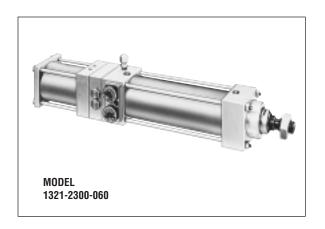


CONTROL LINE EQUIPMENT, INC.

14750 Industrial Parkway • Cleveland, Ohio 44135 (216) 433-7766 • FAX: (216) 433-7664

Series 13 Coaxial Air / Hydraulic Cylinder



Application Information

- Unique combination cylinder provides smooth, precise hydraulic control, but requires only a shop air supply. Oil cylinder concentric with air cylinder, results in unit about one-half the length of an in-line unit, and easier to install than side-by-side cylinder combination.
- These cylinders recommended for machine tool applications or work-piece feeding, and where precise speed control and smoothness are required.
- The compactness of the Series 13 is beneficial where long stroke length, with controlled and uniform speed throughout the stroke, is desirable.
- Dial-set, stepless, load-compensated, speed control in both directions assures smooth, uniform piston travel regardless of load fluctuations.
- Oil reservoir automatically compensates for volume changes with visual low-oil signal.
- Optional built-in skip-stop control for selection of rapid traverse or stop in either direction.

Specifications

Operating Air Pressure Controlled Speed Either Direction

30 p.s.i. minimum, 150 p.s.i. maximum.

3 inches per minute minimum, 300 inches plus 60 inches or minus 40 inches maximum.

Effective Piston Area Skip & Stop Valve Operation

4.6 square inches extending 3.14 square inches retracting.

A 60 p.s.i. minimum air pressure is required on coaxial cylinder operating at from 30 to 70 p.s.i. Cylinder pressures above 70 p.s.i. require a skip or stop

valve pressure equal to 85% of operating pressure.

Skip Operation

Pressurizing Skip Port opens Skip Valve allowing speed control to be

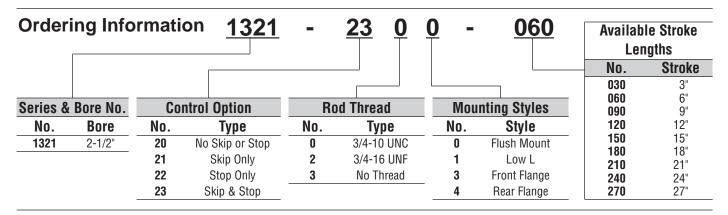
bypassed, either direction.

Stop Operation

Pressurizing Stop Port closes Stop Valve causing cylinder to immediately stop, in either controlled or skip feed modes.

HOW TO ORDER:

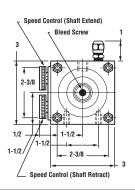
Refer to the table below and specify Series-And-Bore Number. Select suffix number indicating Cylinder Type, Control Option and Mounting Option. Add Stroke Length. This will produce a 4-digit prefix, 4-digit suffix and a dimension in inches. See typical model number beneath illustration above.

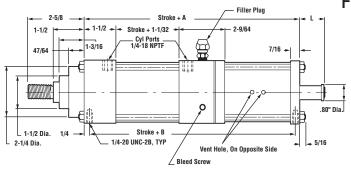




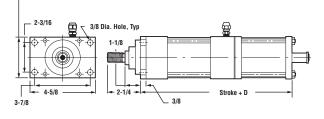
Series 13 Coaxial Cylinder

Flush Mount

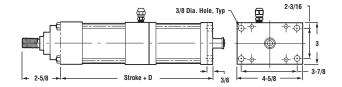




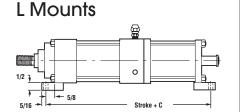
Front Flange Mount



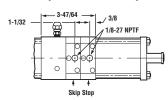
Rear Flange Mount



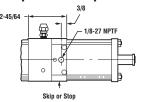
9/32 Dia 2-3/8 Hole, Ty



Skip And Stop



Skip Or Stop



Dimensions

Model	Stroke Range	Α	В	C	D	L
	Up to 9"	8-1/4	7-25/32	9-17/32	8-5/8	1-9/32
No Skip	Over 9" to 18"	9-3/4	9-9/32	11-1/32	10-1/8	2-1/32
Or Stop	Over 18" to 27"	11-1/4	10-25/32	12-17/32	11-5/8	2-25/32
	Up to 9"	8-13/16	8-11/32	10-3/32	9-3/16	1-9/32
With Skip	Over 9" to 18"	10-5/16	9-27/32	11-19/32	10-11/16	2-1/32
Or Stop	Over 18" to 27"	11-13/16	11-11/32	13-3/32	12-3/16	2-25/32
	Up to 9"	9-27/32	9-3/8	11-1/8	10-7/32	1-9/32
With Skip	Over 9" to 18"	11-11/32	10-7/8	12-5/8	11-23/32	2-1/32
And Stop	Over 18" to 27"	12-27/32	12-3/8	14-1/8	13-7/32	2-25/32

Stroke Force Information

Air Line Pressure PSI (bar)	Extending Force Lbs.	Retracting Force Lbs.
60	250	155
80	345	215
100	435	280
120	525	340
140	620	405
150	665	435

Repair Kit

SERIES 13	NO.
All Units	7153

Model 1579 Hydraulic Oil Fill Kit



Recommended for use in filling oil reservoir in Series 12 and Series 13 cylinders.



Hydraulic Oil

Recommended especially for use in Control Line Series 12 Veritrol hydraulic checking cylinders and Series 13 Coaxial air-hydraulic cylinders.

QUANTITY	PART NO.
1 Gallon	1626

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