BST SERIES1 BST1 TRANSFER ARM
for the Plastic Bottle Blowing Industry

- Long life robust design
- Improved precision
- Reduces maintenance and downtime
- Lighter weight than OEM arm

ISO-9001 CERTIFIED
BST1-01

PHD is a member of the MAC Distributor Network

www.phdinc.com
INDEX:
Ordering Data  Page 2
Benefits  Page 3
Engineering Data  TO ORDER SPECIFY:  Page 4
Product Line, Series, Type, Machine No., Process, Cam Bearing,
Design No., Head Design, Jaw Opening and Options if required.
Dimensions  Page 5
Processes & Options  Page 6
Parts List  Page 7

RECOMMENDATIONS
To properly apply this precision transfer arm, care must be
taken with transfer arm tooling. With the newer style preforms,
tooling is more critical. Care must be taken to insure that the fingers
match the profile of the finish being processed.

100 JAW OPENING (NON-LOCKING)
Gripper head utilizes external extension spring and has a
maximum opening angle of 100°. This head design is non-locking in
the full open position. Unit can be converted to a 190° locking design
simply by replacing the left and right jaws.

180 JAW OPENING (LOCKING)
Gripper head utilizes an external extension spring and has a
maximum opening angle of 190°. This head design will cause the
jaws to lock open once rotated past 180°. This jaw design can make
performing maintenance easier by allowing the jaw to stay open
while manually rotating the transfer arm table. Unit can be converted
to a 100° non-locking design simply by replacing the left and right jaws.
100°/180° JAW OPENING

Major Benefits

- Unit is designed to operate over 20 million cycles.
- Lighter in overall weight than OEM arm.
- Head is designed with large radial bearings for increased rigidity and long life.
- Hardened replaceable jaw stop for ease of repair and cost considerations.
- Linear rail and carriage bearing has been increased in size and upgraded to a roller bearing style assembly when compared to PHD’s previous design.
- Jaw and retract springs are manufactured especially for PHD providing greater life.
- All spring returns pins are hardened and replaceable for ease of repair and cost considerations.
- Base and shaft have been incorporated into a one piece weldment.
ENGINEERING DATA: SERIES BST1xx-6 TRANSFER ARM

SPECIFICATIONS | IMPERIAL | METRIC
--- | --- | ---
SERIES | Sidel® Series1 Replacement | 
OPERATION | Cam Operated, Spring Return | 
LINEAR BEARING SYSTEM | Steel Ground Profile Rail with Recirculating Roller Bearings | 
LUBRICATION | FDA Regulation 21 CFR 1789.3570 on Linear Rail | 
AMBIENT TEMPERATURE | -20° to 180° F | -29° to 82° C |
GRIFF FORCE AT TOOLING | | 
COLD SET (CSD) | 13 to 17 lb | 57.8 to 75.6 N |
HEAT SET | 23 to 27 lb | 102.3 to 120.1 N |
EXTENSION SPRING FORCE | | 
FULL RETRACT | 7 to 13 lb | 31.1 to 57.8 N |
FULL EXTEND | 21 to 27 lb | 93.4 to 120.1 N |
WEIGHT | | 
| 11.4 lb | 4.3 kg |
STROKE | | 
| 3.576 ± .059 in | 90.8 ± 1.5 mm |

LIFE EXPECTANCY
Series BST Transfer Arms are designed for over 20 million trouble-free cycles with proper maintenance.

MAINTENANCE
As with most PHD products, these transfer arms are field repairable. Repair kits, jig, and main structural components are available as needed for extended service.

LUBRICATION
Series BST Transfer Arm linear bearing system is lubricated with FDA-approved food grade lube which provides extended life. Lubrication of the bearing system every six months is recommended. Lubricant is available from PHD. Refer to repair procedures.

SETUP TOOLING
Optional jig kits are available to verify and re-align transfer arms as needed in the field.

Jig part number - 84306

NOTCHED TO FIT INTO STANDARD 6 in VISE

REMOVEABLE LEGS
COLD SET (CSD) PROCESS

100°/180° JAW OPENING

External extension springs provide the necessary grip force for Cold Set (CSD) bottle processes.

HEAT SET PROCESS

100°/180° JAW OPENING

External extension springs with heavier spring force provide the necessary grip force for heat set bottle processes.

FACTORY INSTALLED PIVOT ARM ALIGNMENT KEY

Factory installation of the key provides locking of pivot arm.

NOTE:
KEYWAY IS NOT PROVIDED AS STANDARD. IF -Q9 OPTION IS NOT ORDERED, THE TRANSFER ARM MUST BE JIG SET. THE KIT CAN BE ORDERED SEPARATELY FOR FIELD RETROFIT IF REQUIRED. SEE “KIT INCLUDES” FOR COMPONENTS.

* KIT INCLUDES: 1 - RECTANGULAR KEY - SHAFT TO PIVOT ARM 1 - KEYED PIVOT ARM 1 - KEYED BASE WELDMENT ASSEMBLY 1 - DIS-ASSEMBLY / ASSEMBLY INSTRUCTIONS

WARNING: Pivot Arm Alignment Key is for alignment purposes only and is not intended as a safety shear coupling. If the Sidel® machine’s torque limiter is set incorrectly, damage to the transfer arm may occur if the arm is contacted during machine operation.
## PARTS LIST & REPAIR KITS: SERIES BST1xx-6 TRANSFER ARM

### KEY

- **1**: Weldment Base Assembly
- **2**: Rail & Carriage Assembly
- **3**: Carriage to Base SHCS
- **4**: Bearing Mounting Shaft
- **5**: Pivot Arm Key
- **6**: Upper Cam Bearing
- **7**: Bumper
- **8**: Spring Holder Pin
- **9**: Pivot Arm Locking Nut
- **10**: Pivot Arm
- **11**: Lower Cam Bearing
- **12**: Lower Cam Locking Nut
- **13**: Pivot Arm Locking Nut
- **14**: Pivot Arm
- **15**: Pivot Arm Key
- **16**: Pivot Arm Key
- **17**: Bumper
- **18**: Lower Cam Bearing
- **19**: Mounting Flange
- **20**: Upper Cam Bearing
- **21**: Head Assembly
- **22**: Head Repair Kit - Cold Set (CSSD)
- **23**: Head Repair Kit - Heat Set (CSSH)
- **24**: Head Repair Kit - Cold Set (CSSD)
- **25**: Head Repair Kit - Heat Set (CSSH)
- **26**: Weldment Base Assembly
- **27**: Rail & Carriage Assembly
- **28**: Carriage to Base SHCS
- **29**: Bearing Mounting Shaft
- **30**: Pivot Arm Alignment Kit

### PART DESCRIPTION

- **1**: THREAD LOCKER
- **2**: FOOD GRADE GREASE

### PART NO. & KIT NUMBER

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>KIT DESCRIPTION</th>
<th>KIT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>83780</td>
<td>Pivot Arm Alignment Kit</td>
<td>84505</td>
</tr>
<tr>
<td>83783</td>
<td>Sold as part of Rail &amp; Carriage Assembly Repair Kit</td>
<td>84306</td>
</tr>
<tr>
<td>83789</td>
<td>Sold as part of Weldment Base Assembly</td>
<td>84308</td>
</tr>
<tr>
<td>83794</td>
<td>Sold as part of Weldment Base Assembly</td>
<td>84308-02</td>
</tr>
<tr>
<td>83795</td>
<td>Sold as part of Weldment Base Assembly</td>
<td>84308-03</td>
</tr>
<tr>
<td>83790</td>
<td>Sold as part of Weldment Base Assembly</td>
<td>84308-04</td>
</tr>
<tr>
<td>84666</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-05</td>
</tr>
<tr>
<td>83781</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-06</td>
</tr>
<tr>
<td>83782</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-07</td>
</tr>
<tr>
<td>83784</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-08</td>
</tr>
<tr>
<td>84667</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-09</td>
</tr>
<tr>
<td>84668</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-10</td>
</tr>
<tr>
<td>84669</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-11</td>
</tr>
<tr>
<td>84670</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-12</td>
</tr>
<tr>
<td>84671</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-13</td>
</tr>
<tr>
<td>84672</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-14</td>
</tr>
<tr>
<td>84673</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-15</td>
</tr>
<tr>
<td>84674</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-16</td>
</tr>
<tr>
<td>84675</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-17</td>
</tr>
<tr>
<td>84676</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-18</td>
</tr>
<tr>
<td>84677</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-19</td>
</tr>
<tr>
<td>84678</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-20</td>
</tr>
<tr>
<td>84679</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-21</td>
</tr>
<tr>
<td>84680</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-22</td>
</tr>
<tr>
<td>84681</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-23</td>
</tr>
<tr>
<td>84682</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-24</td>
</tr>
<tr>
<td>84683</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-25</td>
</tr>
<tr>
<td>84684</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-26</td>
</tr>
<tr>
<td>84685</td>
<td>Sold as part of Pivot Arm Alignment Kit</td>
<td>84308-27</td>
</tr>
</tbody>
</table>

---

**Solutions for Industrial Automation**

BST1-01

(800) 624-8511

www.phdinc.com/bst1
**Sidel® Series2 Transfer Arm Head**

- Drop-in fit for use on existing Sidel Series2 arms
- PHD head includes replaceable hardened steel tang.
- PHD spring posts are replaceable.
- PHD incorporates high quality rolling element bearings for increased life and precision.

**Replacement for Sidel® Series2 Preferential Transfer Arm Head ML#311319**

**Soon to be released...**

**Replacement for Sidel® Series2 Complete Transfer Arm**

- **BST2xx-5-1x90**
  - (Shimmed Vertical Adjustment - Standard)
- **BST2xx-5-1x90-AP**
  - (Threaded Vertical Adjustment - AP Option)

Illustrations are concept only. Contact your local PHD Distributor for more information.