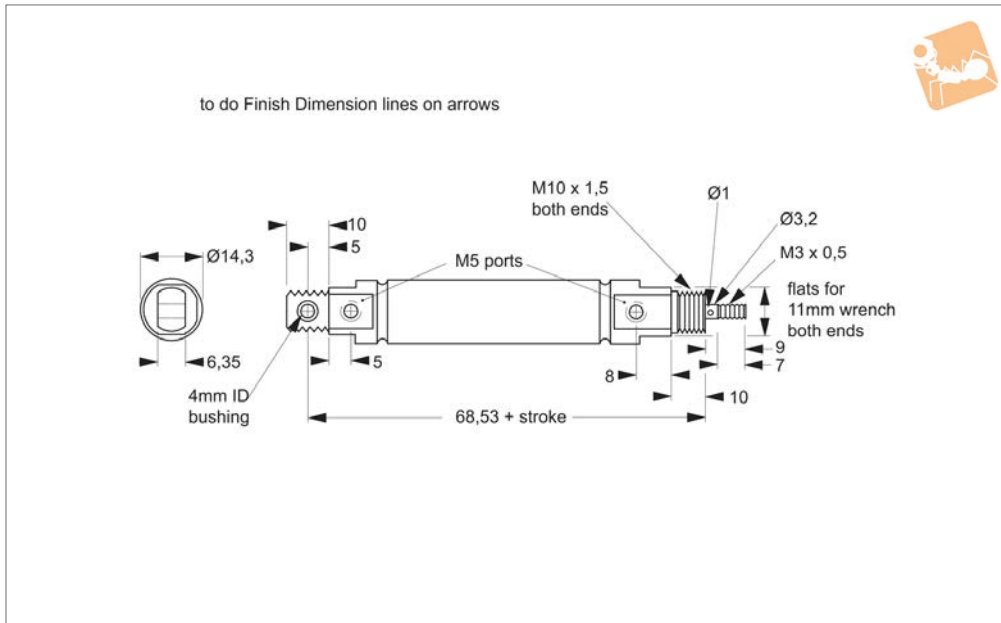




Anti - Stiction Air Cylinder - 9.3mm universal mounts

Cylinders



L4500

CYLINDERS

Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction. Corrosion resistant, no need for lubrication. Operating temperature range: -55°C to

+150°C

For applications operating below -20°C please add -ET to part number>

Suitable for vacuum actuation.

Piston area = 67.7mm²

Force output at max pressure on rear side = 47.4N

Force output at max pressure on rod side = 42N

Piston friction as % of load (without side load) = 1% - 2%.

Min pressure differential required for actuation = < 0.0015 MPa

Force factor rear side = 67.7N

Force factor rod side - 60N

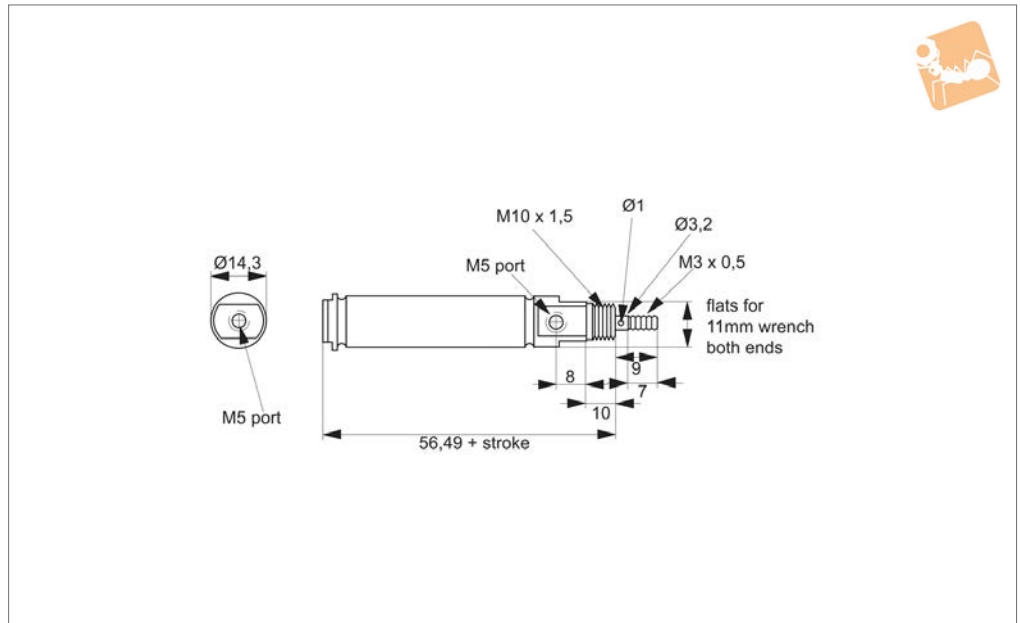
(factor x pressure (MPa) = force output (N))

*max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/mm	Weight g
L4500.012	9.3	12.5	81.03	0.7	1.16	2.2	36.39
L4500.025	9.3	25.0	93.53	0.7	1.16	2.2	41.08
L4500.037	9.3	37.5	106.03	0.7	1.16	2.2	45.76
L4500.050	9.3	50.0	118.53	0.7	1.16	2.2	50.45
L4500.075	9.3	75.0	143.53	0.7	1.16	2.2	59.83
L4500.100	9.3	100.0	168.53	0.7	1.16	2.2	69.20
L4500.125	9.3	125.0	193.53	0.7	1.16	2.2	78.58
L4500.150	9.3	150.0	218.53	0.7	1.16	2.2	87.95
L4500.175	9.3	175.0	243.53	0.7	1.16	2.2	97.33
L4500.200	9.3	200.0	268.53	0.7	1.16	2.2	106.70
L4500.225	9.3	225.0	293.53	0.7	1.16	2.2	116.08
L4500.250	9.3	250.0	318.53	0.7	1.16	2.2	125.45
L4500.275	9.3	275.0	343.53	0.7	1.16	2.2	134.83
L4500.300	9.3	300.0	368.53	0.7	1.16	2.2	144.20



L4502



Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction. Corrosion resistant, no need for lubrication. Operating temperature range: -55°C to

+150°C For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation. Piston area = 67.7mm² Force output at max pressure on rear side = 47.4N Force output at max pressure on rod side = 42N Piston friction as % of load (without side load) = 1% - 2%.

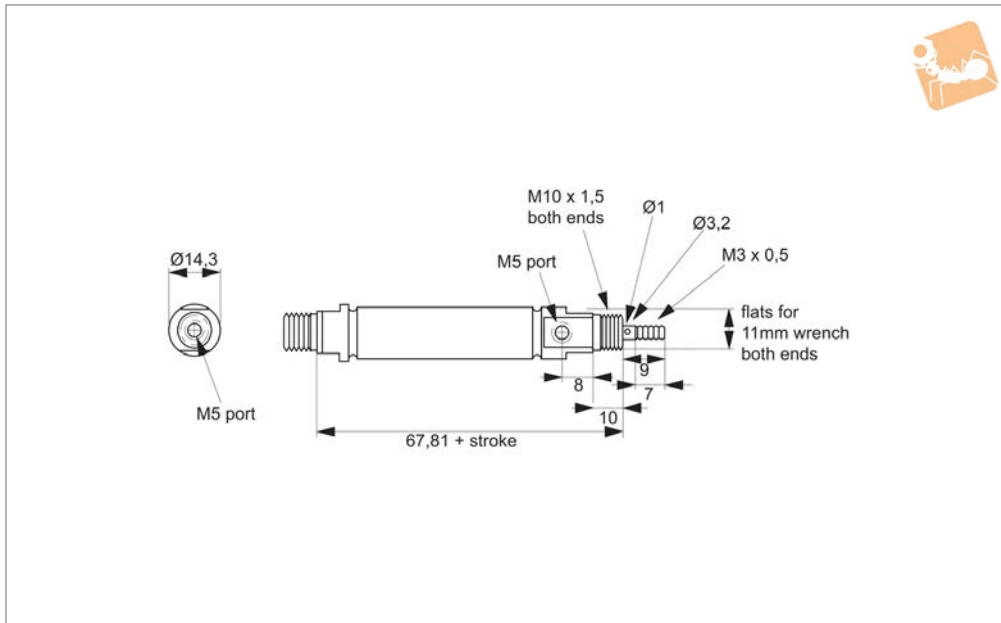
Min pressure differential required for actuation = < 0.0015 MPa Force factor rear side = 67.7N Force factor rod side = 60N (factor x pressure (MPa) = force output (N)) *max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/mm	Weight g
L4502.012	9.3	12.5	68.99	0.7	1.16	2.2	36.39
L4502.025	9.3	25.0	81.49	0.7	1.16	2.2	41.08
L4502.037	9.3	37.5	93.99	0.7	1.16	2.2	45.76
L4502.050	9.3	50.0	106.49	0.7	1.16	2.2	50.45
L4502.075	9.3	75.0	131.49	0.7	1.16	2.2	59.83
L4502.100	9.3	100.0	156.49	0.7	1.16	2.2	69.20
L4502.125	9.3	125.0	181.49	0.7	1.16	2.2	78.58
L4502.150	9.3	150.0	206.49	0.7	1.16	2.2	87.95
L4502.175	9.3	175.0	231.49	0.7	1.16	2.2	97.33
L4502.200	9.3	200.0	256.49	0.7	1.16	2.2	106.70
L4502.225	9.3	225.0	281.49	0.7	1.16	2.2	116.08
L4502.250	9.3	250.0	306.49	0.7	1.16	2.2	125.45
L4502.275	9.3	275.0	331.49	0.7	1.16	2.2	134.83
L4502.300	9.3	300.0	356.49	0.7	1.16	2.2	144.20



Anti - Stiction Air Cylinder - 9.3mm front & rear stud mount

Cylinders



L4504

CYLINDERS

Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction. Corrosion resistant, no need for lubrication. Operating temperature range: -55°C to

+150°C

For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation.

Piston area = 67.7mm²

Force output at max pressure on rear side = 47.4N

Force output at max pressure on rod side = 42N

Piston friction as % of load (without side

load) = 1% - 2%.

Min pressure differential required for actuation = < 0.0015 MPa

Force factor rear side = 67.7N

Force factor rod side - 60N

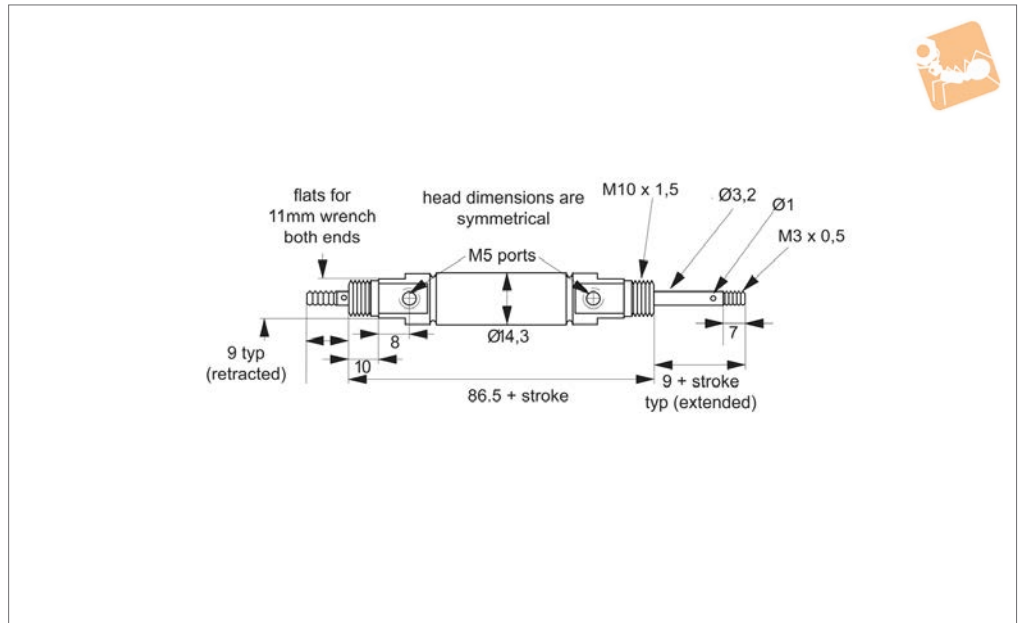
(factor x pressure (MPa) = force output (N))

* max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/mm	Weight g
L4504.012	9.3	12.5	80.31	0.7	1.16	2.2	36.39
L4504.025	9.3	25.0	92.81	0.7	1.16	2.2	41.08
L4504.037	9.3	37.5	105.31	0.7	1.16	2.2	45.76
L4504.050	9.3	50.0	117.81	0.7	1.16	2.2	50.45
L4504.075	9.3	75.0	142.81	0.7	1.16	2.2	59.83
L4504.100	9.3	100.0	167.81	0.7	1.16	2.2	69.20
L4504.125	9.3	125.0	192.81	0.7	1.16	2.2	78.58
L4504.150	9.3	150.0	217.81	0.7	1.16	2.2	87.95
L4504.175	9.3	175.0	242.81	0.7	1.16	2.2	97.33
L4504.200	9.3	200.0	267.81	0.7	1.16	2.2	106.70
L4504.225	9.3	225.0	292.81	0.7	1.16	2.2	116.08
L4504.250	9.3	250.0	317.81	0.7	1.16	2.2	125.45
L4504.275	9.3	275.0	342.81	0.7	1.16	2.2	134.83
L4504.300	9.3	300.0	367.81	0.7	1.16	2.2	144.20



L4506



Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction. Corrosion resistant, no need for lubrication. Operating temperature range: -55°C to

+150°C

For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation.

Piston area = 67.7mm²

Force output at max pressure on rear side = 47.4N

Force output at max pressure on rod side = 42N

Piston friction as % of load (without side

load) = 1% - 2%.

Min pressure differential required for actuation = < 0.0015 MPa

Force factor rear side = 67.7N

Force factor rod side = 60N

(factor x pressure (MPa) = force output (N))

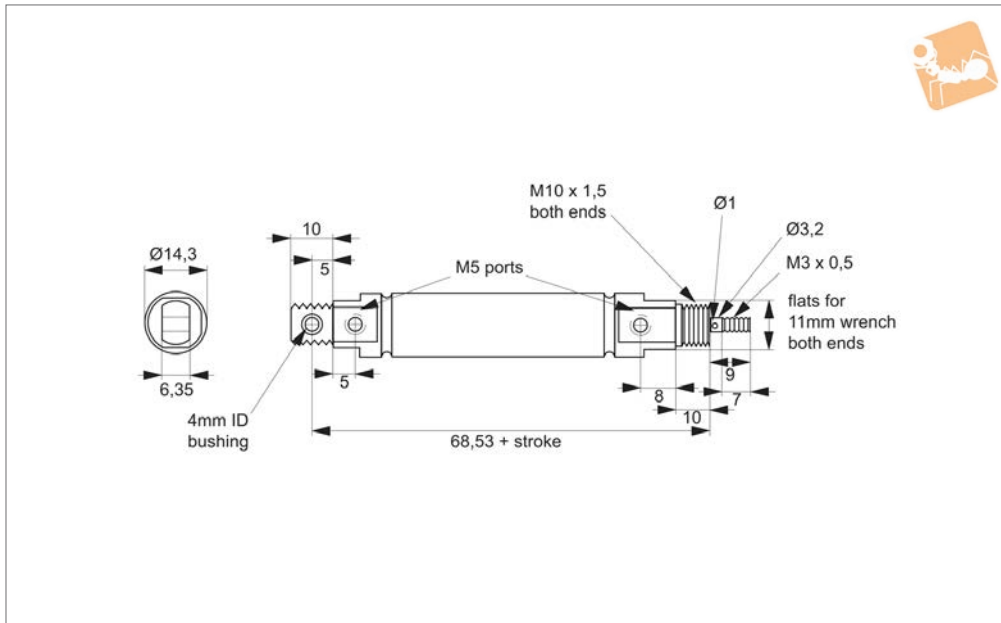
* max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/mm	Weight g
L4506.012	9.3	12.5	99	0.7	1.16	2.2	36.39
L4506.025	9.3	25.0	111.5	0.7	1.16	2.2	41.08
L4506.037	9.3	37.5	124	0.7	1.16	2.2	45.76
L4506.050	9.3	50.0	136.5	0.7	1.16	2.2	50.45
L4506.075	9.3	75.0	161.5	0.7	1.16	2.2	59.83
L4506.100	9.3	100.0	186.5	0.7	1.16	2.2	69.20
L4506.125	9.3	125.0	211.5	0.7	1.16	2.2	78.58
L4506.150	9.3	150.0	236.5	0.7	1.16	2.2	87.95
L4506.175	9.3	175.0	261.5	0.7	1.16	2.2	97.33
L4506.200	9.3	200.0	286.5	0.7	1.16	2.2	106.70
L4506.225	9.3	225.0	311.5	0.7	1.16	2.2	116.08
L4506.250	9.3	250.0	336.5	0.7	1.16	2.2	125.45
L4506.275	9.3	275.0	361.5	0.7	1.16	2.2	134.83
L4506.300	9.3	300.0	386.5	0.7	1.16	2.2	144.20



Anti - Stiction Air Cylinder - 9.3mm

universal mount, air extend, spring return



L4508

CYLINDERS

Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction. Corrosion resistant, no need for lubrication. Operating temperature range: -55°C to

+150°C

For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation.

Piston area = 67.7mm²

Force output at max pressure on rear side = 47.4N

Force output at max pressure on rod side = 42N

Piston friction as % of load (without side

load) = 1% - 2%.

Min pressure differential required for actuation = < 0.0015 MPa

Force factor rear side = 67.7N

Force factor rod side - 60N

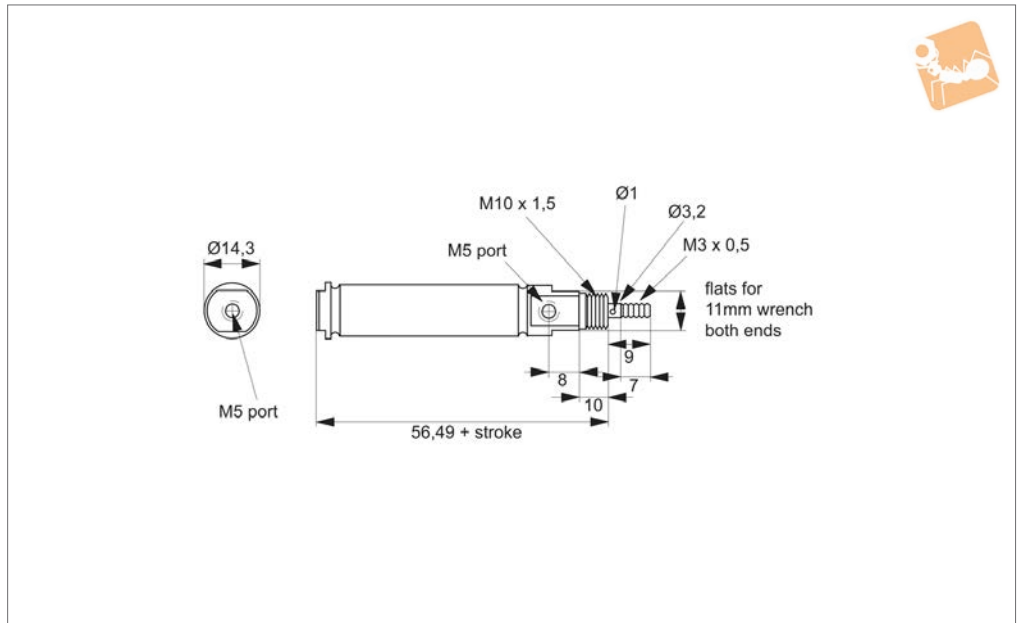
(factor x pressure (MPa) = force output (N))

* max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston SL/min max.	Leak rate by rod SL/mm max.	Reset spring force rod extended N	Reset spring force rod retracted N	Weight g
L4508.012	9,3	12,5	81,03	0,7	1,16	2,2	0,8	0,5	36,39
L4508.025	9,3	25,0	93,53	0,7	1,16	2,2	0,8	0,4	41,08
L4508.037	9,3	37,5	106,03	0,7	1,16	2,2	0,8	0,2	45,76



L4510



Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction. Corrosion resistant, no need for lubrication.
Operating temperature range: -55°C to

+150°C. For applications operating below -20°C please add -ET to part number.
Suitable for vacuum actuation.
Piston area = 67.7mm²
Force output at max pressure on rear side = 47.4N
Force output at max pressure on rod side = 42N
Piston friction as % of load (without side load) = 1% - 2%.

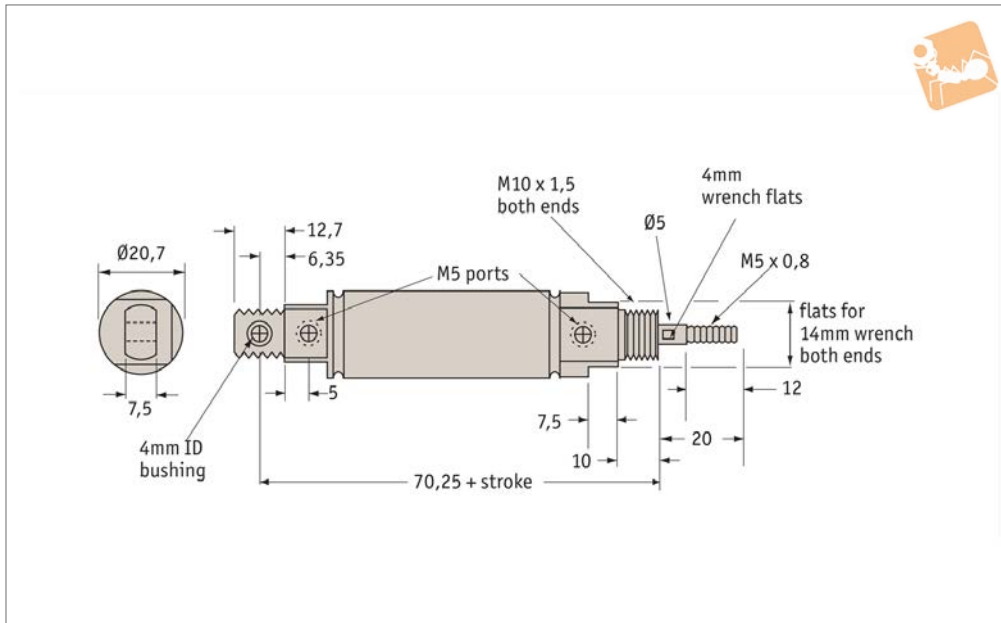
Min pressure differential required for actuation = < 0.0015 MPa
Force factor rear side = 67.7N
Force factor rod side = 60N
(factor x pressure (MPa) = force output (N))
*max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston SL/min max.	Leak rate by rod SL/mm max.	Reset spring force rod extended N	Reset spring force rod retracted N	Weight g
L4510.012	9,3	12,5	68,99	0,7	1,16	2,2	0,8	0,5	36,39
L4510.025	9,3	25,0	81,49	0,7	1,16	2,2	0,8	0,4	41,08
L4510.037	9,3	37,5	93,99	0,7	1,16	2,2	0,8	0,2	45,76



Anti-Stiction Air Cylinder - universal mount

Cylinders



L4520

CYLINDERS

Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless Steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

Operating temp range: -55°C to +150°C.
For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation.
Piston area = 198mm².
Force output at max pressure on rear side = 139N.
Force output at max pressure on rod side = 125N.
Piston friction as % of load (without side

load) = 1% - 2%.
Min pressure differential required for actuation = <0.0015 MPa.
Force factor rear side = 198N.
Force factor rod side = 178N.
(factor x pressure (MPa) = force output (N)).
*max leak measured at pressure of 0.34 MPa.

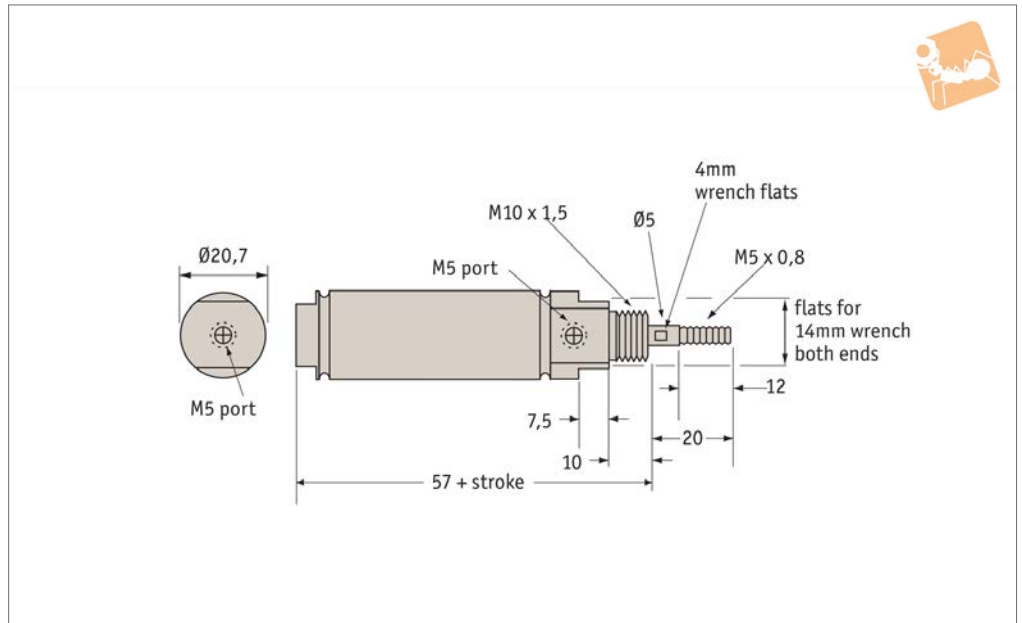
Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/min	Weight g
L4520.012	15.9	12.5	82.75	0.7	1.39	2.6	72.38
L4520.025	15.9	25.0	95.25	0.7	1.39	2.6	80.15
L4520.037	15.9	37.5	107.75	0.7	1.39	2.6	87.93
L4520.050	15.9	50.0	120.25	0.7	1.39	2.6	95.70
L4520.075	15.9	75.0	145.25	0.7	1.39	2.6	111.25
L4520.100	15.9	100.0	170.25	0.7	1.39	2.6	126.80
L4520.125	15.9	125.0	195.25	0.7	1.39	2.6	142.35
L4520.150	15.9	150.0	220.50	0.7	1.39	2.6	157.90
L4520.175	15.9	175.0	245.25	0.7	1.39	2.6	173.45
L4520.200	15.9	200.0	270.25	0.7	1.39	2.6	189.00
L4520.225	15.9	225.0	295.25	0.7	1.39	2.6	204.55
L4520.250	15.9	250.0	320.25	0.7	1.39	2.6	220.10
L4520.275	15.9	275.0	345.25	0.7	1.39	2.6	235.65
L4520.300	15.9	300.0	370.25	0.7	1.39	2.6	251.20



CYLINDERS



L4522



Material

Carbon/graphite piston. Stainless Steel rod (AISI 303). Stainless Steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

Operating temp range: -55°C to +150°C.
For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation.
Piston area = 198mm².
Force output at max pressure on rear side = 139N.
Force output at max pressure on rod side = 125N.
Piston friction as % of load (without side

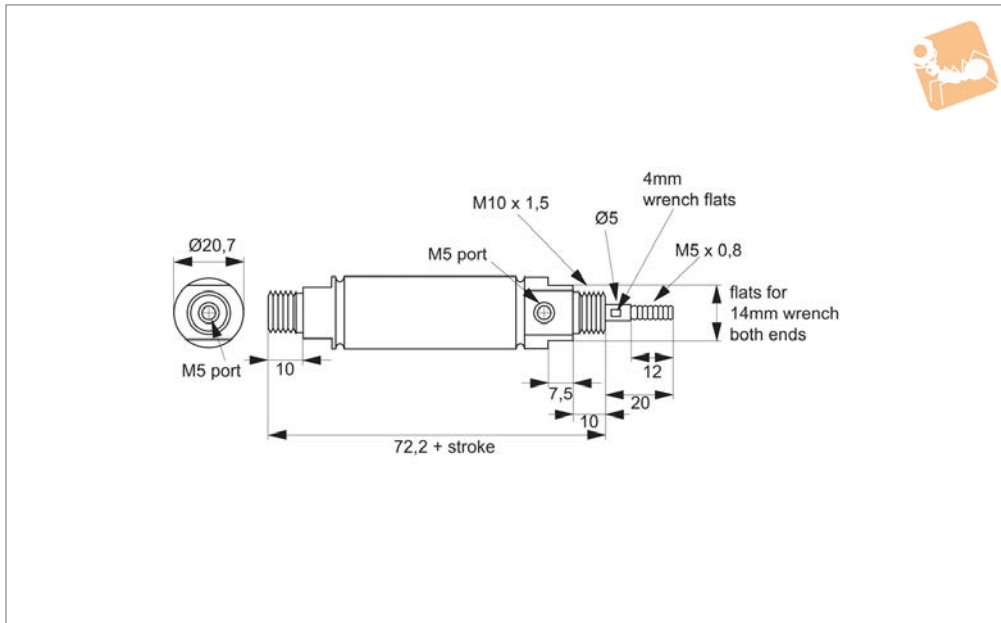
load) = 1% - 2%.
Min pressure differential required for actuation = <0.0015 MPa.
Force factor rear side = 198N.
Force factor rod side = 178N.
(factor x pressure (MPa) = force output (N)).
*max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/min	Weight g
L4522.012	15.9	12.5	69.5	0.7	1.39	2.6	72.38
L4522.025	15.9	25.0	82	0.7	1.39	2.6	80.15
L4522.037	15.9	37.5	94.5	0.7	1.39	2.6	87.93
L4522.050	15.9	50.0	107	0.7	1.39	2.6	95.70
L4522.075	15.9	75.0	132	0.7	1.39	2.6	111.25
L4522.100	15.9	100.0	157	0.7	1.39	2.6	126.80
L4522.125	15.9	125.0	182	0.7	1.39	2.6	142.35
L4522.150	15.9	150.0	207	0.7	1.39	2.6	157.90
L4522.175	15.9	175.0	232	0.7	1.39	2.6	173.45
L4522.200	15.9	200.0	257	0.7	1.39	2.6	189.00
L4522.225	15.9	225.0	282	0.7	1.39	2.6	204.55
L4522.250	15.9	250.0	307	0.7	1.39	2.6	220.10
L4522.275	15.9	275.0	332	0.7	1.39	2.6	235.65
L4522.300	15.9	300.0	357	0.7	1.39	2.6	251.20



Anti-Stiction Air Cylinder - 15.9mm front & rear stud mount

Cylinders



L4524

CYLINDERS

Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

Operating temp range: -55°C to +150°C.
For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation. Piston area = 198mm².
Force output at max pressure on rear side = 139N.
Force output at max pressure on rod side = 125N.
Piston friction as % of load (without side load) = 1% - 2%.

Min pressure differential required for actuation = <0.0015 MPa.
Force factor rear side = 198N.
Force factor rod side = 178N.
(factor x pressure (MPa) = force output (N)).
*max leak measured at pressure of 0.34 MPa.

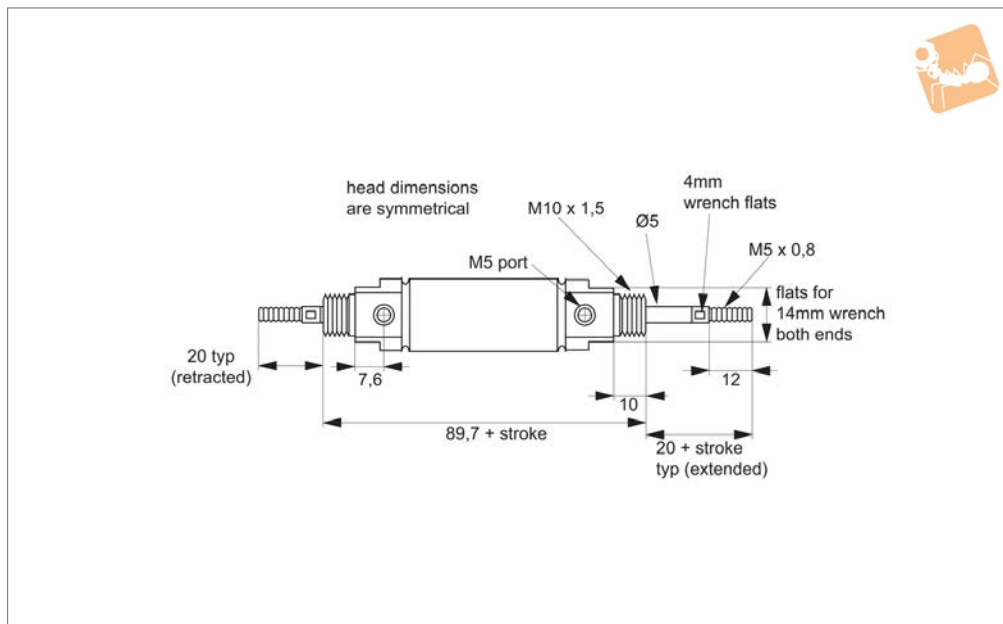
Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/min	Weight g
L4524.012	15.9	12.5	84.7	0.7	1.39	2.6	72.38
L4524.025	15.9	25.0	97.2	0.7	1.39	2.6	80.15
L4524.037	15.9	37.5	109.7	0.7	1.39	2.6	87.93
L4524.050	15.9	50.0	122.2	0.7	1.39	2.6	95.70
L4524.075	15.9	75.0	147.2	0.7	1.39	2.6	111.25
L4524.100	15.9	100.0	172.2	0.7	1.39	2.6	126.80
L4524.125	15.9	125.0	197.2	0.7	1.39	2.6	142.35
L4524.150	15.9	150.0	222.2	0.7	1.39	2.6	157.90
L4524.175	15.9	175.0	247.2	0.7	1.39	2.6	173.45
L4524.200	15.9	200.0	272.2	0.7	1.39	2.6	189.00
L4524.225	15.9	225.0	297.2	0.7	1.39	2.6	204.55
L4524.250	15.9	250.0	322.2	0.7	1.39	2.6	220.10
L4524.275	15.9	275.0	347.2	0.7	1.39	2.6	235.65
L4524.300	15.9	300.0	372.2	0.7	1.39	2.6	251.20



CYLINDERS



L4526



Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

Operating temp range: -55°C to +150°C.
For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation. Piston area = 198mm².
Force output at max pressure on rear side = 139N.
Force output at max pressure on rod side = 125N.
Piston friction as % of load (without side load) = 1% - 2%.

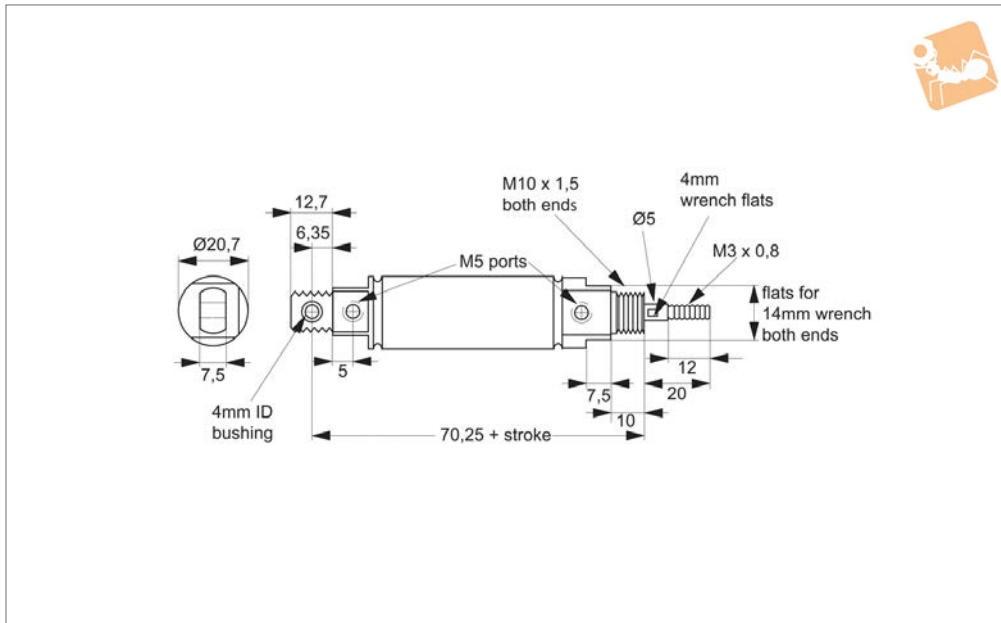
Min pressure differential required for actuation = <0.0015 MPa.
Force factor rear side = 198N.
Force factor rod side = 178N.
(factor x pressure (MPa) = force output (N)).
*max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/min	Weight g
L4526.012	15.9	12.5	102.2	0.7	1.39	2.6	91.13
L4526.025	15.9	25.0	114.7	0.7	1.39	2.6	101.80
L4526.037	15.9	37.5	127.2	0.7	1.39	2.6	112.48
L4526.050	15.9	50.0	139.7	0.7	1.39	2.6	123.15
L4526.075	15.9	75.0	164.7	0.7	1.39	2.6	144.50
L4526.100	15.9	100.0	189.7	0.7	1.39	2.6	165.85
L4526.125	15.9	125.0	214.7	0.7	1.39	2.6	187.20
L4526.150	15.9	150.0	239.7	0.7	1.39	2.6	208.55
L4526.175	15.9	175.0	264.7	0.7	1.39	2.6	229.90
L4526.200	15.9	200.0	289.7	0.7	1.39	2.6	251.25
L4526.225	15.9	225.0	314.7	0.7	1.39	2.6	272.60
L4526.250	15.9	250.0	339.7	0.7	1.39	2.6	293.95
L4526.275	15.9	275.0	364.7	0.7	1.39	2.6	315.30
L4526.300	15.9	300.0	389.7	0.7	1.39	2.6	336.65



Anti-Stiction Air Cylinder - 15.9mm

universal mount, air extended, spring return



L4528

CYLINDERS

Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

tion.
Operating temp range: -55°C to +150°C.
Suitable for vacuum actuation./symbol
Piston area = 198mm².
Force output at max pressure on rear side = 139N.
Force output at max pressure on rod side = 125N.
Piston friction as % of load (without side

load) = 1% - 2%.
Min pressure differential required for actuation = $\lt; 0.0015 \text{ MPa}$. Force factor rear side = 198N. Force factor rod side = 178N. (factor x pressure (MPa) = force output (N)).
*max leak measured at pressure of 0.34 MPa.

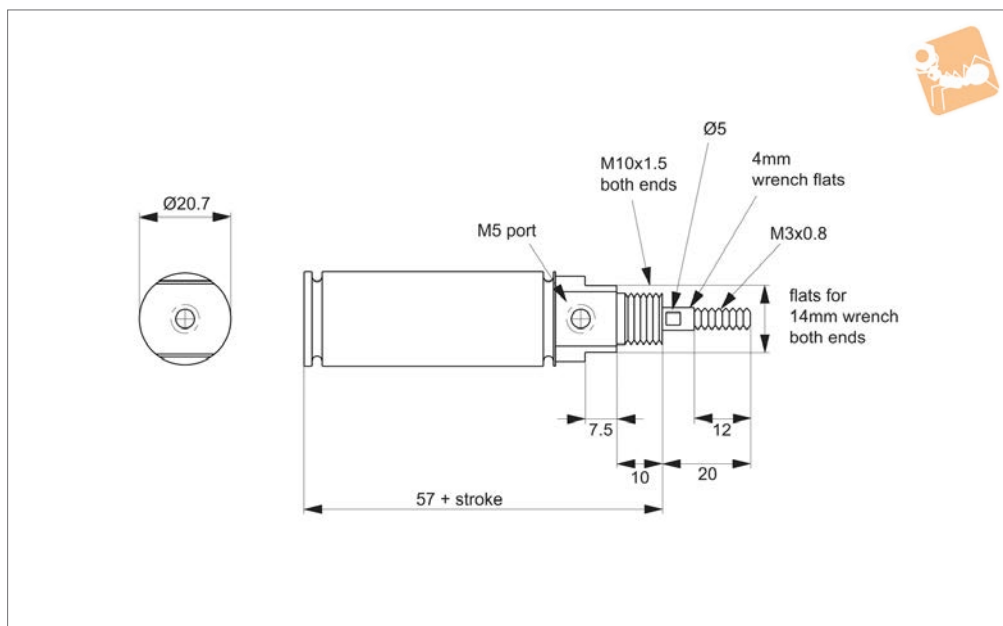
Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston SL/min max.	Leak rate by rod SL/mm max.	Reset spring force rod extended N	Reset spring force rod retracted N	Weight g
L4528.012	15,9	12,5	82,75	0,7	139	125	1,1	1,0	72,38
L4528.025	15,9	25,0	95,25	0,7	139	125	1,1	0,9	80,15
L4528.037	15,9	37,5	107,75	0,7	139	125	1,1	0,8	87,93
L4528.050	15,9	50,0	120,25	0,7	139	125	1,1	0,7	95,70



CYLINDERS



L4530



Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

Operating temp range: -55°C to +150°C.
For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation.
Piston area = 198mm².
Force output at max pressure on rear side = 139N.
Force output at max pressure on rod side = 125N.
Piston friction as % of load (without side

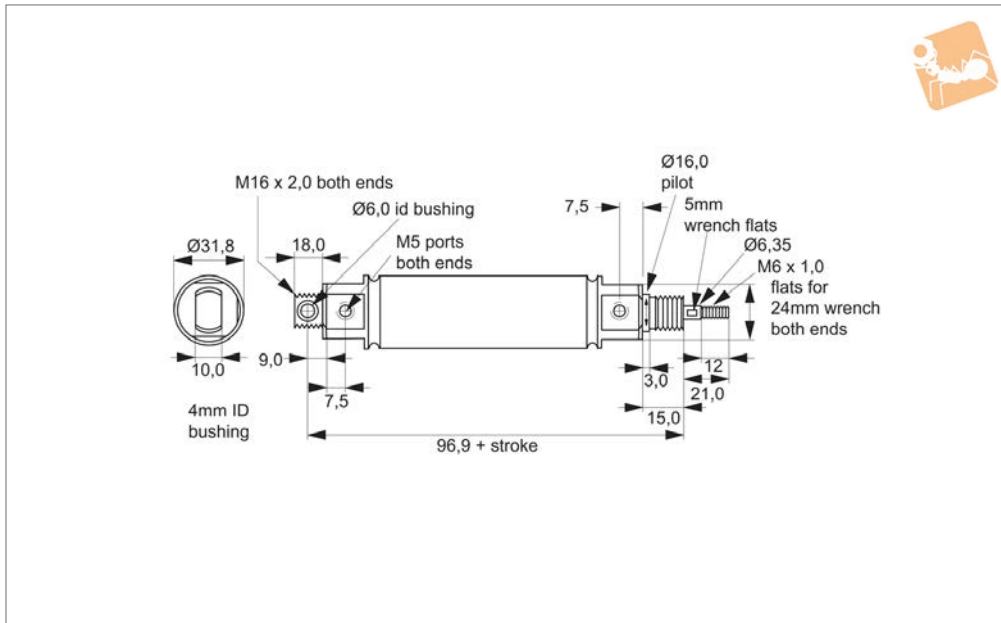
load) = 1% - 2%.
Min pressure differential required for actuation = <0.0015 MPa.
Force factor rear side = 198N.
Force factor rod side = 178N.
(factor x pressure (MPa) = force output (N)).
* max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston SL/min max.	Leak rate by rod SL/mm max.	Reset spring force rod extended N	Reset spring force rod retracted N	Weight g
L4530.012	15,9	12,5	69,5	0,7	139	125	1,1	1,0	72,38
L4530.025	15,9	25	82	0,7	139	125	1,1	0,9	80,15
L4530.037	15,9	37,5	94,5	0,7	139	125	1,1	0,8	87,93
L4530.050	15,9	50	107	0,7	139	125	1,1	0,7	95,70



Anti-Stiction Air Cylinder - 24mm universal mount

Cylinders



L4540

CYLINDERS

Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

Operating temp range: -55°C to +150°C.
For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation.
Piston area = 452.5mm².
Force output at max pressure on rear side = 316.6N.
Force output at max pressure on rod side = 294.5N.
Piston friction as % of load (without side

load) = 1% - 2%.
Min pressure differential required for actuation = <0.0015 MPa.
Force factor rear side = 452.5N.
Force factor rod side = 420.8N.
(factor x pressure (MPa) = force output (N)).
*max leak measured at pressure of 0.34 MPa.

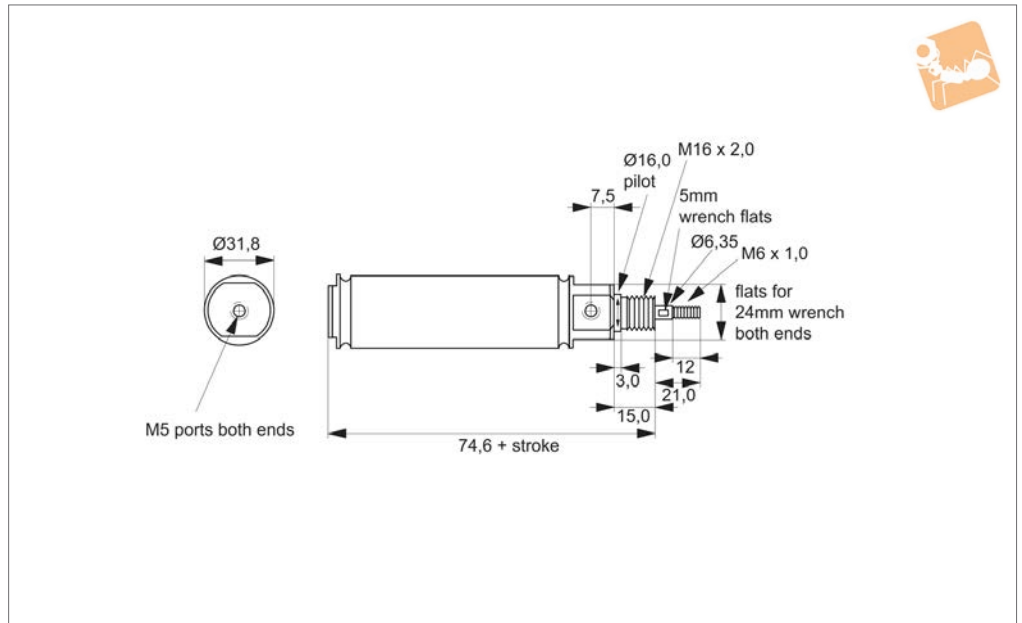
Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/min	Weight g
L4540.012	24.0	12.5	109.4	0.7	2.2	2.6	172.49
L4540.025	24.0	25.0	121.9	0.7	2.2	2.6	187.81
L4540.037	24.0	37.5	134.4	0.7	2.2	2.6	203.12
L4540.050	24.0	50.0	146.9	0.7	2.2	2.6	218.43
L4540.075	24.0	75.0	171.9	0.7	2.2	2.6	249.06
L4540.100	24.0	100.0	196.9	0.7	2.2	2.6	279.68
L4540.125	24.0	125.0	221.9	0.7	2.2	2.6	310.31
L4540.150	24.0	150.0	246.9	0.7	2.2	2.6	340.93
L4540.175	24.0	175.0	271.9	0.7	2.2	2.6	371.56
L4540.200	24.0	200.0	296.9	0.7	2.2	2.6	402.18
L4540.225	24.0	225.0	321.9	0.7	2.2	2.6	432.81
L4540.250	24.0	250.0	346.9	0.7	2.2	2.6	463.43
L4540.275	24.0	275.0	371.9	0.7	2.2	2.6	494.06
L4540.300	24.0	300.0	396.9	0.7	2.2	2.6	524.68



CYLINDERS



L4542



Material

Carbon/graphite piston. Stainless Steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

Operating temp range: -55°C to +150°C.
For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation.
Piston area = 452.5mm².
Force output at max pressure on rear side = 316.6N.
Force output at max pressure on rod side = 294.5N.
Piston friction as % of load (without side

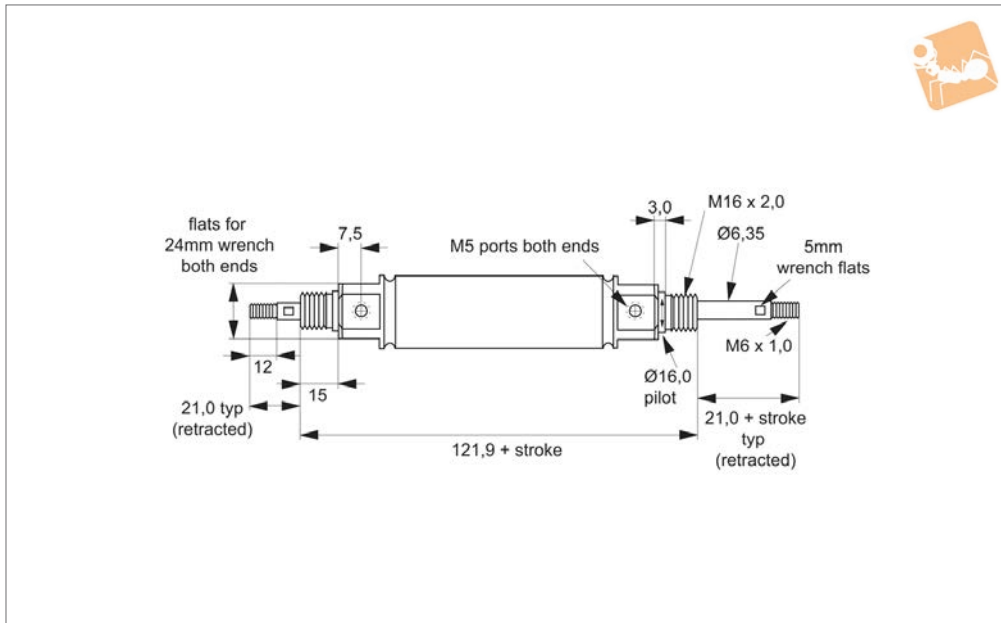
load) = 1% - 2%.
Min pressure differential required for actuation = <0.0015 MPa.
Force factor rear side = 452.5N.
Force factor rod side = 420.8N.
(factor x pressure (MPa) = force output (N)).
*max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/min	Weight g
L4542.012	24.0	12.5	87.1	0.7	2.2	2.6	172.49
L4542.025	24.0	25.0	99.6	0.7	2.2	2.6	187.81
L4542.037	24.0	37.5	112.1	0.7	2.2	2.6	203.12
L4542.050	24.0	50.0	124.6	0.7	2.2	2.6	218.43
L4542.075	24.0	75.0	149.6	0.7	2.2	2.6	249.06
L4542.100	24.0	100.0	174.6	0.7	2.2	2.6	279.68
L4542.125	24.0	125.0	199.6	0.7	2.2	2.6	310.31
L4542.150	24.0	150.0	224.6	0.7	2.2	2.6	340.93
L4542.175	24.0	175.0	249.6	0.7	2.2	2.6	371.56
L4542.200	24.0	200.0	274.6	0.7	2.2	2.6	402.18
L4542.225	24.0	225.0	299.6	0.7	2.2	2.6	432.81
L4542.250	24.0	250.0	324.6	0.7	2.2	2.6	463.43
L4542.275	24.0	275.0	349.6	0.7	2.2	2.6	494.06
L4542.300	24.0	300.0	374.6	0.7	2.2	2.6	524.68



Anti-Stiction Air Cylinder - 24mm double rod end

Cylinders



L4544

CYLINDERS

Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless Steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

Operating temp range: -55°C to +150°C.
For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation.
Piston area = 452.5mm².
Force output at max pressure on rear side = 316.6N.
Force output at max pressure on rod side = 294.5N.
Piston friction as % of load (without side

load) = 1% - 2%.
Min pressure differential required for actuation = <0.0015 MPa.
Force factor rear side = 452.5N.
Force factor rod side = 420.8N.
(factor x pressure (MPa) = force output (N)).
*max leak measured at pressure of 0.34 MPa.

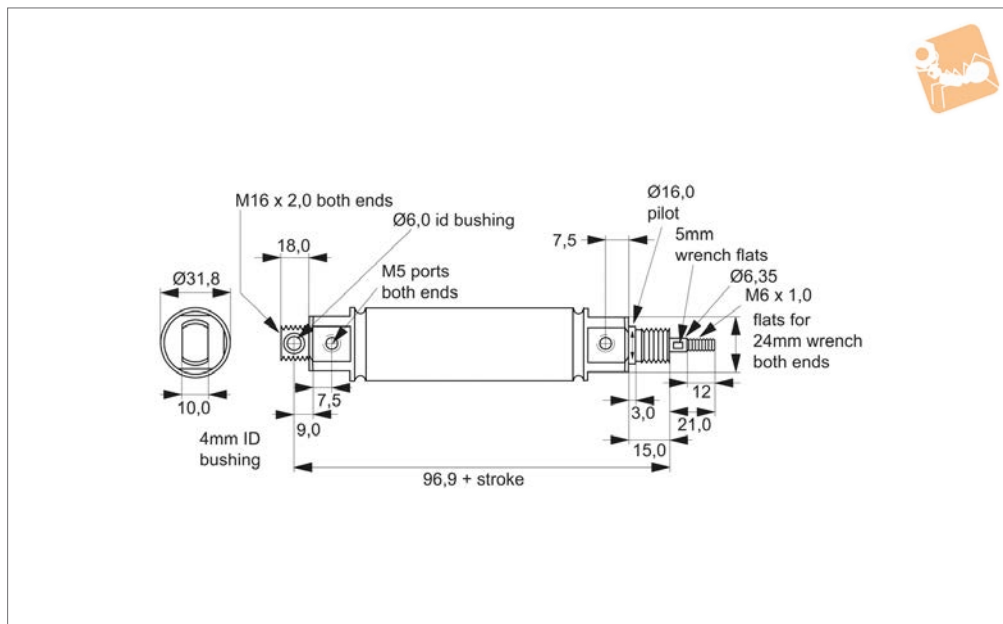
Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/min	Weight g
L4544.012	24.0	12.5	134.4	0.7	2.2	2.6	223.4
L4544.025	24.0	25.0	146.9	0.7	2.2	2.6	241.9
L4544.037	24.0	37.5	159.4	0.7	2.2	2.6	260.4
L4544.050	24.0	50.0	171.9	0.7	2.2	2.6	278.9
L4544.075	24.0	75.0	196.9	0.7	2.2	2.6	315.9
L4544.100	24.0	100.0	221.9	0.7	2.2	2.6	352.9
L4544.125	24.0	125.0	246.9	0.7	2.2	2.6	389.9
L4544.150	24.0	150.0	271.9	0.7	2.2	2.6	426.9
L4544.175	24.0	175.0	296.9	0.7	2.2	2.6	463.9
L4544.200	24.0	200.0	321.9	0.7	2.2	2.6	500.9
L4544.225	24.0	225.0	346.9	0.7	2.2	2.6	537.9
L4544.250	24.0	250.0	371.9	0.7	2.2	2.6	574.9
L4544.275	24.0	275.0	396.9	0.7	2.2	2.6	611.9



CYLINDERS



L4546



Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

Operating temp range: -55°C to +150°C.
For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation.
Piston area = 452.5mm².
Force output at max pressure on rear side = 316.6N.
Force output at max pressure on rod side = 294.5N.
Piston friction as % of load (without side

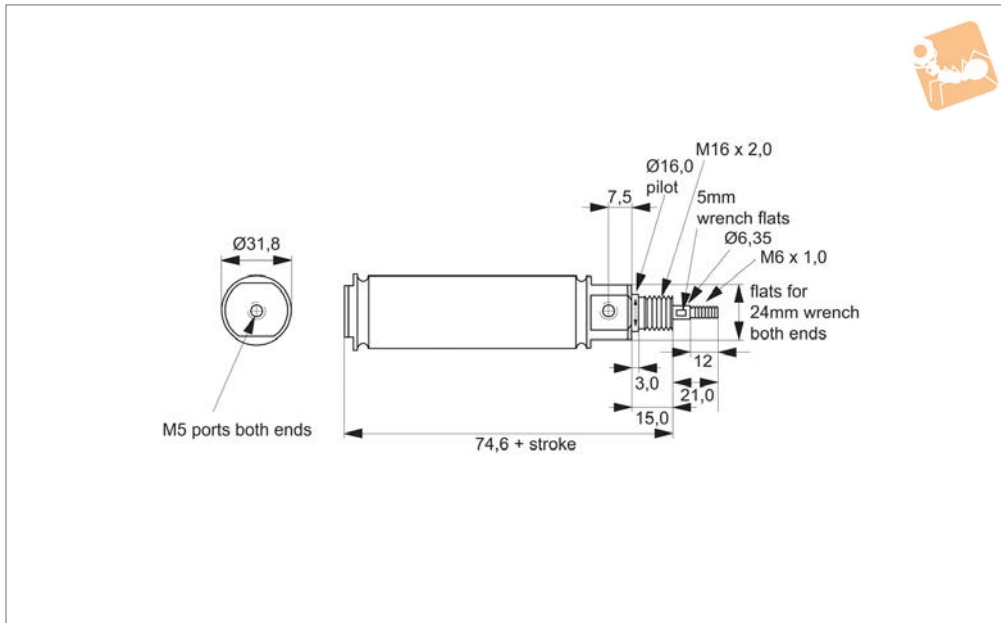
load) = 1% - 2%.
Min pressure differential required for actuation = <0.0015 MPa.
Force factor rear side = 452.5N.
Force factor rod side = 420.8N.
(factor x pressure (MPa) = force output (N)).
* max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston SL/min max.	Leak rate by rod SL/mm max.	Reset spring force rod extended N	Reset spring force rod retracted N	Weight g
L4546.012	24,0	12,5	109,4	0,7	2,2	2,6	1,44	1,34	172,49
L4546.025	24,0	25,0	121,9	0,7	2,2	2,6	1,44	1,26	187,81
L4546.037	24,0	37,5	134,4	0,7	2,2	2,6	1,44	1,17	203,12
L4546.050	24,0	50,0	146,9	0,7	2,2	2,6	1,44	1,09	218,43



Anti-Stiction Air Cylinder - 24mm

front stud mount - air extend spring return



L4548

CYLINDERS

Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

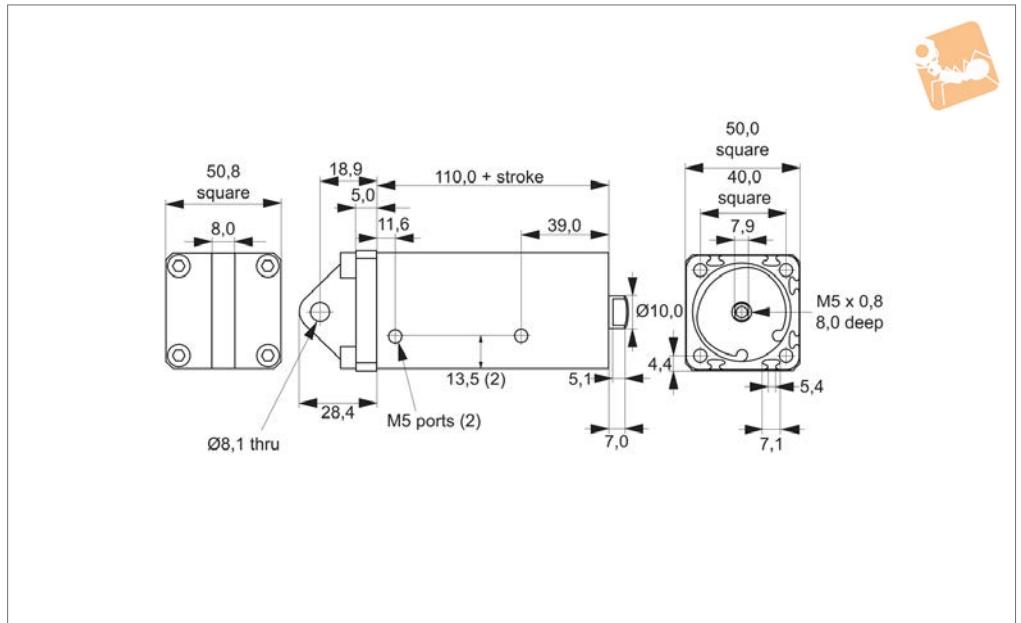
Operating temp range: -55°C to +150°C.
For applications operating below -20°C please add -ET to part number. Suitable for vacuum actuation.
Piston area = 452.5mm².
Force output at max pressure on rear side = 316.6N.
Force output at max pressure on rod side = 294.5N.
Piston friction as % of load (without side

load) = 1% - 2%.
Min pressure differential required for actuation = <0.0015 MPa.
Force factor rear side = 452.5N.
Force factor rod side = 420.8N.
(factor x pressure (MPa) = force output (N)).
* max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston SL/min max.	Leak rate by rod SL/mm max.	Reset spring force rod extended N	Reset spring force rod retracted N	Weight g
L4548.012	24,0	12,5	87,1	0,7	2,2	2,6	1,44	1,34	172,49
L4548.025	24,0	25,0	99,6	0,7	2,2	2,6	1,44	1,26	187,81
L4548.037	24,0	37,5	112,1	0,7	2,2	2,6	1,44	1,17	203,12
L4548.050	24,0	50,0	124,6	0,7	2,2	2,6	1,44	1,09	218,43



L4556



Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

Operating temp range: -55°C to +150°C.

For applications operating below -20°C please add -ET to part number. NOT suitable for vacuum actuation.

Piston area = 830mm².

Force output at max pressure on rear side = 581N.

Force output at max pressure on rod side = 526N.

Piston friction as % of load (without side

load) = 1% - 2%.

Min pressure differential required for actuation = $\leq 0.0035 \text{ MPa}$.

Force factor rear side = 830N.

Force factor rod side = 751N.

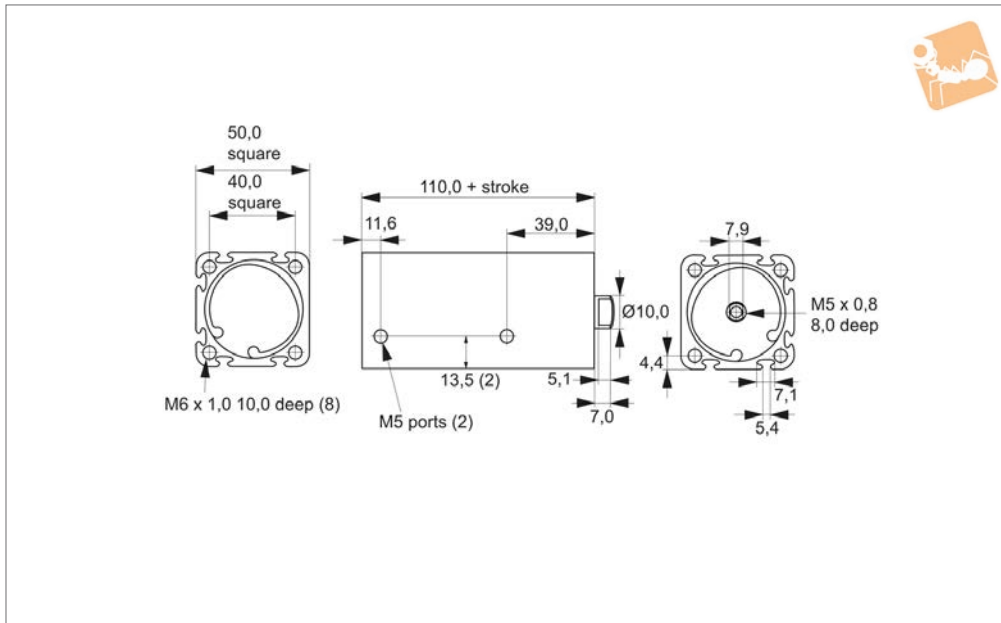
(factor x pressure (MPa) = force output (N)).

* max leak measured at pressure of 0.34 MPa./symbol

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/min	Weight g
L4556.012	32.5	12.5	122.5	0.7	2.2	2.0	661.75
L4556.025	32.5	25.0	135	0.7	2.2	2.0	707.50
L4556.050	32.5	50.0	160	0.7	2.2	2.0	799.00
L4556.075	32.5	75.0	185	0.7	2.2	2.0	890.50
L4556.100	32.5	100.0	210	0.7	2.2	2.0	982.00



Anti-Stiction Air Cylinder - 32mm front/rear mount



L4558

CYLINDERS

Material

Carbon/graphite piston. Stainless steel rod (AISI 303). Stainless steel outer tube (AISI 304). Nickel plated aluminium cylinder heads and piston/rod coupling. Graphite filled bronze pivot bushing.

Technical Notes

Ultra low friction.
Corrosion resistant, no need for lubrication.

Operating temp range: -55°C to +150°C.

For applications operating below -20°C please add -ET to part number. NOT suitable for vacuum actuation.

Piston area = 830mm².

Force output at max pressure on rear side = 581N.

Force output at max pressure on rod side = 526N.

Piston friction as % of load (without side

load) = 1% - 2%.

Min pressure differential required for actuation = <0.0035 MPa.

Force factor rear side = 830N.

Force factor rod side = 751N.

(factor x pressure (MPa) = force output (N)).

*max leak measured at pressure of 0.34 MPa.

Order No.	Bore dia.	Stroke	Length	Pressure MPa max.	Leak rate by piston max. SL/min	Leak rate by rod max. SL/min	Weight g
L4558.012	32.5	12.5	122.5	0.7	2.2	2.0	661.75
L4558.025	32.5	25.0	135	0.7	2.2	2.0	707.50
L4558.050	32.5	50.0	160	0.7	2.2	2.0	799.00
L4558.075	32.5	75.0	185	0.7	2.2	2.0	890.50
L4558.100	32.5	100.0	210	0.7	2.2	2.0	982.00