



STRETCH ROD CYLINDERS FOR SIDEL® UNIVERSAL MACHINES

for the Plastic Bottle Blowing Industry



- Longer Life
- Reduces Maintenance and Downtime
- Direct Replacement

**Direct Replacement
for Sidel® Model
Universal Machines**

HEAT SET
WITHOUT BALAYAGE
ML# 309397



SB034
ML# 309360



HEAT SET
ML# 309326



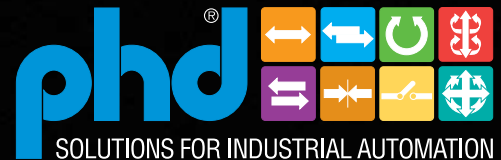
CSD
ML# 308217



UNIVERSAL02

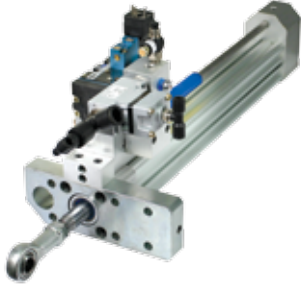


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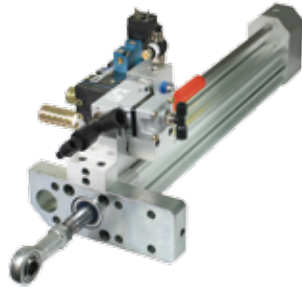


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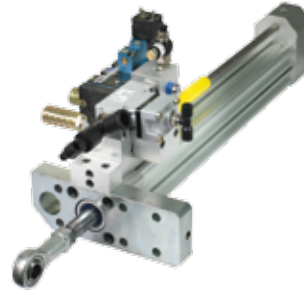
ORDERING GUIDE: UNIVERSAL CYLINDER



CSD
ML# 308217



Heat Set
ML# 309326



Heat Set without Balayage
ML# 309397



SB034
ML# 309360

Recommended Set Up Instructions

How is the machine being run?

CSD - If yes, order **ML306987** (unit without valve)(1)
or **ML308217** (unit with valve)

Heat Set - Is Balayage only being used? If YES, ML307364 (without valve)(2)
or ML309326 (with valve)

Heat Set - Instead of Balayage, is there back pressure (full blow) on stretch rod during retract?
If YES, then **ML307592** (without valve) (3)
or **ML309397** (with valve)

(This is the case often when machine is heat set, but running CSD bottles)

Shock Absorber used on stretch rod cylinder retract?
If NO, contact PHD before ordering.

Cold Set on an SB034? Standard cylinders issued on this machine are only 290mm in stroke, as opposed to 400mm. This cylinder has a different stroke, a different flange and the alignment of the flange/check valve is different than the other cylinders for the Universal. If YES, order ML309360 (4) for unit with valve, ML309361 for a unit without valve, or ML309734 for a unit with a valve and heat set style mufflers.

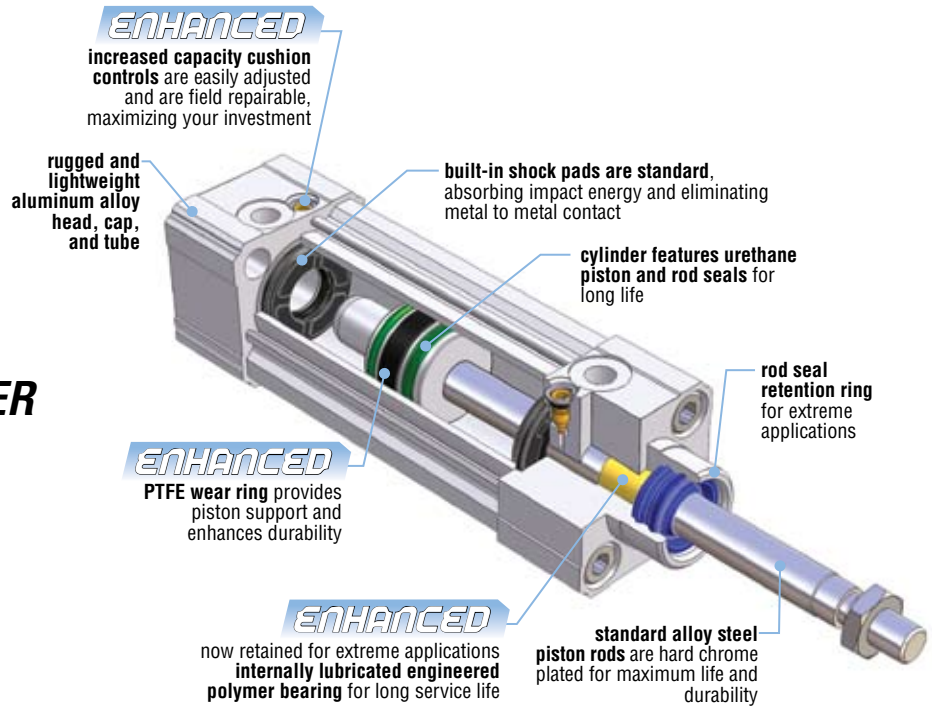
Recommended Set Up Instructions –
Start with cushion needle in fully closed position

- (1) IF **NO** BACK PRESSURE, adjust cushion needle 1/2 to 1 full turn from fully closed position.
IF BACK PRESSURE, adjust cushion needle 1-1/2 to 2 full turns from fully closed position.
- (2) Adjust cushion needle 4 full turns from fully closed position. If used in conjunction with shock absorber on retract, then open counterclockwise until fully open.
- (3) Adjust cushion needle 1-1/4 turns from fully closed position.

Factory recommended guidelines only - customer will need to adjust accordingly to his specific loads and speed.



- Provides Significantly Longer Life
- Direct Replacement
- Reduces Maintenance and Downtime



UNIVERSAL MACHINES STRETCH ROD CYLINDER

- Direct replacement for Sidel® Model Universal Machines

Common Benefits

- PHD Cylinder mounts into the same space and bolt patterns.
- Provides significantly longer life and reduces maintenance and downtime.
- Mounting options provide ease of design into application.
- Internal shock pads are standard, eliminating metal to metal contact.
- Cushion controls are standard for end of stroke deceleration.
- Cylinders are easily field repairable, maximizing your investment.

Industry Uses

- Plastic Packaging - Stretch Blow Molding

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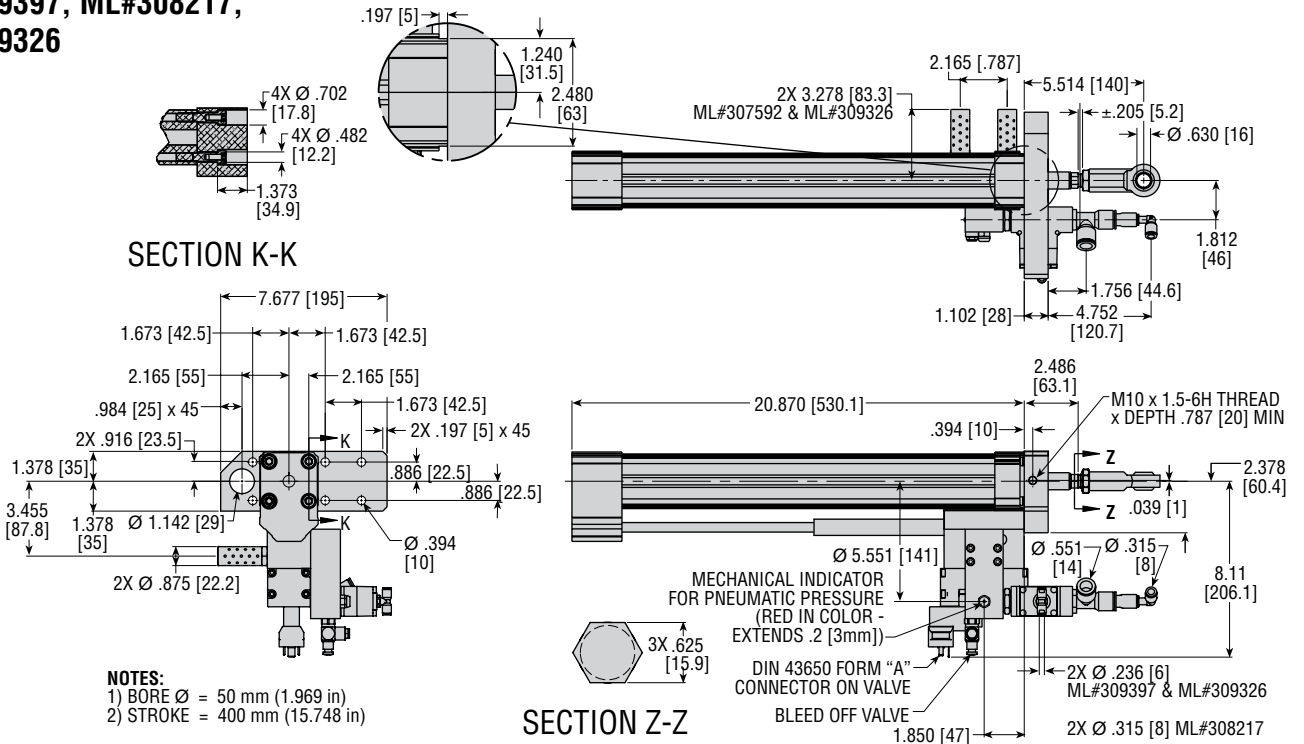
SPECIFICATIONS	IMPERIAL	METRIC
TYPE	Pneumatic Cylinder	
SERIES	Universal Machines Stretch Rod Cylinder	
BORE SIZE	1.969 in	50 mm
BORE AREA - EXTEND	3.04 in ²	1963 mm ²
BORE AREA - RETRACT	2.56 in ²	1649 mm ²
THEORETICAL OUTPUT	264.5 lb @ 87 psi	1176.6 N @ 6 bar
OPERATION	Double Acting	
OPERATING PRESSURE RANGE	7.5 - 150 psi	0.5 - 10 bar
AMBIENT TEMPERATURE	-20° to 180° F	-29° to 82° C
ADJUSTABLE CUSHION - RETRACT	Standard	
LUBRICATION; FOOD GRADE	FDA Regulation 21 CFR 178.3570	
STROKE (SB034)	15.692 in 11.417 in	400 mm 290 mm
STROKE TOLERANCE	+0.079/-0.000 in	+2.0/-0.0 mm
SHOCK PAD	Thermoplastic Polyester Elastomer (TPE)	
HEADS & CAPS	Anodized Aluminum	
CYLINDER TUBE	Anodized Aluminum	
PISTON ROD	Hard Chrome Plated Steel	
ROD BEARING	Internally Lubricated Polymer	
PISTON & ROD SEALS	Urethane	

VALVE SPECIFICATIONS

SERIES	ISO 2 (ISO 5599/1)
FUNCTION	5/2
OPERATOR	Single
PILOT	Internal
SPOOL RETURN	Spring
SOLENOID	24 VDC (5.4 W)
VOLTAGE RANGE	-15% to +10% from Nominal
ELECTRICAL CONNECTOR	DIN 43650, Form A
MANUAL OPERATOR	Non-locking Recessed
PILOT EXHAUST	Muffled
FLOW	3.0 Cv
LUBRICATION	FDA Regulation 21 CFR 1789.3570
FILTRATION	40 Micron
OPERATING PRESSURE RANGE	20 to 150 psi [1.37 to 10 bar]
AMBIENT FLUID TEMPERATURE	0° to 120° F [-18° to 50° C]

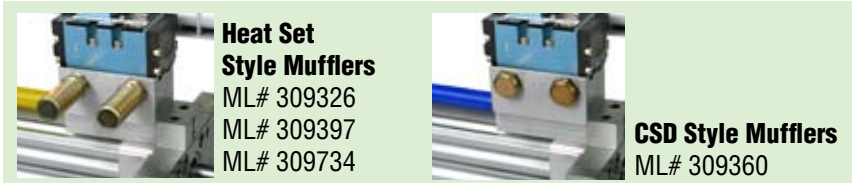
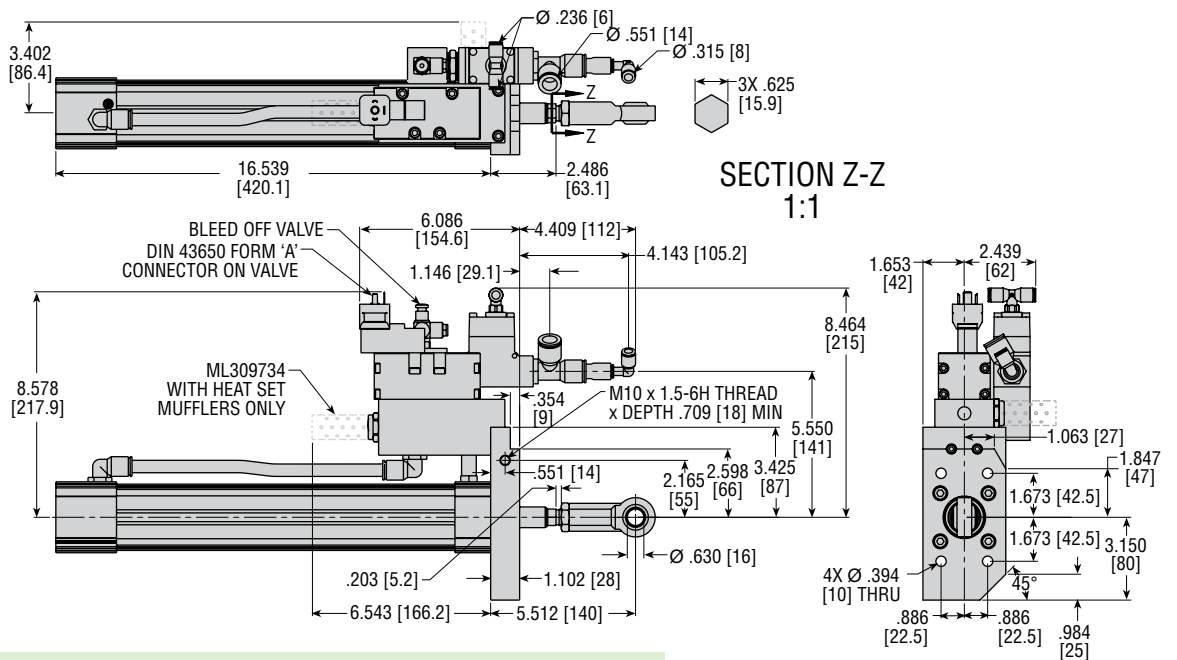
DIMENSIONS: STRETCH ROD CYLINDERS

**ML#309397, ML#308217,
ML#309326**



ML#309360
for SB034, 290 mm stroke cylinder

ML#309734
for SB034, 290 mm stroke cylinder with heat set mufflers



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