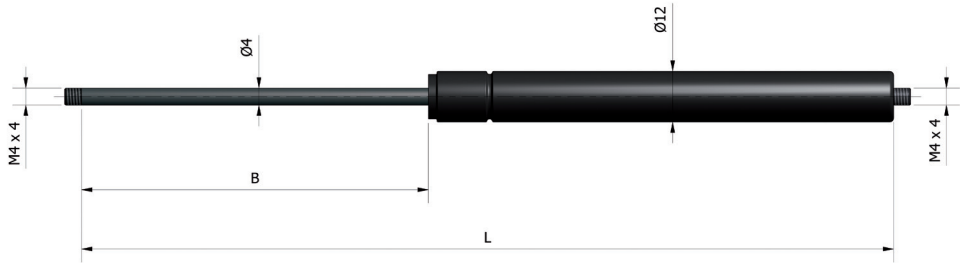


# GAS SPRINGS

TYPE 12-4 L



## Gas spring with pneumatic extension speed ~0,15 m/s

All dimensions in mm

L = Length +/- 2

B = Stroke

F1 = Spring force in N

Force range: 15-130 N

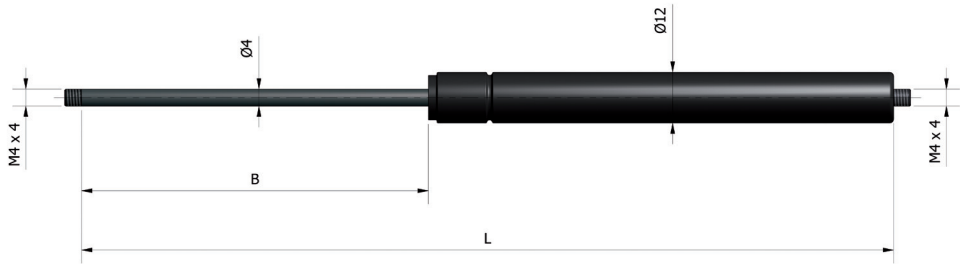
End fittings: See separate data sheet

L	B	F1	Part no.
80	25	15	200
80	25	20	201
80	25	30	202
80	25	50	203
80	25	70	204
80	25	90	205
80	25	110	206
80	25	130	207
100	35	15	208
100	35	20	209
100	35	30	210
100	35	50	211
100	35	70	212
100	35	90	213
100	35	110	214
100	35	130	215
120	45	15	216
120	45	20	217
120	45	30	218
120	45	50	219
120	45	70	220
120	45	90	221
120	45	110	222
120	45	130	223
140	55	15	224
140	55	20	225
140	55	30	226
140	55	50	227
140	55	70	228
140	55	90	229
140	55	110	230
140	55	130	231

L	B	F1	Part no.
180	75	15	232
180	75	20	233
180	75	30	234
180	75	50	235
180	75	70	236
180	75	90	237
180	75	110	238
180	75	130	239
220	95	15	240
220	95	20	241
220	95	30	242
220	95	50	243
220	95	70	244
220	95	90	245
220	95	110	246
220	95	130	247

# GAS SPRINGS

TYPE 12-4 E



## Gas spring with pneumatic extension speed ~0,3 m/s

All dimensions in mm

L = Length +/- 2

B = Stroke

F1 = Spring force in N

Force range: 10-140 N

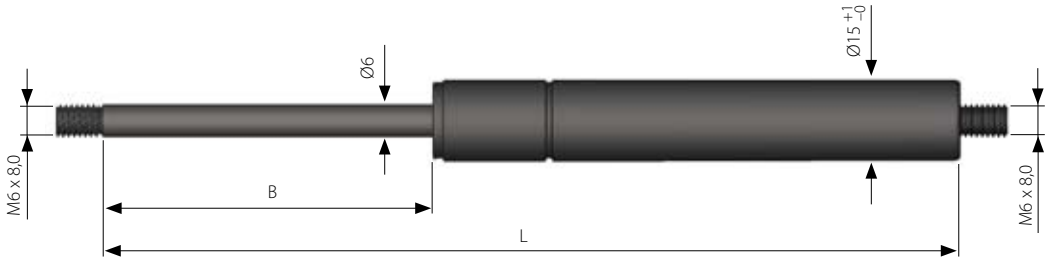
End fittings: See separate data sheet

L	B	F1	Part no.
72	20	10	400
72	20	20	401
72	20	30	402
72	20	40	403
72	20	60	404
72	20	80	405
72	20	110	406
72	20	140	407
92	30	10	408
92	30	20	409
92	30	30	410
92	30	40	411
92	30	60	412
92	30	80	413
92	30	110	414
92	30	140	415
112	40	10	416
112	40	20	417
112	40	30	418
112	40	40	419
112	40	60	420
112	40	80	421
112	40	110	422
112	40	140	423
132	50	10	424
132	50	20	425
132	50	30	426
132	50	40	427
132	50	60	428
132	50	80	429
132	50	110	430
132	50	140	431

L	B	F1	Part no.
152	60	10	432
152	60	20	433
152	60	30	434
152	60	40	435
152	60	60	436
152	60	80	437
152	60	110	438
152	60	140	439
172	70	10	440
172	70	20	441
172	70	30	442
172	70	40	443
172	70	60	444
172	70	80	445
172	70	110	446
172	70	140	447
192	80	10	448
192	80	20	449
192	80	30	450
192	80	40	451
192	80	60	452
192	80	80	453
192	80	110	454
192	80	140	455
232	100	10	456
232	100	20	457
232	100	30	458
232	100	40	459
232	100	60	460
232	100	80	461
232	100	110	462

# GAS SPRINGS

TYPE 15-6 L



## Conventional gas spring with extension speed ~ 0.1 m/s

All dimensions are in mm

L = Length +/- 2

B = Stroke

F1 = Spring force in Newtons

Force range: 40-350 Newtons

End fittings: See pages 179-190.

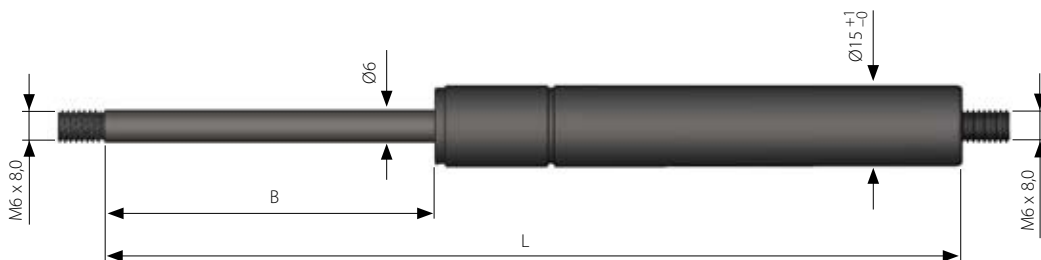
1 kp = 9.80665 Newtons, 1 Newton = 0.10197 kp

L	B	F1	Cat. no.
127	50	40	4461
127	50	80	4462
127	50	120	4463
127	50	160	4464
127	50	200	4465
127	50	240	4466
127	50	280	4468
127	50	350	4469
156	60	40	4470
156	60	80	4471
156	60	120	4472
156	60	160	4473
156	60	200	4474
156	60	240	4475
156	60	280	4476
156	60	350	4477
181	70	40	4478
181	70	80	4479
181	70	120	4480
181	70	160	4549
181	70	200	4482
181	70	240	4483
181	70	280	4484
181	70	350	4485
221	90	40	4486
221	90	80	4487
221	90	120	4488
221	90	160	4489
221	90	200	4490
221	90	240	4481
221	90	280	4537
221	90	350	4492

L	B	F1	Cat. no.
236	105	40	8101
236	105	80	8102
236	105	120	8103
236	105	160	8104
236	105	200	8105
236	105	240	8106
236	105	280	8107
236	105	350	8108
273	105	40	4829
273	105	80	4494
273	105	120	4495
273	105	160	4813
273	105	200	4496
273	105	240	4497
273	105	280	4498
273	105	350	4499
303	135	40	4500
303	135	80	4501
303	135	120	4502
303	135	160	4503
303	135	200	4504
303	135	240	4505
303	135	280	4506
303	135	350	4507
378	175	40	8109
378	175	80	8110
378	175	120	8111
378	175	160	8112
378	175	200	8113
378	175	240	8114
378	175	280	8115
378	175	350	8116

# GAS SPRINGS

TYPE 15-6 E



## Conventional gas spring with extension speed ~ 0.3 m/s

All dimensions are in mm

L = Length +/- 2

B = Stroke

F1 = Spring force in Newtons

Force range: 50-400 Newtons

End fittings: See pages 179-190.

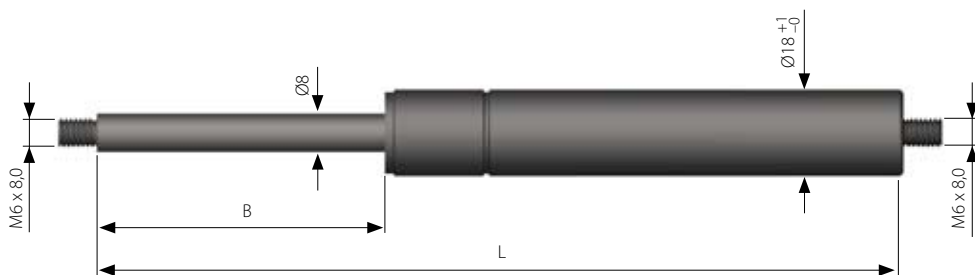
1 kp = 9.80665 Newtons, 1 Newton = 0.10197 kp

L	B	F1	Cat. no.
77,5	20	50	9002
77,5	20	100	9003
77,5	20	150	9004
77,5	20	200	9005
77,5	20	250	9006
77,5	20	300	9007
77,5	20	350	9008
77,5	20	400	9009
117,5	40	50	9010
117,5	40	100	9011
117,5	40	150	9012
117,5	40	200	9013
117,5	40	250	9014
117,5	40	300	9015
117,5	40	350	9016
117,5	40	400	9017
156,5	60	50	9018
156,5	60	100	9019
156,5	60	150	9020
156,5	60	200	9021
156,5	60	250	9022
156,5	60	300	9023
156,5	60	350	9024
156,5	60	400	9025
197	80	50	9026
197	80	100	9027
197	80	150	9028
197	80	200	9029
197	80	250	9030
197	80	300	9031
197	80	350	9032
197	80	400	9033

L	B	F1	Cat. no.
235	100	50	9034
235	100	100	9035
235	100	150	9036
235	100	200	9037
235	100	250	9038
235	100	300	9039
235	100	350	9040
235	100	400	9041
278	120	50	9042
278	120	100	9043
278	120	150	9044
278	120	200	9045
278	120	250	9046
278	120	300	9047
278	120	350	9048
278	120	400	9049
337,5	150	50	9050
337,5	150	100	9051
337,5	150	150	9052
337,5	150	200	9053
337,5	150	250	9054
337,5	150	300	9055
337,5	150	350	9056
337,5	150	400	9057

# GAS SPRINGS

TYPE 18-8 L



## Conventional gas spring with extension speed ~ 0.1 m/s

All dimensions are in mm

L = Length +/- 2

B = Stroke

F1 = Spring force in Newtons

Force range: 100-600 Newtons

End fittings: See pages 179-190.

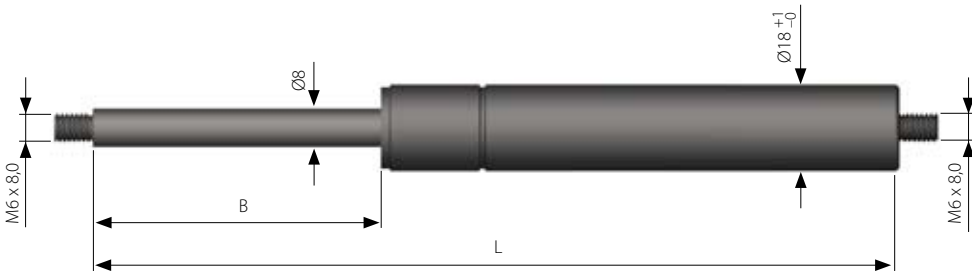
1 kp = 9.80665 Newtons, 1 Newton = 0.10197 kp

L	B	F1	Cat. no.
158	50	400	4508
158	50	500	4509
158	50	600	4852
201	80	400	4831
201	80	500	4511
201	80	600	4512
238	100	400	4513
238	100	500	4708
238	100	600	4515
293	125	100	4516
293	125	150	4517
293	125	200	4518
293	125	300	4553
293	125	400	4519
293	125	500	4520
293	125	600	4521
353	150	100	4522
353	150	150	4523
353	150	200	4524
353	150	300	4525
353	150	400	4526
353	150	500	4527
353	150	600	4528
398	175	100	8117
398	175	150	8118
398	175	200	8119
398	175	300	8120
398	175	400	8121
398	175	500	8122
398	175	600	8123

L	B	F1	Cat. no.
453	200	100	4529
453	200	150	4530
453	200	200	4531
453	200	300	4532
453	200	400	4533
453	200	500	4534
453	200	600	4535
503	225	100	8124
503	225	150	8125
503	225	200	8126
503	225	300	8127
503	225	400	8128
503	225	500	8129
503	225	600	8130
556	262	100	4536
556	262	150	4810
556	262	200	4538
556	262	300	4510
556	262	400	4853
556	262	500	4540
556	262	600	4550

# GAS SPRINGS

TYPE 18-8 E



## Conventional gas spring with extension speed ~ 0.3 m/s

All dimensions are in mm

L = Length +/- 2

B = Stroke

F1 = Spring force in Newtons

Force range: 100-750 Newtons

End fittings: See pages 179-190.

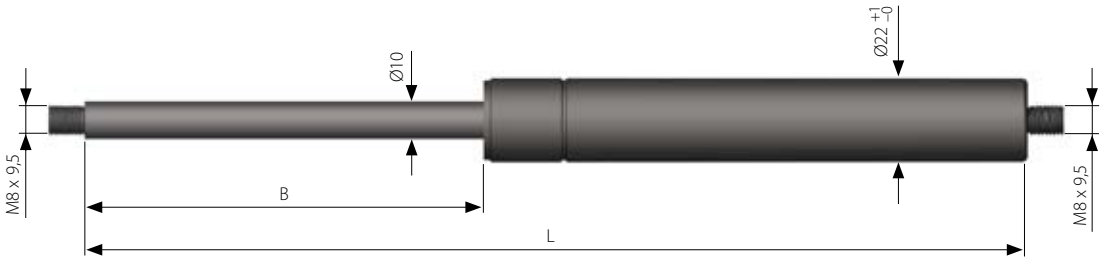
1 kp = 9.80665 Newtons, 1 Newton = 0.10197 kp

L	B	F1	Cat. no.
168	60	500	9114
168	60	600	9115
168	60	750	9116
248	100	500	9117
248	100	600	9118
248	100	750	9119
328	140	400	9120
328	140	500	9121
328	140	600	9122
328	140	750	9123
367	160	100	9338
367	160	150	9339
367	160	200	9340
367	160	250	9341
367	160	300	9342
367	160	350	9343
367	160	400	9344
367	160	500	9345
367	160	600	9346
367	160	750	9347
447,5	200	100	9124
447,5	200	150	9125
447,5	200	200	9126
447,5	200	250	9127
447,5	200	300	9128
447,5	200	350	9129
447,5	200	400	9130
447,5	200	500	9131
447,5	200	600	9132
447,5	200	750	9133

L	B	F1	Cat. no.
489	220	100	9134
489	220	150	9135
489	220	200	9136
489	220	250	9137
489	220	300	9138
489	220	350	9139
489	220	400	9140
489	220	500	9141
489	220	600	9142
489	220	750	9143
547,5	250	100	9144
547,5	250	150	9145
547,5	250	200	9146
547,5	250	250	9147
547,5	250	300	9148
547,5	250	350	9149
547,5	250	400	9150
547,5	250	500	9151
547,5	250	600	9152
547,5	250	750	9153

# GAS SPRINGS

TYPE 22-10 L



## Conventional gas spring with extension speed ~ 0.1 m/s

All dimensions are in mm

L = Length +/- 2

B = Stroke

F1 = Spring force in Newtons

Force range: 200-1000 Newtons

End fittings: See pages 179-190.

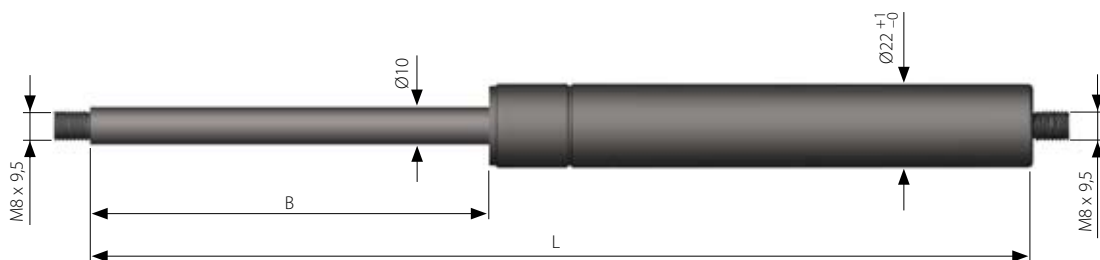
1 kp = 9.80665 Newtons, 1 Newton = 0.10197 kp

L	B	F1	Cat. no.
218	85	700	4542
218	85	850	4543
218	85	1000	4544
263	110	700	4545
263	110	850	4546
263	110	1000	4547
293	125	700	8131
293	125	850	8132
293	125	1000	8133
338	150	700	4548
338	150	850	4808
338	150	1000	4541
393	175	700	8134
393	175	850	8135
393	175	1000	8136
453	200	700	4551
453	200	850	4552
453	200	1000	4539
553	250	700	4554
553	250	850	4555
553	250	1000	4557

L	B	F1	Cat. no.
653	300	200	4558
653	300	300	4559
653	300	400	4560
653	300	500	4561
653	300	600	4562
653	300	700	4563
653	300	850	4564
653	300	1000	4565
783	365	200	4566
783	365	300	4567
783	365	400	4568
783	365	500	4569
783	365	600	4570
783	365	700	4571
783	365	850	4572
783	365	1000	4573
874	400	200	8236
874	400	300	8237
874	400	400	8238
874	400	500	8239
874	400	600	8240
874	400	700	8137
874	400	850	8138
874	400	1000	8139

# GAS SPRINGS

TYPE 22-10 E



## Conventional gas spring with extension speed ~ 0.3 m/s

All dimensions are in mm

L = Length +/- 2

B = Stroke

F1 = Spring force in Newtons

Force range: 150-1200 Newtons

End fittings: See pages 179-190.

1 kp = 9.80665 Newtons, 1 Newton = 0.10197 kp

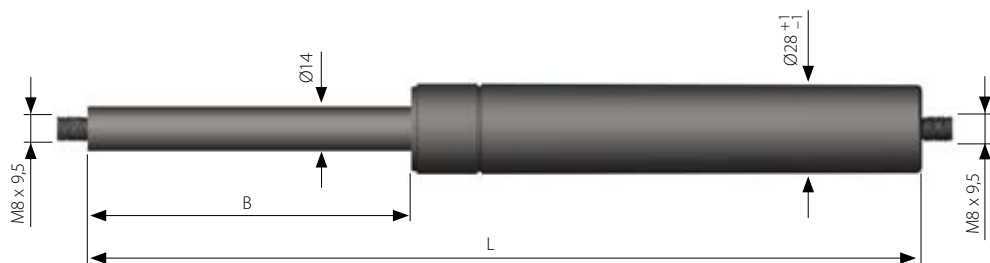
L	B	F1	Cat. no.
248	100	900	9220
248	100	1000	9221
248	100	1200	9222
348	150	900	9223
348	150	1000	9224
348	150	1200	9225
448	200	900	9226
448	200	1000	9227
448	200	1200	9228
548	250	900	9229
548	250	1000	9230
548	250	1200	9231
648	300	150	9232
648	300	200	9233
648	300	250	9234
648	300	300	9235
648	300	350	9236
648	300	400	9237
648	300	500	9238
648	300	600	9239
648	300	700	9240
648	300	800	9241
648	300	900	9242
648	300	1000	9243
648	300	1200	9244
748	350	150	9245
748	350	200	9246
748	350	250	9247
748	350	300	9248
748	350	350	9249
748	350	400	9250

L	B	F1	Cat. no.
748	350	500	9251
748	350	600	9252
748	350	700	9253
748	350	800	9254
748	350	900	9255
748	350	1000	9256
748	350	1200	9257
848	400	150	9258
848	400	200	9259
848	400	250	9260
848	400	300	9261
848	400	350	9262
848	400	400	9263
848	400	500	9264
848	400	600	9265
848	400	700	9266
848	400	800	9267
848	400	900	9268
848	400	1000	9269
848	400	1200	9270



# GAS SPRINGS

TYPE 28-14 L



## Conventional gas spring with extension speed $\sim 0.1$ m/s

All dimensions are in mm

$L$  = Length  $\pm 2$

$B$  = Stroke

$F1$  = Spring force in Newtons

Force range: 1200-2000 Newtons

End fittings: See pages 179–190.

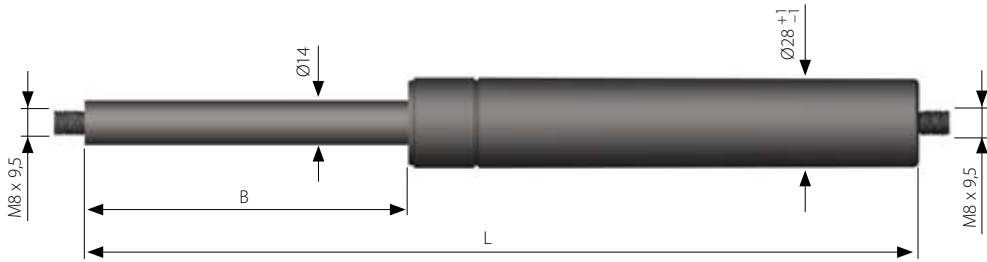
1 kp = 9.80665 Newtons, 1 Newton = 0.10197 kp

L	B	F1	Cat. no.
258	100	1200	4574
258	100	1600	4575
258	100	2000	4576
308	125	1200	8140
308	125	1600	8141
308	125	2000	8142
368	150	1200	4577
368	150	1600	4578
368	150	2000	4579
408	175	1200	8143
408	175	1600	8144
408	175	2000	8145
468	200	1200	4580
468	200	1600	4581
468	200	2000	4582

L	B	F1	Cat. no.
568	250	1200	4583
568	250	1600	4584
568	250	2000	4585
668	300	1200	4586
668	300	1600	4587
668	300	2000	4588
768	350	1200	8146
768	350	1600	8147
768	350	2000	8148
874	400	1200	4589
874	400	1600	4590
874	400	2000	4591

# GAS SPRINGS

TYPE 28-14 E



## Conventional gas spring with extension speed ~ 0.3 m/s

All dimensions are in mm

L = Length +/- 2

B = Stroke

F1 = Spring force in Newtons

Force range: 500-2000 Newtons

End fittings: See pages 179–190.

1 kp = 9.80665 Newtons, 1 Newton = 0.10197 kp

L	B	F1	Cat. no.
268	100	1300	9334
268	100	1500	9335
268	100	1700	9336
268	100	2000	9337
468	200	1300	9379
468	200	1500	9380
468	200	1700	9381
468	200	2000	9382
668	300	1300	9350
668	300	1500	9351
668	300	1700	9352
668	300	2000	9353
874	400	1300	9358
874	400	1500	9359
874	400	1700	9360
874	400	2000	9361

L	B	F1	Cat. no.
1070	500	500	9362
1070	500	600	9363
1070	500	700	9364
1070	500	800	9365
1070	500	900	9366
1070	500	1000	9367
1070	500	1100	9368
1070	500	1300	9369
1070	500	1500	9370
1070	500	1700	9371
1070	500	2000	9372