

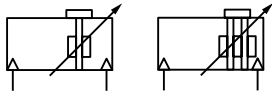
LINTRA® Rodless cylinders

C/46000B, C/46100B, C/46200B

Internal, external and precision roller guided

Double acting

Ø 16 ... 80 mm



Well proven, long life sealing technology

Lightweight design extrusion with integral switch mounting slots

Capable of withstanding large bending moments and lateral forces

Non-lube operation

Wide range of variants

Technical data

Medium:

Compressed air, filtered and lubricated or non-lubricated

Operation:

C/46000B/M, C/46100B/M,

C/46200B/M

Double acting, adjustable cushioning, magnetic piston

Operating pressure:

14 to 145 psi

(22 to 145 psi for Ø 16 mm)

Operating temperature:

-22°F to +176°F* (-30°C to + 80°C)

*With dewpoint of supply air less than ambient air temperature.

Maximum strokes:

Made to order

Ø 16 to 40 mm: 8500 mm

Ø 50 and 63 mm: 7000 mm

Ø 80: 5500 mm

Materials

End covers: plastic (Ø 16) or anodized aluminum (Ø 20 ... 80)

Yoke: plastic (Ø 16 and 20), anodized aluminum (Ø 25 ... 80)

Cylinder barrel: extruded anodized aluminum alloy

Sealing strip & piston seals: polyurethane

Cover strip: polyimide

Seals: nitrile rubber

Standard models

Ø	Port size inch (mm)	Internal guide Magnetic	External guide Magnetic	Precision roller guide Magnetic
16	- (M5)	C/46016B/M/*	C/46116B/M/*	-
20	1/8 NPT (G-1/8)	C/46020B/M/*	C/46120B/M/*	-
25	1/8 NPT (G-1/8)	C/46025B/M/*	C/46125B/M/*	C/46225B/M/*
32	1/4 NPT (G-1/4)	C/46032B/M/*	C/46132B/M/*	C/46232B/M/*
40	1/4 NPT (G-1/4)	C/46040B/M/*	C/46140B/M/*	C/46240B/M/*
50	3/8 NPT (G-3/8)	C/46050B/M/*	C/46150B/M/*	C/46250B/M/*
63	1/2 NPT (G-1/2)	C/46063B/M/*	C/46163B/M/*	C/46263B/M/*
80	1/2 NPT (G-1/2)	C/46080B/M/*	C/46180B/M/*	-

* Cylinders shown above use NPT porting, stroke in inches

For ISO G porting insert an "M" in the first position and provide stroke length in mm.

Note: For service kits see Norgren website reference below.

Options selector

C/46 ★ ★ ★ B/M/★

Porting	Substitute
NPT Porting	C
ISO G Porting	M

Guiding system	Substitute
Internal	0
External	1
Roller	2

Cylinder diameters mm
16, 20, 25, 32, 40, 50, 63, 80

Strokes C = inch M = mm
Stroke length in inches for NPT ports
Stroke length in mm for ISO G ports

Variants (magnetic piston) Substitute	
Standard	M
Alternative ports	MC
Active brake	L3
Passive brake	L4

Note: Disregard option positions not used.

For combinations of cylinder variants consult our Technical Service.

LINTRA Rodless cylinders

C/46000B, C/46100B, C/46200B

Features

- » Lintra rodless cylinders require less space for installation since the stroke of the cylinder is contained within the length of the cylinder itself.
- » Non-rotating load carrying capability without additional expensive guide rods and bearings
- » Rodless design means there is no rod that can buckle or kink.
- » Equal forces can be applied to each stroke direction.
- » All stroke lengths are custom made to customer requirements.
- » Extreme stroke lengths are available up to 28 ft.(see ACT-10-5).
- » Lintra features a wide range of bore sizes:
 - 16 mm bore — 0.63"
 - 20 mm bore — 0.79"
 - 25 mm bore — 0.98"
 - 32 mm bore — 1.26"
 - 40 mm bore — 1.57"
 - 50 mm bore — 1.97"
 - 63 mm bore — 2.48"
 - 80 mm bore — 3.15"
- » Magnetic piston standard
- » Integral switch rail on both sides of the extrusion.
- » Components are made of anodized, corrosion resistant aluminum.
- » Cushion adjustment standard at both ends of the cylinder.

- » Stroke velocities up to 98 ft/sec (30 m/s) are available. Contact factory.
- » The Lintra is designed for easy maintenance.
- » Lintra cylinders can withstand heavy loads and inertial moments.
- » Polyurethane seals provide long life.
- » For increased load carrying capabilities and mounting versatility a variety of options and accessories are available.

For corrosion resistance put a "V" in front of the actuator part number. i.e. VC/46032/M...

- » High corrosion and acid resistance
- » Suitable for food, chemical, pharmaceutical and offshore oil industry applications.

Notes: For ISO porting with the corrosion resistance option contact factory.

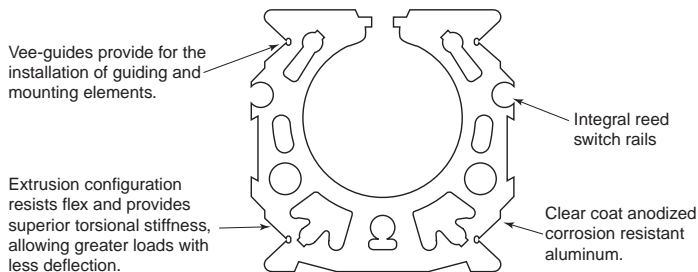
Corrosion resistance is available for 20 thru 80 mm only.

Materials:

End covers: Aluminum (HCR® coated*)
 Carriage: Aluminum (HCR® coated*)
 Yoke: Moulded plastic – Ø 20 mm,
 Aluminum (HCR® coated*) – Ø 25 to 80 mm
 Barrel: Extruded aluminum alloy (HCR® coated*)
 Sealing strip & piston seals: Polyurethane
 Cover strip: Polyamide
 Seals: Nitrile rubber

*HCR®: High Technology Synergistic Coating

The Extruded Tube of the Lintra Series 46000B Cylinder



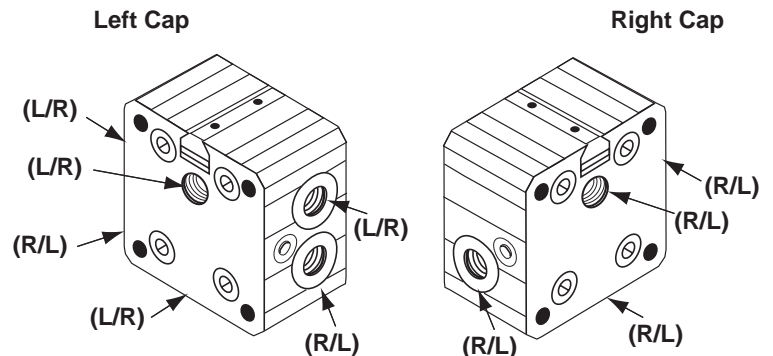
Lintra® 46000 Series Multiple Port Endcaps

Multiple Ported left and right endcaps available in bore sizes 25mm - 63mm, endcaps are ported with NPT or Metric ISO G threads.

(L/R) - indicates air applied to this port will move the carriage from Left to Right.

(R/L) - indicates air applied to this port will move the carriage from Right to Left.

To specify Multiple Port endcaps place /MC/ in the fourth position instead of /M/.



LINTRA Rodless cylinders

C/46000B, C/46100B, C/46200B

Internal. external and precision roller guided

Double acting

Ø 16 ... 80 mm

Stroke lengths:

16 mm to 40 mm bore - to 28 ft. (8500 mm)

50 mm and 63 mm bore - to 23 ft. (7000)

80 mm bore - to 18 ft. (5500 mm)

Supply Fluid: Compressed air filtered to 50-microns and lubricated.

Cushion Lengths:

16 mm bore — 12 mm (0.48")

20 mm bore — 26 mm (1.02")

25 mm bore — 26 mm (1.02")

32 mm bore — 35 mm (1.38")

40 mm bore — 50 mm (1.97")

50 mm bore — 60 mm (2.36")

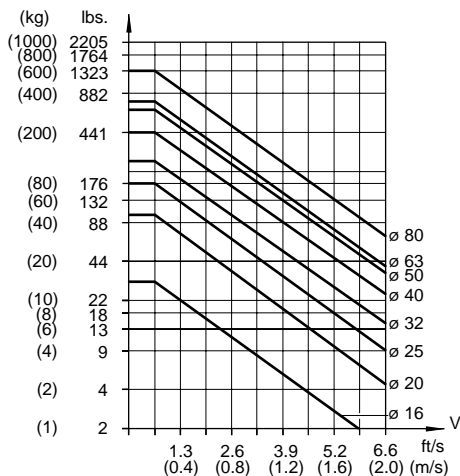
63 mm bore — 70 mm (2.76")

80 mm bore — 75 mm (2.95")

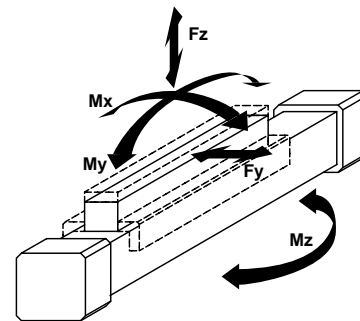
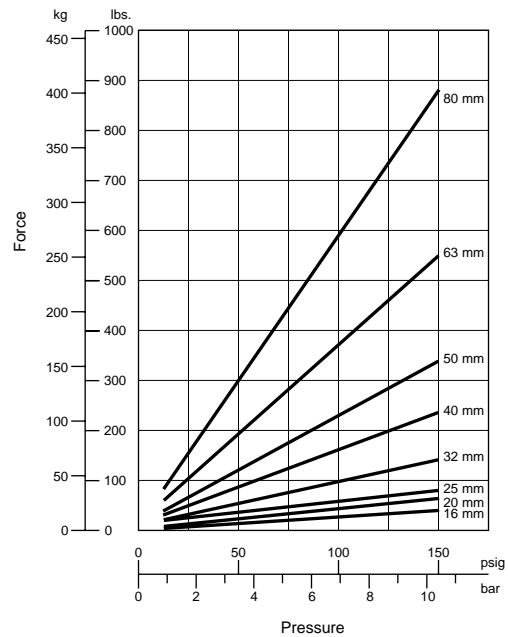
Bore Sizes:		Area (sq. in.)
16 mm bore —	0.63"	.31
20 mm bore —	0.79"	.49
25 mm bore —	0.98"	.75
32 mm bore —	1.26"	1.25
40 mm bore —	1.57"	1.94
50 mm bore —	1.97"	3.05
63 mm bore —	2.48"	4.83
80 mm bore —	3.15"	7.79

Cushioning Performance

The dynamic energy of a Lintra cylinder is caused by direct or partial external loads which must be absorbed by pneumatic cushioning. The cushioning ability depends to a large extent on the pneumatic circuit (e. g. counter pressure, pre-exhaust). The values given in the diagram were tested with an operation pressure of 87 psig (6 bar) using a 5/2 control valve. When installed horizontally, depending upon the speed, dynamic energy can be absorbed by the cylinder. Whenever the values given in the diagram are exceeded, the transported mass must be cushioned by additional shock absorbers. These have to be located at the center of gravity of the mass.



THRUST – Based on 75% of Maximum Thrust



Loading values for Lintra cylinders

The values given in the table below show the single forces in the directions Fy and Fz and the maximum moments Mx, My and Mz. All values are applicable only for speeds of max. 0.66 ft/s (0.2 m/s). A requirement for using these values is a constant movement (no jerking) of the mass over the whole stroke length of the cylinder. The reference point from which the moments for all cylinders should be calculated is the centerline of the piston.

Total loads

When a Lintra cylinder has to take several loads and moments, an additional calculation is necessary using this formula:

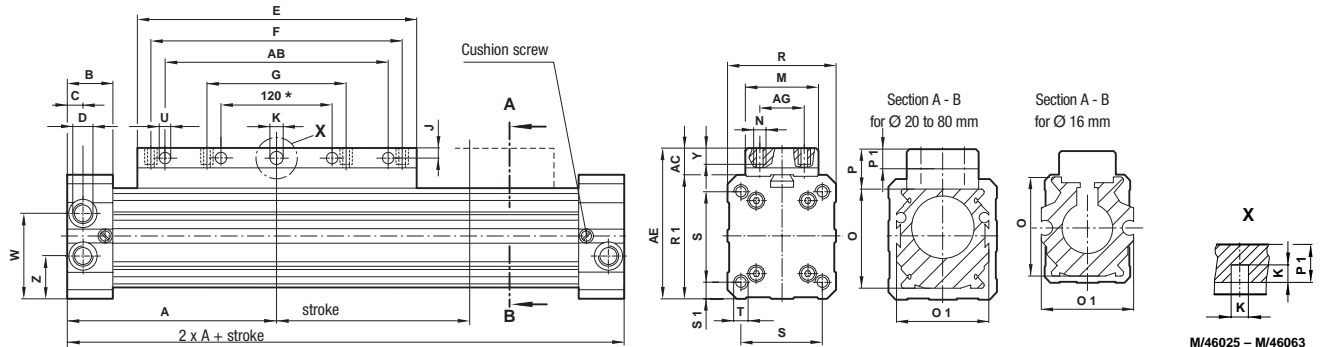
$$\frac{M_x}{M_{x \max}} + \frac{M_y}{M_{y \max}} + \frac{M_z}{M_{z \max}} + \frac{F_y}{F_{y \max}} + \frac{F_z}{F_{z \max}} \leq 1$$

LINTRA Rodless cylinders

C/4600B, C/46100BM, C/46200B

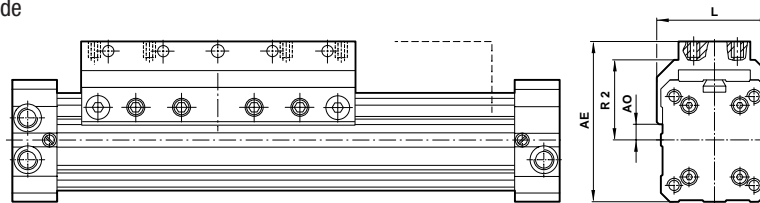
Standard cylinders

C/4600B/M – Cylinders with internal guide



*For cylinder Ø 80 mm

C/46100B/M – Cylinders with external guide



internal guiding / external guiding

Ø	A	AB	AC	AE	AG	AO	B	C	D	E	F	G	J	K	L	
16	2.46 (62.5)	–	0.28 (7)	1.50 (38)	0.31 (8)	/0.30 (7.5)	0.69 (18)	0.31 (8)	–	3.15 (80)	2.36 (60)	–	0.10 (2.5)	Ø 0.12 G7 (3)	1.22 (31)	
20	3.34 (85)	/2.36 (60)	0.55 (14)	2.13/2.32 (54/59)	0.71 (18)	/0.26 (6.5)	0.91 (23)	0.31 (8)	1/8 NPT G1/8	4.33 (110)	3.15 (80)	1.57 (40)	0.14 /0.30 (3.5/7.5)	Ø 0.17H9 (4.2)	1.65 (42)	
25	3.93 (100)	/2.76 (70)	0.47 (12)	2.36/2.66 (60/67.5)	0.79 (20)	/0.37 (9.5)	0.91 (23)	0.57 (14.5)	1/8 NPT G1/8	5.12 (130)	3.54 (90)	1.77 (45)	/0.20 (5)	□ 0.18 (4.5)	2.05 (52)	
32	4.72 (120)	/3.54 (90)	0.63 (16)	3.00/3.23 (76/82)	0.98 (25)	/0.61 (15.5)	1.06 (27)	0.41 (10.5)	1/4 NPT G1/4	6.30 (160)	4.72 (120)	2.36 (60)	/0.20 (5)	□ 0.24 (6)	2.52 (64)	
40	5.91 (150)	/4.72 (120)	0.60 (15)	3.54/3.84 (90/97.5)	0.98 (25)	/0.65 (16.5)	1.18 (30)	0.45 (11.5)	1/4 NPT G1/4	8.46 (215)	6.30 (160)	3.15 (80)	/0.20 (5)	□ 0.24 (6)	3.11 (79)	
50	7.09 (180)	/6.30 (160)	0.79 (20)	4.33/4.61 (110/117)	0.98 (25)	/0.94 (24)	1.38 (35)	0.55 (14)	3/8 NPT G3/8	9.84 (250)	7.48 (190)	3.74 (95)	/0.26 (6.5)	□ 0.32 (8)	3.62 (92)	
63	8.46 (215)	/7.48 (190)	0.79 (20)	4.92/5.39 (125/137)	0.98 (25)	/1.00 (25.5)	1.57 (40)	0.67 (17)	1/2 NPT G1/2	12.60 (320)	9.45 (240)	4.72 (120)	/0.30 (7.5)	□ 0.32 (8)	4.33 (110)	
80	10.23 (260)	9.45 (240)	0.94 (24)	6.06/6.50 (154/165)	0.98 (25)	/1.50 (38)	1.77 (45)	0.67 (17)	1/2 NPT G1/2	15.35 (390)	11.81 (300)	5.91 (150)	0.35 /0.39 (9/10)	Ø 0.47G7 (12)	5.12 (130)	
Ø	M	N	O	O1	P	P1	R	R1	R2	S	S1	T	Ø U	W	Y	Z
16	0.71 (18)	M3	0.98 (25)	1.26 (32)	0.47 (12)	–	1.06 (27)	1.22 (31)	/0.73 (18.5)	0.63 (16)	0.22 (5.5)	M3x5 deep	–	–	0.16/0.20 (4/5)	0.63 (16.3)
20	1.06/1.06 (27/27)	M5	1.26 (32)	1.50 (38)	0.73 (18.5)	–	1.57 (40)	1.57 (40)	/0.94 (24)	1.26 (32)	0.16 (4)	M5x12 deep	–	–	0.47 (12)	0.85 (21.5)
25	1.26/1.26 (32/32)	M5	1.57 (40)	1.77 (45)	0.63 (16)	0.30 (7.5)	1.89 (48)	1.89 (48)	/1.34 (34)	1.46 (37)	0.22 (5.5)	M5x13 deep	–	1.30 (33)	0.28/0.47 (7/12)	0.67 (17)
32	1.77/1.77 (45/45)	M5	2.05 (52)	2.05 (52)	0.79 (20)	0.39 (10)	2.36 (60)	2.36 (60)	/1.67 (42.5)	1.85 (47)	0.26 (6.5)	M6x15 deep	–	1.57 (40)	0.31/0.47 (8/12)	0.79 (20)
40	1.77/1.77 (45/45)	M6	2.56 (65)	2.56 (65)	0.79 (20)	0.39 (10)	2.95 (75)	2.95 (75)	/1.95 (49.5)	2.28 (58)	0.33 (8.5)	M8x20 deep	–	1.97 (50)	0.31/0.47 (8/12)	0.98 (25)
50	1.97/1.97 (50/50)	M8	3.15 (80)	3.15 (80)	0.98 (25)	0.51 (13)	3.54 (90)	3.54 (90)	/2.30 (58.5)	2.76 (70)	0.39 (10)	M8x25 deep	–	2.36 (60)	0.43/0.67 (11/17)	1.18 (30)
63	1.97/1.97 (50/50)	M8	3.74 (95)	3.74 (95)	0.98 (25)	0.55 (14)	4.13 (105)	4.13 (105)	/2.68 (68)	3.31 (84)	0.41 (10.5)	M10x25 deep	–	2.76 (70)	0.43/0.79 (11/20)	1.38 (35)
80	1.97/1.97 (50/50)	M10	4.72 (120)	4.72 (120)	0.98 (25)	–	5.12 (130)	5.12 (130)	/3.20 (81)	3.94 (100)	0.59 (15)	M12x25 deep	0.43 (11)	3.54 (90)	0.60/0.98 (15/25)	1.57 (40)

Dimensions in inch (mm)

LINTRA® Rodless cylinders

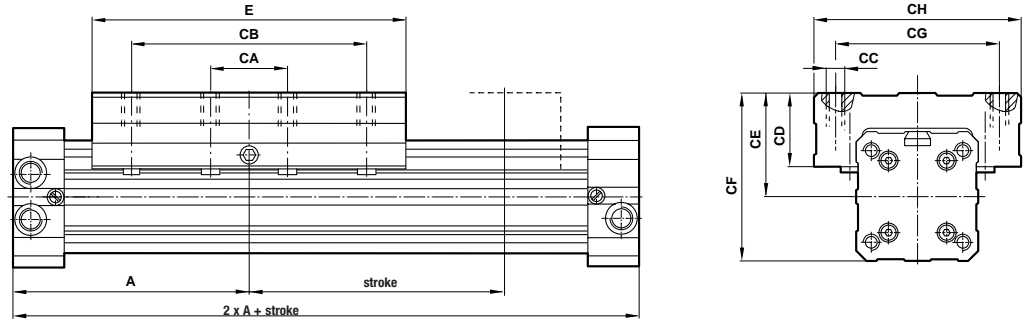
C/46000B, C/46100B, C/46200B

Internal. external and precision roller guided

Double acting

Ø 16 ... 80 mm

C/46200B/M – Cylinders with precision roller guide

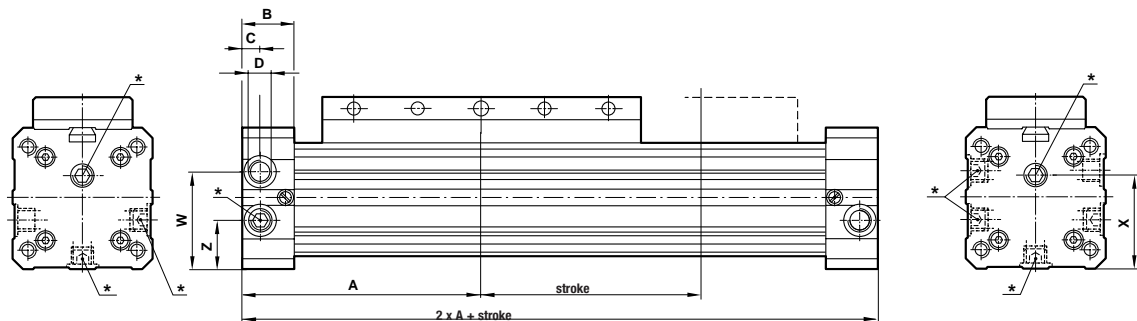


Ø mm	A	CA	CB	CC	CD	CE	CF	CG	CH	E
25	3.94 (100)	1.77 (45)	3.54 (90)	M6x14 deep	1.42 (36)	1.65 (42)	2.60 (66)	2.36 (60)	3.35 (85)	5.91 (150)
32	4.72 (120)	2.36 (60)	4.72 (120)	M8x16 deep	1.50 (38)	1.97 (50)	3.15 (80)	2.95 (75)	3.86 (98)	7.09 (180)
40	5.91 (150)	3.15 (80)	5.91 (150)	M8x16 deep	1.65 (42)	2.26 (57.5)	3.74 (95)	3.62 (92)	4.65 (118)	8.46 (215)
50	7.09 (180)	3.54 (90)	7.09 (180)	M10x20 deep	1.73 (44)	2.64 (67)	4.41 (112)	3.94 (100)	5.20 (132)	9.84 (250)
63	8.46 (215)	4.72 (120)	9.45 (240)	M10x20 deep	1.85 (47)	2.93 (74.5)	5.00 (127)	4.33 (110)	5.51 (140)	12.60 (320)

Dimensions in inch (mm)

Cylinder variants

C/46000B/MC, C/46100B/MC, C/46200B/MC – Cylinders with alternative ports



* Alternative ports with inserted plugs.

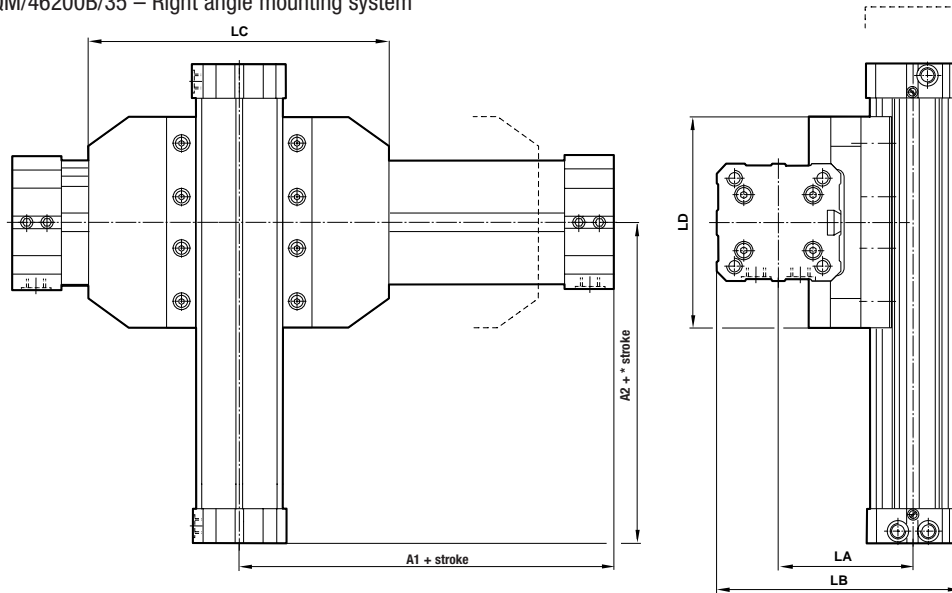
Ø	A	B	C	D	W	X	Z
25	3.94 (100)	0.91 (23)	0.57 (14.5)	1/8 NPT G/18	1.30 (33)	1.30 (33)	0.67 (17)
32	4.72 (120)	1.06 (27)	0.41 (10.5)	1/4 NPT G1/4	1.57 (40)	1.36 (34.5)	0.79 (20)
40	5.91 (150)	1.18 (30)	0.45 (11.5)	1/4 NPT G1/4	1.97 (50)	1.71 (43.5)	0.98 (25)
50	7.09 (180)	1.38 (35)	0.55 (14)	3/8 NPT G3/8	2.36 (60)	2.11 (53.5)	1.18 (30)
63	8.46 (215)	1.57 (40)	0.67 (17)	1/2 NPT G1/2	2.76 (70)	2.42 (61.5)	1.38 (35)

Dimensions in inch (mm)

LINTRA Rodless cylinders

C/46000B, C/46100B, C/46200B

QM/46100B/33 and QM/46200B/35 – Right angle mounting system



Dimensions in inch (mm)

Externally Guided Right Angle Mounting System (Same bore size cylinders)

Note: For ISO ports replace “C” with “M” in second position of the cylinder number and state stroke length in mm.

Bore	Model	Right Angle Adapter	A1	A2	LA	LB	LC	LD
25 mm	QC/46025B/M*/33	QM/46125/25/33	3.9 (100)	3.9 (100)	2.7 (69)	4.6 (117)	5.1 (130)	5.1 (130)
25 mm	QC/46025B/M*/33							
32 mm	QC/46032B/M*/33	QM/46132/32/33	4.7 (120)	4.7 (120)	3.3 (84)	5.7 (144)	6.3 (160)	6.3 (160)
32 mm	QC/46032B/M*/33							
40 mm	QC/46040B/M*/33	QM/46140/40/33	5.9 (150)	5.9 (150)	3.8 (97)	6.8 (172)	8.5 (215)	8.5 (215)
40 mm	QC/46040B/M*/33							
50 mm	QC/46050B/M*/33	QM/46150/50/33	7.1 (180)	7.1 (180)	4.6 (116)	8.1 (206)	9.8 (250)	9.8 (250)
50 mm	QC/46050B/M*/33							

* Insert stroke length

Reduction 1 (One cylinder one size smaller than the other cylinder)

Note: For ISO ports replace “C” with “M” in second position of the cylinder number and state stroke length in mm.

Bore	Model	Right Angle Adapter	A1	A2	LA	LB	LC	LD
25 mm	QC/46025B/M*/33	QM/46125/20/33	3.9 (100)	3.4 (85)	2.4 (62)	4.2 (106)	5.1 (130)	4.3 (110)
20 mm	QC/46020B/M*/33							
32 mm	QC/46032B/M*/33	QM/46132/25/33	4.7 (120)	3.9 (100)	3.0 (77)	5.1 (131)	6.3 (160)	5.1 (130)
25 mm	QC/46025B/M*/33							

* Insert stroke length

Reduction 2 (One cylinder two bore sizes smaller than the other cylinder)

Note: For ISO ports replace “C” with “M” in second position of the cylinder number and state stroke length in mm.

Bore	Model	Right Angle Adapter	A1	A2	LA	LB	LC	LD
40 mm	QC/46040B/M*/33	QM/46140/25/33	5.9 (150)	3.9 (100)	3.0 (77)	5.5 (139)	8.5 (215)	5.1 (130)
25 mm	QC/46025B/M*/33							
50 mm	QC/46050B/M*/33	QM/46150/32/33	7.1 (180)	4.7 (120)	3.3 (84)	6.7 (169)	9.8 (250)	6.3 (160)
32 mm	QC/46032B/M*/33							
63 mm	QC/46063B/M*/33	QM/46163/40/33	8.5 (215)	5.9 (150)	4.3 (108)	7.8 (198)	12.6 (320)	8.5 (215)
40 mm	QC/46040B/M*/33							

* Insert stroke length

Roller Guided Right Angle Mounting System Reduction 2 (One cylinder two bore sizes smaller than the other cylinder)

Note: For ISO ports replace “C” with “M” in second position of the cylinder number and state stroke length in mm.

Bore	Model	Right Angle Adapter	A1	A2	LA	LB	LC	LD
40 mm	QC/46240B/M*/35	QM/46240/25/35	5.9 (150)	3.9 (100)	3.2 (80)	5.6 (142)	8.5 (215)	5.1 (130)
25 mm	QC/46225B/M*/35							
63 mm	QC/46263B/M*/35	QM/46263/40/35	8.5 (215)	5.9 (150)	4.3 (108)	7.8 (198)	12.6 (320)	8.5 (215)
40 mm	QC/46240B/M*/35							

* Insert stroke length

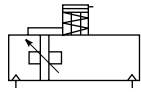
LINTRA® Rodless cylinders

C/46000B/L

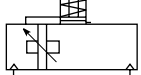
Internal guide with brake

Double acting

Ø 25 ... 63 mm



Active



Passive



PRODUCTS FOR SAFE SYSTEMS

Standard models

Ø	Port size	Magnetic Active brake	Passive brake
25	1/8	C/46025B/L3/*	C/46025B/L4/*
32	1/4	C/46032B/L3/*	C/46032B/L4/*
40	1/4	C/46040B/L3/*	C/46040B/L4/*
50	3/8	C/46050B/L3/*	C/46050B/L4/*
63	1/2	C/46063B/L3/*	C/46063B/L4/*

* Cylinders shown above use NPT porting. For ISO G porting insert an "M" in the first position and provide stroke length in mm. For complete cylinder details see page ACT-???

Integral pneumatically actuated brakes – ‘active’ (L3) and ‘passive’ (L4)

Air supply to brake can be connected to either bottom or side

Asbestos free brake lining – safer working environment

Technical data

Medium:

Compressed air, filtered and lubricated.

Pressure (brake):

29 to 145 psi – active

58 to 145 psi – passive

Operating temperature:

+40°F to +158°F

Active brake:

Pressure applied to obtain brake action

Passive brake:

Pressure released to obtain brake action

Materials

Cylinder barrel: anodized aluminum alloy

End covers, yoke & carriage: anodized aluminum

Brake strip: stainless steel

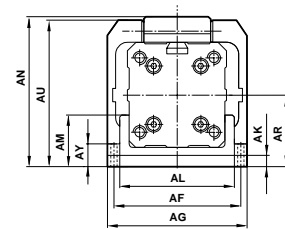
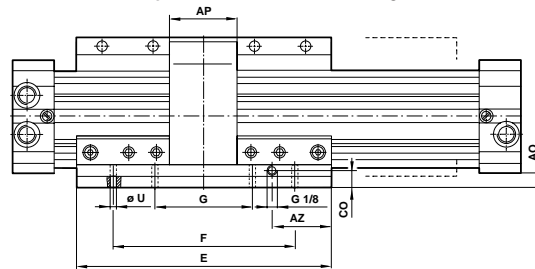
Brake liner: non-asbestos

Sealing strip & piston seals: polyurethane

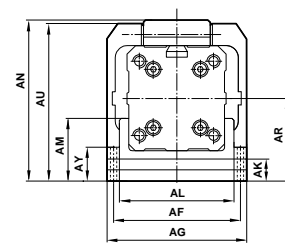
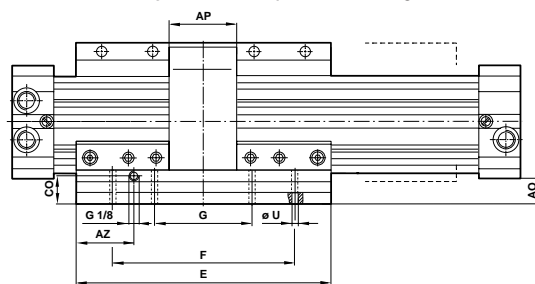
Cover strip: polyimide

Seals: nitrile rubber

C/46000B/L3 – Cylinders with active holding brake



C/46000B/L4 – Cylinders with passive holding brake



	Ø	AF	AG	AK	AL	AM	AN	AO	AP	AR	AU	AY	AZ	CØ	E	F	G	Ø U
C/46025B/L3	25	2.44 (62)	2.95 (75)	0.47 (12)	2.05 (52)	1.12 (28.5)	2.89 (73.5)	0.53 (13.5)	1.77 (45)	1.47 (37.5)	2.87 (73)	0.65 (16.5)	1.18 (30)	0.24 (6)	5.12 (130)	3.54 (90)	1.77 (45)	0.26 (6.6)
C/46025B/L4	25	2.44 (62)	2.95 (75)	0.39 (10)	2.05 (52)	1.52 (38.5)	3.29 (83.5)	0.93 (23.5)	1.77 (45)	1.87 (47.5)	3.27 (83)	1.04 (26.5)	1.18 (30)	0.63 (16)	5.12 (130)	3.54 (90)	1.77 (45)	0.26 (6.6)
C/46032B/L3	32	3.07 (78)	3.62 (92)	0.47 (12)	2.52 (64)	1.14 (29)	3.54 (90)	0.55 (14)	2.17 (55)	1.73 (44)	3.52 (89.5)	0.69 (17.5)	1.28 (32.5)	0.24 (6)	6.30 (160)	4.72 (120)	2.36 (60)	0.35 (9)
C/46032B/L4	32	3.07 (78)	3.62 (92)	0.47 (12)	2.52 (64)	1.61 (41)	4.02 (102)	1.02 (26)	2.17 (55)	2.20 (56)	4.00 (101.5)	1.16 (29.5)	1.28 (32.5)	0.71 (18)	6.30 (160)	4.72 (120)	2.36 (60)	0.35 (9)
C/46040B/L3	40	3.70 (94)	4.41 (112)	0.47 (12)	3.19 (81)	1.36 (34.5)	4.07 (103.5)	0.53 (13.5)	2.56 (65)	2.01 (51)	4.06 (103)	0.71 (18)	2.07 (52.5)	0.24 (6)	8.46 (215)	6.30 (160)	3.15 (80)	0.35 (9)
C/46040B/L4	40	3.70 (94)	4.41 (112)	0.47 (12)	3.19 (81)	1.83 (46.5)	4.55 (115.5)	1.00 (25.5)	2.56 (65)	2.48 (63)	4.53 (115)	1.18 (30)	2.07 (52.5)	0.71 (18)	8.46 (215)	6.30 (160)	3.15 (80)	0.35 (9)
C/46050B/L3	50	4.41 (112)	5.20 (132)	0.47 (12)	3.70 (94)	1.40 (35.5)	4.90 (124.5)	0.57 (14.5)	2.95 (75)	2.34 (59.5)	4.88 (124)	0.73 (18.5)	2.56 (65)	0.24 (6)	9.84 (250)	7.48 (190)	3.74 (95)	0.43 (11)
C/46050B/L4	50	4.41 (112)	5.20 (132)	0.71 (18)	3.70 (94)	2.11 (53.5)	5.61 (142.5)	1.28 (32.5)	2.95 (75)	3.05 (77.5)	5.59 (142)	1.44 (36.5)	2.56 (65)	0.94 (24)	9.84 (250)	7.48 (190)	3.74 (95)	0.43 (11)
C/46063B/L3	63	5.20 (132)	5.91 (150)	0.47 (12)	4.41 (112)	1.67 (42.5)	5.53 (140.5)	0.61 (15.5)	3.54 (90)	2.68 (68)	5.51 (140)	0.81 (20.5)	4.53 (115)	0.24 (6)	12.60 (320)	9.45 (240)	4.72 (120)	0.51 (13)
C/46063B/L4	63	5.20 (132)	5.91 (150)	0.71 (18)	4.41 (112)	2.38 (60.5)	6.24 (158.5)	1.32 (33.5)	3.54 (90)	3.39 (86)	6.22 (158)	1.52 (38.5)	4.53 (115)	0.94 (24)	12.60 (320)	9.45 (240)	4.72 (120)	0.51 (13)

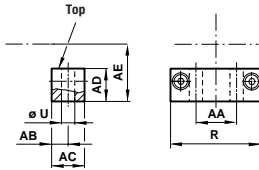
Dimensions in inch (mm)

LINTRA Rodless cylinders

C/46000B/L

Foot mounting – C QM/460**/21

** Insert bore size



Ø	AA	AB	AC	AD	AE	R	ØU	lb (kg)
16	0.63 (16)	0.39 (10)	0.59 (15)	0.12 (03)	0.63 (16)	1.06 (27)	0.22 (5.5)	0.02 (0.01)
20	0.67 (17)	0.20 (05)	0.39 (10)	0.39 (10)	0.85 (21.5)	1.57 (40)	0.22 (5.5)	0.07 (0.03)
25	0.71 (18)	0.28 (07)	0.59 (15)	0.53 (13.5)	0.94 (24)	1.89 (48)	0.28 (7)	0.02 (0.01)
32	1.02 (26)	0.43 (11)	0.87 (22)	0.65 (16.5)	1.20 (30.5)	2.36 (60)	0.35 (9)	0.22 (0.1)
40	1.18 (30)	0.43 (11)	0.87 (22)	0.77 (19.5)	1.48 (37.5)	2.95 (75)	0.35 (9)	0.44 (0.2)
50	1.65 (42)	0.47 (12)	0.98 (25)	0.94 (24)	1.77 (45)	3.54 (90)	0.43 (11)	0.66 (0.3)
63	1.89 (48)	0.51 (13)	0.98 (25)	1.08 (27.5)	2.13 (54)	4.13 (105)	0.51 (13)	0.88 (0.4)
80	2.52 (64)	0.49 (12.5)	0.98 (25)	1.38 (35)	2.76 (70)	5.12 (130)	0.55 (14)	0.88 (0.4)

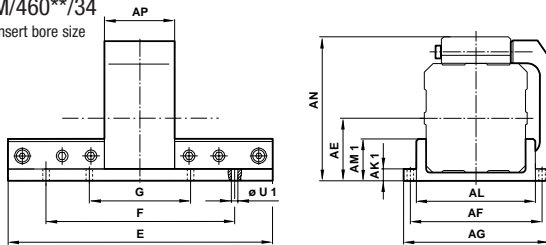
End cover mounts for cylinders Ø 25 to 80mm can be attached to give different distances AE. When used together with a center support mounting the word 'TOP' should be visible on the top face of the mount.

Dimensions in inch (mm)

Carriage plate mounting – UV

QM/460**/34

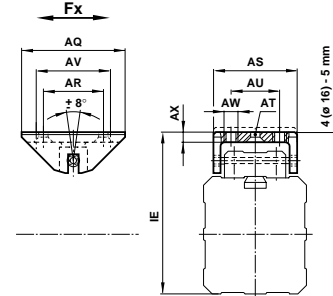
** Insert bore size



Ø	AE	AF	AG	AK1	AL	AM1	AN	AP	E	F	G	ØU1	lb (kg)
16	0.63 (16)	1.57 (40)	1.97 (50)	0.14 (3.5)	1.22 (31)	0.33 (8.5)	1.59 (40.5)	1.18 (30)	3.15 (80)	2.36 (60)	-	0.22 (5.5)	0.22 (0.10)
20	0.85 (21.5)	2.05 (52)	2.44 (62)	0.22 (5.5)	1.65 (42)	0.57 (14.5)	2.20 (56)	1.42 (36)	4.33 (110)	3.15 (80)	1.57 (5.5)	0.22 (06)	0.44 (0.20)
25	1.04 (26.5)	2.44 (62)	2.95 (75)	0.22 (5.5)	2.05 (52)	0.69 (17.5)	2.46 (62.5)	1.77 (45)	5.12 (130)	3.54 (90)	1.77 (45)	0.26 (6.6)	0.66 (0.30)
32	1.30 (33)	3.02 (78)	3.62 (92)	0.26 (6.5)	2.52 (64)	0.71 (18)	3.11 (79)	2.17 (55)	6.30 (160)	4.72 (120)	2.36 (60)	0.35 (09)	0.88 (0.40)
40	1.59 (40.5)	3.70 (94)	4.41 (112)	0.30 (7.5)	3.19 (81)	0.94 (24)	3.66 (93)	2.56 (65)	8.46 (215)	6.30 (160)	3.15 (80)	0.35 (09)	1.76 (0.80)
50	1.93 (49)	4.41 (112)	5.20 (132)	0.31 (08)	3.70 (94)	0.98 (25)	4.49 (114)	2.95 (75)	9.84 (250)	7.48 (190)	3.74 (95)	0.43 (11)	2.65 (1.20)
63	2.26 (57.5)	5.20 (132)	5.91 (150)	0.39 (10)	4.41 (112)	1.26 (32)	5.12 (130)	3.54 (90)	12.60 (320)	9.45 (240)	4.72 (120)	0.51 (13)	4.41 (2.00)
80	2.76 (70)	6.10 (155)	7.09 (180)	0.39 (10)	5.20 (132)	1.26 (32)	6.26 (159)	3.94 (100)	15.35 (390)	11.81 (300)	5.91 (150)	0.55 (14)	6.39 (2.90)

Dimensions in inch (mm)

Swinging bridge – S QM/460/37



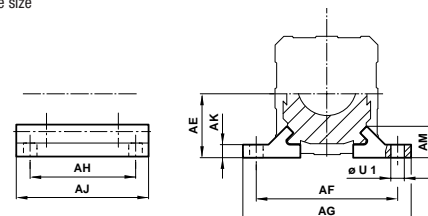
Part / Ø	AQ	AR	AS	AT	AU	AV	AW	AX	IE	Fx (N)	lb (kg)
QM/46016/37/16	1.57 (40)	-	1.02 (26)	-	0.47 (12)	1.18 (30)	M4 (4)	0.16 (4)	1.89 +.16 (48 +4)	3.94 (100)	0.04 (0.02)
QM/46020/3/20	1.97 (50)	1.38 (35)	1.50 (38)	DIN74 -Bm5	0.79 (20)	1.57 (40)	M5 (5)	0.20 (5)	2.58 +.20 (65.5 +5)	5.91 (150)	0.22 (0.10)
QM/46025/3/25	2.36 (60)	1.57 (40)	1.73 (44)	DIN74 -Bm5	0.79 (20)	1.77 (45)	M5 (5)	0.20 (5)	2.76 +.20 (70 +5)	9.84 (250)	0.44 (0.20)
QM/46032/3/32	3.15 (80)	1.97 (50)	2.32 (59)	DIN74 -Bm6	1.18 (30)	2.36 (60)	M6 (5.5)	0.22 (5.5)	3.48 +.20 (88.5 +5)	16.14 (410)	0.66 (0.30)
QM/46032/3/40	3.15 (80)	1.97 (50)	2.32 (59)	DIN74 -Bm6	1.18 (30)	2.36 (60)	M6 (5.5)	0.22 (5.5)	4.04 +.20 (102.5 +5)	25.20 (640)	0.66 (0.30)
QM/46050/3/50	3.94 (100)	2.36 (60)	2.56 (65)	DIN74 -Bm8	1.57 (40)	3.15 (80)	M8 (6.5)	0.26 (6.5)	4.88 +.20 (124 +5)	39.37 (1000)	1.10 (0.50)
QM/46050/3/63	3.94 (100)	2.36 (60)	2.56 (65)	DIN74 -Bm8	1.57 (40)	3.15 (80)	M8 (6.5)	0.26 (6.5)	5.47 +.20 (139 +5)	59.06 (1500)	1.10 (0.50)
QM/46080/3/80	3.94 (100)	2.36 (60)	2.56 (65)	DIN74 -Bm8	1.57 (40)	3.15 (80)	M8 (6.5)	0.26 (6.5)	6.63 +.20 (168.5 +5)	94.49 (2400)	1.10 (0.50)

Dimensions in inch (mm)

Center support – V

QM/460**/32

** Insert bore size



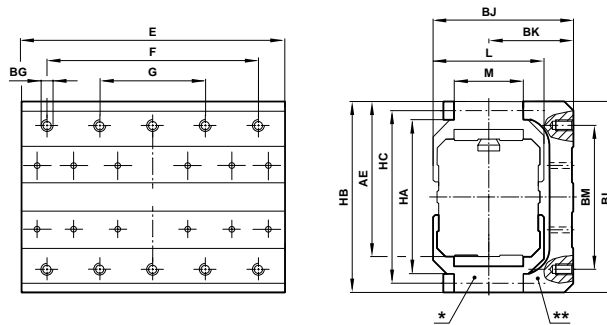
Ø	AE	AF	AG	AH	AJ	AK	AM	ØU1	lb (kg)
16	0.63 (16)	1.57 (40)	1.97 (50)	0.79 (20)	1.18 (30)	0.14 (3.5)	0.35 (9)	0.22 (5.5)	0.02 (0.01)
20	0.85 (21.5)	2.05 (52)	2.44 (62)	1.77 (45)	2.36 (60)	0.18 (5)	0.47 (12)	0.22 (5.5)	0.07 (0.03)
25	0.94 (24)	2.36 (60)	2.83 (72)	2.36 (60)	3.15 (80)	0.22 (5.5)	0.51 (13)	0.26 (6.6)	0.09 (0.04)
32	1.20 (30.5)	2.99 (76)	3.62 (92)	2.76 (70)	3.94 (100)	0.26 (6.5)	0.73 (18.5)	0.35 (9)	0.15 (0.07)
40	1.48 (37.5)	3.62 (92)	4.25 (108)	3.54 (90)	4.72 (120)	0.30 (7.5)	0.73 (18.5)	0.35 (9)	0.44 (0.2)
50	1.77 (45)	4.33 (110)	5.04 (128)	4.33 (110)	5.51 (140)	0.30 (7.5)	0.73 (18.5)	0.43 (11)	0.44 (0.2)
63	2.13 (54)	5.20 (132)	6.06 (154)	4.72 (120)	6.30 (160)	0.35 (9)	0.98 (25)	0.51 (13)	0.66 (0.3)
80	2.76 (70)	6.10 (155)	7.09 (180)	5.51 (140)	7.09 (180)	0.47 (12)	1.12 (28.5)	0.55 (14)	0.88 (0.4)

Dimensions in inch (mm)

LINTRA® Rodless cylinders

C/46000B, C/46100B, C/46200B

Internal. external and precision roller guided



Secondary carriage – W
Side mounting plate – UW

* Secondary carriage – W
**Side mounting plate – UW

Ø	AE	BG	BJ	BK	BL	BM	E	F	G	HA	HB	HC	L	M	W lb(kg)	UW lb(kg)
16	1.50 (38)	–	–	–	–	–	3.15 (80)	–	–	–	1.93 (49)	–	–	0.71 (18)	0.09 (0.04)	–
20	2.32 (59)	M5x10 deep	2.13 (54)	1.30 (33)	3.07 (78)	2.17 (55)	4.33 (110)	–	1.57 (40)	2.52 (64)	3.11 (79)	2.52 (64)	1.65 (42)	1.06 (27)	0.42 (0.19)	0.55 (0.25)
25	2.66 (67.5)	M5x10 deep	2.48 (63)	1.46 (37)	3.39 (86)	2.56 (65)	5.12 (130)	3.15 (80)	1.77 (45)	3.03 (77)	3.43 (87)	3.03 (77)	2.05 (52)	1.26 (32)	0.73 (0.27)	0.73 (0.33)
32	3.23 (82)	M5x12 deep	3.03 (77)	1.77 (45)	4.06 (103)	3.15 (80)	6.30 (160)	3.54 (90)	2.36 (60)	3.70 (94)	4.09 (104)	3.70 (94)	2.52 (64)	1.77 (45)	1.10 (0.50)	1.10 (0.50)
40	3.84 (97.5)	M6x12 deep	3.86 (98)	2.30 (58.5)	4.69 (119)	3.54 (90)	8.46 (215)	4.72 (120)	3.15 (80)	4.33 (110)	4.72 (120)	4.33 (110)	3.11 (79)	1.77 (45)	1.43 (0.65)	2.38 (1.08)
50	4.61 (117)	M6x15 deep	4.63 (117.5)	2.81 (71.5)	5.63 (143)	4.72 (120)	9.84 (250)	6.30 (160)	3.74 (95)	5.16 (131)	5.67 (144)	5.16 (131)	3.62 (92)	1.97 (50)	2.43 (1.10)	4.08 (1.85)
63	5.39 (137)	M8x20 deep	5.49 (139.5)	3.33 (84.5)	6.61 (168)	5.51 (140)	12.60 (320)	7.48 (190)	4.72 (120)	6.02 (153)	6.65 (169)	6.06 (154)	4.33 (110)	1.97 (50)	4.20 (1.90)	7.62 (3.46)
80	6.50 (165)	–	–	–	–	–	15.35 (390)	9.45 (240)	–	–	7.87 (200)	–	–	1.97 (50)	5.51 (2.50)	–

Dimensions in inch (mm)

Weights of Cylinders lbs. (kg)

Model	C/46000B	C/46100B	C/46200B	C/46000B/L3	C/46000B/L4	Weight per inch of Stroke
16	0.35 (0.16)	0.40 (0.18)	–	–	–	0.07 (0.03)
20	1.10 (0.50)	1.32 (0.60)	–	–	–	0.09 (0.04)
25	1.76 (0.80)	1.98 (0.90)	3.75 (1.7)	3.53 (1.6)	4.19 (1.9)	0.11 (0.05)
32	3.53 (1.60)	3.75 (1.70)	6.84 (3.1)	5.95 (2.7)	6.84 (3.1)	0.20 (0.09)
40	5.95 (2.70)	6.39 (2.90)	11.03 (5.0)	9.92 (4.5)	11.47 (5.2)	0.29 (0.13)
50	10.58 (4.80)	10.80 (4.90)	20.07 (9.1)	16.10 (7.3)	19.62 (8.9)	0.42 (0.19)
63	15.88 (7.20)	16.98 (7.70)	30.65 (13.9)	25.36 (11.5)	27.34 (12.4)	0.55 (0.25)
80	29.11 (13.20)	29.55 (13.40)	–	–	–	0.84 (0.38)

Mountings

	C	S*	UV*	V	W***	UW ***
16	QM/46016/21	QM/46016/37	QM/46016/34	QM/46016/32	QM/46116/35	–
20	QM/46020/21	QM/46020/37	QM/46020/34	QM/46020/32	QM/46120/35	QM/46120/36
25	QM/46025/21	QM/46025/37	QM/46025/34	QM/46025/32	QM/46125/35	QM/46125/36
32	QM/46032/21	QM/46032/37	QM/46032/34	QM/46032/32	QM/46132/35	QM/46132/36
40	QM/46040/21	QM/46032/37	QM/46040/34	QM/46040/32	QM/46140/35	QM/46140/36
50	QM/46050/21	QM/46050/37	QM/46050/34	QM/46050/32	QM/46150/35	QM/46150/36
63	QM/46063/21	QM/46050/37	QM/46063/34	QM/46063/32	QM/46163/35	QM/46163/36
80	QM/46080/21	QM/46080/37	QM/46080/34	QM/46080/32	QM/46180/35	–

* Suitable for internally guided models only. ** Insert stroke length (mm). *** Suitable for external guided models only.

LINTRA® Spindle

M/49000, M/49100, M/49200, M/49800

Internal, external, precision roller and heavy duty guided

Ø 25 to 63 mm



- High forces
- Precise positioning
- High repeatability
- Constant, defined high and low speed operation
- Proven LINTRA® guiding systems
- Interchangeable with LINTRA® pneumatic cylinders series M/46000

Technical data

Operation:

Electric spindle drive

Operating temperature:

-4°F to 176°F (-20° to +80°C) max.

Consult our Technical Service for use below 35°F (+2°C)

Cylinder diameters:

Ø 25, 32, 40, 50, 63 mm

Strokes:

Ø 25 mm: 1250 mm max.

Ø 32, 40, 50, 63 mm: 5000 mm max.

Speed:

8 ft/s (2.5 m/s) max.

Forces:

112 to 1349 lb force (500 to 6000 N)

Repeatability:

+/- .002" (0.05 mm) (Single nut)

+/- .0004" (0.01 mm) (Double nut)

Materials

End covers, yoke, carriage, cover and barrel: anodized aluminum

Cover strip: polyamide

Options selector

M/49****/****/****/****

Guiding system	Substitute
Internal	0
External adjustable	1
Precision roller	2
Heavy duty	8

Cylinder diameters (mm)	Substitute
25	25
32	32
40	40
50	50
63	63

Spindle types	Substitute
Ball screw	B
Lead screw	L

Ball screw-sizes (mm)	Strokes (mm)
Ø 25	max. 1250
Ø 32, 40, 50, 63	max. 5000
Lead screw-sizes (mm)	Strokes (mm)
Ø 25, 32	max. 2700
Ø 40, 50, 63	max. 2500
Heavy duty -sizes (mm)	Strokes (mm)
Ø 40 - Ball screw type	max. 4000
Ø 40 - Lead screw type	max. 2500

Number of spindle supports
0, 2, 4, 6

Thread pitch (mm)
02 to 50

Spindle nuts	Substitute
Single nut (standard)	S
Double nut (on request)	D



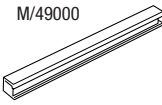
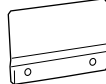
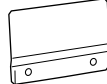
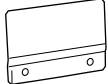
LINTRA Spindle

M/49000, M/49100, M/49200, M/49800

Internal, external, precision roller and heavy duty guided

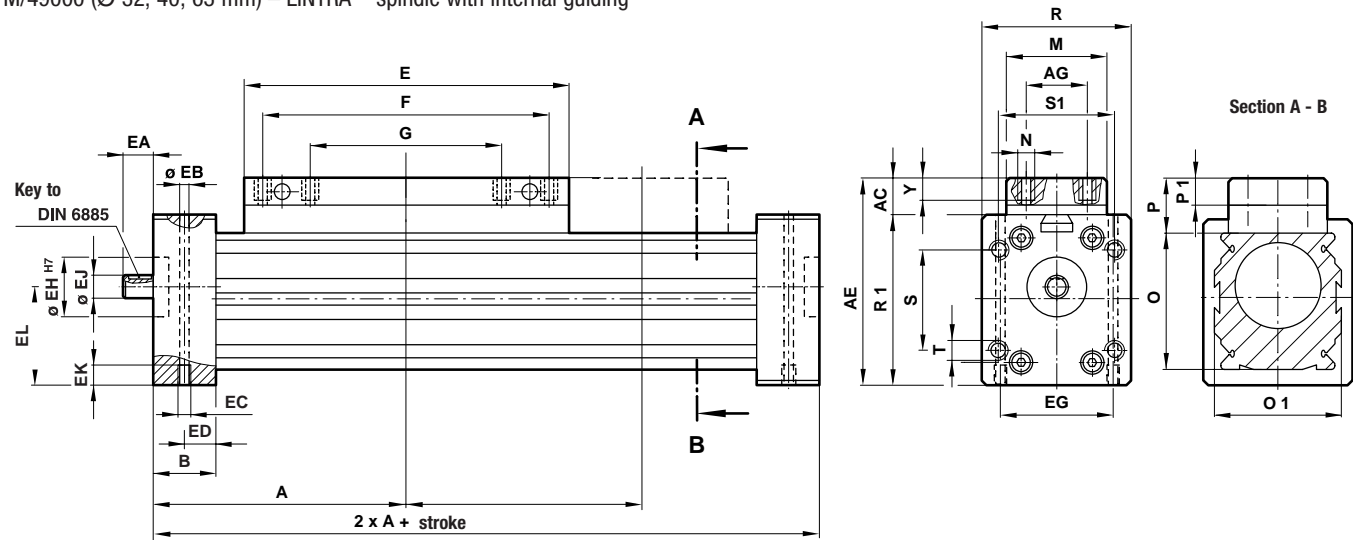
Ø 25 to 63 mm

Mountings

Ø	V	Bevel gear	Sensor bracket	Sensor activator	Sensor activator	Sensor activator
			M/49000 	M/49000 	M/49100 	M/49200 
25	QM/46025/32	SPC/Q008003/20	SPC/Q008003/22	–	SPC/Q008009/21	SPC/Q008014/21
32	QM/46032/32	On request	SPC/Q008004/22	SPC/Q008004/21	SPC/Q008010/21	SPC/Q008015/21
40	QM/46040/32	SPC/Q008005/20	SPC/Q008004/22	SPC/Q008005/21	SPC/Q008011/21	SPC/Q008016/21
50	QM/46050/32	SPC/Q008006/20	SPC/Q008004/22	–	SPC/Q008012/21	SPC/Q008017/21
63	QM/46063/32	SPC/Q008007/20	SPC/Q008004/22	SPC/Q008007/21	SPC/Q008013/21	SPC/Q008018/21

Motor adaptors for motor couplings and motors available on request

M/49000 (Ø 32, 40, 63 mm) – LINTRA® spindle with internal guiding



Ø	A	AC	AE	AG	B	E	EA	EB	EC	ED	EF	EG	EH	EJ	EK	F	G	M
25	–	–	–	20	23	180	20	5.6	M6	11.5	4	35	22	9	12	90	45	–
32	120	16	76	25	27	160	20	5.6	M6	13.5	4	45	28	10	12	120	60	45
40	150	15	90	25	30	215	25	6.8	M8	15	3	52	38	12	12	160	80	45
50	–	–	–	25	35	250	32	8.5	M10	17.5	5	64	47	17	20	190	95	–
63	215	20	125	25	40	320	40	8.5	M10	20	4	75	52	20	20	240	120	50
Ø	N	O	O1	P	P1	R	R1	S	S1	T	W	X	Y	Z	kg at 0 mm		kg per 100 mm	
25	M5	40	40	–	–	48	48	22	38	M5x13 deep	33	28	7	17	1.8	0.27		
32	M5	52	52	20	10	60	60	27.5	47.6	M6x15 deep	40	34.5	8	20	2.5	0.47		
40	M6	65	65	20	10	75	75	50.9	50.9	M8x20 deep	50	43.5	8	25	3.4	0.70		
50	M8	80	80	–	–	90	90	62.2	62.2	M8x25 deep	60	53.5	11	30	6.1	1.18		
63	M8	95	95	25	14	105	105	74.25	74.25	M10x25 deep	70	61.5	11	35	10.5	1.6		

Attention: when using spindle supports (SA) the total length of the spindle actuator is increased by 40 mm per two SAs.
Dimensions in inch (mm)

M/49100 (Ø25,32,40,50,63mm) - LINTRA® spindle with external guiding

M/49200 (Ø25,32,40,50,63mm) - LINTRA® spindle with precision roller guiding

M/49800 (Ø40mm) - LINTRA® spindle with heavy duty guiding

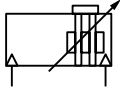
Technical information on request

LINTRA[®] Rodless cylinders

M/44000/M

Double acting

Ø 25 to 40 mm



New compact, space-saving design

Proven sealing system

Integral switch mounting

Adjustable cushioning

Magnetic piston as standard

Technical data

Medium:

Compressed air, filtered, lubricated or non-lubricated

Operation:

Double acting
Magnetic piston

Operating pressure:

1 to 8 bar

Operating temperature:

-30°C to +80°C max.

Consult our Technical Service for use below +2°C

Cylinder diameters:

25, 32, 40 mm

Strokes:

5000 mm or 196 inches max.

Longer strokes on request

Materials

Barrel: anodised aluminium alloy

End covers: aluminium alloy

Yoke: anodised aluminium alloy

Cover and pistons: plastic

Sealing strip: polyurethane

Cover strip: polyamide

Seals: nitrile rubber & polyurethane

Standard models

Ø	Port size	Model
25	G1/8	M/44025/M/*
32	G1/8	M/44032/M/*
40	G1/4	M/44040/M/*

* Insert stroke length

Note: When specifying NPT ports the stroke should be given in inches

Options selector

★/440★*/M/★★★★★

Porting	Substitute
ISO G-thread	M
NPT-thread	C

Stroke length in mm for ISO G-thread
5000 max.

Guiding system	Substitute
Internal	0

Stroke length in full inches for NPT-thread
196 max.

Cylinder diameters (mm)	Substitute
25	025
32	032
40	040

Fractional increments of stroke (inches)

	Substitute		Substitute		Substitute
0	A	3/8	G	3/4	P
1/16	B	7/16	H	13/16	R
1/8	C	1/2	J	7/8	S
3/16	D	9/16	K	15/16	T
1/4	E	5/8	M	Special	X
5/16	F	11/16	N		

Note: When specifying NPT ports the stroke should be given in inches

LINTRA[®] Rodless cylinders

M/44000/M

Double acting

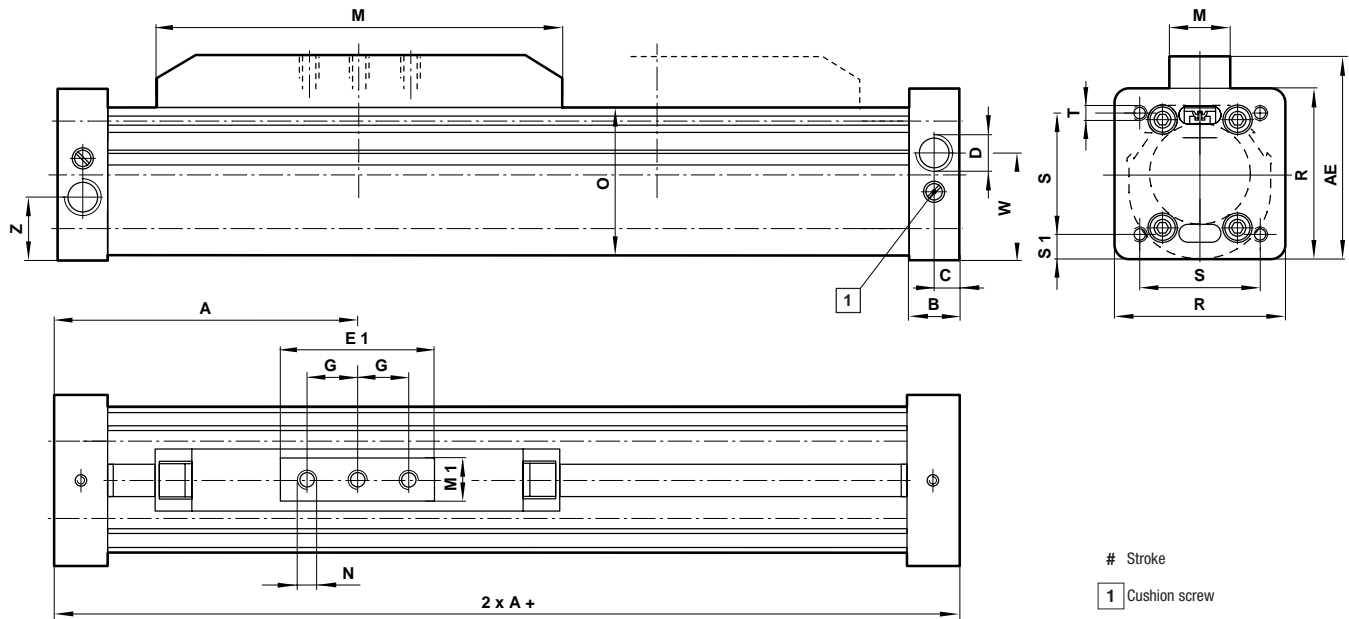
Ø 25 to 40 mm

Mountings

Ø	C	V	S	Switch mounting brackets
25	QM/44025/21	Q44025AAAAAM332	Q44025AAAAAM337	M/P72487
32	QM/44032/21	Q44032AAAAAM332	Q44032AAAAAM337	M/P72487
40	QM/44040/21	Q44040AAAAAM332	Q44040AAAAAM337	M/P72487

Standard cylinders

M/44000/M/...



Stroke
1 Cushion screw

Ø	A	AE	B	C	D (Port threads)*		E	E1	G	M	M1
25	72,5	53,2	13,5	7	G 1/8	1/8 NPT	100	40	12,5	22	18
32	82,5	67,8	13,5	7	G 1/8	1/8 NPT	120	50	15	24	20
40	112,5	79,3	19	9,5	G 1/4	1/8 NPT	165	60	20	24	20
Ø	N	O	R	S	S1	T	W	Z	kg at 0 mm		kg per 100 mm
25	M5-7 deep	35	42	33	4,5	M4-13,5	25,6	16,4	0,60	0,15	
32	M6-10 deep	46,5	53	41	6	M6-13,5	33,5	19,5	0,90	0,25	
40	M6-10 deep	58	65,5	48	8,75	M6-19	40,8	24,8	1,40	0,35	

* Optional ISO G or NPT-thread

LINTRA[®] Rodless cylinders

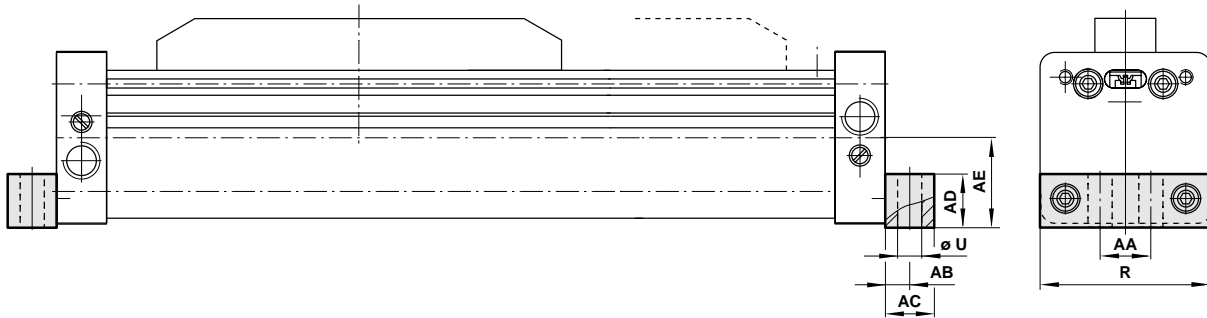
M/44000/M

Double acting

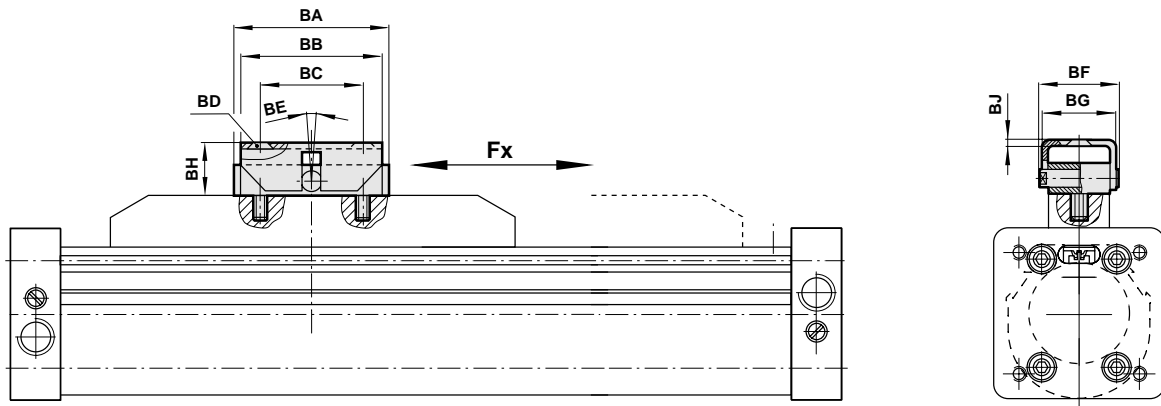
Ø 25 to 40 mm

Mountings

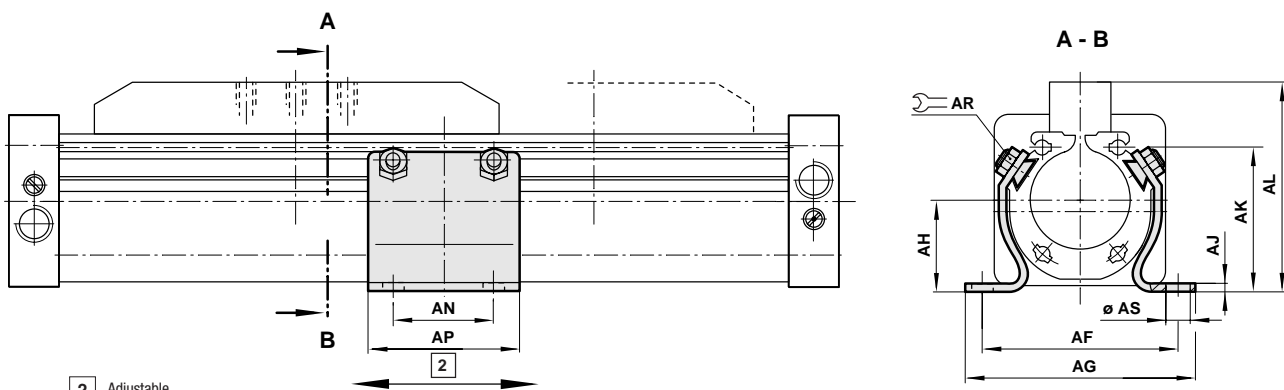
QM/44000/21 – Foot mounting style 'C'



QM44000AAAAAM337 – Swinging bridge mounting style 'S'



QM44000AAAAAM332 – Centre support mounting style 'V'



2 Adjustable

Ø	AA	AB	AC	AD	AE	AF	AG	AH	AJ	AK	AL	AN	AP	AR	Ø AS
25	18,5	5	10	10	21,5	58	70	21,5	3	31	53,5	25	40	10	6,6
32	20	8	16	16	28,5	70	83	28,5	3	43	70	30	50	10	9
40	27	7,5	15	22	35	79	92	35	3	55	81,5	40	60	10	9
Ø	BA	BB	BC	BD (DIN74)	BE	BF	BG	BH	BJ	Fx	R	Ø U	Style C	Style S	Style V
25	40	40	28	BM 5	± 8	29	28	15 + 5	2	250 N	42	5,5	0,04 kg	0,15 kg	0,07 kg
32	50	55	40	BM 6	± 8	31	30	17,5 + 5	2	410 N	53	9	0,09 kg	0,20 kg	0,15 kg
40	60	55	40	BM 6	± 8	31	30	18 + 5	2	640 N	65,5	9	0,13 kg	0,25 kg	0,25 kg