

# CONDENSER TUBE EXPANDER

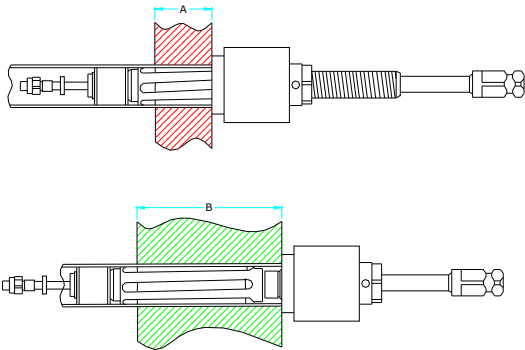


**TUBE TOOLS**

## **B800-5 Series** Tube O. D. 5/8"-1.1/2"

### FIVE ROLLER FOR THIN WALL FEATURES:

- Use -This is recommended for use on thin walled tubes (19 thru 22 gauge walls) of stainless steel, Titanium, & other exotic materials in thick tube sheets.
- Advantages: It gives a more concentric and even expansion when expanding thin walled tubes vs conventional 3 roller tube expander and reduces tube spring back effect.



**Sizes Available : 5/8" O.D. to 1.1/2" O.D.  
 Tube Internal diameter : 12.9mm (0.509") to 36.7mm (1.44")  
 Roller Length of Tube Expander: 1.1/2" (38.1mm) & 2.1/4" (57.1mm)**

For Tube Internal Diameter  
 From (12.9mm) 0.509" to (36.7mm) 1.44"

| TUBE EXPANDERS FITTED WITH ROLLER LENGTH |            | FOR TUBE SHEET ADJUSTABLE RANGE |              |
|--|------------|---------------------------------|--------------|
|  |            | MINIMUM A                       | MAXIMUM B    |
| 2.1/4" (57.1mm)                          | STD. REACH | (12.7mm) 1/2"                   | (101.4mm) 4" |
|  | 6" REACH   | (12.7mm) 1/2"                   | (152.4mm) 6" |
|  | 8" REACH   | (12.7mm) 1/2"                   | (203.2mm) 8" |

| Tube O.D.<br>(Mm)<br>inch | Tube Thickness |      | Tube I. D. |      | Minimum I. D. Tool Enters |      | Maximum Expansion of Tool |      | EXPANDER with (38.10mm) 1.1/2" Long rollers |                   |                | EXPANDER with (57.15mm) 2.1/4" Long rollers |                   |                |             |
|---------------------------|----------------|------|------------|------|---------------------------|------|---------------------------|------|---|-------------------|----------------|---|-------------------|----------------|-------------|
|                           | Bwg            | Inch | Mm         | Inch | Mm                        | Inch | Mm                        | Inch | Mm  | Complete Tool No. | Roller Set No. | Mandrel No.                                 | Complete Tool No. | Roller Set No. | Mandrel No. |
| (15.88)<br>5/8            | 17             | .058 | 1.47       | .509 | 12.9                      | .499 | 12.6                      | .564 | 14.3  | B815-5            | R-4-5          | 816-5                                       | B816-5            | R-4-A-5        | 816-5       |
|                           | 18             | .049 | 1.24       | .527 | 13.4                      | .517 | 13.1                      | .576 | 14.6  | B817-5            | R-4-5          | M-9   | -                 | -              | -           |
|                           | 19             | .042 | 1.06       | .541 | 13.7                      | .522 | 13.3                      | .582 | 14.8  | B819-5            | R-4-5          | 820-5                                       | B820-5            | R-4-A-5        | 820-5       |
|                           | 20             | .035 | 0.88       | .555 | 14.1                      | .536 | 13.6                      | .596 | 15.1  | B819-5 S          | R-4-5          | 820-5 S                                     | B820-5 S          | R-4-A-5        | 820-5 S     |
|                           | 21             | .032 | 0.81       | .561 | 14.2                      | .536 | 13.6                      | .596 | 15.1  | B819-5 S          | R-4-5          | 820-5 S                                     | B820-5 S          | R-4-A-5        | 820-5 S     |
|                           | 22             | .028 | 0.71       | .569 | 14.5                      | .536 | 13.6                      | .596 | 15.1  | B819-5 S          | R-4-5          | 820-5 S                                     | B820-5 S          | R-4-A-5        | 820-5 S     |
| (19.05)<br>3/4            | 13             | .095 | 2.41       | .560 | 14.2                      | .550 | 13.9                      | .615 | 15.6  | B821-5            | R-5-5          | 822-5                                       | B822-5            | R-5-A-5        | 822-5       |
|                           | 14             | .083 | 2.10       | .584 | 14.8                      | .574 | 14.5                      | .629 | 15.9  | B823-5            | R-6-5          | 824-5                                       | B824-5            | R-6-A-5        | 824-5       |
|                           | 15             | .072 | 1.82       | .606 | 15.3                      | .596 | 15.1                      | .661 | 16.8  | B825-5            | R-7-5          | 826-5                                       | B826-5            | R-7-A-5        | 826-5       |
|                           | 16             | .065 | 1.65       | .620 | 15.7                      | .605 | 15.3                      | .680 | 17.2  | B827-5            | R-7-5          | M-13  | B828-5            | R-7-A-5        | M-13        |
|                           | 17             | .058 | 1.47       | .630 | 16.1                      | .619 | 15.7                      | .699 | 17.8  | B829-5            | R-7-5          | 830-5                                       | B830-5            | R-7-A-5        | 830-5       |
|                           | 18             | .049 | 1.24       | .652 | 16.5                      | .619 | 15.7                      | .699 | 17.8  | B829-5            | R-7-5          | 830-5                                       | B830-5            | R-7-A-5        | 830-5       |
|                           | 19             | .042 | 1.06       | .666 | 16.9                      | .642 | 16.3                      | .729 | 18.5  | B831-5            | R-9-5          | M-13  | B832-5            | R-9-A-5        | M-13        |
|                           | 20             | .035 | 0.88       | .680 | 17.2                      | .642 | 16.3                      | .729 | 18.5  | B831-5            | R-9-5          | M-13  | B832-5            | R-9-A-5        | M-13        |
|                           | 21             | .032 | 0.81       | .686 | 17.4                      | .642 | 16.3                      | .729 | 18.5  | B831-5            | R-9-5          | M-13  | B832-5            | R-9-A-5        | M-13        |
|                           | 22             | .028 | 0.71       | .694 | 17.6                      | .642 | 16.3                      | .729 | 18.5  | B831-5            | R-9-5          | M-1   | B832-5            | R-9-A-5        | M-13        |
|                           | 23             | .025 | 0.64       | .700 | 17.8                      | .670 | 17.0                      | .747 | 18.9  | B833-5            | R-9-5          | M-14-3/8                                    | B834-5            | R-9-A-5        | M-14-3/8    |
|                           | 24             | .022 | 0.56       | .706 | 17.9                      | .670 | 17.0                      | .747 | 18.9  | B833-5            | R-9-5          | M-14-3/8                                    | B834-5            | R-9-A-5        | M-14-3/8    |
|                           | 25             | .020 | 0.51       | .710 | 18.0                      | .685 | 17.4                      | .750 | 19.0  | B835-5            | R-10-5         | 840-5                                       | B836-5            | R-10-A-5       | M-840-5     |

# CONDENSER TUBE EXPANDER



**TUBE TOOLS**



**B800-5 Series**

**Tube O. D.  
5/8"-1.1/2"**

| Tube O.D.<br>(Mm)<br>inch | Tube Thickness |      |       | Tube I. D. |       | Minimum I. D. Tool Enters |       | Maximum Expansion of Tool |        | EXPANDER with (38.10mm) 1.1/2" Long rollers |                |             | EXPANDER with (57.15mm) 2.1/4" Long rollers |                |             |
|---------------------------|----------------|------|-------|------------|-------|---------------------------|-------|---------------------------|--------|---|----------------|-------------|---|----------------|-------------|
|                           | Bwg            | Inch | Mm    | Inch       | Mm    | Inch                      | Mm    | Inch                      | Mm     | Complete Tool No.                           | Roller Set No. | Mandrel No. | Complete Tool No.                           | Roller Set No. | Mandrel No. |
| (22.22)<br>7/8            | 13             | .095 | 2.41  | .685       | 17.4  | .670                      | 17.0  | .747                      | 18.9   | B833-5                                      | R-9-5          | M-14-3/8    | B834-5                                      | R-9-A-5        | M-14-3/8    |
|                           | 14             | .083 | 2.10  | .709       | 18.0  | .685                      | 17.4  | .750                      | 19.0   | B835-5                                      | R-10-5         | M-15-3/8    | B836-5                                      | R-10-A-5       | M-15-3/8    |
|                           | 16             | .065 | 1.65  | .745       | 18.9  | .726                      | 18.4  | .800                      | 20.3   | B839-5                                      | R-11-5         | 840-5       | B840-5                                      | R-11-A-5       | 840-5       |
|                           | 17             | .058 | 1.47  | .759       | 19.2  | .740                      | 18.8  | .824                      | 20.9   | B843-5                                      | R-11-5         | M-17-3/8    | B844-5                                      | R-11-A-5       | M-17-3/8    |
|                           | 18             | .049 | 1.24  | .777       | 19.7  | .740                      | 18.8  | .824                      | 20.9   | B843-5                                      | R-11-5         | M-17-3/8    | B844-5                                      | R-11-A-5       | M-17-3/8    |
|                           | 19             | .042 | 1.06  | .791       | 20.1  | .763                      | 19.4  | .851                      | 21.6   | B845-5                                      | R-11-5         | M-18-3/8    | B846-5                                      | R-11-A-5       | M-18-3/8    |
|                           | 20             | .035 | 0.88  | .805       | 20.4  | .763                      | 19.4  | .851                      | 21.6   | B845-5                                      | R-11-5         | M-18-3/8    | B846-5                                      | R-11-A-5       | M-18-3/8    |
|                           | 21             | .032 | 0.81  | .811       | 20.6  | .763                      | 19.4  | .851                      | 21.6   | B845-5                                      | R-11-5         | M-18-3/8    | B846-5                                      | R-11-A-5       | M-18-3/8    |
|                           | 22             | .028 | 0.71  | .819       | 20.8  | .763                      | 19.4  | .851                      | 21.6   | B845-5                                      | R-11-5         | M-18-3/8    | B846-5                                      | R-11-A-5       | M-18-3/8    |
|                           | 23             | .025 | 0.64  | .825       | 20.9  | .791                      | 20.1  | .880                      | 22.4   | B847-5                                      | R-13-5         | M-18-3/8    | B848-5                                      | R-13-A-5       | M-18-3/8    |
|                           | 24             | .022 | 0.56  | .831       | 21.1  | .791                      | 20.1  | .880                      | 22.4   | B847-5                                      | R-13-5         | M-18-3/8    | B848-5                                      | R-13-A-5       | M-18-3/8    |
|                           | (25.40)<br>1   | 12   | .109  | 2.76       | .782  | 19.8                      | .763  | 19.4                      | .852   | 21.6  | B845-5         | R-11-5      | M-18-3/8                                    | B846-5         | R-11-A-5    |
| 13                        |                | .095 | 2.41  | .810       | 20.5  | .791                      | 20.1  | .880                      | 22.4   | B847-5                                      | R-13-5         | M-18-3/8    | B848-5                                      | R-13-A-5       | M-18-3/8    |
| 14                        |                | .083 | 2.10  | .834       | 21.2  | .810                      | 20.5  | .879                      | 22.3   | B879-5                                      | R-12-5         | 850-5       | B850-5                                      | R-12-A-5       | M-18-3/8    |
| 15                        |                | .072 | 1.82  | .856       | 21.7  | .837                      | 21.3  | .936                      | 23.8   | B851-5                                      | R-13-5         | 852-5       | B852-5                                      | R-13-A-5       | 852-5       |
| 16                        |                | .065 | 1.65  | .870       | 22.0  | .837                      | 21.3  | .936                      | 23.8   | B851-5                                      | R-13-5         | 852-5       | B852-5                                      | R-13-A-5       | 852-5       |
| 17                        |                | .058 | 1.47  | .884       | 22.4  | .865                      | 22.0  | .965                      | 24.5   | B855-5                                      | R-13-5         | 856-6       | B856-5                                      | R-13-A-5       | 856-5       |
| 18                        |                | .049 | 1.24  | .902       | 22.9  | .865                      | 22.0  | .965                      | 24.5   | B855-5                                      | R-13-5         | 856-7       | B856-5                                      | R-13-A-5       | 856-5       |
| 19                        |                | .042 | 1.06  | .916       | 23.2  | .865                      | 22.0  | .965                      | 24.5   | B855-5                                      | R-13-5         | 856-6       | B856-5                                      | R-13-A-5       | 856-5       |
| 20                        |                | .035 | 0.88  | .930       | 23.6  | .865                      | 22.0  | .965                      | 24.5   | B855-5                                      | R-13-5         | 856-8       | B856-5                                      | R-13-A-5       | 856-5       |
| 21                        |                | .032 | 0.81  | .936       | 23.8  | .883                      | 22.4  | .997                      | 25.3   | B857-5                                      | R-15-5         | M-21-3/8    | B858-5                                      | R-15-A-5       | M-21-3/8    |
| 22                        |                | .028 | 0.71  | .944       | 24.0  | .883                      | 22.4  | .997                      | 25.3   | B857-5                                      | R-15-5         | M-21-3/8    | B858-5                                      | R-15-A-5       | M-21-3/8    |
| 23                        |                | .025 | 0.64  | .950       | 24.1  | .883                      | 22.4  | .997                      | 25.3   | B857-5                                      | R-15-5         | M-21-3/8    | B858-5                                      | R-15-A-5       | M-21-3/8    |
| 24                        | .022           | 0.56 | .956  | 24.3       | .883  | 22.4                      | .997  | 25.3                      | B857-5 | R-15-5                                      | M-21-3/8       | B858-5      | R-15-A-5                                    | M-21-3/8       |             |
| 25                        | .020           | 0.51 | .960  | 24.4       | .883  | 22.4                      | .997  | 25.3                      | B857-5 | R-15-5                                      | M-21-3/8       | B858-5      | R-15-A-5                                    | M-21-3/8       |             |
| (28.58)<br>1.1/8          | 12             | .109 | 2.76  | .907       | 23.0  | .883                      | 22.4  | .997                      | 25.3   | B857-5                                      | R-15-5         | M-21-3/8    | B858-5                                      | R-15-A-5       | M-21-3/8    |
|                           | 13             | .095 | 2.41  | .935       | 23.7  | .916                      | 23.2  | 1.000                     | 25.4   | B859-5                                      | R-16-5         | 860-5       | B960-5                                      | R-16-A-5       | 860-5       |
|                           | 14             | .083 | 2.10  | .959       | 24.3  | .935                      | 23.7  | 1.039                     | 26.4   | B861-5                                      | R-17-5         | 862-5       | B862-5                                      | R-17-A-5       | 862-5       |
|                           | 22             | .028 | 0.71  | 1.069      | 27.2  | 1.039                     | 26.4  | 1.157                     | 29.4   | B871-5                                      | R-19-5         | 872-5       | B872-5                                      | R-19-A-5       | 872-5       |
| 24                        | .022           | 0.56 | 1.081 | 27.5       | 1.039 | 26.4                      | 1.157 | 29.4                      | B871-5 | R-19-5                                      | 872-5          | B872-5      | R-19-A-5                                    | 872-5          |             |
| (31.75)<br>1.1/4          | 15             | .072 | 1.82  | 1.106      | 28.1  | 1.087                     | 27.6  | 1.196                     | 30.4   | B875-5                                      | R-21-5         | 876-5       | B876-5                                      | R-21-A-5       | 876-5       |
|                           | 16             | .065 | 1.65  | 1.120      | 28.4  | 1.087                     | 27.6  | 1.196                     | 30.4   | B875-5                                      | R-21-5         | 876-5       | B876-5                                      | R-21-A-5       | 876-5       |
|                           | 17             | .058 | 1.47  | 1.134      | 28.8  | 1.115                     | 28.3  | 1.231                     | 31.3   | B879-5                                      | R-21-5         | 880-5       | B880-5                                      | R-21-A-5       | 880-5       |
|                           | 18             | .049 | 1.24  | 1.152      | 29.3  | 1.115                     | 28.3  | 1.231                     | 31.3   | B879-5                                      | R-21-5         | 880-5       | B880-5                                      | R-21-A-5       | 880-5       |
|                           | 19             | .042 | 1.06  | 1.166      | 29.6  | 1.115                     | 28.3  | 1.231                     | 31.3   | B879-5                                      | R-21-5         | 880-5       | B880-5                                      | R-21-A-5       | 880-5       |
|                           | 20             | .035 | 0.88  | 1.180      | 30.0  | 1.115                     | 28.3  | 1.231                     | 31.3   | B879-5                                      | R-21-5         | 880-5       | B880-5                                      | R-21-A-5       | 880-5       |
|                           | 21             | .032 | 0.81  | 1.186      | 30.1  | 1.115                     | 28.3  | 1.231                     | 31.3   | B879-5                                      | R-21-5         | 880-5       | B880-5                                      | R-21-A-5       | 880-5       |
|                           | 22             | .028 | 0.71  | 1.194      | 30.3  | 1.115                     | 28.3  | 1.231                     | 31.3   | B879-5                                      | R-21-5         | 880-5       | B880-5                                      | R-21-A-5       | 880-5       |
| (34.92)<br>1.3/8          | 23             | .025 | 0.64  | 1.200      | 30.5  | 1.133                     | 28.8  | 1.242                     | 31.5   | B881-5                                      | R-21-5         | 882-5       | B882-5                                      | R-21-A-5       | 880-5       |
|                           | 24             | .022 | 0.56  | 1.206      | 30.6  | 1.133                     | 28.8  | 1.242                     | 31.5   | B881-5                                      | R-21-5         | 882-5       | B882-5                                      | R-21-A-5       | 880-5       |
|                           | 12             | .109 | 2.76  | 1.154      | 29.3  | 1.133                     | 28.8  | 1.242                     | 31.5   | B881-5                                      | R-21-5         | 882-5       | B880-5                                      | R-15-A-5       | 880-5       |
|                           | 14             | .083 | 2.11  | 1.209      | 30.7  | 1.179                     | 29.9  | 1.296                     | 32.9   | B885-5                                      | R-23-5         | 882-5       | B882-5                                      | R-16-A-5       | 882-5       |
| (38.10)<br>1.1/2          | 20             | .035 | 0.88  | 1.305      | 33.2  | 1.257                     | 31.9  | 1.385                     | 35.2   | B893-5                                      | R-26-5         | 894-5       | B894-5                                      | R-17-A-5       | 894-5       |
|                           | 22             | .028 | 0.71  | 1.319      | 33.5  | 1.285                     | 32.6  | 1.417                     | 36.0   | B895-5                                      | R-26-5         | 896-5       | B896-5                                      | R-19-A-5       | 896-5       |
|                           | 24             | .022 | 0.56  | 1.331      | 33.8  | 1.285                     | 32.6  | 1.417                     | 36.0   | B895-5                                      | R-26-5         | 896-5       | B896-5                                      | R-19-A-5       | 896-5       |
|                           | 17             | .058 | 1.47  | 1.384      | 35.1  | 1.331                     | 33.8  | 1.489                     | 37.8   | B899-5                                      | R-29-5         | 900-5       | B900-5                                      | R-29-A-5       | 900-5       |
| 18                        | .049           | 1.24 | 1.402 | 35.6       | 1.331 | 33.8                      | 1.489 | 37.8                      | B843-5 | R-29-5                                      | 900-5          | B900-5      | R-29-A-5                                    | 900-5          |             |
| 19                        | .042           | 1.06 | 1.416 | 36.0       | 1.331 | 33.8                      | 1.489 | 37.8                      | B845-5 | R-29-5                                      | 900-5          | B900-5      | R-29-A-5                                    | 900-5          |             |
| 20                        | .035           | 0.88 | 1.430 | 36.3       | 1.331 | 33.8                      | 1.489 | 37.8                      | B845-5 | R-29-5                                      | 900-5          | B900-5      | R-29-A-5                                    | 900-5          |             |
| 21                        | .032           | 0.81 | 1.436 | 36.5       | 1.331 | 33.8                      | 1.489 | 37.8                      | B845-5 | R-29-5                                      | 900-5          | B900-5      | R-29-A-5                                    | 900-5          |             |
| 22                        | .028           | 0.71 | 1.444 | 36.7       | 1.331 | 33.8                      | 1.489 | 37.8                      | B845-5 | R-29-5                                      | 900-5          | B900-5      | R-29-A-5                                    | 900-5          |             |
| 23                        | .025           | 0.64 | 1.450 | 36.8       | 1.331 | 33.8                      | 1.489 | 37.8                      | B847-5 | R-29-5                                      | 900-5          | B900-5      | R-29-A-5                                    | 900-5          |             |
| 24                        | .022           | 0.56 | 1.456 | 37.0       | 1.331 | 20.1                      | 1.489 | 37.8                      | B847-5 | R-29-5                                      | 900-5          | B900-5      | R-29-A-5                                    | 900-5          |             |