



START-UP & INFORMATION SHEET: SERIES BCZUS UNIVERSAL NOZZLE CYLINDER

IMPORTANT INFORMATION DO NOT DISCARD!

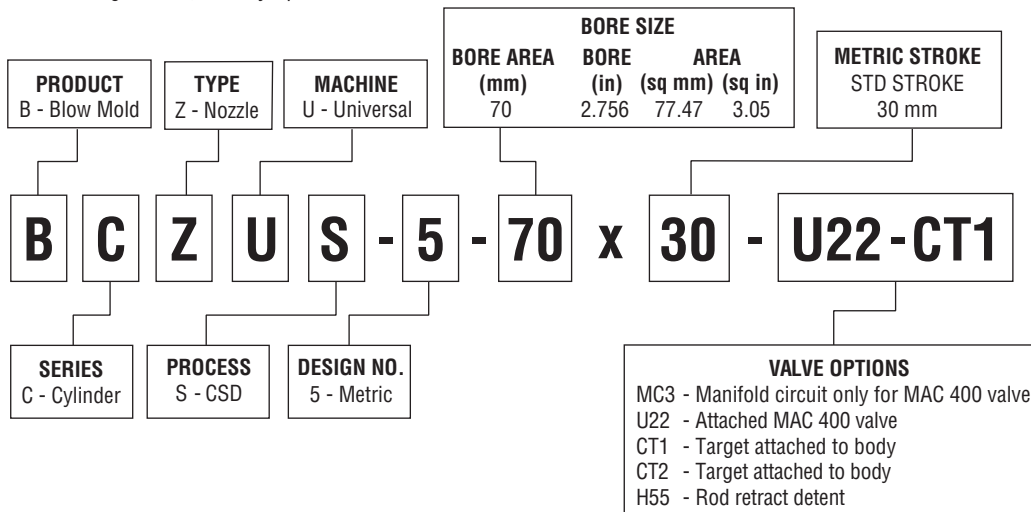
Use this information sheet to assist with cylinder installation and setup.
File with maintenance or machine documentation.

THE FOLLOWING IS A CROSS REFERENCE LISTING OF PHD TO SIDEL® UNITS:

| PHD | SIDEL |
|------------------------|---|
| BCZUS-5-7 X 30-U22-CT1 | 15.01124520804A |
| BCZUS-5-7 X 30-U22-CT2 | 15.01131571501 15.01131444603 15.01124638605A |

TO ORDER, SPECIFY:

Product, Series, Type, Machine No., Process, Design No., Bore Size, Stroke Configurations, and any Options.



For additional technical assistance, call or visit our website:

P.O. Box 9070, Fort Wayne, IN 46899
1-800-624-8511
www.phdinc.com

phd[®] START-UP PROCEDURE: SERIES BCZUS UNIVERSAL NOZZLE CYLINDER

LIFE EXPECTANCY

Series BCZU Cylinders have been designed for 20 million trouble-free cycles.

CYCLE RATE

Series BCZU Nozzle Cylinders meet or exceed cycle rate of competitor's unit when using optional manifold/valve combinations.

| CYLINDER SPECIFICATION | IMPERIAL | METRIC |
|--|-------------------------------|-----------------------|
| Type | Pneumatic Cylinder | |
| Series | BCZU Two Step Nozzle Cylinder | |
| Operation | Double Acting | |
| Bore Size - Actuator | 2.756 in | 70 mm |
| Stroke | 1.181 in | 30 mm |
| Piston Rod Diameter | 2.205 in | 56 mm |
| Bore Area Extend | 3.680 in ² | 23.74 cm ² |
| Bore Area Retract | 2.147 in ² | 13.85 cm ² |
| Operating Pressure Range | 30 - 145 psi | 2.1 - 10 bar |
| Blow Pressure | 580 psi | 40 bar |
| Theoretical Extend Output @ 87 psi (6 bar) | 320.2 lbf | 1424.4 N |
| Theoretical Retract Output @ 87 psi (6 bar) | 186.7 lbf | 830.5 N |
| Ambient and Fluid Temperature | -20°F to +180°F | -29°C to +82°C |
| Stroke Time - Applied Power to End of Stroke | Extend 50 ms, Retract 110 ms | |
| Stroke Time - Start of Movement to End of Stroke | Extend 32 ms, Retract 65 ms | |
| Lubrication | FDA Regulation 21CFR 178.3570 | |
| Port Size | N/A | |
| Glide Ring | FDA Engineered Polymer | |
| Piston & Rod Seals | FDA Engineered Polymer | |
| Bumper | FDA Polyurethane | |
| Cap | Teflon Hard Anodized Aluminum | |
| Cylinder Body | Teflon Hard Anodized Aluminum | |
| Piston Rod | Teflon Hard Anodized Aluminum | |
| Rod Bearing | FDA Engineered Polymer | |

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MAINTENANCE

As with most PHD products, these cylinders are field repairable. Repair kits, tooling kits, and main structural components are available as needed for extended service. Optional rebuild service is available.

LUBRICATION

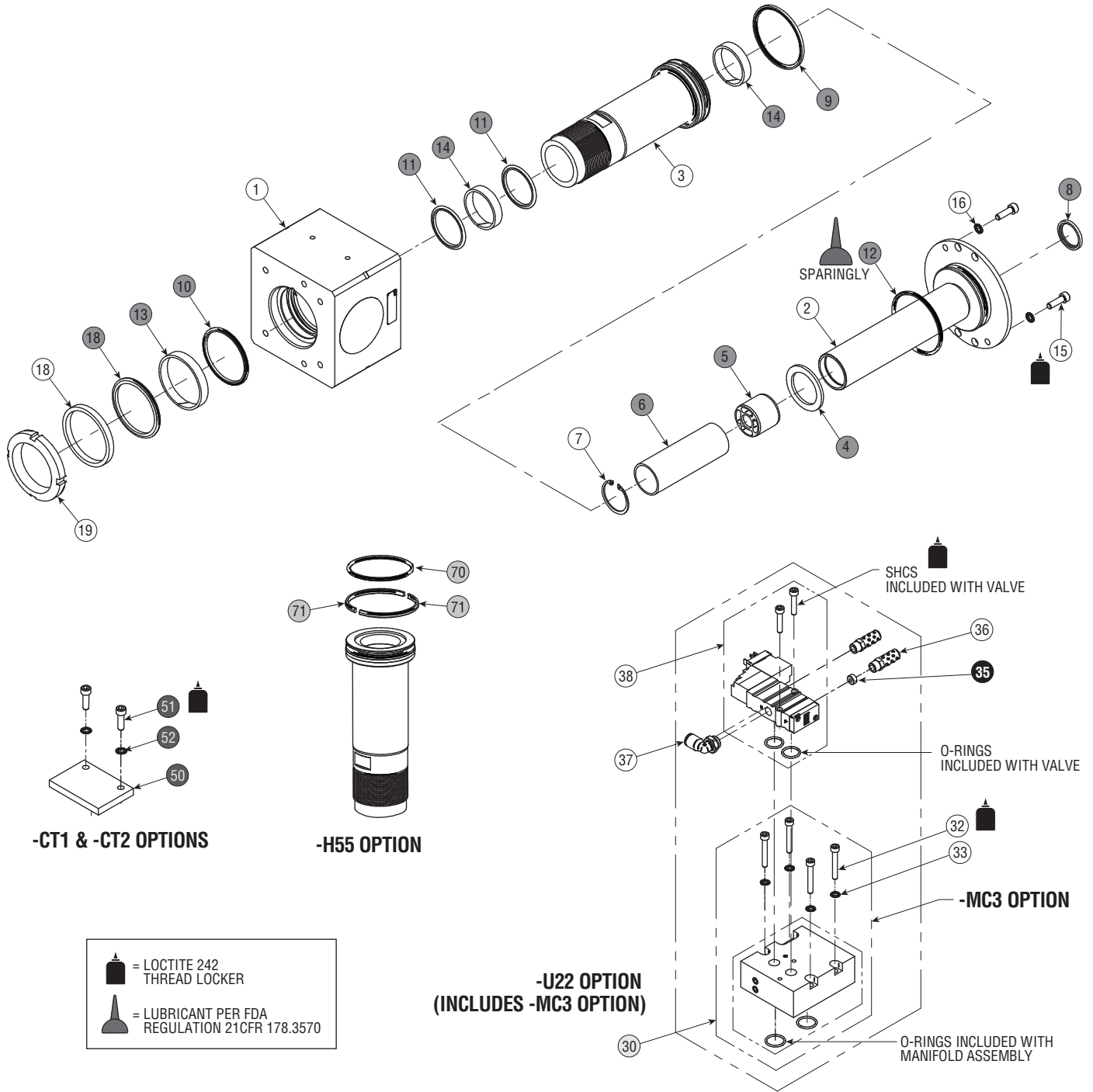
Series BCZU Nozzle Cylinders are designed and intended not to require lubrication. Static seals may be lubricated for assembly purposes using lubrication per FDA Regulation 21CFR 178.3570.

| VALVE SPECIFICATIONS | |
|----------------------|----------------------|
| Series | Mac 400 series |
| Pressure [Max] | 125 psi |
| Flow [Max] | 1.0 Cv |
| Function | 5/2 |
| Operator | Single |
| Pilot | Internal |
| Spool Return | 4 way Pilot |
| Solenoid | 24Vdc, 0.15W |
| Electrical Connector | Form "B" |
| Manual Operator | Non-locking Recessed |
| Pilot Exhaust | Muffled |

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phd PARTS LIST & REPAIR KITS: SERIES BCZUS UNIVERSAL NOZZLE CYLINDER



| KIT DESCRIPTION | KIT NUMBER | COLOR CODE |
|-----------------|---|------------|
| Repair Kit | Full unit description required followed by -H9010 | |
| Detent Kit | 85082 | |
| Manifold Kit | 86255 | |
| Orifice Kit | 86256 | |
| -CT1 Target Kit | 86291 | |
| -CT2 Target Kit | 86292 | |
| Repair Tooling | 86257 | Not Shown |

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phd PARTS LIST & REPAIR KITS: SERIES BCZUS UNIVERSAL NOZZLE CYLINDER

CYLINDER ONLY PARTS LIST

| KEY | PART DESCRIPTION | PART NO. |
|-----|------------------------|---|
| 1 | Body | 86255 |
| 2 | Cap | 86226 |
| 3 | Piston | 86227 |
| 4 | Shock Pad | 86228 |
| 5 | Diffuser | 86229 |
| 6 | Spacer Tube | 86230 |
| 7 | Retaining Ring | Full unit description required followed by -H7101 |
| 8 | Compression Seal | Sold as part of Repair Kit (-H9010*) |
| 9 | 70mm Piston Seal | Sold as part of Repair Kit (-H9010*) |
| 10 | 56mm Rod Seal | Sold as part of Repair Kit (-H9010*) |
| 11 | 40mm Rod Seal | Sold as part of Repair Kit (-H9010*) |
| 12 | O-Ring Seal | Sold as part of Repair Kit (-H9010*) |
| 13 | 56mm Wear Ring | Sold as part of Repair Kit (-H9010*) |
| 14 | 40mm Wear Ring | Sold as part of Repair Kit (-H9010*) |
| 15 | Fastener | 61054-118 |
| 16 | Serrated Safety Washer | 84141-008-02 |
| 17 | 56mm Rod Scraper | Sold as part of Repair Kit (-H9010*) |
| 18 | Rod Scraper Retainer | 86237 |
| 19 | Locking Nut | Full unit description required followed by -H3600 |

NOTE: * Full unit description required (followed by -Hxxxx)

-MC3 OPTION PARTS LIST

| KEY | PART DESCRIPTION | PART NO. |
|-----|------------------------|--------------|
| 30 | Manifold Assembly | 86240 |
| 32 | Fastener | 61054-106 |
| 33 | Serrated Safety Washer | 84141-007-02 |

-CT1 OPTION PARTS LIST

| KEY | PART DESCRIPTION | PART NO. |
|-----|------------------------|--------------|
| 50 | Target | 86239 |
| 51 | Fastener | 61054-118 |
| 52 | Serrated Safety Washer | 84141-008-02 |

-U22 OPTION PARTS LIST

| KEY | PART DESCRIPTION | PART NO. |
|-----|------------------------|--------------|
| 30 | Manifold Assembly | 86240 |
| 32 | Fastener | 61054-106 |
| 33 | Serrated Safety Washer | 84141-007-02 |
| 35 | Orifice Plug | 86242 |
| 36 | Muffler | 86957 |
| 37 | Elbow Fitting | 61734-053 |
| 38 | 400 Series Mac Valve | 86243 |

-CT2 OPTION PARTS LIST

| KEY | PART DESCRIPTION | PART NO. |
|-----|------------------------|--------------|
| 50 | Target | 86239 |
| 51 | Fastener | 61054-118 |
| 52 | Serrated Safety Washer | 84141-008-02 |

-H55 OPTION PARTS LIST

| KEY | PART DESCRIPTION | PART NO. |
|-----|------------------|-------------|
| 70 | O-Ring Seal | 1950-143-14 |
| 71 | Detent Ring | 87095 |

NOTE: * Full unit description required (followed by -Hxxxx)

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