### Brushes for smooth bore and internally enhanced tubes

#### **Nylon Brushes:**

Nylon Brushes are recommended for removing soft deposits (mud, algae, etc.) in straight, ferrous and nonferrous tubes. Order brush to correspond to tube I.D.

| <b>TCB-012N</b> 11/4" | TCB-020N | 2″    | TCB-027N | 23⁄4″ | TCB-035N | 31⁄2″ |
|-----------------------|----------|-------|----------|-------|----------|-------|
| <b>TCB-015N</b> 11/2" | TCB-022N | 21/4" | TCB-030N | 3"    | TCB-037N | 33⁄4" |
| <b>TCB-017N</b> 13⁄4″ | TCB-025N | 21/2" | TCB-032N | 31⁄4″ | TCB-040N | 4"    |

#### **Brass Brushes:**

Brass Brushes are recommended for removing soft and light scale deposits in straight, ferrous and nonferrous tubes. Order brush to correspond to tube I.D.

| <b>TCB-012B</b> 11/4" | TCB-020B | 2"    | TCB-027B | 23⁄4″ | TCB-035B | 31⁄2″ |
|-----------------------|----------|-------|----------|-------|----------|-------|
| <b>TCB-015B</b> 11/2" | TCB-022B | 21/4" | TCB-030B | 3"    | TCB-037B | 33⁄4" |
| <b>TCB-017B</b> 13⁄4″ | TCB-025B | 21/2" | TCB-032B | 31/4" | TCB-040B | 4"    |

#### **Stainless Steel Brushes:**

Stainless Steel Brushes are recommended for removing soft and light scale deposits in straight, ferrous tubes. Order brush to correspond to tube I.D.

| <b>TCB-012S</b> 11⁄4" | TCB-022S | 21/4" | TCB-032S | 31⁄4" | TCB-042S | 41⁄4″ |
|-----------------------|----------|-------|----------|-------|----------|-------|
| <b>TCB-015S</b> 11/2" | TCB-025S | 21⁄2″ | TCB-035S | 31⁄2″ | TCB-045S | 41⁄2″ |
| <b>TCB-017S</b> 13⁄4″ | TCB-027S | 23⁄4″ | TCB-037S | 33⁄4" | TCB-047S | 43⁄4″ |
| TCB-020S 2"           | TCB-030S | 3"    | TCB-040S | 4″    | TCB-050S | 5″    |

#### **Dual Diameter Spin-Grit Brushes:**

Dual Diameter Spin-Grit Brushes are recommended for removing soft and light scale deposits in straight, ferrous and nonferrous internally enhanced tubes. The small diameter end of this brush cleans into the grooves while the large diameter end cleans the lands of the tube's rifling.

ESGB-Q-100 Dual Diameter Spin-Grit Brush for tubes 1" I.D.

ESGB-Q-125 Dual Diameter Spin-Grit Brush for tubes 11/4" I.D.

Note: ESGB brushes require a GTC-706 Coupling (\$6.00) to connect to GTC-720, GTC-721, GTC-721G and GTC-821 Flexible Shafts.





#### **Carbon Steel Brushes:**

Carbon Steel Brushes are recommended for removing soft and light scale deposits in straight, ferrous tubes. Order brush to correspond to tube I.D. (Not recommended for stainless steel tubes.)

| <b>TCB-050C</b> 5" | <b>TCB-070C</b> | 7″ | <b>TCB-090C</b> 9"  | TCB-110C 11" | TCB-130C 13" |
|--------------------|-----------------|----|---------------------|--------------|--------------|
| <b>TCB-060C</b> 6" | TCB-080C        | 8″ | <b>TCB-100C</b> 10" | TCB-120C 12" | TCB-140C 14" |



#### **Plastic Brushes:**

Plastic Brushes are recommended for removing soft deposits in straight, ferrous and nonferrous tubes. Order brush to correspond to tube I.D.

| TCB-040P | 4″ | TCB-060P | 6″ | TCB-080P | 8″ | TCB-100P 10" | TCB-120P 12" | TCB-140P 14" |
|----------|----|----------|----|----------|----|--------------|--------------|--------------|
| TCB-050P | 5″ | TCB-070P | 7″ | TCB-090P | 9" | TCB-110P 11" | TCB-130P 13" |              |

#### Food Grade Nylon Brushes:

Food Grade Nylon Brushes are recommended for removing deposits in straight tubes and pipes in food processing facilities. The materials of the brush are compliant with FDA requirements for single and repeated use on food contact surfaces. Order brush to correspond to tube I.D.

FGB-060 6"

| FGB-015 | 11⁄2″ | FGB-025 | 21/2" | FGB-040 | 4″ |
|---------|-------|---------|-------|---------|----|
| FGB-020 | 2"    | FGB-030 | 3″    | FGB-050 | 5″ |



### **Spring Filled Brushes:**

Spring Filled Brushes are recommended for removing heavy scale deposits in straight, ferrous tubes. The spring bristles dig into the scale, breaking it free from the tube wall.

SFB-200 Spring Filled Brushes for tubes 13/8", 15/8", 2", 21/2" or 3" O.D

SFB-300 Spring Filled Brushes for tubes 2" or 3" I.D.



## WWW.GOODWAY.COM 49

# No Tube Cleaning Job Is Too Tough

PURPOSE-BUILT TOOLS THAT EASILY REMOVE HARDENED DEPOSITS.







BUFFING TOOL WITH DRILL TIP



REPLACEMENT BLADES



TRIANGULAR SCRAPER TOOL

### Cleaning tool for smooth bore tubes 1" I.D. and up

#### **Buffing Tools:**

Stainless Steel Wire Buffing Tools are used for removing light to medium scale deposits or for finishing tubes previously "roughed out" with other cleaning tools. They can be used in straight, ferrous and nonferrous tubes. They are adjustable to a 2" range. **GTC-223** Buffing Tool for tubes 1"-3" I.D.

GTC-223DT Same as above with drill tip

GTC-224 Replacement Metal Blades for GTC-223

#### **Triangular Scraper Tools:**

Triangular Scraper Tools are used for removing heavy scale deposits in straight, ferrous tubes. They are adjustable to a  $\frac{1}{2}$ " range.

TST-1000 Triangular Scraper Tool for tubes 1"-11/2" I.D.

TST-1500 Triangular Scraper Tool for tubes 11/2"-2" I.D.

TST-2000 Triangular Scraper Tool for tubes 2"-21/2" I.D.

TST-2500 Triangular Scraper Tool for tubes 21/2"-3" I.D.







CARBIDE DRILL

#### **Carbide Drills:**

Carbide Drills are recommended for cleaning straight, ferrous tubes plugged solidly with deposit. GTC-231D 3/4", GTC-229 7/8" or PTB-100 1"

Note: All drills run 10% oversize [e.g. GTC-231D Drill is 0.825" O.D.].

#### **Flex-Hone Abrasive Tools:**

Flex-Hone Abrasive Tools are light pressure, soft application honing devices for cleaning straight, ferrous tubes. They consist of 180 grit silicon carbide abrasive globules (stones) bonded to high density nylon filaments. Order tool to correspond to tube I.D. FHT-125 1¼", FHT-150 1½", FHT-175 1¾" or FHT-200 2"

FHT-225 21/4", FHT-250 21/2", FHT-275 23/4" or FHT-300 3"

Note: Flex-Hone Abrasive Tools are normally used with a water flush for maximum life.

#### Flex Hub Tools:

Flex Hub Tools incorporate centrifugally activated blades for removing hard and heavy deposits in straight or curved, ferrous tubes. A drill can be attached to the front of the GTC-227 or GTC-231 Flex Hub to clean severely clogged tubes.

GTC-226 Flex Hub for straight tubes 7/8"-11/2" I.D. or curved tubes 1"-13/4" I.D.

- GTC-231 Flex Hub for straight tubes 11/2"-2" I.D. or curved tubes 13/4"-21/2" I.D.
- GTC-227 Flex Hub for straight tubes 13/4"-4" I.D. or curved tubes 21/2"-4" I.D.
- GTC-226A Replacement Metal Blades for GTC-226 (set of three)
- GTC-231A Replacement Metal Blades for GTC-231 (set of three)
- GTC-227A Replacement Metal Blades for GTC-227 (set of three)
- GTC-229 Drill to be attached to GTC-227 Flex Hub

GTC-231D Drill to be attached to GTC-231 Flex Hub

 $\ensuremath{\text{CUJ-002}}$  Universal Joint for use with Flex Hubs when minimum tube bend radius is less than 5 x l.D. of the tube (consult factory)





FLEX HUB TOOL



REPLACEMENT METAL BLADES





UNIVERSAL JOINT

## WWW.GOODWAY.COM 51

## Specialty Tools For Difficult Applications UNIQUE WIRE WHEEL, CONE AND FLARE TOOLS FOR TUBES 1 INCH AND UP.

| Straight Tube Wheel Brush Assemblies |              |            |             |  |  |  |
|--------------------------------------|--------------|------------|-------------|--|--|--|
| Straight                             | Wheel Brush  | Actual     | Replacement |  |  |  |
| Tube I.D.                            | Assembly     | Brush O.D. | Brushes     |  |  |  |
|                                      | \$105.00 ea. |            | \$13.50 ea. |  |  |  |
| 11/8"-11/4"                          | WBS-100      | 1″         | WBR-100     |  |  |  |
| 13/8"-11/2"                          | WBS-125      | 11/4″      | WBR-125     |  |  |  |
| 15/8"-13/4"                          | WBS-150      | 11/2″      | WBR-150     |  |  |  |
| 17/8"-2"                             | WBS-175      | 13/4″      | WBR-175     |  |  |  |
| 21/8"-21/4"                          | WBS-200      | 2″         | WBR-200     |  |  |  |
| 23/8"-21/2"                          | WBS-225      | 21/4"      | WBR-225     |  |  |  |
| 25/8"-23/4"                          | WBS-250      | 21/2"      | WBR-250     |  |  |  |
| 27/8"-3"                             | WBS-275      | 23/4"      | WBR-275     |  |  |  |
| 31/8"-31/4"                          | WBS-300      | 3″         | WBR-300     |  |  |  |

|             | Curved Tube Wheel Brush Assemblies |            |             |  |  |  |  |
|-------------|------------------------------------|------------|-------------|--|--|--|--|
| Curved      | Wheel Brush                        | Actual     | Replacement |  |  |  |  |
| Tube I.D.   | Assembly                           | Brush O.D. | Brushes     |  |  |  |  |
|             | \$85.00 ea.                        |            | \$13.50 ea. |  |  |  |  |
| 11/4"-13/8" | WBC-100*                           | 1″         | WBR-100     |  |  |  |  |
| 11/2"-15/8" | WBC-125*                           | 11/4″      | WBR-125     |  |  |  |  |
| 13/4"-17/8" | WBC-150*                           | 11/2″      | WBR-150     |  |  |  |  |
| 2"-21/8"    | WBC-175                            | 13/4″      | WBR-175     |  |  |  |  |
| 21/4"-23/8" | WBC-200                            | 2″         | WBR-200     |  |  |  |  |
| 21/2"-25/8" | WBC-225                            | 21/4"      | WBR-225     |  |  |  |  |
| 23/4"-27/8" | WBC-250                            | 21/2"      | WBR-250     |  |  |  |  |
| 3"-31/8"    | WBC-275                            | 23/4"      | WBR-275     |  |  |  |  |
| 31/4"-31/2" | WBC-300                            | 3″         | WBR-300     |  |  |  |  |

| Single and Double Assemblies |             |             |              |             |  |
|------------------------------|-------------|-------------|--------------|-------------|--|
| Straight                     | Curved      | Single Cone | Double Cone  | Replacement |  |
| Tube I.D.                    | Tube I.D.   | Assembly    | Assembly     | Cones       |  |
|                              |             | \$99.00 ea. | \$109.00 ea. | \$33.00 ea. |  |
| 11/8"-11/4"                  | 11/4"-13/8" | SCA-100     | DCA-100      | RCO-100     |  |
| 15/16"-13/8"                 | 11/2"-15/8" | SCA-112     | DCA-112      | RCO-112     |  |
| 17/16"-11/2"                 | 13/4"-17/8" | SCA-125     | DCA-125      | RCO-125     |  |
| 19/16"-13/4"                 | 2"-21/8"    | SCA-150     | DCA-150      | RCO-150     |  |
| 113/16"-2"                   | 21/4"-23/8" | SCA-175     | DCA-175      | RCO-175     |  |
| 21/16"-25/16"                | •           | SCA-200     | DCA-200      | RCO-200     |  |

| Disc Cone Assemblies |              |              |             |  |  |  |
|----------------------|--------------|--------------|-------------|--|--|--|
| Straight             | Curved       | Disc Cone    | Replacement |  |  |  |
| Tube I.D.            | Tube I.D.    | Assembly     | Cones       |  |  |  |
|                      |              | \$150.00 ea. | \$33.00 ea. |  |  |  |
| 23/8"-213/16"        | 21/2"-31/16" | CDC-101      | RCO-100     |  |  |  |
| 27/8"-35/16"         | 31/8"-35/8"  | CDC-102      | RCO-100     |  |  |  |
| 33/8"-33/4"          | 311/16"-4"   | CDC-103      | RCO-112     |  |  |  |



### **Cleaning tools for smooth bore tubes**

#### Wheel Brush Assemblies:

Wheel Brush Assemblies are recommended for removing soft

and light scale deposits from straight and curved, ferrous tubes.

**Straight Tube Wheel Brush Assemblies** 

Straight Tube Wheel Brush Assemblies consists of four stainless steel wire wheel brushes attached to a universal joint. Brushes should be  $\frac{1}{10}$ " smaller than tube I.D.

#### **Curved Tube Wheel Brush Assemblies**

Curved Tube Wheel Brush Assemblies consists of a single stainless steel wire wheel brush attached to each end of a universal joint. Brushes should be 1/4'' - 3/6'' smaller than tube I.D.

#### **Cone Cutter Assemblies:**

Cone Cutter Assemblies are recommended for removing scale deposits from straight and curved, ferrous tubes. Assemblies should be slightly smaller than tube I.D.

Single Cone Assemblies

Single Cone Assemblies consists of a one cone element attached to a universal joint and are used for cleaning straight tubes 1%"-2%16" I.D.

#### **Double Cone Assemblies**

Double Cone Assemblies consists of two cone elements attached to a universal joint and are used for cleaning curved tubes 11/4"-23%" I.D.

#### **Disc Cone Assemblies**

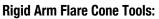
Disc Cone Assemblies consists of three cone elements attached to a universal joint and are used for cleaning straight tubes 2%"-3%" I.D. and curved tubes 21/2"-4" I.D.

#### **Drill Cone Assemblies:**

Drill Cone Assemblies consists of two cone elements attached to a drill and are recommended for cleaning straight, ferrous tubes plugged solidly with deposits. Order assembly to correspond to tube I.D. **DDC-100** 1", **DDC-112** 1½", **DDC-125** 1½"-1¾", **DDC-150** 1½"-1¾" or **DDC-175** 1¾"-1½".



<sup>\*</sup>Note: GTC-706 Coupling (\$5.00) required to connect to GTC-720, GTC-721, GTC-7216 and GTC-821 Flexible Shafts.



Rigid Arm Flare Cone Tools incorporate centrifugally activated, serrated cones for removing light to heavy scale deposits in straight, ferrous tubes. Use in horizontal or vertical tubes. **FCT-300** Flare Cone Tool for tubes 13/4"-4" I.D.

FCT-301 Flare Cone Tool for tubes 4"-61/2" I.D.

RCO-100 Replacement Cone

**CRB-001** Replacement Cone Retainer Bolt

#### Flexible Arm Flare Cone Tool:

The Flexible Arm Flare Cone Tool incorporates centrifugally activated serrated cones for removing light to heavy scale deposits in straight or curved, ferrous tubes. Most effective results are obtained if tube is in vertical position when cleaning. FCT-600 Flare Cone Tool for tubes 4"-12" I.D.

RCO-100 Replacement Cone

**CRB-001** Replacement Cone Retainer Bolt

#### **Flare Brushes:**

Flare Brushes incorporate centrifugally activated wire cables with cobalt tips for light descaling and finishing of straight or curved, ferrous and nonferrous tubes. **FBT-301** Three Strand Flare Brush for tubes 1"-2" I.D.

FBT-501 Five Strand Flare Brush for tubes 2"-4" I.D.

FBT-502 Five Strand Flare Brush for tubes 4"-8" I.D.

### Universal Nylon Rod (Flare) Tool:

The Universal Nylon Rod (Flare) Tool incorporates centrifugally activated nylon rods for removing light deposits in straight or curved, ferrous and nonferrous tubes. **UFT-005-8** Universal Nylon Rod (Flare) Tool for tubes 2"-15" I.D.

RIGID ARM FLARE CONE TOOL



FLEXIBLE ARM FLARE CONE TOOL





UNIVERSAL NYLON ROD (FLARE) TOOL

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