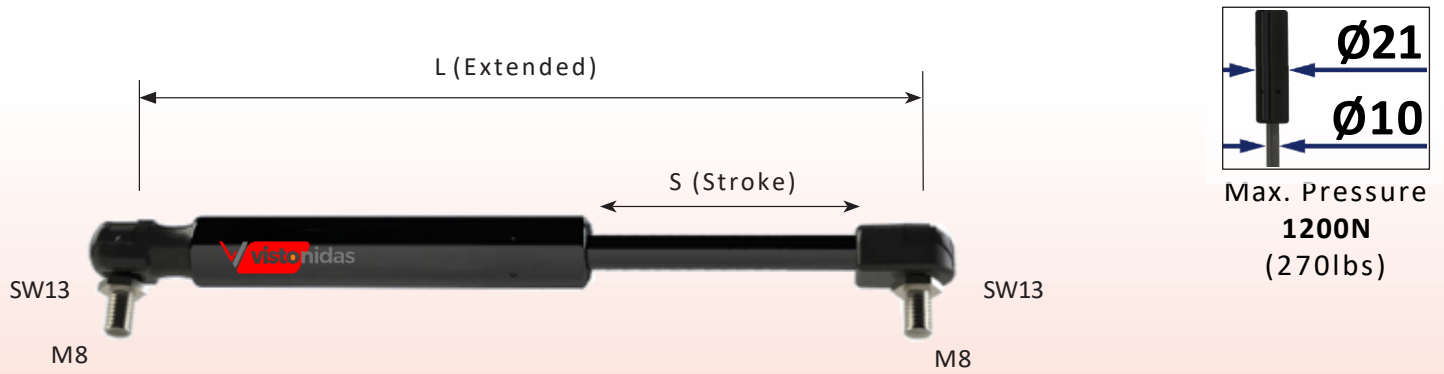
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 403 012	200	485	7.87	19.09
300 403 013	200	499	7.87	19.64
300 403 014	200	504	7.87	19.84
300 403 015	200	524	7.87	20.63
300 403 016	203	608	7.99	23.94
300 403 017	248	585	9.76	23.03
300 403 018	250	598	9.84	23.54
300 403 019	250	624	9.84	24.57
300 403 020	250	508	9.84	20
300 403 021	292	711	11.50	27.99
300 403 022	300	685	11.81	26.97
300 403 023	300	698	11.81	27.48



Max. Pressure
1200N
(270lbs)

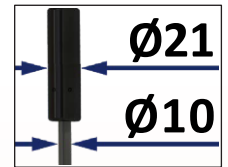
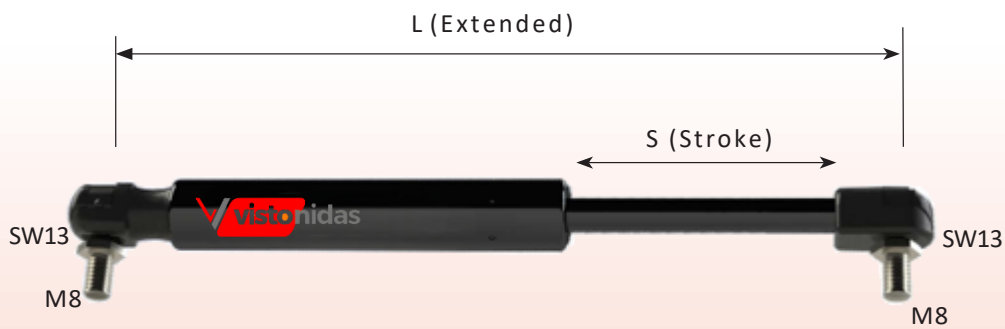
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 403 024	300	705	11.81	27.75
300 403 025	300	724	11.81	28.50
300 403 026	345	808	13.58	31.81
300 403 027	345	828	13.58	32.60
300 403 028	350	785	13.78	30.90
300 403 029	350	799	13.78	31.46
300 403 030	350	804	13.78	31.65
300 403 031	350	824	13.78	32.44
300 403 032	350	810	13.78	31.89
300 403 033	395	908	15.55	35.75
300 403 034	400	885	15.75	34.84
300 403 035	400	898	15.75	35.35

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 403 036	400	905	15.75	35.63
300 403 037	400	924	15.75	36.38
300 403 038	410	921	16.14	36.26
300 403 039	445	1008	17.52	39.68
300 403 040	450	1024	17.72	40.31
300 403 041	495	1108	19.49	43.62
300 403 042	500	1124	19.68	44.25
300 403 043	500	1116	19.68	43.94
300 403 044	510	1116	20.08	43.94



Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 404 000	50	205	1.97	8.07
300 404 001	50	224	1.97	8.82
300 404 002	100	285	3.94	11.22
300 404 003	100	298	3.94	11.73
300 404 004	100	305	3.94	12
300 404 005	100	324	3.94	12.75
300 404 006	150	385	5.90	15.16
300 404 007	150	399	5.90	15.71
300 404 008	150	404	5.90	15.90
300 404 009	150	427	5.90	16.81
300 404 010	168	466	6.61	18.35
300 404 011	198	508	7.79	20

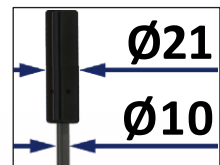
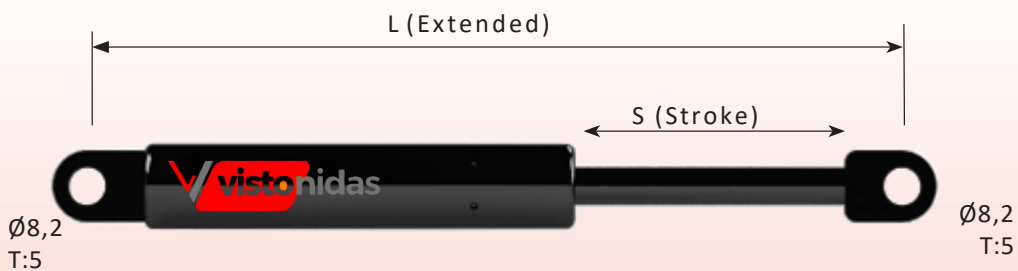
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 404 012	200	485	7.87	19.09
300 404 013	200	499	7.87	19.64
300 404 014	200	504	7.87	19.84
300 404 015	200	524	7.87	20.63
300 404 016	203	608	7.99	23.94
300 404 017	248	585	9.76	23.03
300 404 018	250	598	9.84	23.54
300 404 019	250	624	9.84	24.57
300 404 020	250	508	9.84	20
300 404 021	292	711	11.50	27.99
300 404 022	300	685	11.81	26.97
300 404 023	300	698	11.81	27.48



Max. Pressure
1200N
(270lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 404 025	300	705	11.81	27.75
300 404 026	300	724	11.81	28.50
300 404 027	345	808	13.58	31.81
300 404 028	345	828	13.58	32.60
300 404 029	350	785	13.78	30.90
300 404 030	350	799	13.78	31.46
300 404 031	350	804	13.78	31.65
300 404 032	350	824	13.78	32.44
300 404 033	350	810	13.78	31.89
300 404 034	395	908	15.55	35.75
300 404 035	400	885	15.75	34.84
300 404 036	400	898	15.75	35.35

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 404 037	400	905	15.75	35.63
300 404 038	400	924	15.75	36.38
300 404 039	410	921	16.14	36.26
300 404 040	445	1008	17.52	39.68
300 404 041	450	1024	17.72	40.31
300 404 042	495	1108	19.49	43.62
300 404 043	500	1124	19.68	44.25
300 404 044	500	1116	19.68	43.94
300 404 045	510	1116	20.08	43.94



Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 405 000	50	179	1.97	7.05
300 405 001	95	283	3.74	11.14
300 405 002	95	286	3.74	11.26
300 405 003	100	262	3.94	10.31
300 405 004	145	385	5.71	15.16
300 405 005	150	362	5.90	14.25
300 405 006	175	405	6.89	15.94
300 405 007	195	483	7.68	19.01
300 405 008	195	486	7.68	19.13
300 405 009	200	462	7.87	18.19

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 405 010	245	586	9.64	23.07
300 405 011	250	562	9.84	22.12
300 405 012	295	685	11.61	22.97
300 405 013	300	662	11.81	26.06
300 405 014	345	785	13.58	30.90
300 405 015	350	762	13.78	30
300 405 016	395	885	15.55	34.84
300 405 017	400	862	15.75	33.94
300 405 018	450	962	17.72	37.87
300 405 019	495	1083	19.49	42.64



Liftstrut Series 14-27



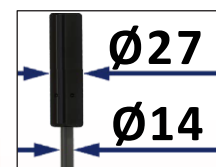
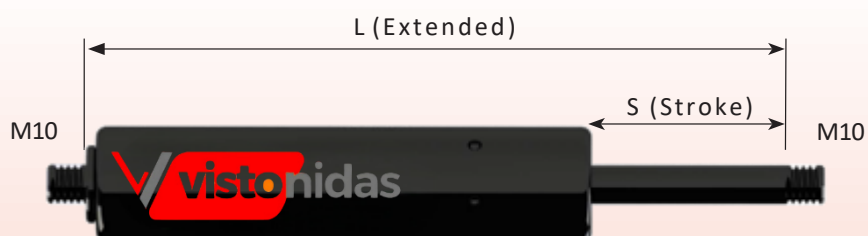
Rod- Tube Diameter

2500N
562 lbs

Maximum Pressure Capacity

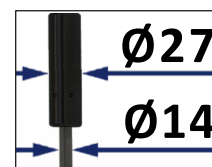
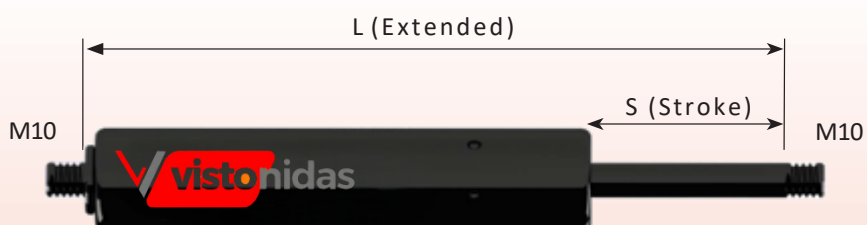
End Fitting Options





Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 500 000	50	170	1.97	6.69
300 500 001	57	173	2.24	6.81
300 500 002	70	218	2.75	8.58
300 500 003	100	266	3.94	10.47
300 500 004	100	262	3.94	10.31
300 500 005	100	270	3.94	10.63
300 500 006	100	280	3.94	11.02
300 500 007	100	247	3.94	9.72
300 500 008	100	295	3.94	11.61
300 500 009	150	348	5.90	13.70
300 500 010	150	362	5.90	14.25
300 500 011	150	366	5.90	14.41
300 500 012	150	370	5.90	14.57

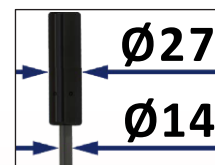
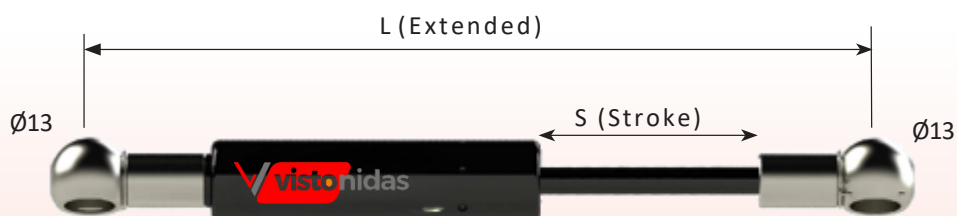
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 500 013	150	396	5.90	15.59
300 500 014	200	447	7.87	17.60
300 500 015	200	462	7.87	18.19
300 500 016	200	466	7.87	18.35
300 500 017	200	470	7.87	18.50
300 500 018	200	480	7.87	18.90
300 500 019	200	495	7.87	19.49
300 500 020	250	547	9.84	21.53
300 500 021	250	562	9.84	22.12
300 500 022	250	566	9.84	22.28
300 500 023	250	570	9.84	22.44
300 500 024	250	595	9.84	23.42
300 500 025	300	647	11.81	25.47



Max. Pressure
2500N
(562lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 500 026	300	662	11.81	26.06
300 500 027	300	666	11.81	26.22
300 500 028	300	670	11.81	26.38
300 500 029	300	679	11.81	26.73
300 500 030	300	695	11.81	27.36
300 500 031	350	748	13.78	29.47
300 500 032	350	762	13.78	30
300 500 033	350	766	13.78	30.16
300 500 034	350	770	13.78	30.31
300 500 035	350	796	13.78	31.34
300 500 036	400	848	15.75	33.38
300 500 037	400	862	15.75	33.94
300 500 038	400	866	15.75	34.09

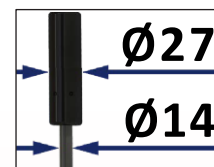
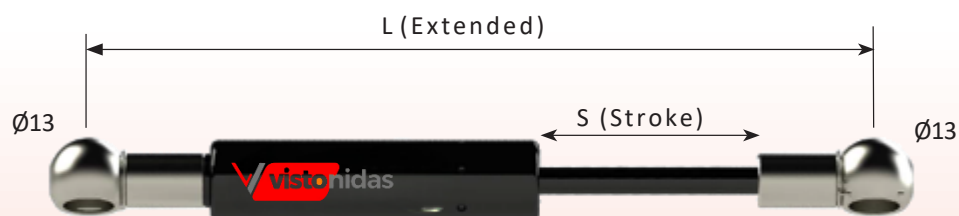
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 500 039	400	870	15.75	34.25
300 500 040	400	884	15.75	34.80
300 500 041	400	896	15.75	35.27
300 500 042	450	947	17.71	37.28
300 500 043	450	963	17.71	37.91
300 500 044	450	970	17.71	38.19
300 500 045	450	995	17.71	39.17
300 500 046	500	1048	19.68	41.26
300 500 047	500	1066	19.68	41.97
300 500 048	500	1062	19.68	41.81
300 500 049	500	1070	19.68	42.12
300 500 050	500	1087	19.68	42.79



Max. Pressure
2500N
(562lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 501 000	50	230	1,97	9,05
300 501 001	70	278	2,75	10,94
300 501 002	98	328	3,86	12,91
300 501 003	100	318	3,94	12,52
300 501 004	100	332	3,94	13,07
300 501 005	100	335	3,94	13,19
300 501 006	100	366	3,94	14,41
300 501 007	150	418	5,90	16,46
300 501 008	150	432	5,90	17
300 501 009	150	435	5,90	17,12

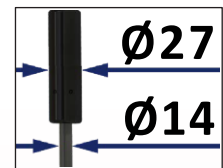
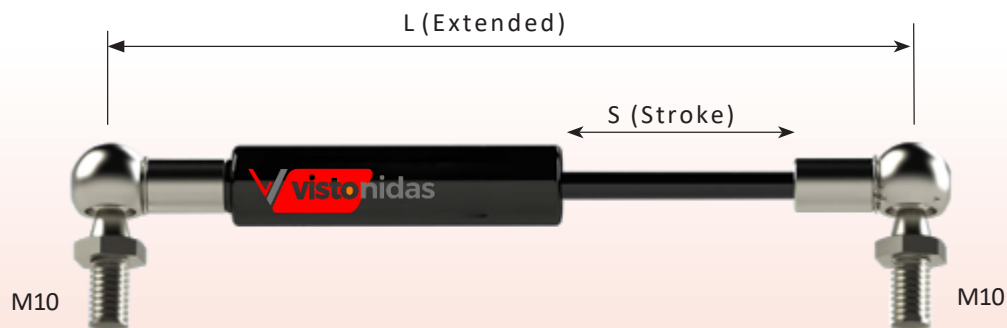
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 501 010	150	466	5,90	18,35
300 501 011	200	517	7,87	20,35
300 501 012	200	532	7,87	20,94
300 501 013	200	535	7,87	21,06
300 501 014	200	565	7,87	22,24
300 501 015	250	617	9,84	24,29
300 501 016	250	632	9,84	24,88
300 501 017	250	635	9,84	25
300 501 018	250	665	9,84	26,18
300 501 019	300	718	11,81	28,27



Max. Pressure
2500N
(562lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 501 020	300	732	11,81	28,82
300 501 021	300	735	11,81	28,94
300 501 022	300	766	11,81	30,16
300 501 023	350	818	13,78	32,20
300 501 024	350	832	13,78	32,75
300 501 025	350	835	13,78	32,87
300 501 026	350	828	13,78	32,60
300 501 027	350	865	13,78	34,05
300 501 028	400	917	15,75	36,10
300 501 029	400	932	15,75	36,69

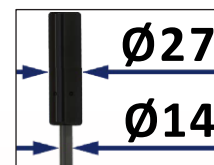
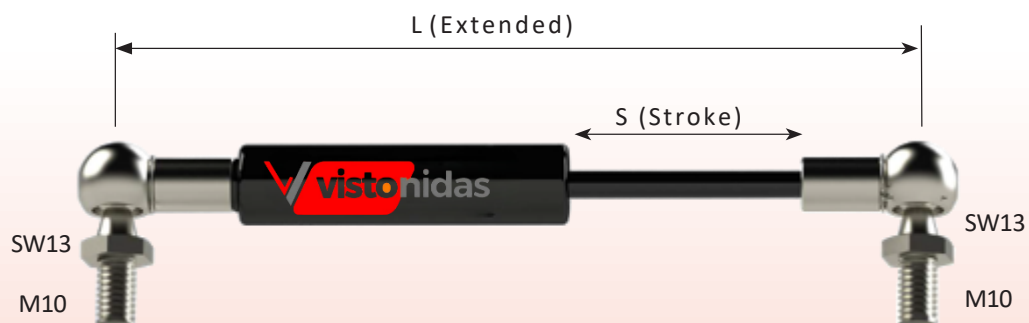
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 501 030	400	935	15,75	36,81
300 501 031	400	965	15,75	37,99
300 501 032	450	1018	17,71	40,08
300 501 033	450	1032	17,71	40,63
300 501 034	450	1023	17,71	40,27
300 501 035	450	1166	17,71	43,94
300 501 036	500	1118	19,68	44,01
300 501 037	500	1132	19,68	44,57
300 501 038	500	1135	19,68	44,68
300 501 039	500	1166	19,68	45,90



Max. Pressure
2500N
(562lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 502 000	50	230	1,97	9,05
300 502 001	70	278	2,75	10,94
300 502 002	98	328	3,86	12,91
300 502 003	100	318	3,94	12,52
300 502 004	100	332	3,94	13,07
300 502 005	100	335	3,94	13,19
300 502 006	100	366	3,94	14,41
300 502 007	150	418	5,90	16,46
300 502 008	150	432	5,90	17
300 502 009	150	435	5,90	17,12

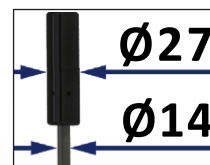
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 502 010	150	466	5,90	18,35
300 502 011	200	517	7,87	20,35
300 502 012	200	532	7,87	20,94
300 502 013	200	535	7,87	21,06
300 502 014	200	565	7,87	22,24
300 502 015	250	617	9,84	24,29
300 502 016	250	632	9,84	24,88
300 502 017	250	635	9,84	25
300 502 018	250	665	9,84	26,18
300 502 019	300	718	11,81	28,27



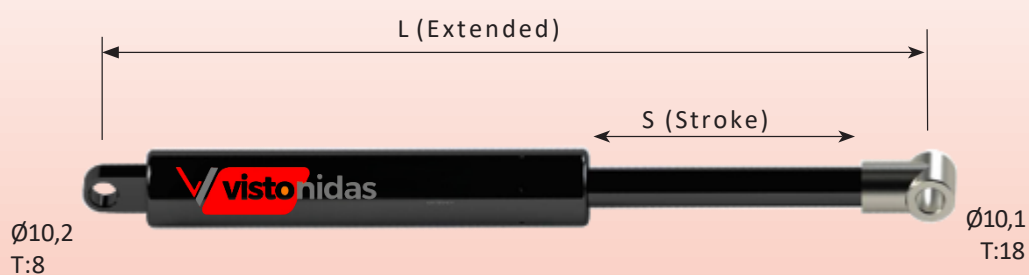
Max. Pressure
2500N
(562lbs)

Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 502 020	300	732	11,81	28,82
300 502 021	300	735	11,81	28,94
300 502 022	300	766	11,81	30,16
300 502 023	350	818	13,78	32,20
300 502 024	350	832	13,78	32,75
300 502 025	350	835	13,78	32,87
300 502 026	350	828	13,78	32,60
300 502 027	350	865	13,78	34,05
300 502 028	400	917	15,75	36,10
300 502 029	400	932	15,75	36,69

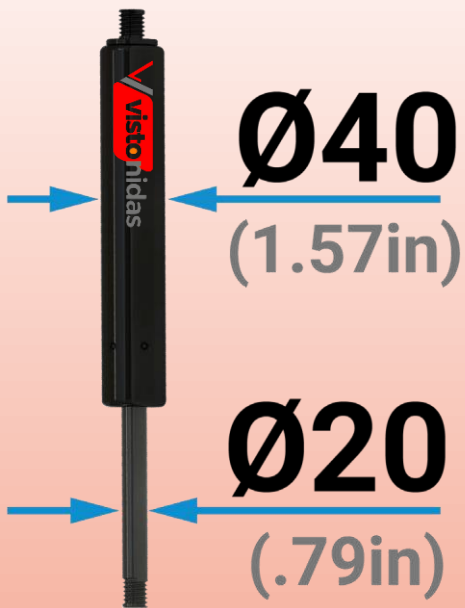
Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 502 030	400	935	15,75	36,81
300 502 031	400	965	15,75	37,99
300 502 032	450	1018	17,71	40,08
300 502 033	450	1032	17,71	40,63
300 502 034	450	1023	17,71	40,27
300 502 035	450	1166	17,71	43,94
300 502 036	500	1118	19,68	44,01
300 502 037	500	1132	19,68	44,57
300 502 038	500	1135	19,68	44,68
300 502 039	500	1166	19,68	45,90



Max. Pressure
2500N
(562lbs)



Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 503 000	100	302	3.94	11.89
300 503 001	150	402	5.90	15.83
300 503 002	200	502	7.87	19.76
300 503 003	250	602	9.84	23.70
300 503 034	300	702	11.81	27.64
300 503 035	350	802	13.78	31.57
300 503 036	400	902	15.75	35.51
300 503 037	500	1102	19.68	43.88

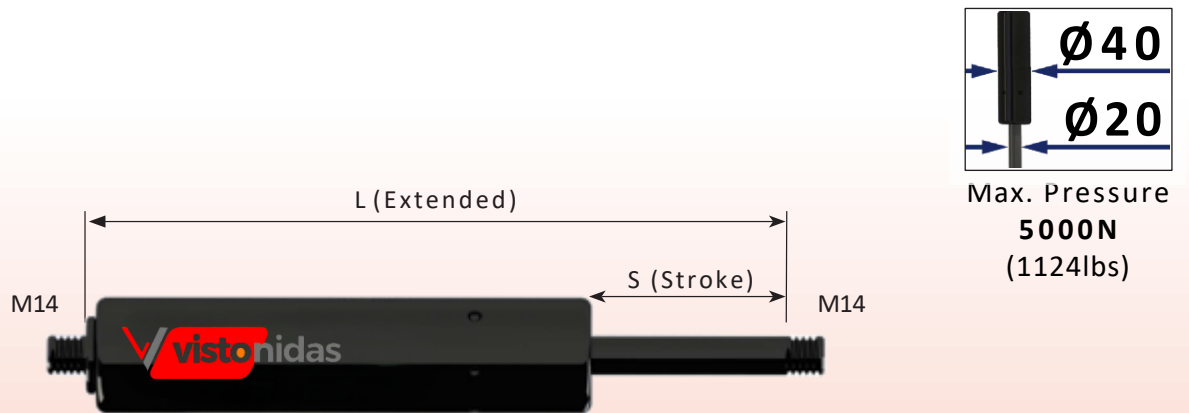


Rod- Tube Diameter

Maximum Pressure Capacity

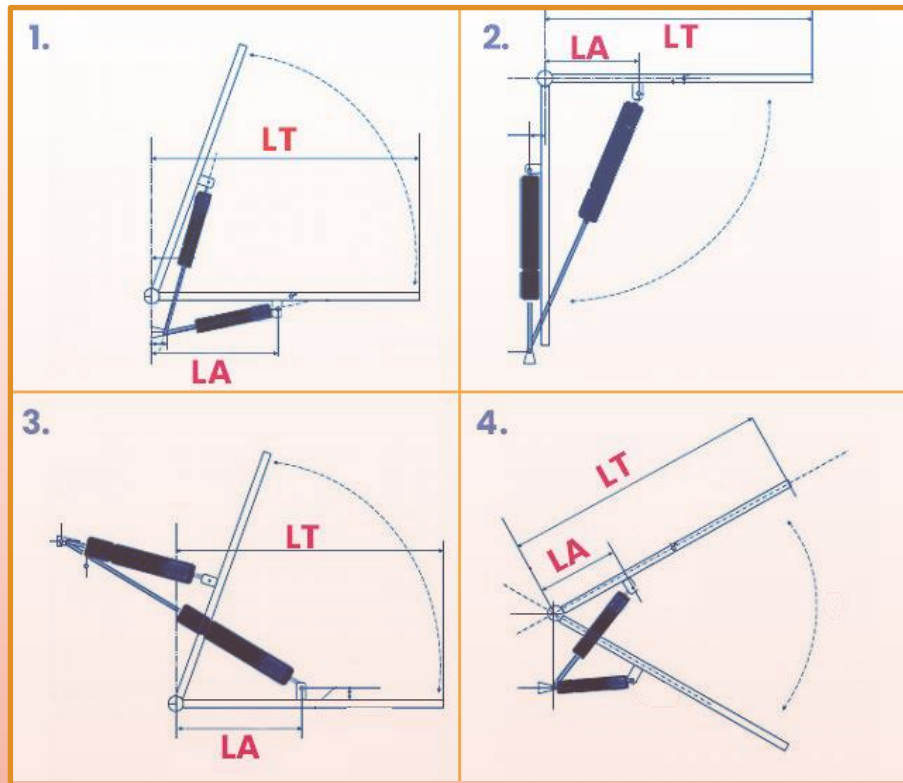
End Fitting Options





Item Code	S (mm)	L (mm)	S (inch)	L (inch)
300 600 000	50	220	1.97	8.66
300 600 001	100	317	3.94	12.48
300 600 002	150	417	5.90	16.42
300 600 003	200	517	7.87	20.35
300 600 004	250	615	9.84	24.21
300 600 005	300	717	11.81	28.23
300 600 006	400	917	15.75	36.10
300 600 007	500	1117	19.68	43.98
300 600 008	600	1317	23.62	51.85
300 600 009	800	1717	31.50	67.60
300 600 010	1000	2117	39.37	83.35

Gas Spring Force Calculation



The pressure required for the gas spring is calculated by substituting the value used in the following formula:

$$F1 = ((m * LT) / (2 * N * LA) + 5) * 9.81 = \text{gas spring pressure (Newton)}$$

F1 = gas spring pressure/force

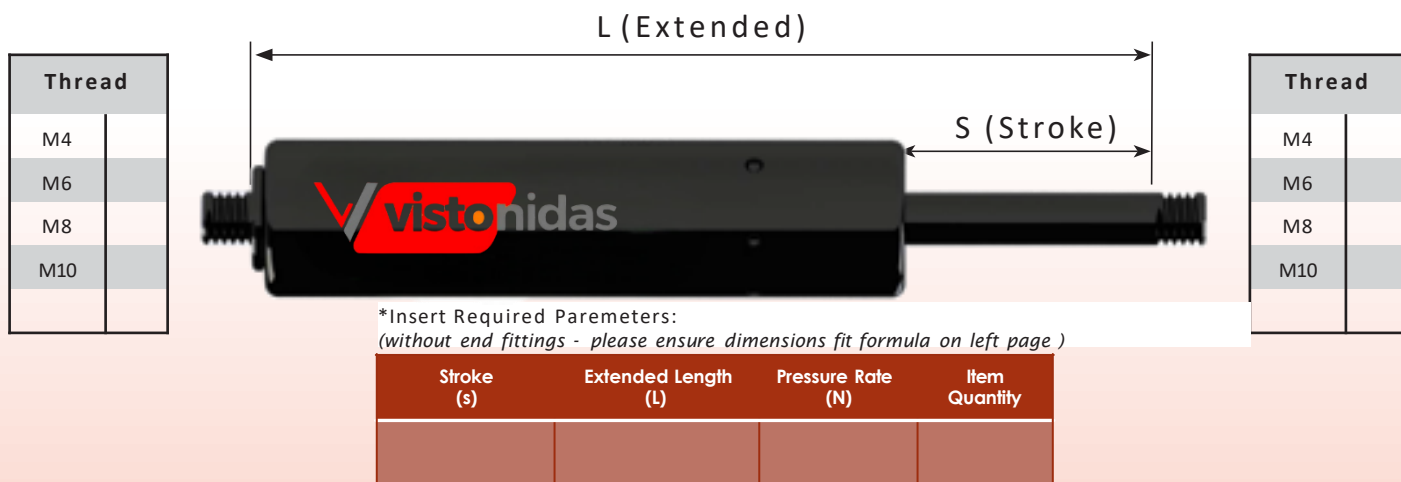
N = number of gas springs required

m = weight of the tailgate/object to be lifted, operated (kg)

LT = length of the tailgate object to be lifted, operated (meter)

LA = the distance (in meters) between the application point of the gas spring on the tailgate and the rotation axis of the tailgate.

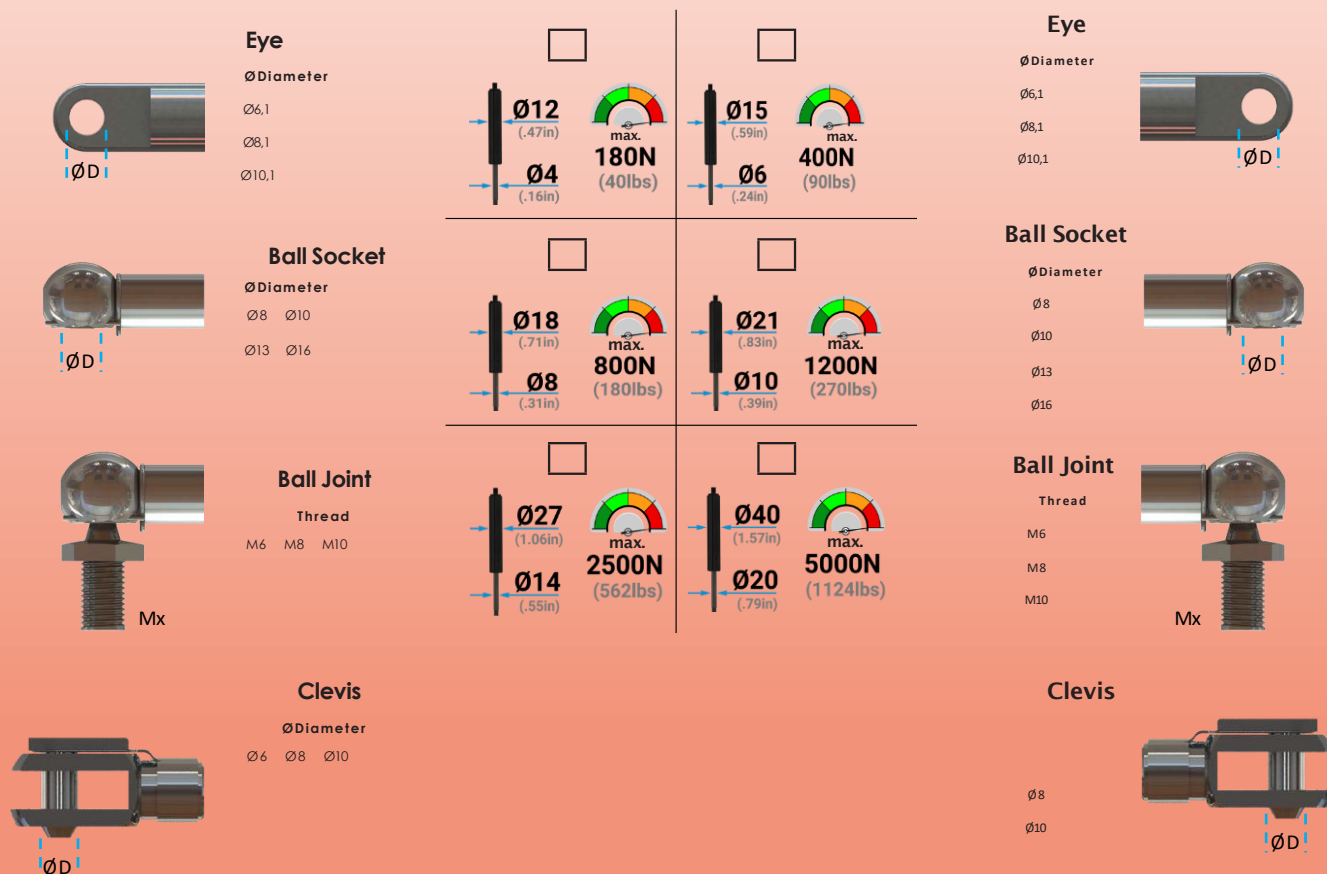
The number 5 represents a constant force of 5 kg/p, which is equivalent to friction.



***Choose / Mention Tube Side End Fitting:**
 For more information and details, please check our End Fittings Catalogue.

***Choose Tube-Rod Diameter:**

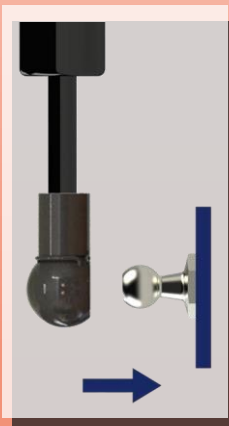
***Choose / Mention Rod Side End Fitting:**
 For more information and details, please check our End Fittings Catalogue.



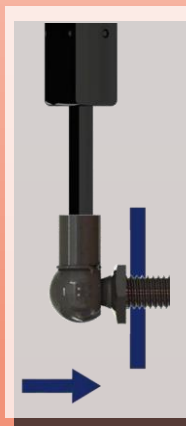


End Fittings

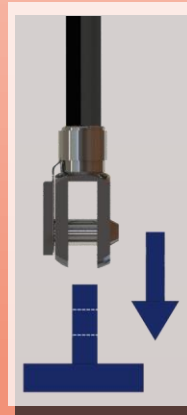
Ball Socket



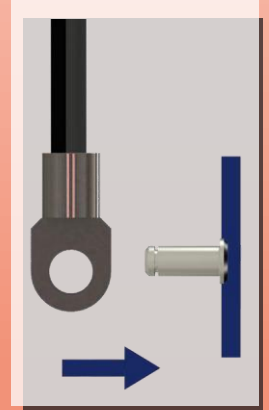
Ball Joint



Clevis



Eye

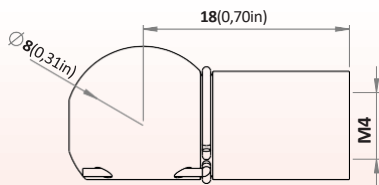


Ball Socket



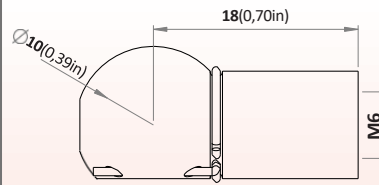
Material & Surface Treatment Options

MATERIAL	ALTERNATIVES	SURFACE TREATMENTS	ORDER REF.
Free cutting steel DIN 1.0718 (11SMnPb30+C)"		Black zinc plated (Zn/Black)	Item Code -B
		Yellow zinc plated (Zn/Yellow)	Item Code -C
		Matte nickel plated	Item Code -D
		Shiny nickel plated	Item Code -E
		No plating, raw material	Item Code -F
Stainless steel 1.4301 (X8CrNiS18-9) / AISI 304		No plating, raw material	Item Code -4
		Polished	Item Code -4P
Stainless steel 1.4401 (X8CrNiS18-9) / AISI 316		No plating, raw material	Item Code -6
		Polished	Item Code -6P
		Electropolished	Item Code -6Z



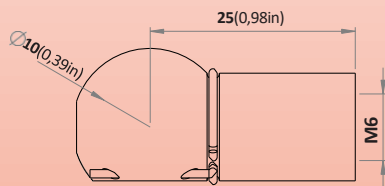
400 100 001 Ball Socket

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



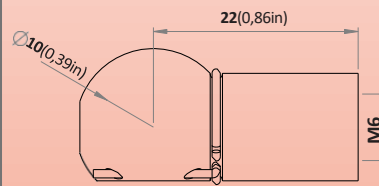
400 100 010 Ball Socket

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



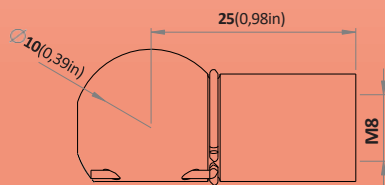
400 100 014 Ball Socket

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



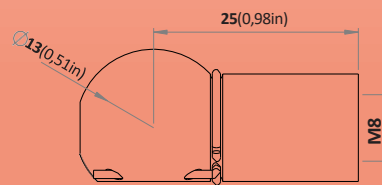
400 100 012 Ball Socket

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



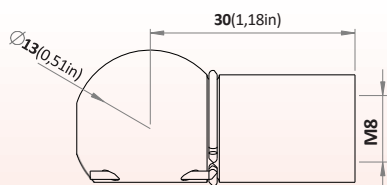
400 100 016 Ball Socket

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



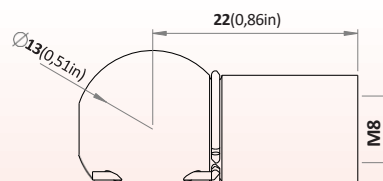
400 100 018 Ball Socket

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



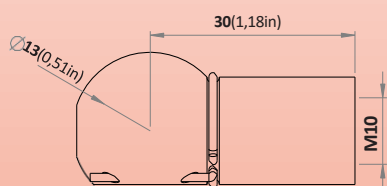
400 100 020 Ball Socket

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



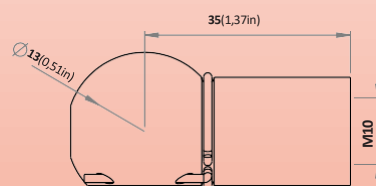
400 100 017 Ball Socket

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



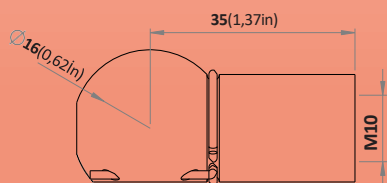
400 100 021 Ball Socket

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



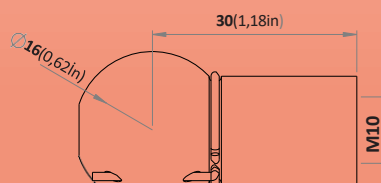
400 100 023 Ball Socket

Material Information;
Steel Sheet + 11SM-
nPb30 Surface Treat-
ment; White Zinc
Plated
General Tolerances;



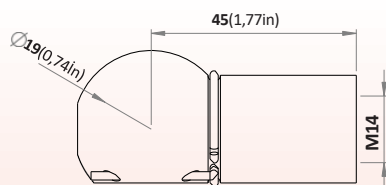
400 100 026 Ball Socket

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 025 Ball Socket

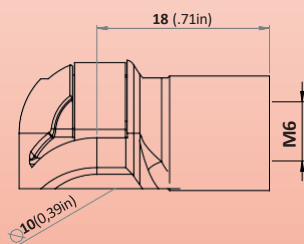
Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400100030

Ball Socket

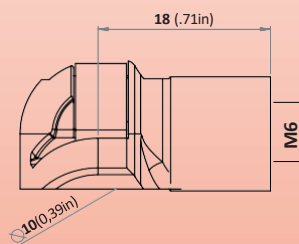
Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400100038

Ball Socket

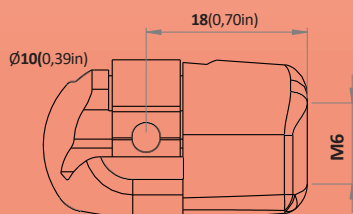
Material Information;
ZAMAC Alloy
Surface Treatment;
Grey Zinc
General Tolerances;
DIN ISO 2768-medium



400100037

Ball Socket

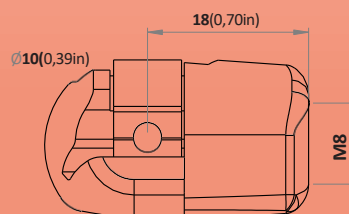
Material Information;
Composite
Surface Treatment;
Black
General Tolerances; DIN
ISO 2768-medium



400100040

Ball Socket

Material Information;
Composite
Surface Treatment;
Black
General Tolerances;
DIN ISO 2768-medium



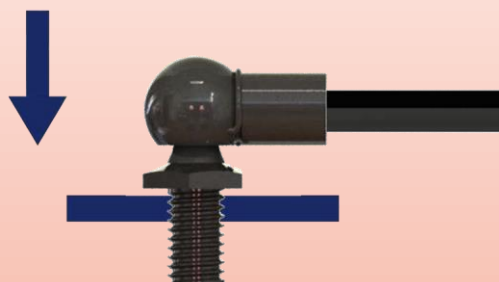
400100041

Ball Socket

Material Information;
Composite
Surface Treatment;
Black
General Tolerances;
DIN ISO 2768-medium

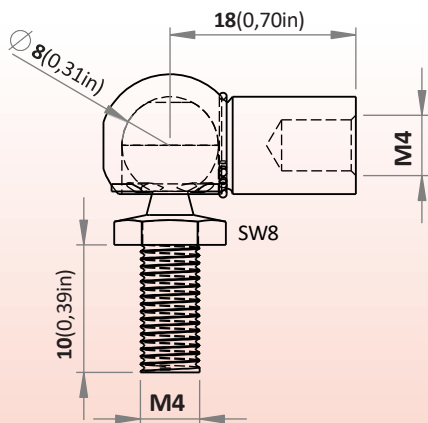


Ball Joint



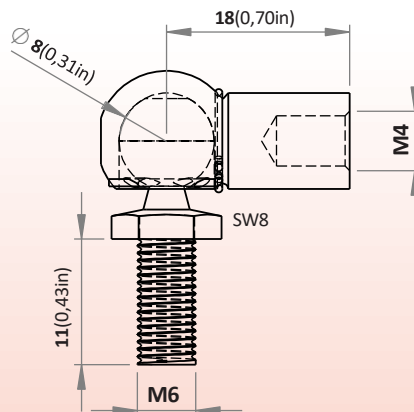
Material & Surface Treatment Options

MATERIAL ALTERNATIVES	SURFACE TREATMENTS	ORDER REF.
Free cutting steel DIN 1.0718 (11SMnPb30+C)"	Black zinc plated (Zn/Black)	Item Code -B
	Yellow zinc plated (Zn/Yellow)	Item Code -C
	Matte nickel plated	Item Code -D
	Shiny nickel plated	Item Code -E
	No plating, raw material	Item Code -F
Stainless steel 1.4301 (X8CrNiS18-9) / AISI 304	No plating, raw material	Item Code -4
	Polished	Item Code -4P
Stainless steel 1.4401 (X8CrNiS18-9) / AISI 316	No plating, raw material	Item Code -6
	Polished	Item Code -6P
	Electropolished	Item Code -6Z



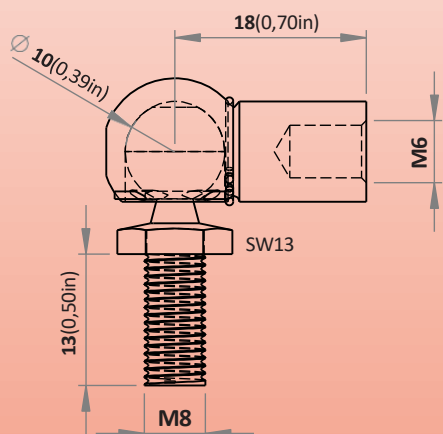
400 100 040 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



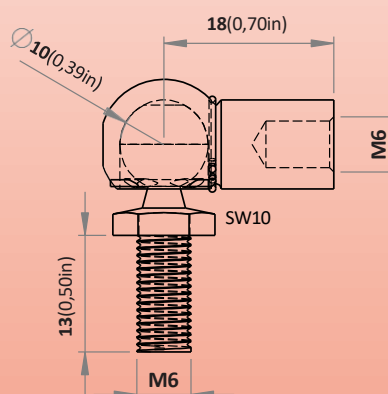
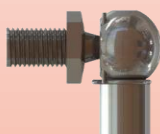
400 100 041 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



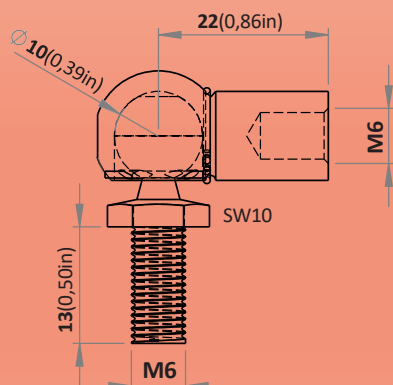
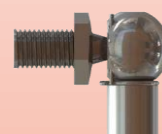
400 100 046 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



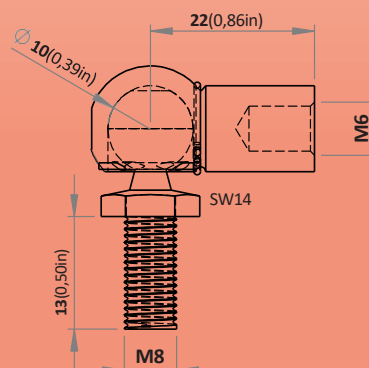
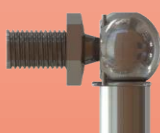
400 100 047 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



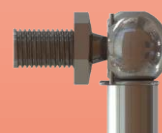
400 100 051 Ball Joint

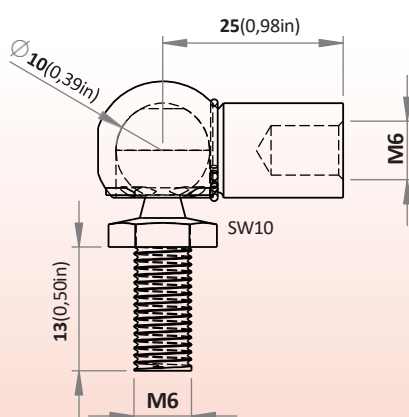
Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 050 Ball Joint

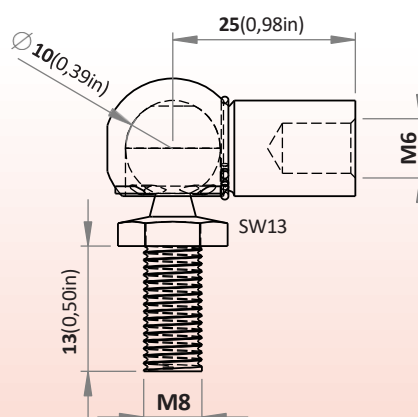
Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium





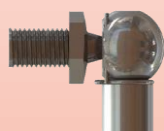
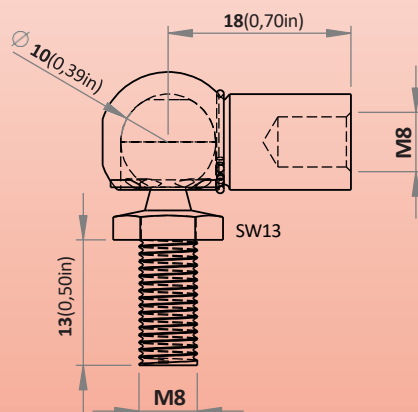
400 100 056 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



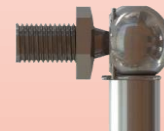
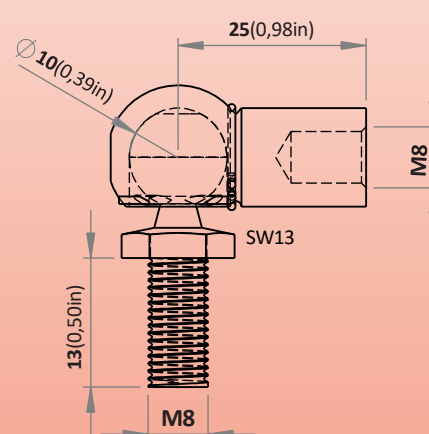
400 100 057 Ball Joint

Material Information;
Steel Sheet + 11SM-
nPb30 Surface Treat-
ment; White Zinc
Plated
General Tolerances;



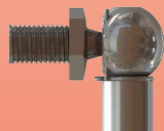
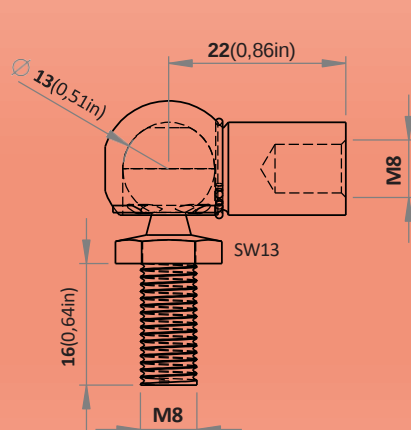
400 100 048 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



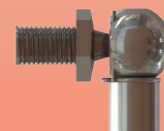
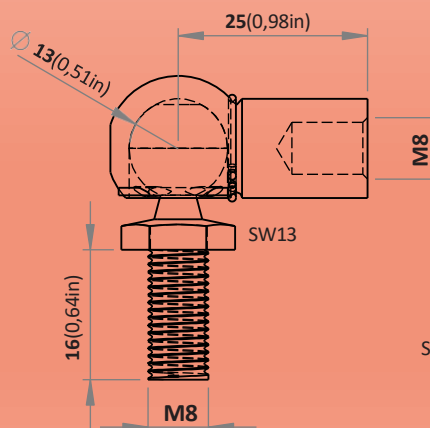
400 100 058 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



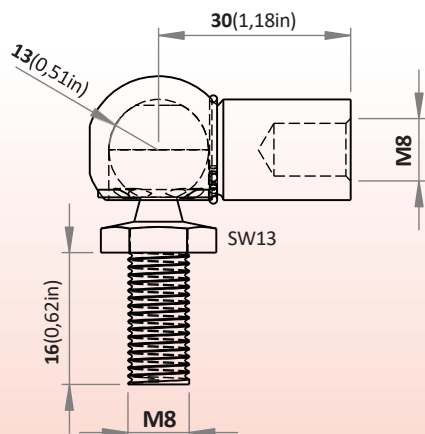
400 100 064 Ball Joint

Material Information;
Steel Sheet + 11SM-
nPb30 Surface Treat-
ment; White Zinc
Plated
General Tolerances;



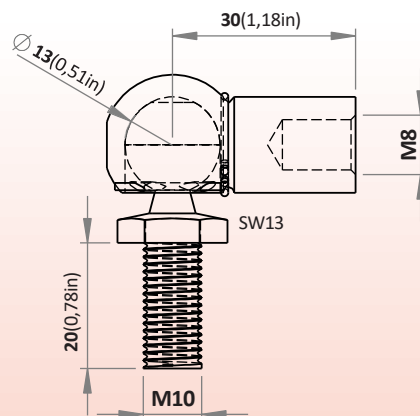
400 100 066 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



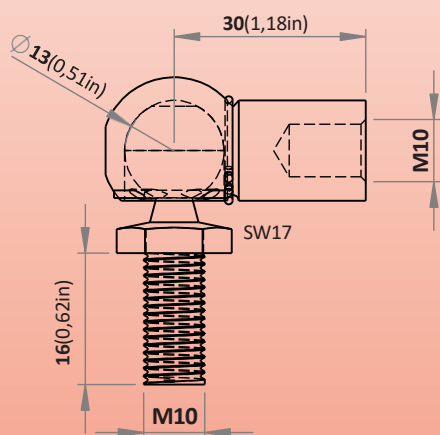
400 100 067 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



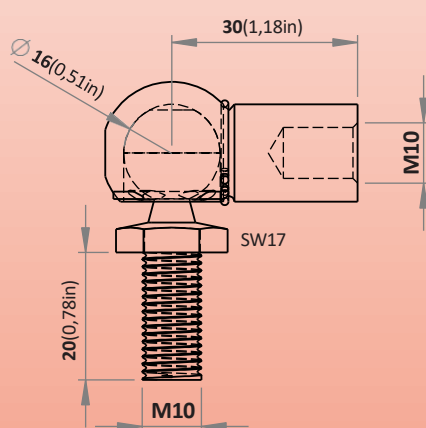
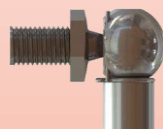
400 100 068 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



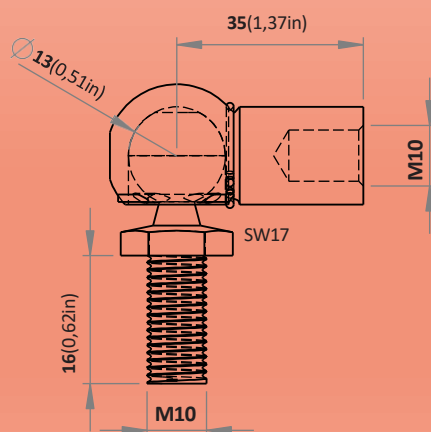
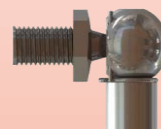
400 100 069 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



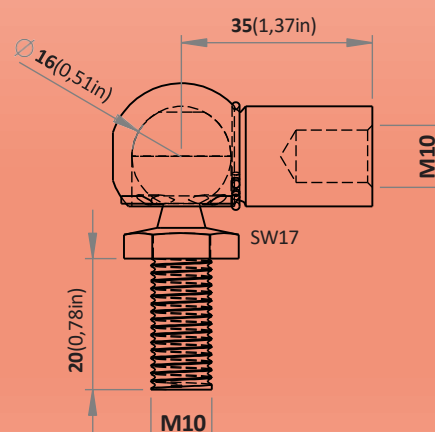
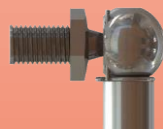
400 100 070 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



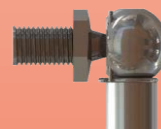
400 100 071 Ball Joint

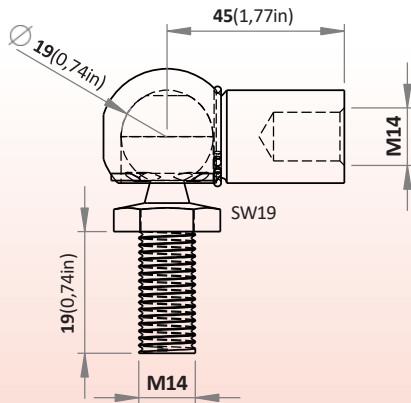
Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 072 Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;

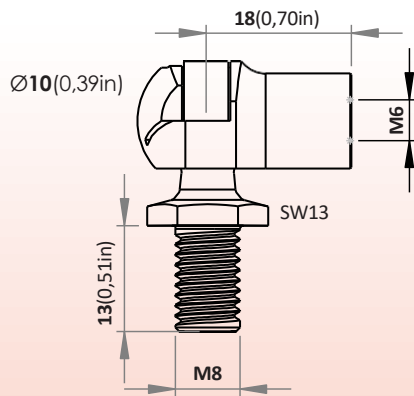




400 100 073

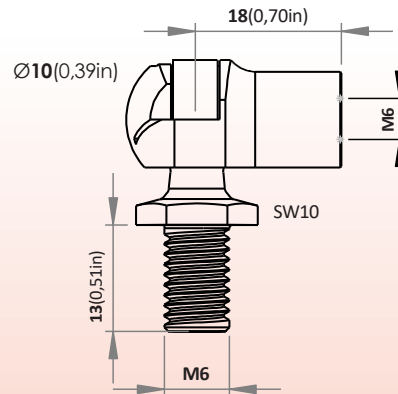
Ball Joint

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



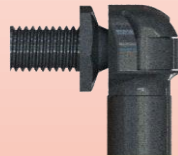
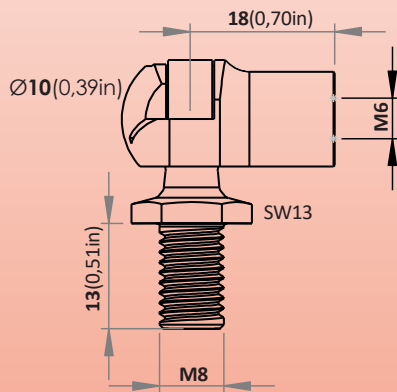
400 100 074 Ball Joint

Material Information;
Composite
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



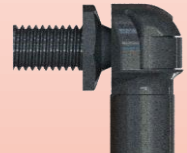
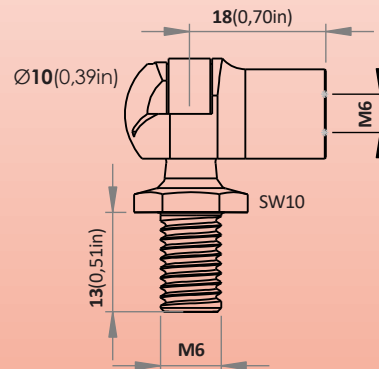
400 100 075 Ball Joint

Material Information;
Composite
Surface Treatment;
Black
General Tolerances;
DIN ISO 2768-medium



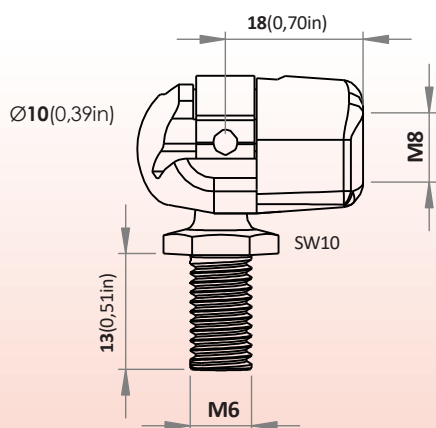
400 100 076 Ball Joint

Material Information;
ZAMAC Alloy
Surface Treatment;
-
General Tolerances;
DIN ISO 2768-medium



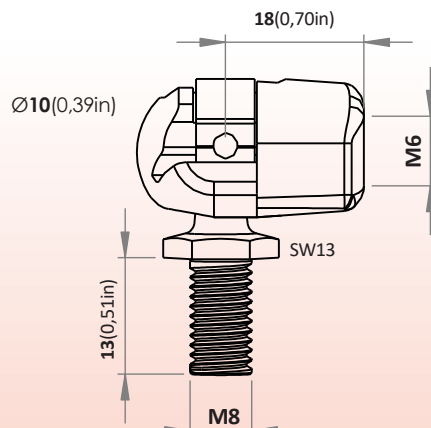
400 100 077 Ball Joint

Material Information;
ZAMAC Alloy
Surface Treatment;
-
General Tolerances;
DIN ISO 2768-medium



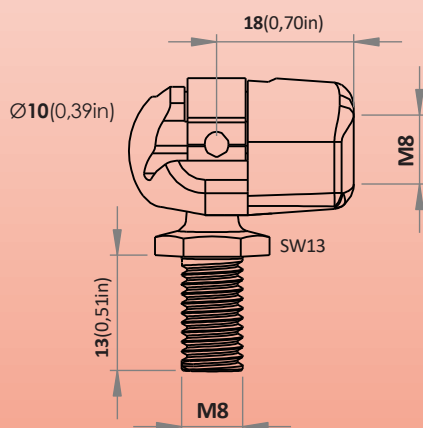
400 100 078 Ball Joint

Material Information;
Composite
Surface Treatment;
Black
General Tolerances;
DIN ISO 2768-medium



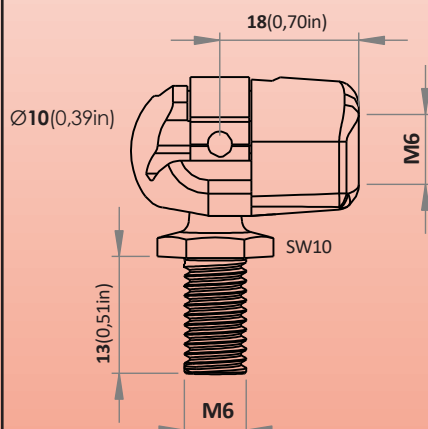
400 100 079 Ball Joint

Material Information;
Composite
Surface Treatment;
Black
General Tolerances;
DIN ISO 2768-medium



400 100 080 Ball Joint

Material Information;
Composite
Surface Treatment;
Black
General Tolerances; DIN
ISO 2768-medium

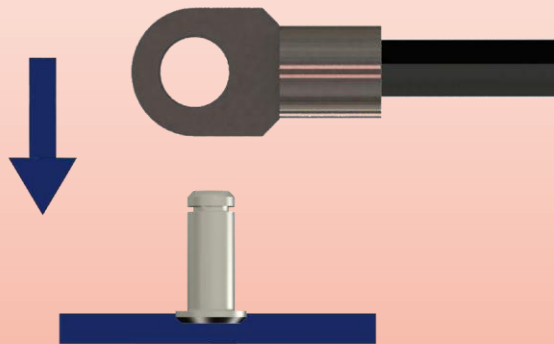


400 100 081 Ball Joint

Material Information;
Composite
Surface Treatment;
Black
General Tolerances; DIN ISO
2768-medium

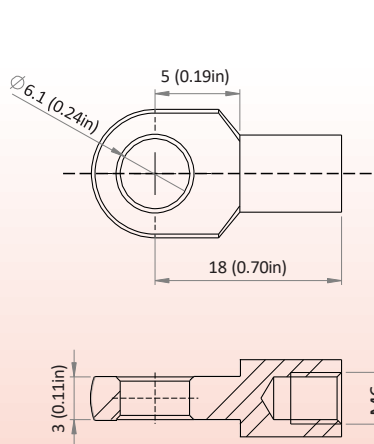


Eye



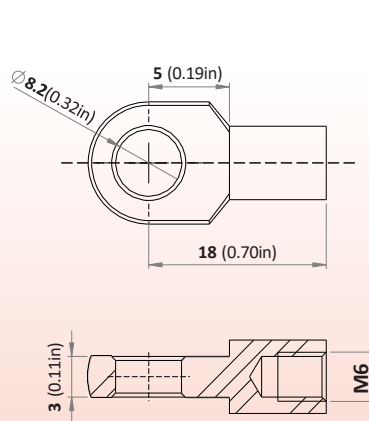
Material & Surface Treatment Options

MATERIAL ALTERNATIVES	SURFACE TREATMENTS	ORDER REF.
Free cutting steel DIN 1.0718 (11SMnPb30+C)"	Black zinc plated (Zn/Black)	Item Code -B
	Yellow zinc plated (Zn/Yellow)	Item Code -C
	Matte nickel plated	Item Code -D
	Shiny nickel plated	Item Code -E
	No plating, raw material	Item Code -F
Stainless steel 1.4301 (X8CrNiS18-9) / AISI 304	No plating, raw material	Item Code -4
	Polished	Item Code -4P
Stainless steel 1.4401 (X8CrNiS18-9) / AISI 316	No plating, raw material	Item Code -6
	Polished	Item Code -6P
	Electropolished	Item Code -6Z



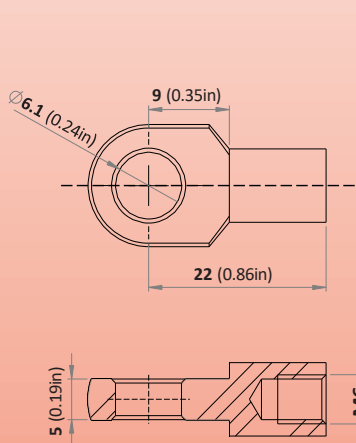
400 100 082 Eye Fitting

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



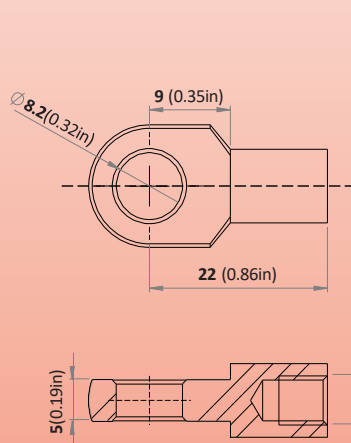
400 100 083 Eye Fitting

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



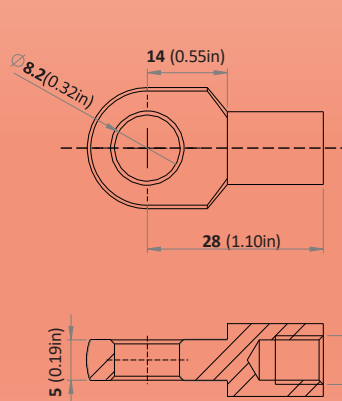
400 100 084 Eye Fitting

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



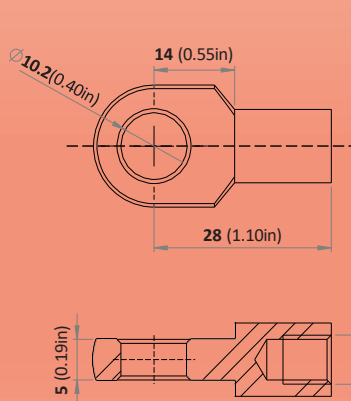
400 100 085 Eye Fitting

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



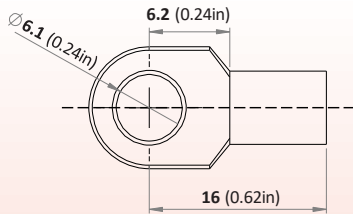
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Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



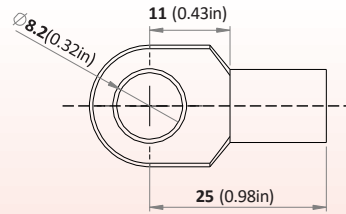
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Material Information;
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



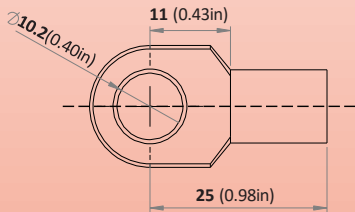
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



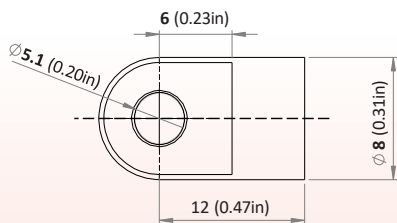
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Material Information;
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 089 Eye Fitting

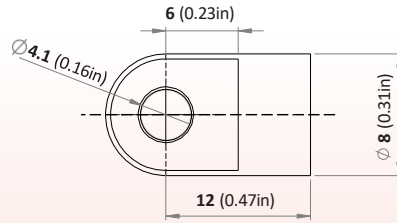
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 090

Eye Fitting

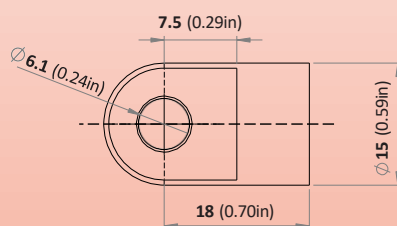
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Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 091

Eye Fitting

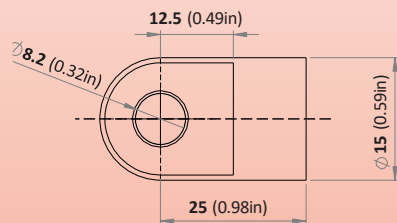
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Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 092

Eye Fitting

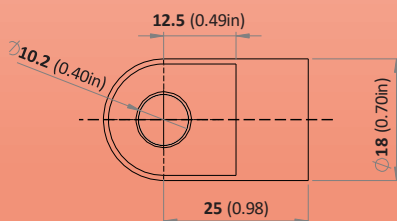
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Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances; DIN
ISO 2768-medium



400 100 093

Eye Fitting

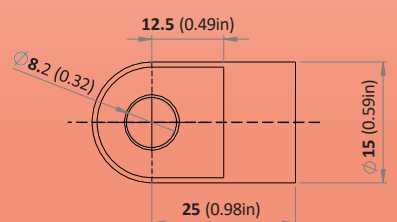
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 094

Eye Fitting

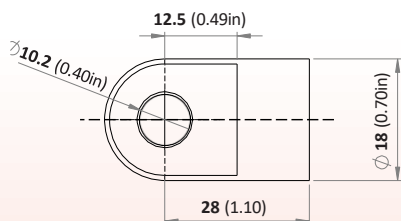
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 095

Eye Fitting

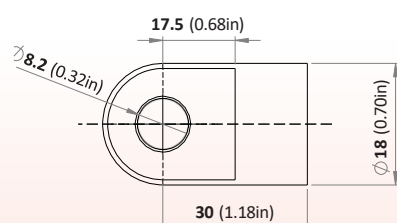
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 096

Eye Fitting

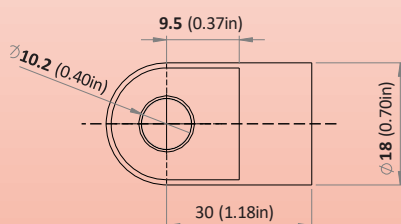
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 097

Eye Fitting

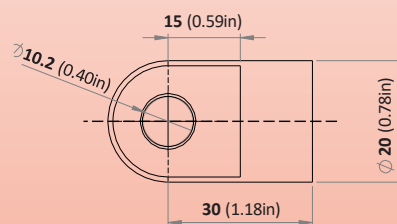
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Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 098

Eye Fitting

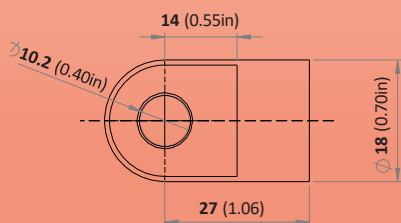
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 099

Eye Fitting

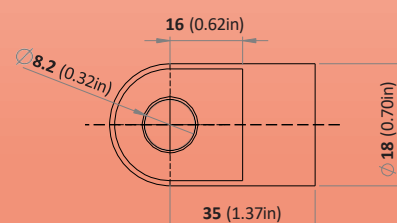
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Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 100

Eye Fitting

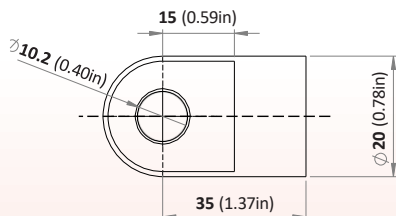
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 101

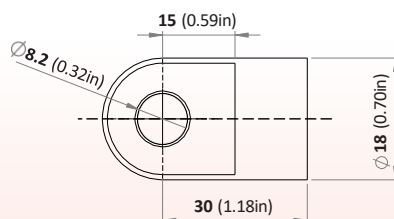
Eye Fitting

Material Information;
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



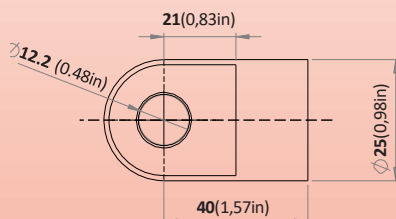
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Material Information;
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



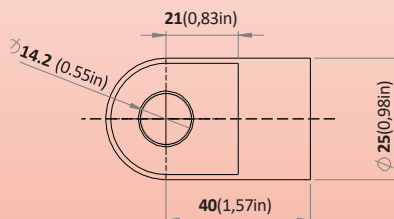
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Surface Treatment;
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General Tolerances;
DIN ISO 2768-medium



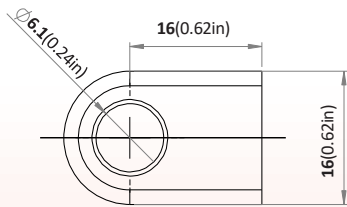
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Surface Treatment;
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General Tolerances;
DIN ISO 2768-medium



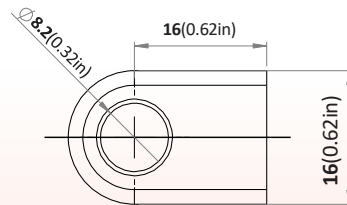
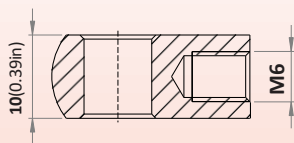
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



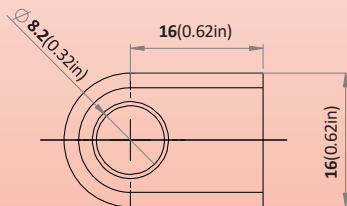
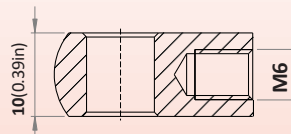
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Surface Treatment;
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General Tolerances;
DIN ISO 2768-medium



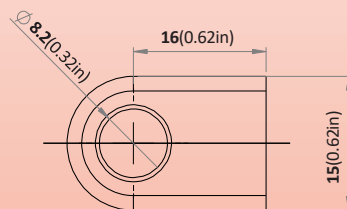
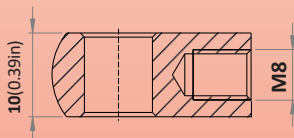
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Material Information;
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



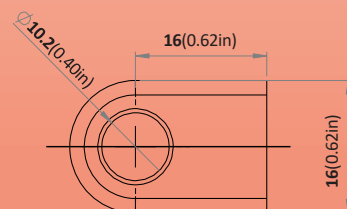
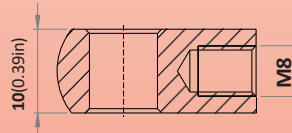
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Material Information;
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



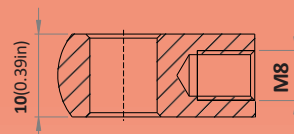
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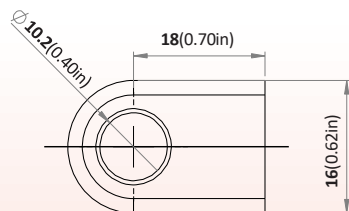
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Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



400 100 110 Eye Fitting

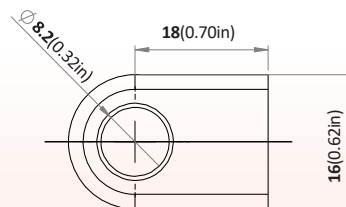
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium





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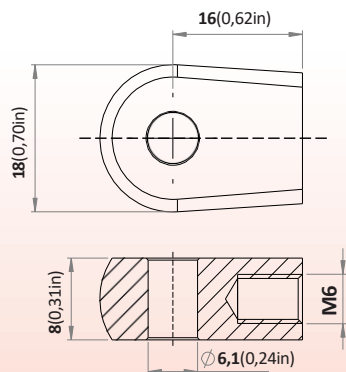
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Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



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Material Information;
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium

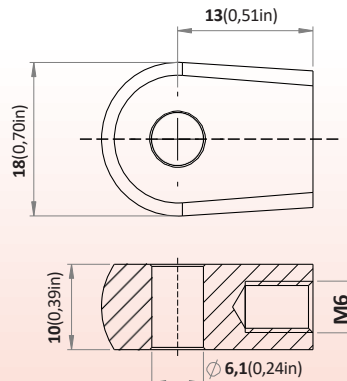




400 100 113 Eye Fitting

Material Information;
ZAMAC Alloy
Surface Treatment;

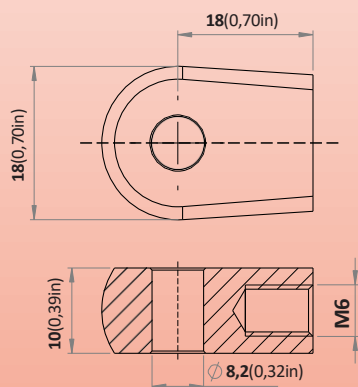
General Tolerances;
DIN ISO 2768-medium



400 100 114 Eye Fitting

Material Information;
ZAMAC Alloy
Surface Treatment;

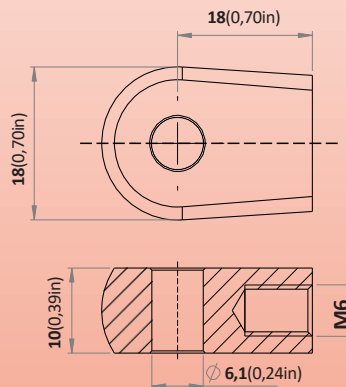
General Tolerances;
DIN ISO 2768-medium



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Material Information;
ZAMAC Alloy
Surface Treatment;

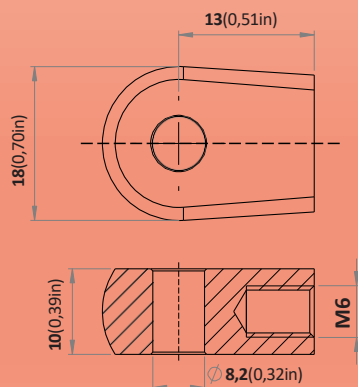
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DIN ISO 2768-medium



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Material Information;
ZAMAC Alloy
Surface Treatment;

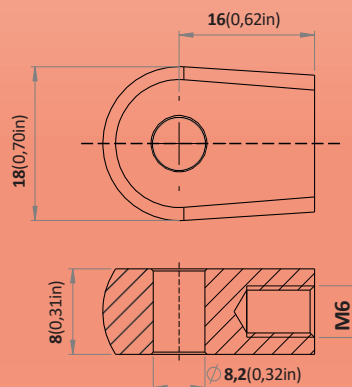
General Tolerances;
DIN ISO 2768-medium



400 100 117 Eye Fitting

Material Information;
ZAMAC Alloy
Surface Treatment;

General Tolerances;
DIN ISO 2768-medium

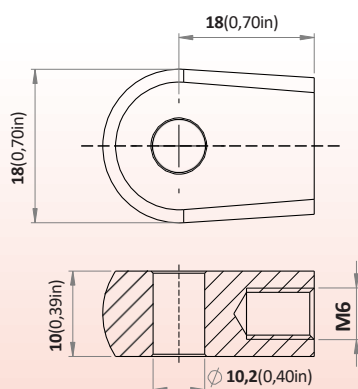


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Material Information;
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Surface Treatment;

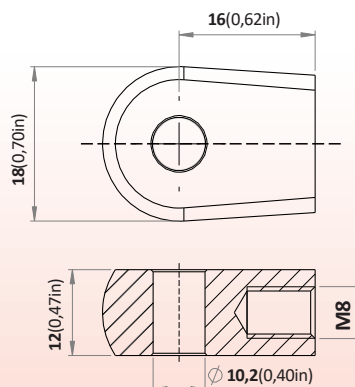
General Tolerances;
DIN ISO 2768-medium





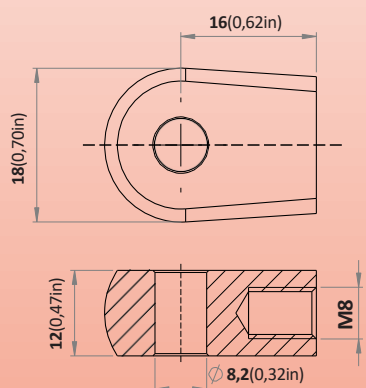
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Material Information;
ZAMAC Alloy
Surface Treatment;

General Tolerances;
DIN ISO 2768-medium



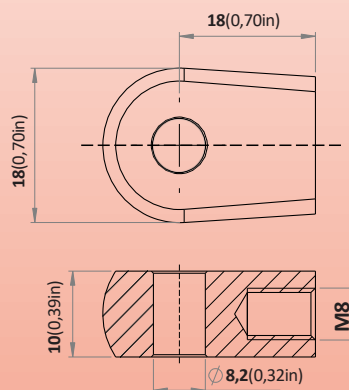
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Material Information;
ZAMAC Alloy
Surface Treatment;

General Tolerances;
DIN ISO 2768-medium



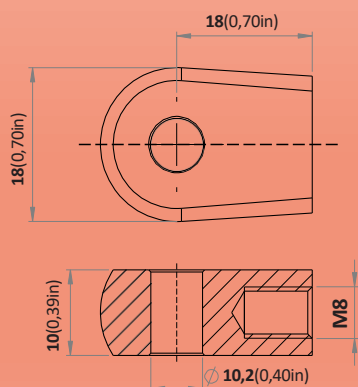
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Material Information;
ZAMAC Alloy
Surface Treatment;

General Tolerances;
DIN ISO 2768-medium



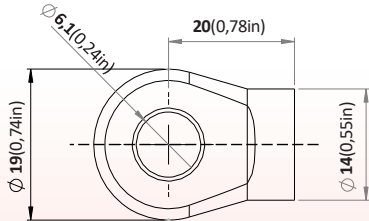
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Eye Fitting
Material Information;
ZAMAC Alloy
Surface Treatment;

General Tolerances;
DIN ISO 2768-medium



400 100 123
Eye Fitting
Material Information;
ZAMAC Alloy
Surface Treatment;

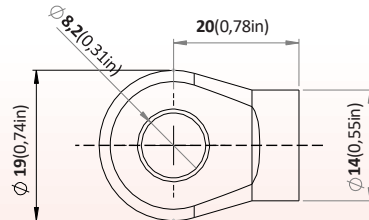
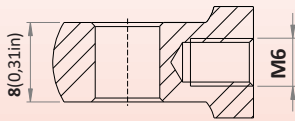
General Tolerances;
DIN ISO 2768-medium



400 100 124 Eye Fitting

Material Information;
ZAMAC Alloy
Surface Treatment;

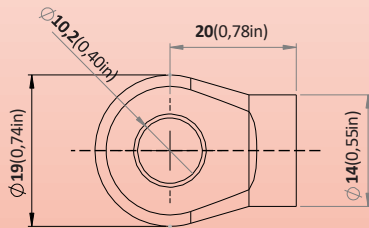
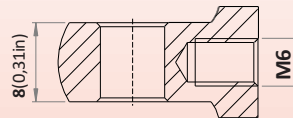
General Tolerances;
DIN ISO 2768-medium



400 100 125 Eye Fitting

Material Information;
ZAMAC Alloy
Surface Treatment;

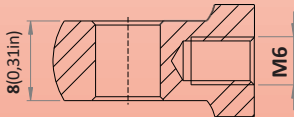
General Tolerances;
DIN ISO 2768-medium

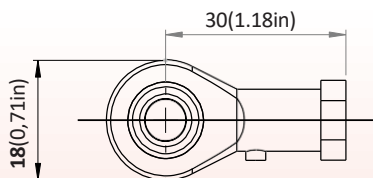


400 100 126 Eye Fitting

Material Information;
ZAMAC Alloy
Surface Treatment;

General Tolerances;
DIN ISO 2768-medium

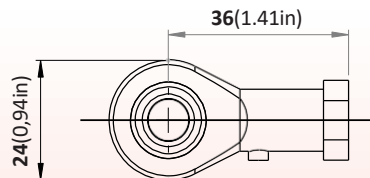




400 100 127 Eye Fitting

Material Information;
Steel
Surface Treatment;

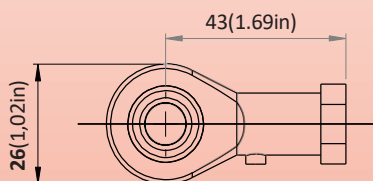
General Tolerances;
DIN ISO 2768-medium



400 100 128 Eye Fitting

Material Information;
Steel
Surface Treatment;

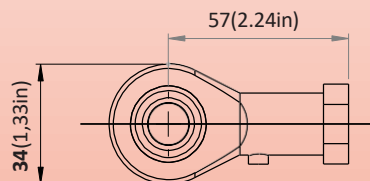
General Tolerances;
DIN ISO 2768-medium



400 100 129 Eye Fitting

Material Information;
Steel
Surface Treatment;

General Tolerances;
DIN ISO 2768-medium

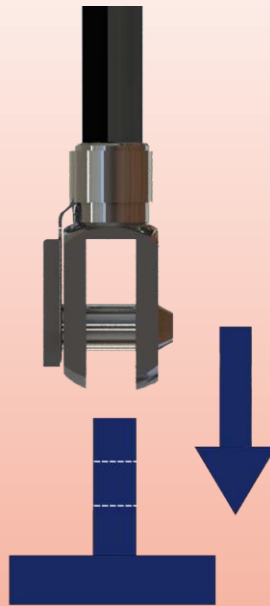


400 100 130 Eye Fitting

Material Information;
Steel
Surface Treatment;

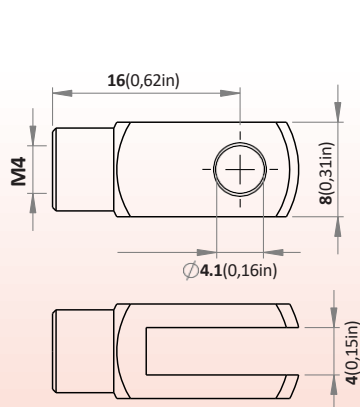
General Tolerances;
DIN ISO 2768-medium

Clevis



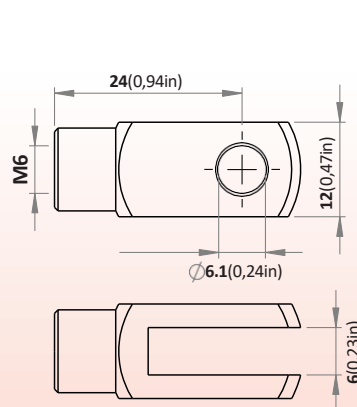
Material & Surface Treatment Options

MATERIAL ALTERNATIVES	SURFACE TREATMENTS	ORDER REF.
Free cutting steel DIN 1.0718 (11SMnPb30+C)"	Black zinc plated (Zn/Black)	Item Code -B
	Yellow zinc plated (Zn/Yellow)	Item Code -C
	Matte nickel plated	Item Code -D
	Shiny nickel plated	Item Code -E
	No plating, raw material	Item Code -F
Stainless steel 1.4301 (X8CrNiS18-9) / AISI 304	No plating, raw material	Item Code -4
	Polished	Item Code -4P
Stainless steel 1.4401 (X8CrNiS18-9) / AISI 316	No plating, raw material	Item Code -6
	Polished	Item Code -6P
	Electropolished	Item Code -6Z



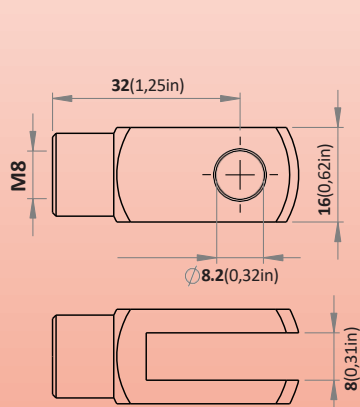
400 100 131 Clevis

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



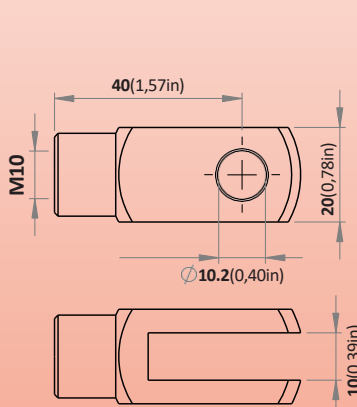
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Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



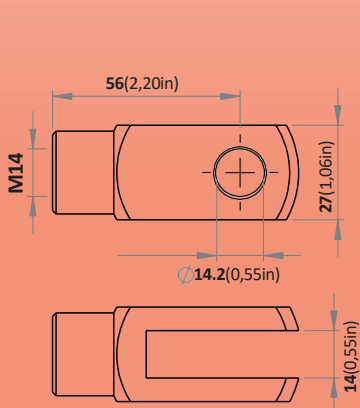
400 100 133 Clevis

Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



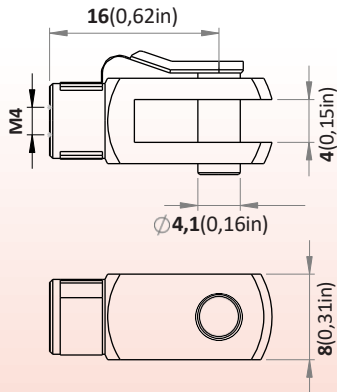
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Material Information;
Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



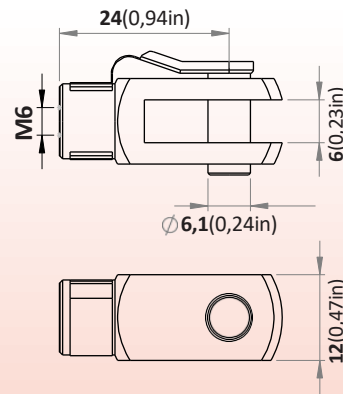
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



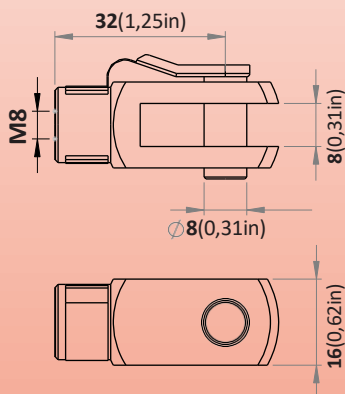
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



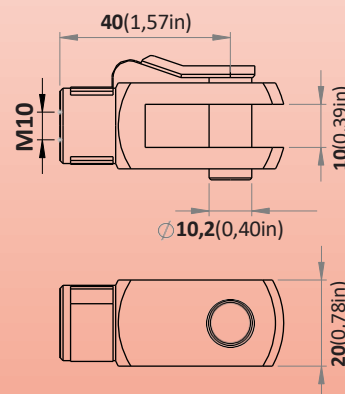
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



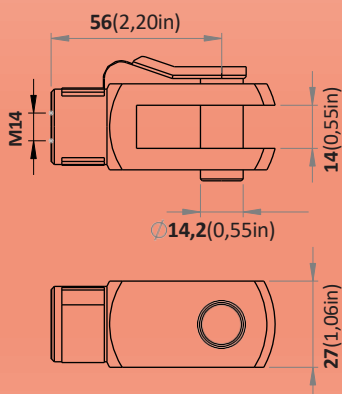
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Steel Sheet + 11SMnPb30
Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



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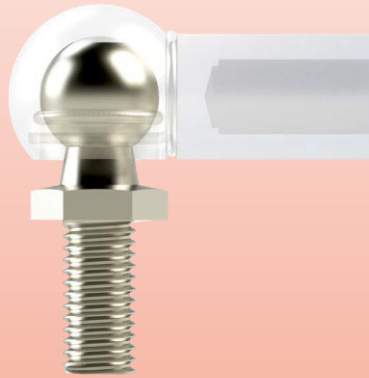
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Surface Treatment;
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General Tolerances;
DIN ISO 2768-medium



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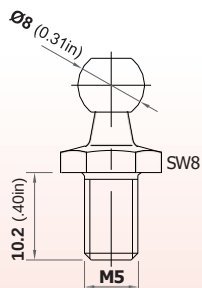
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium

Ball Studs



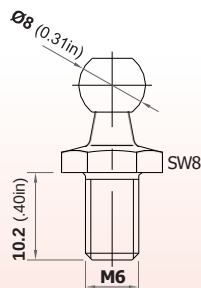
Material & Surface Treatment Options

MATERIAL ALTERNATIVES	SURFACE TREATMENTS	ORDER REF.
Free cutting steel DIN 1.0718 (11SMnPb30+C)"	Black zinc plated (Zn/Black)	Item Code-B
	Yellow zinc plated (Zn/Yellow)	Item Code -C
	Matte nickel plated	Item Code -D
	Shiny nickel plated	Item Code -E
	No plating, raw material	Item Code -F
Stainless steel 1.4301 (X8CrNiS18-9) / AISI 304	No plating, raw material	Item Code -4
	Polished	Item Code -4P
Stainless steel 1.4401 (X8CrNiS18-9) / AISI 316	No plating, raw material	Item Code -6
	Polished	Item Code -6P
	Electropolished	Item Code -6Z



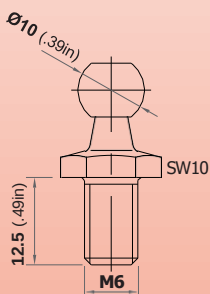
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Surface Treatment;
White Zinc Plated
General Tolerances;
DIN ISO 2768-medium



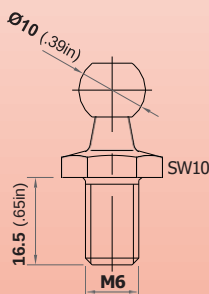
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Surface Treatment;
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General Tolerances;
DIN ISO 2768-medium



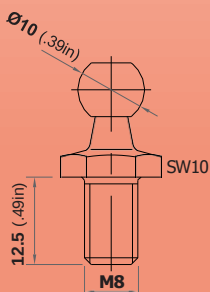
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General Tolerances;
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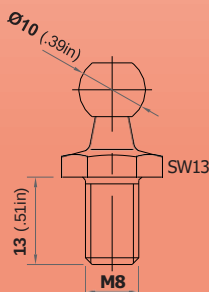
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General Tolerances;
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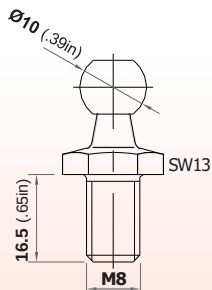
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Surface Treatment;
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General Tolerances;
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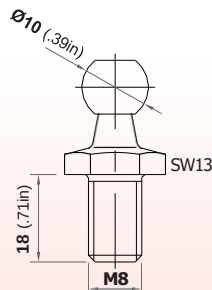
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General Tolerances;
DIN ISO 2768-medium



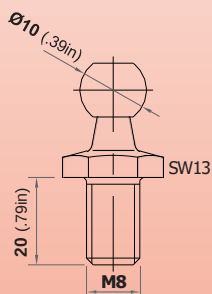
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General Tolerances;
DIN ISO 2768-medium



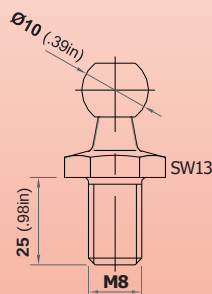
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General Tolerances;
DIN ISO 2768-medium



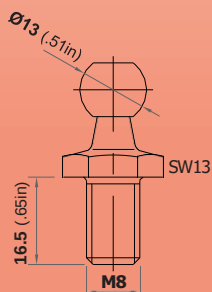
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General Tolerances;
DIN ISO 2768-medium



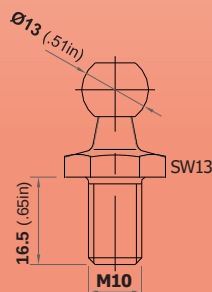
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General Tolerances;
DIN ISO 2768-medium



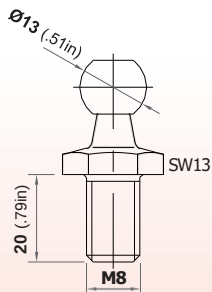
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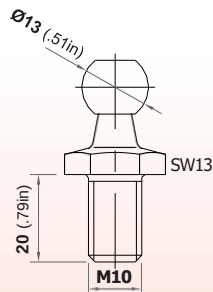


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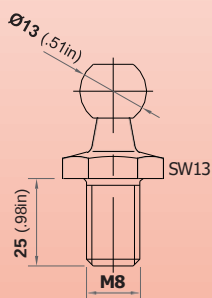
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General Tolerances;
DIN ISO 2768-medium



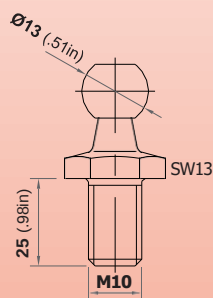
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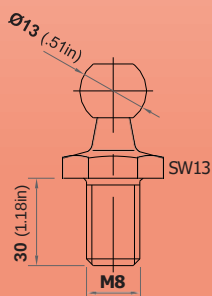
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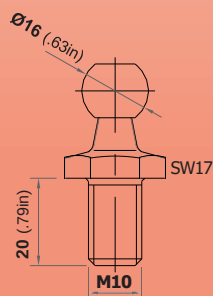
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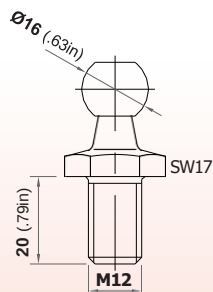
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 General Tolerances;
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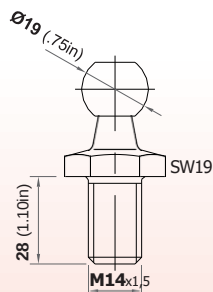
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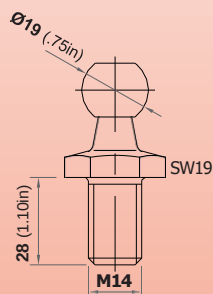
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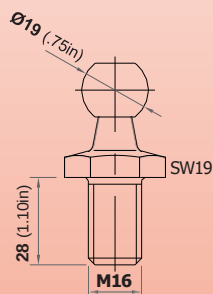
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 Surface Treatment;
 White Zinc Plated
 General Tolerances;
 DIN ISO 2768-medium



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 Surface Treatment;
 White Zinc Plated
 General Tolerances;
 DIN ISO 2768-medium



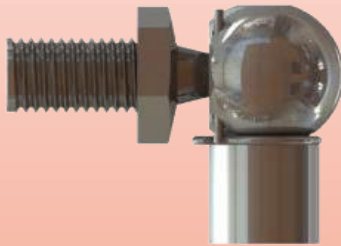
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 General Tolerances;
 DIN ISO 2768-medium



400 101 023
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 Material Information;
 11SMnPb30
 Surface Treatment;
 White Zinc Plated
 General Tolerances;
 DIN ISO 2768-medium



Connector



Liftstrut Series Usage Fields

Lift-type gas springs find extensive application across various industries due to their versatile and reliable nature. These mechanical devices, also known as gas struts or gas shocks, are commonly utilized in automotive engineering to support the opening and closing of hoods, tailgates, and trunk lids effortlessly.

Additionally, in the furniture industry, they enable smooth and controlled movement for adjustable chairs and recliners, enhancing user comfort. In the aerospace sector, lift-type gas springs aid in stabilizing aircraft components and cabin amenities, optimizing weight distribution and facilitating access to maintenance areas.

Furthermore, these gas springs are instrumental in the medical field, supporting adjustable hospital beds and medical equipment, ensuring ergonomic patient care.

Beyond these domains, lift-type gas springs serve numerous other applications, ranging from industrial machinery to agricultural equipment, proving indispensable in scenarios where controlled lifting, lowering, and positioning are essential for enhanced safety and efficiency.



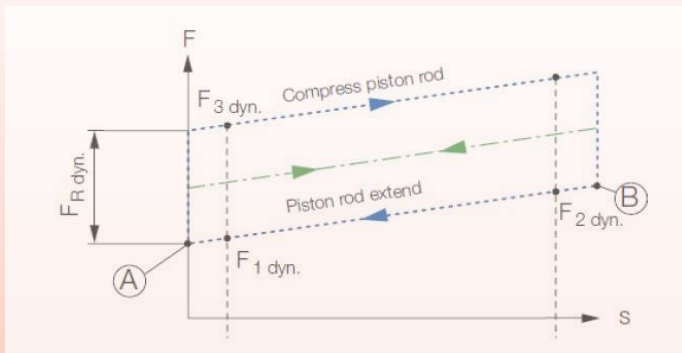
Usage Instructions

- Do mount standard gas springs rod down, use within a temperature range of -25°C up to $+60^{\circ}\text{C}$.
- Do not allow external objects to exert side load forces on the gas spring or on the end fittings .
- Do ensure that the end fittings are in line so that side load forces are not applied as a result of misalignment.
- Do try to use ball joints to help avoid side load forces. If eye (clevises) are used ensure a sloppy fit to allow lateral movement.
- Do try to use shorter springs close to the hinge rather than long stroke springs away from the hinge.
- Do provide physical stops to limit the spring's extremes. i.e. ensure that undue force is not applied to over compress .
- Ensure the gas spring's end fittings are compatible to gas spring and fully screwed home.
- Do not cycle more than 15 times per minute. Do not scratch, dent, chip, bend or paint the rod.
- If springs are to be stored prior to use, the spring should be stored rod down to lubricate the seal by its own.

Pressure Parameters and Tolerances

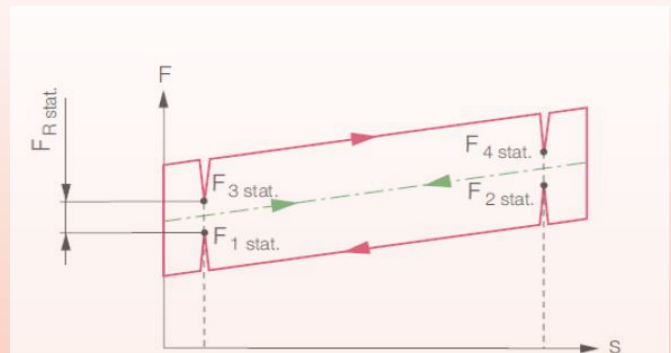
Lifstrut Series gas spring is a closed system consisting of a pressure tube and piston rod with piston, as well as compressed Nitrogen (N₂) as an energy source and a lubrication oil. Pressure rate of gas spring generally defined as F1 with unit of N (Newton).

In order to get most certain results, test environment should be 20 C° (±3°). Positioning in test equipment as rod side down. There are 2 main measurement methods for measuring pressure rates of gas springs.



Dynamic Measurement

From the fully extended position, the gas spring is compressed at a constant test velocity until fully compressed. The subsequent, automatic extension is controlled at the same constant velocity. During compression/extension, the force reaction is recorded, resulting in the characteristic curve. F3 measured in after 5mm compressed of rod. F4 measured 5mm before fully compressed position. F2 measured 5mm extension after fully compressed position. F1 measured 5mm before fully extended position.



Static Measurement

Similar to the dynamic measurement, the static measurement is performed with a constant speed. However, the motion is interrupted at the measuring points and the spring force is measured in a static condition. F3 measured in after 5mm compressed of rod. F4 measured 5mm before fully compressed position. F2 measured 5mm extension after fully compressed position. F1 measured 5mm before fully extended position. Dynamic measurement is being applied to force measure, unless otherwise specified. F1 rate is being compared to reference drawing.

Pressure Tolerance Table

50N < F1 ≤ 250N	250N < F1 ≤ 750N	750N < F1 ≤ 1250N	1250N < F1 ≤ 2500N
± 20N	± 30N	± 50N	± 80N

Pressure Behaviours

In general, the gas spring is intended for a maximum operating temperature of 80°C. This accounts for the real properties of nitrogen (N₂) in respect to temperature and pressure changes.

Considering pressured gas inside gas spring tube, pressure rate varies according to environment temperature. In order to get most certain results, test environment should be 20 C° (±3°)

The force change of the gas spring as a function of pressure and temperature is also represented in diagram.

