

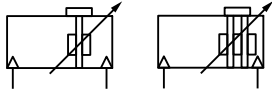
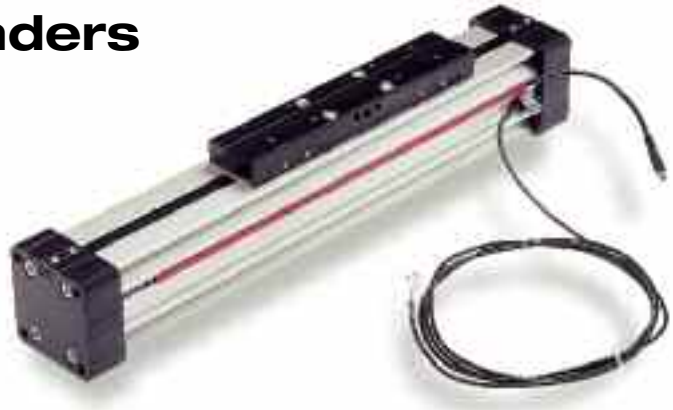
# LINTRA® Rodless cylinders

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

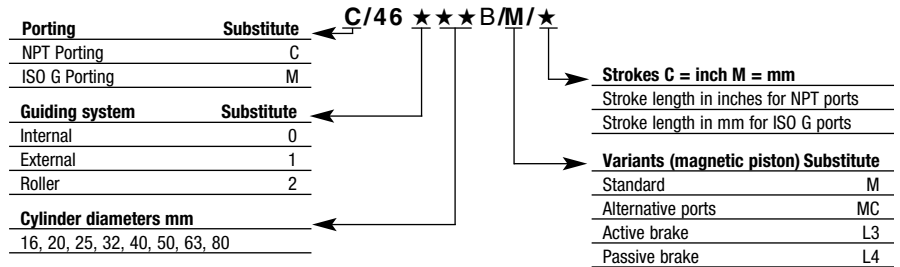
Ø	Port size inch (mm)	Internal guide	External guide	Precision roller guide
		Magnetic	Magnetic	Magnetic
16	- (M5)	C/46016B/M/*	C/46116B/M/*	-
20	1/8 NPT (G-1/8)	C/46020B/M/*	C/46120B/M/*	-
25	1/8 NPT (G-1/8)	C/46025B/M/*	C/46125B/M/*	C/46225B/M/*
32	1/4 NPT (G-1/4)	C/46032B/M/*	C/46132B/M/*	C/46232B/M/*
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



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.
- » 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.

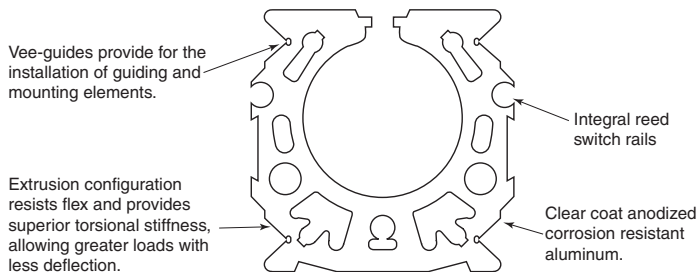
Corrosion resistance is available for 20 thru 80 mm only.

### 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



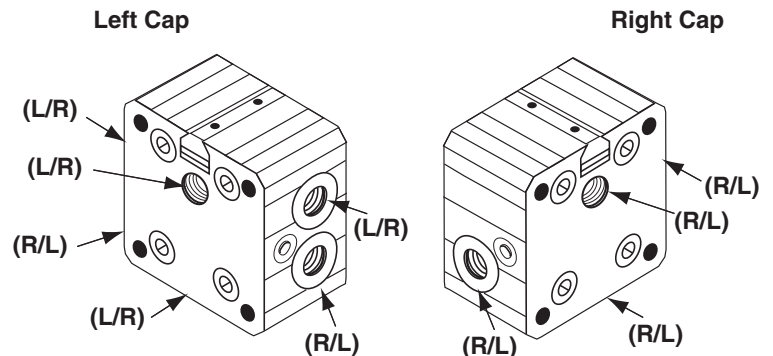
### Lintra® 46000 Series Multiple Port Endcaps

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")

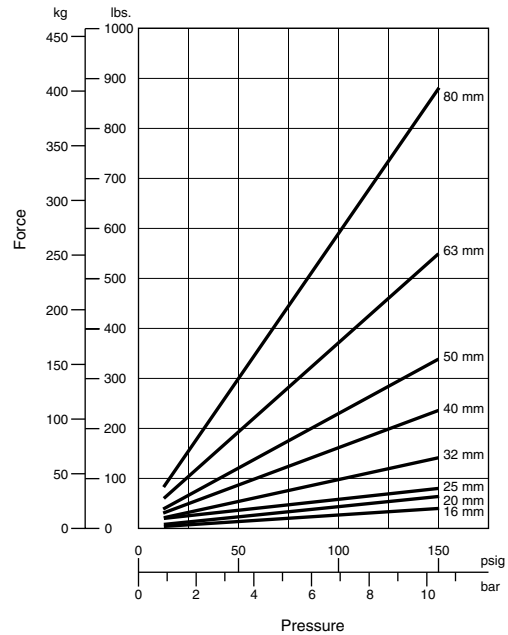
50 mm bore — 60 mm (2.36")

63 mm bore — 70 mm (2.76")

80 mm bore — 75 mm (2.95")

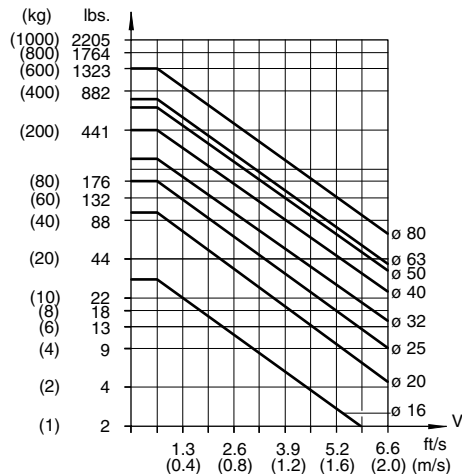
Bore Sizes:		Area (sq. in.)
16 mm bore —	0.63"	.31
20 mm bore —	0.79"	.49
25 mm bore —	0.98"	.75
32 mm bore —	1.26"	1.25
40 mm bore —	1.57"	1.94
50 mm bore —	1.97"	3.05
63 mm bore —	2.48"	4.83
80 mm bore —	3.15"	7.79

THRUST – Based on 75% of Maximum Thrust



## 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.

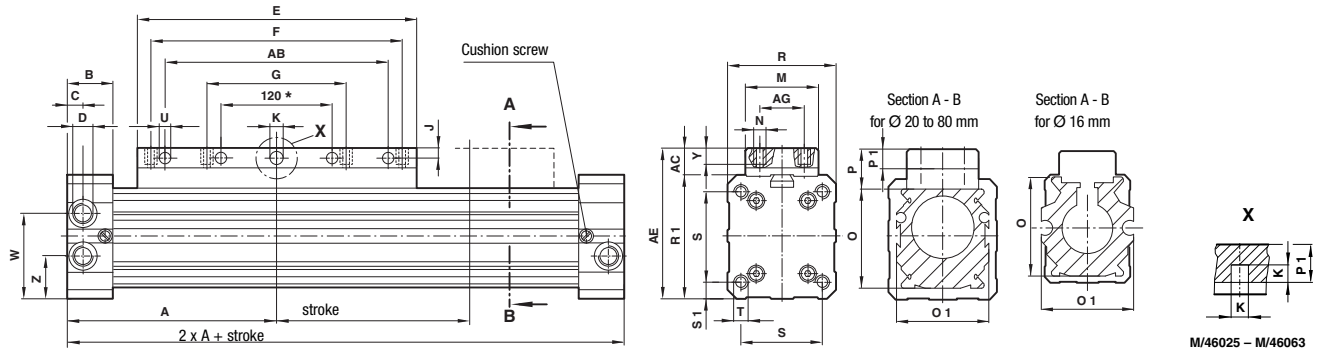


# LINTRA Rodless cylinders

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

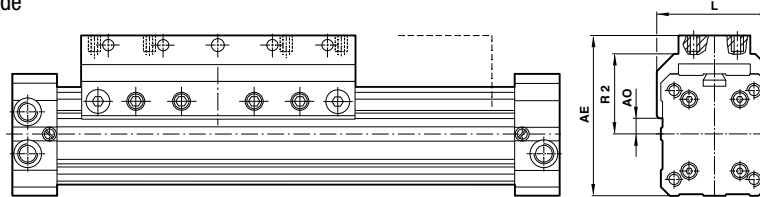
## Standard cylinders

C/46000B/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 (08)	– M5	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 (08)	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

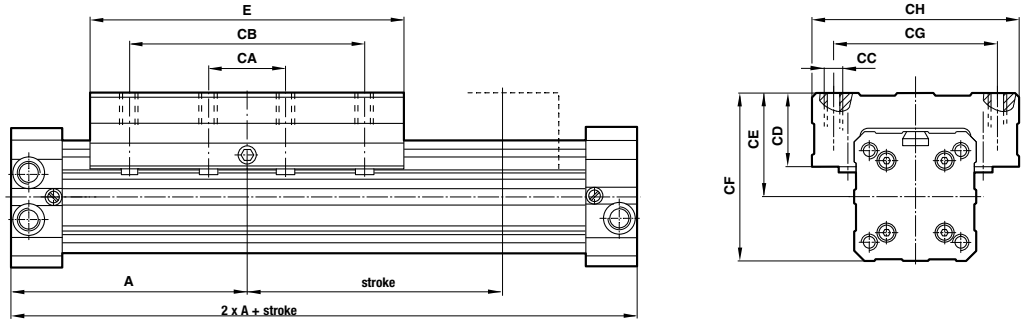
C/46000B, C/46100B, C/46200B

Internal. external and precision roller guided

Double acting

Ø 16 ... 80 mm

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

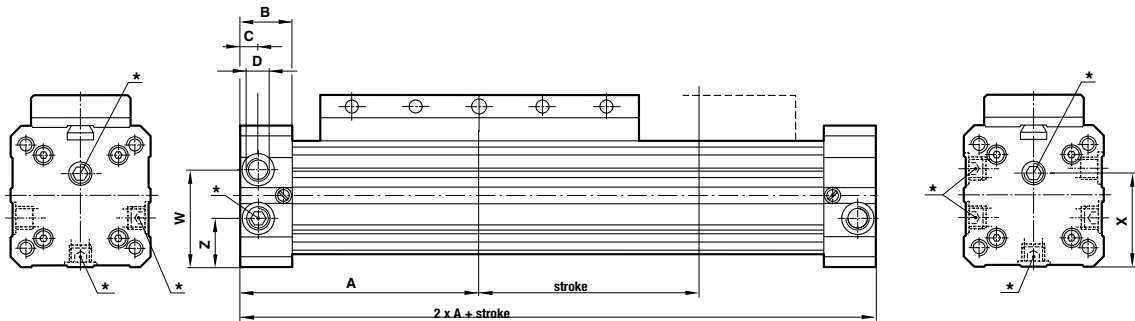


Ø mm	A	CA	CB	CC	CD	CE	CF	CG	CH	E
25	3.94 (100)	1.77 (45)	3.54 (90)	M6x14 deep	1.42 (36)	1.65 (42)	2.60 (66)	2.36 (60)	3.35 (85)	5.91 (150)
32	4.72 (120)	2.36 (60)	4.72 (120)	M8x16 deep	1.50 (38)	1.97 (50)	3.15 (80)	2.95 (75)	3.86 (98)	7.09 (180)
40	5.91 (150)	3.15 (80)	5.91 (150)	M8x16 deep	1.65 (42)	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.

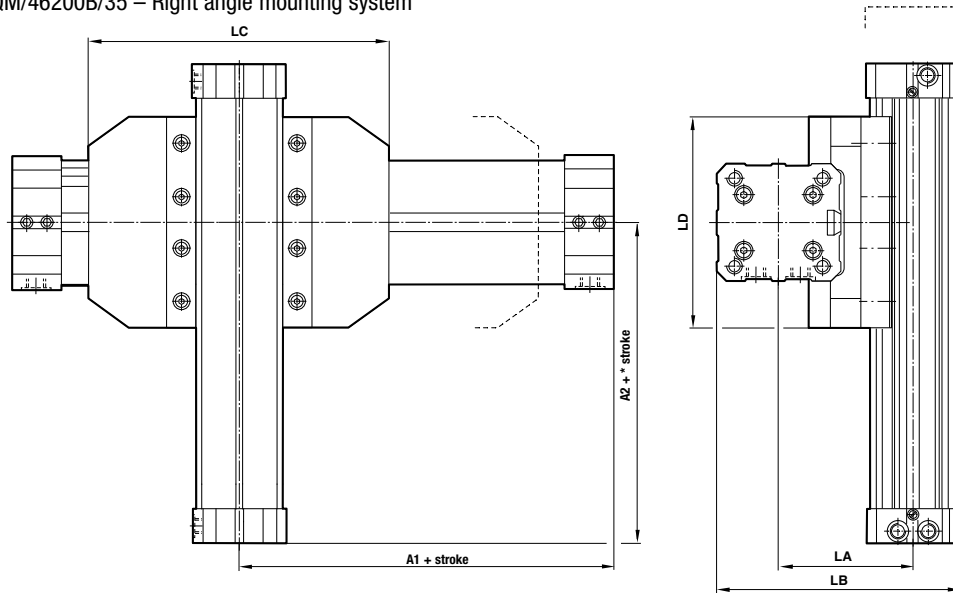
Ø	A	B	C	D	W	X	Z
25	3.94 (100)	0.91 (23)	0.57 (14.5)	1/8 NPT G/18	1.30 (33)	1.30 (33)	0.67 (17)
32	4.72 (120)	1.06 (27)	0.41 (10.5)	1/4 NPT G1/4	1.57 (40)	1.36 (34.5)	0.79 (20)
40	5.91 (150)	1.18 (30)	0.45 (11.5)	1/4 NPT G1/4	1.97 (50)	1.71 (43.5)	0.98 (25)
50	7.09 (180)	1.38 (35)	0.55 (14)	3/8 NPT G3/8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

### 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							

### 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							

### 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

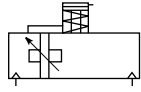
# LINTRA® Rodless cylinders

C/46000B/L

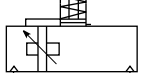
Internal guide with brake

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

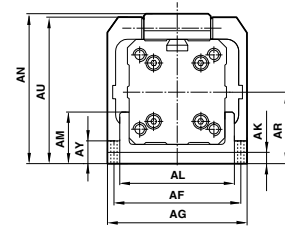
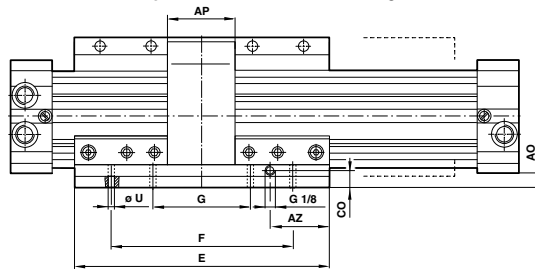
Brake liner: non-asbestos

Sealing strip & piston seals: polyurethane

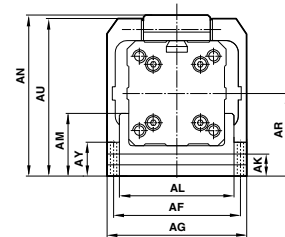
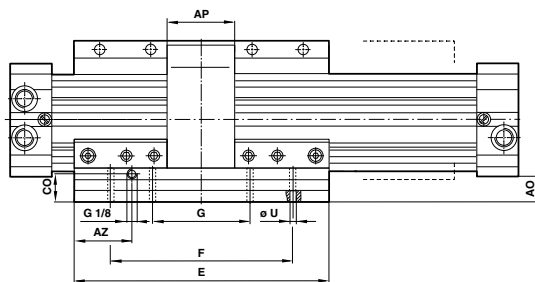
Cover strip: polyimide

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	CO	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 (06)	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)	0.18 (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 (06)	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 (06)	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)

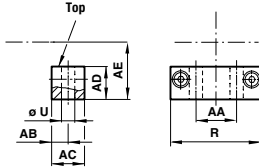


# LINTRA Rodless cylinders

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)

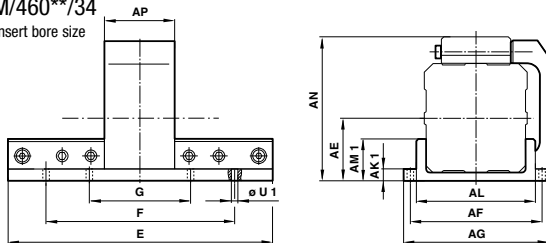
End cover mounts for cylinders Ø 25 to 80mm can be attached to give different distances AE. When used together with a center support mounting the word 'TOP' should be visible on the top face of the mount.

Dimensions in inch (mm)

## Carriage plate mounting – UV

QM/460\*\*/34

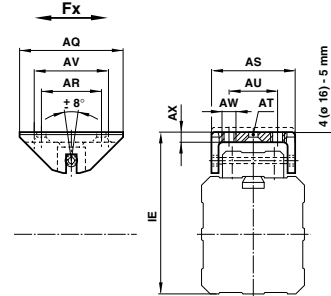
\*\* Insert bore size



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 (5.5)	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)	3.07 (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 (9)	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 (9)	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



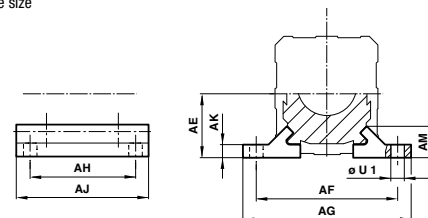
Ø	AQ	AR	AS	AT	AU	AV	AW	AX	IE	Fx (N)	lb (kg)
16	1.57 (40)	-	1.02 (26)	-	0.47 (12)	1.18 (30)	M4	0.16 (4)	1.89 +.16 (48 +4)	3.94 (100)	0.04 (0.02)
20	1.97 (50)	1.38 (35)	1.50 (38)	DIN74 -Bm5	0.79 (20)	1.57 (40)	M5	0.20 (5)	2.58 +.20 (65.5 +5)	5.91 (150)	0.22 (0.10)
25	2.36 (60)	1.57 (40)	1.73 (44)	DIN74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

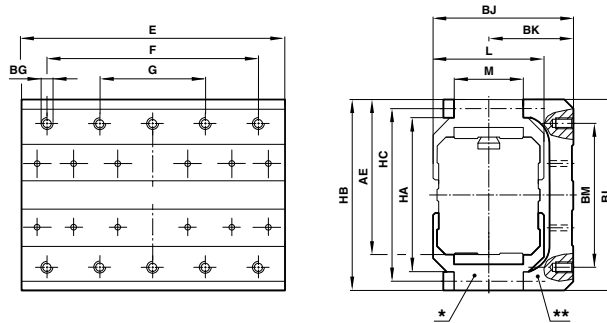
Dimensions in inch (mm)



# 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
Bore	Weight at 0 in. stroke	Weight at 0 in. stroke	Weight at 0 in. stroke	Weight at 0 in. stroke	Weight at 0 in. 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.

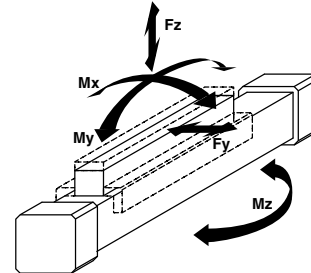
# LINTRA® Rodless cylinders

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

Internal, external and precision roller guided

## 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:

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

## Load values for Internal guide cylinders

	Bore	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm	80 mm	
		NPT Model	NA	C/46020B/M/*	C/46025B/M/*	C/46032B/M/*	C/46040B/M/*	C/46050B/M/*	C/46063B/M/*	C/46080B/M/*
		ISO G Model	M/46016B/M/*	C/46020B/M/*	M/46025B/M/*	M/46032B/M/*	M/46040B/M/*	M/46050B/M/*	M/46063B/M/*	M/46080B/M/*
Fy	Lbs Force	9	20	25	34	68	90	144	176	
	N	(40)	(90)	(110)	(150)	(300)	(400)	(640)	(780)	
Fz	Lbs Force	27	63	79	104	203	270	428	518	
	N	(120)	(280)	(350)	(460)	(900)	(1200)	(1900)	(2300)	
Mx	In Lbs	2.7	8	12	22	51	87	159	239	
	Nm	(0.3)	(0.9)	(1.3)	(2.5)	(5.8)	(9.8)	(18)	(27)	
My	In Lbs	34	106	168	266	681	974	2124	3186	
	Nm	(3.8)	(12)	(19)	(30)	(77)	(110)	(240)	(360)	
Mz	In Lbs	9.7	32	50	76	195	283	620	885	
	Nm	(1.1)	(3.6)	(5.6)	(8.6)	(22)	(32)	(70)	(100)	

## Load values for External guide cylinders

	Bore	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm	80 mm	
		NPT Model	NA	C/46120B/M/*	C/46125B/M/*	C/46132B/M/*	C/46140B/M/*	C/46150B/M/*	C/46163B/M/*	C/46180B/M/*
		ISO G Model	M/46116B/M/*	M/46120B/M/*	M/46125B/M/*	M/46132B/M/*	M/46140B/M/*	M/46150B/M/*	M/46163B/M/*	M/46180B/M/*
Fy	Lbs Force	45	106	133	176	338	450	720	878	
	N	(200)	(470)	(590)	(780)	(1500)	(2000)	(3200)	(3900)	
Fz	Lbs Force	45	106	133	176	338	450	720	878	
	N	(200)	(470)	(590)	(780)	(1500)	(2000)	(3200)	(3900)	
Mx	In Lbs	18	53	80	150	345	577	1066	1598	
	Nm	(2)	(6)	(9)	(17)	(39)	(65)	(120)	(180)	
My	In Lbs	49	159	249	381	974	1421	3108	4618	
	Nm	(5.5)	(18)	(28)	(43)	(110)	(160)	(350)	(520)	
Mz	In Lbs	49	159	249	381	974	1421	3108	4618	
	Nm	(5.5)	(18)	(28)	(43)	(110)	(160)	(350)	(520)	

## Load values for Roller guide cylinders

	Bore	16 mm	20 mm	25 mm	32 mm	40 mm	50 mm	63 mm	80 mm	
		NPT Model	NA	C/46220B/M/*	C/46225B/M/*	C/46232B/M/*	C/46240B/M/*	C/46250B/M/*	C/46263B/M/*	C/46280B/M/*
		ISO G Model	M/46216B/M/*	M/46220B/M/*	M/46225B/M/*	M/46232B/M/*	M/46240B/M/*	M/46250B/M/*	M/46263B/M/*	M/46280B/M/*
Fy	Lbs Force	-	-	133	176	338	450	720	-	
	N	-	-	(590)	(780)	(1500)	(2000)	(3200)	-	
Fz	Lbs Force	-	-	266	351	675	900	1440	-	
	N	-	-	(1180)	(1560)	(3000)	(4000)	(6400)	-	
Mx	In Lbs	-	-	115	222	515	861	1598	-	
	Nm	-	-	(13)	(25)	(58)	(97)	(180)	-	
My	In Lbs	-	-	373	568	1421	2131	4618	-	
	Nm	-	-	(42)	(64)	(160)	(240)	(520)	-	
Mz	In Lbs	-	-	373	568	1421	2131	4618	-	
	Nm	-	-	(42)	(64)	(160)	(240)	(520)	-	

\*Insert stroke length