

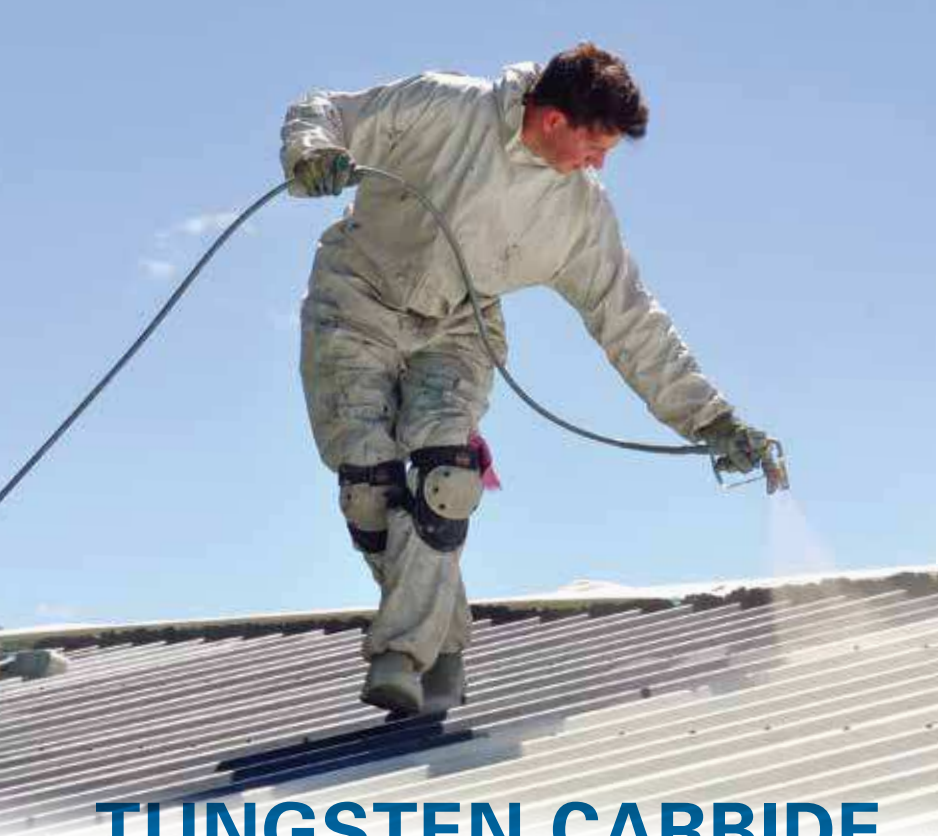


Spraying Systems Co.[®]
Experts in Spray Technology

TUNGSTEN CARBIDE TIPS

FOR HIGH-PRESSURE SPRAYING





TUNGSTEN CARBIDE TIPS SAVE ADHESIVES, COATINGS, PAINT, CHEMICALS & ELECTRICITY

In high-pressure spraying applications, the high velocity of the liquid through the nozzle causes the orifice to wear very quickly. As the orifice becomes larger, the flow rate will increase. Surprisingly, tens and even hundreds of thousands of dollars can be wasted in excess adhesives, coatings, paint and chemicals as a result of nozzle wear, product quality or uneven spray distribution. Electricity costs will also rise due to excess pump operation.

Using spray tips constructed of a harder material provide significantly longer wear life. The abrasion resistance ratio chart shows that tungsten carbide has a resistance ratio up to 250 times greater than brass.










APPROXIMATE ABRASION RESISTANCE RATIOS

| Spray Nozzle Material | Resistance Ratio |
|----------------------------------|------------------|
| Aluminum | 1 |
| Brass | 1 |
| Polypropylene | 1 - 2 |
| Steel | 1.5 - 2 |
| Monel® | 2 - 3 |
| Stainless Steel | 4 - 6 |
| Hastelloy® | 4 - 6 |
| Hardened Stainless Steel | 10 - 15 |
| Stellite® | 10 - 15 |
| Silicon Carbide (Nitride Bonded) | 90 - 130 |
| Ceramics | 90 - 200 |
| Carbides | 180 - 250 |
| Synthetic Ruby or Sapphire | 600 - 2000 |

Monel® is a registered trademark of Special Metals Corporation.
 Hastelloy® is a registered trademark of Haynes International, Inc.
 Stellite® is a registered trademark of Deloro Stellite.



QUICK REFERENCE GUIDE

| Model | Max. Pressure | Spray Pattern | Typical Applications | Page |
|--|--------------------|---------------|---|------|
|  High-pressure TC Tips | 3000 psi (207 bar) | Flat | <ul style="list-style-type: none"> • Paint spraying • Sealant/protective coating spraying | 4 |
|  Heavy Edge TC Tips | 4000 psi (276 bar) | Flat | <ul style="list-style-type: none"> • Road paint striping • Pavement and parking lot marking | 8 |
|  Robotic TC Tips | 4000 psi (276 bar) | Flat | <ul style="list-style-type: none"> • Robotic spraying • Sealant/coating spraying • Adhesives spraying • Automotive seam sealing | 10 |
|  ECRTC Tips | 4000 psi (276 bar) | Even Flat | <ul style="list-style-type: none"> • Robotic spraying • Viscous solution spraying such as thickened paints and adhesives • Automotive seam sealing | 14 |
|  Fine Spray TC Tips | 2000 psi (138 bar) | Hollow Cone | <ul style="list-style-type: none"> • Coating inside piping • Evaporative cooling | 16 |
|  Off-centered Flat Spray Tips | 400 psi (275 bar) | Flat | <ul style="list-style-type: none"> • Can coating | 18 |
|  RotoClean® Airless Spray Nozzles | 5000 psi (345 bar) | Flat | <ul style="list-style-type: none"> • Manual spraying • High-pressure paint spraying | 20 |
|  Model HV Orifice | 2000 psi (138 bar) | Flat | <ul style="list-style-type: none"> • Orifice insert produces a fine finish; for use with high-pressure TC tips | 23 |
|  High-pressure 11430 UniJet® Body | 3000 psi (207 bar) | Flat | <ul style="list-style-type: none"> • Nozzle body for high-pressure UniJet spray tips | 23 |



EXCEPTIONAL WEAR RESISTANCE – 30 TIMES GREATER THAN STAINLESS STEEL



FEATURES AND BENEFITS

- Erosion- and corrosion-resistant tungsten carbide orifice insert provides long wear life
- Flat spray pattern with tapered edges provides even coverage when sprays overlap
- Tip orifice insert is recessed in a stainless steel tip body to protect against damage
- Can be used with a wide range of assemblies and extensions
- 12728 TC tips are available for plywood glue applications
[Request data sheet number 14518 for more information](#)

SPECIFICATIONS:

Maximum pressure: 3000 psi (207 bar)

Spray pattern: Flat spray

Materials: Stainless steel with tungsten carbide orifice insert



IDEAL FOR:

- Paint spraying
- Automotive sealants and protective coatings
- Airless paint spraying
- Applying slurry to ceramic tiles

ORDERING INFORMATION

HIGH-PRESSURE TC TIPS



Example



PERFORMANCE DATA: HIGH-PRESSURE TC TIPS

| Spray Angle at 3 bar | Capacity Size | Equiv. Orifice Dia. (mm) | Capacity* (liters per minute) | | | | Approx.** Spray Pattern Width (cm) at 30 cm distance |
|----------------------|---------------|--------------------------|-------------------------------|---------|---------|---------|--|
| | | | 50 bar | 100 bar | 150 bar | 200 bar | |
| 110° | 0017 | .28 | .27 | .39 | .47 | .55 | 39 |
| | 0025 | .33 | .40 | .57 | .70 | .81 | 42 |
| | 0033 | .38 | .53 | .75 | .92 | 1.1 | 43 |
| | 0039 | .41 | .63 | .89 | 1.1 | 1.3 | 46 |
| | 0050 | .46 | .81 | 1.1 | 1.4 | 1.6 | 48 |
| | 0067 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 53 |
| | 0080 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 56 |
| | 01 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 58 |
| | 015 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 63 |
| | 02 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 66 |
| | 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 68 |
| | 04 | 1.3 | 6.4 | 9.1 | 11.2 | 12.9 | 71 |
| | 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 71 |
| | 053 | 1.5 | 8.5 | 12.1 | 14.8 | 17.1 | 71 |
| | 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 71 |
| | 07 | 1.7 | 11.3 | 16.0 | 19.5 | 23 | 71 |
| | 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 71 |
| | 09 | 1.9 | 14.5 | 21 | 25 | 29 | 71 |
| | 10 | 2.0 | 16.1 | 23 | 28 | 32 | 71 |
| | 11 | 2.2 | 17.7 | 25 | 31 | 35 | 71 |
| 12 | 2.3 | 19.3 | 27 | 33 | 39 | 71 | |
| 95° | 0017 | .28 | .27 | .39 | .47 | .55 | 33 |
| | 0025 | .33 | .40 | .57 | .70 | .81 | 36 |
| | 0033 | .38 | .53 | .75 | .92 | 1.1 | 38 |
| | 0039 | .41 | .63 | .89 | 1.1 | 1.3 | 40 |
| | 0044 | .43 | .71 | 1.0 | 1.2 | 1.4 | 41 |
| | 0050 | .46 | .81 | 1.1 | 1.4 | 1.6 | 43 |
| | 0067 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 48 |
| | 0080 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 48 |
| | 01 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 53 |
| | 015 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 53 |
| | 02 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 56 |
| | 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 56 |
| | 04 | 1.3 | 6.4 | 9.1 | 11.2 | 12.9 | 58 |
| | 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 58 |
| | 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 58 |
| | 07 | 1.7 | 11.3 | 16.0 | 19.5 | 23 | 58 |
| | 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 58 |
| | 09 | 1.9 | 14.5 | 21 | 25 | 29 | 58 |
| | 10 | 2.0 | 16.1 | 23 | 28 | 32 | 58 |
| | 11 | 2.2 | 17.7 | 25 | 31 | 35 | 58 |
| 12 | 2.3 | 19.3 | 27 | 33 | 39 | 58 | |
| 13 | 2.3 | 21 | 30 | 36 | 42 | 58 | |
| 14 | 2.4 | 23 | 32 | 39 | 45 | 58 | |
| 15 | 2.5 | 24 | 34 | 42 | 48 | 58 | |
| 16 | 2.5 | 26 | 36 | 45 | 52 | 58 | |
| 18 | 2.6 | 29 | 41 | 50 | 58 | 58 | |
| 20 | 2.8 | 32 | 46 | 56 | 64 | 58 | |

| Spray Angle at 3 bar | Capacity Size | Equiv. Orifice Dia. (mm) | Capacity* (liters per minute) | | | | Approx.** Spray Pattern Width (cm) at 30 cm distance |
|----------------------|---------------|--------------------------|-------------------------------|---------|---------|---------|--|
| | | | 50 bar | 100 bar | 150 bar | 200 bar | |
| 80° | 0011 | .23 | .18 | .25 | .31 | .35 | 27 |
| | 0017 | .28 | .27 | .39 | .47 | .55 | 29 |
| | 0025 | .33 | .40 | .57 | .70 | .81 | 31 |
| | 0033 | .38 | .53 | .75 | .92 | 1.1 | 33 |
| | 0039 | .41 | .63 | .89 | 1.1 | 1.3 | 36 |
| | 0050 | .46 | .81 | 1.1 | 1.4 | 1.6 | 38 |
| | 0067 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 43 |
| | 0080 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 43 |
| | 01 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 48 |
| | 015 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 48 |
| | 02 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 48 |
| | 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 48 |
| | 04 | 1.3 | 6.4 | 9.1 | 11.2 | 12.9 | 48 |
| | 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 48 |
| | 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 48 |
| | 07 | 1.7 | 11.3 | 16.0 | 19.5 | 23 | 48 |
| | 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 48 |
| | 09 | 1.9 | 14.5 | 21 | 25 | 29 | 48 |
| | 10 | 2.0 | 16.1 | 23 | 28 | 33 | 48 |
| | 11 | 2.1 | 17.7 | 25 | 31 | 35 | 48 |
| 12 | 2.2 | 19.3 | 27 | 33 | 39 | 48 | |
| 13 | 2.3 | 21 | 30 | 36 | 42 | 48 | |
| 14 | 2.4 | 23 | 32 | 39 | 45 | 48 | |
| 15 | 2.5 | 24 | 34 | 42 | 48 | 48 | |
| 73° | 0023 | .30 | .37 | .52 | .64 | .74 | 29 |
| | 0039 | .41 | .63 | .89 | 1.1 | 1.3 | 33 |
| | 0044 | .43 | .71 | 1.0 | 1.2 | 1.4 | 33 |
| | 0050 | .46 | .81 | 1.1 | 1.4 | 1.6 | 33 |
| | 0154 | .79 | 2.5 | 3.5 | 4.3 | 5.0 | 33 |
| 65° | 0008 | .18 | .13 | .18 | .22 | .26 | 21 |
| | 0011 | .23 | .18 | .25 | .31 | .35 | 23 |
| | 0017 | .28 | .27 | .39 | .47 | .55 | 25 |
| | 0025 | .33 | .40 | .57 | .70 | .81 | 26 |
| | 0033 | .38 | .53 | .75 | .92 | 1.1 | 27 |
| | 0039 | .41 | .63 | .89 | 1.1 | 1.3 | 30 |
| | 0044 | .43 | .71 | 1.0 | 1.2 | 1.4 | 32 |
| | 0050 | .46 | .81 | 1.1 | 1.4 | 1.6 | 33 |
| | 0055 | .48 | .88 | 1.3 | 1.5 | 1.8 | 33 |
| | 0067 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 38 |
| | 0080 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 38 |
| | 01 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 40 |
| | 015 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 40 |
| | 02 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 40 |
| | 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 40 |
| | 04 | 1.3 | 6.4 | 9.1 | 11.2 | 12.9 | 40 |
| | 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 40 |
| | 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 40 |
| | 07 | 1.7 | 11.3 | 16.0 | 19.5 | 23 | 40 |
| | 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 40 |
| 09 | 1.9 | 14.5 | 21 | 25 | 29 | 40 | |
| 10 | 2.0 | 16.1 | 23 | 28 | 32 | 40 | |
| 11 | 2.1 | 17.7 | 25 | 31 | 35 | 40 | |
| 12 | 2.2 | 19.3 | 27 | 33 | 39 | 40 | |
| 13 | 2.3 | 21 | 30 | 36 | 42 | 40 | |
| 14 | 2.4 | 23 | 32 | 39 | 45 | 40 | |
| 15 | 2.5 | 24 | 34 | 42 | 48 | 40 | |
| 17 | 2.6 | 27 | 39 | 47 | 55 | 40 | |
| 20 | 2.7 | 32 | 46 | 56 | 64 | 40 | |

* Tabulated capacities based on water.

** Spray pattern width is based on liquid with viscosity of 20 seconds, #4 Zahn Cup spraying at 1600 psi (110 bar). Coverage will vary with viscosities and pressures.



PERFORMANCE DATA: HIGH-PRESSURE TC TIPS

| Spray Angle at 3 bar | Capacity Size | Equiv. Orifice Dia. (mm) | Capacity* (liters per minute) | | | | Approx.** Spray Pattern Width (cm) at 30 cm distance |
|----------------------|---------------|--------------------------|-------------------------------|---------|---------|---------|--|
| | | | 50 bar | 100 bar | 150 bar | 200 bar | |
| 50° | 0004 | .13 | .06 | .09 | .11 | .13 | 17 |
| | 0006 | .15 | .10 | .14 | .17 | .19 | 18 |
| | 0008 | .18 | .13 | .18 | .22 | .26 | 19 |
| | 0011 | .23 | .18 | .25 | .31 | .35 | 20 |
| | 0017 | .28 | .27 | .39 | .47 | .55 | 21 |
| | 0025 | .33 | .40 | .57 | .70 | .81 | 22 |
| | 0033 | .38 | .53 | .75 | .92 | 1.1 | 25 |
| | 0039 | .41 | .63 | .89 | 1.1 | 1.3 | 26 |
| | 0044 | .43 | .71 | 1.0 | 1.2 | 1.4 | 26 |
| | 0050 | .46 | .81 | 1.1 | 1.4 | 1.6 | 28 |
| | 0055 | .48 | .88 | 1.3 | 1.5 | 1.8 | 28 |
| | 0067 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 30 |
| | 0080 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 33 |
| | 01 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 35 |
| | 015 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 35 |
| 02 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 35 | |
| 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 35 | |
| 04 | 1.3 | 6.4 | 9.1 | 11.2 | 12.9 | 35 | |
| 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 35 | |
| 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 35 | |
| 07 | 1.7 | 11.3 | 16.0 | 19.5 | 23 | 35 | |
| 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 35 | |
| 10 | 2.0 | 16.1 | 23 | 28 | 32 | 35 | |
| 15 | 2.5 | 24 | 34 | 42 | 48 | 35 | |
| 40° | 0004 | .13 | .06 | .09 | .11 | .13 | 16 |
| | 0006 | .15 | .10 | .14 | .17 | .19 | 16 |
| | 0008 | .18 | .13 | .18 | .22 | .26 | 16 |
| | 0011 | .23 | .18 | .25 | .31 | .35 | 17 |
| | 0017 | .28 | .27 | .39 | .47 | .55 | 19 |
| | 0025 | .33 | .40 | .57 | .70 | .81 | 20 |
| | 0033 | .38 | .53 | .75 | .92 | 1.1 | 21 |
| | 0039 | .41 | .63 | .89 | 1.1 | 1.3 | 22 |
| | 0044 | .43 | .71 | 1.0 | 1.2 | 1.4 | 24 |
| | 0050 | .46 | .81 | 1.1 | 1.4 | 1.6 | 25 |
| | 0055 | .48 | .88 | 1.3 | 1.5 | 1.8 | 25 |
| | 0067 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 27 |
| | 0080 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 27 |
| | 01 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 30 |
| | 013 | .74 | 2.1 | 3.0 | 3.6 | 4.2 | 30 |
| 015 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 30 | |
| 02 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 30 | |
| 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 30 | |
| 04 | 1.3 | 6.4 | 9.1 | 11.2 | 12.9 | 30 | |
| 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 30 | |
| 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 30 | |
| 07 | 1.7 | 11.3 | 16.0 | 19.5 | 23 | 30 | |
| 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 30 | |
| 09 | 1.9 | 14.5 | 21 | 25 | 29 | 30 | |
| 10 | 2.0 | 16.1 | 23 | 28 | 32 | 30 | |
| 11 | 2.1 | 17.7 | 25 | 31 | 35 | 30 | |
| 15 | 2.5 | 24 | 34 | 42 | 48 | 30 | |
| 25° | 0004 | .13 | .06 | .09 | .11 | .13 | 12 |
| | 0006 | .15 | .10 | .14 | .17 | .19 | 12 |
| | 0008 | .18 | .13 | .18 | .22 | .26 | 13 |
| | 0011 | .23 | .18 | .25 | .31 | .35 | 13 |
| | 0017 | .28 | .27 | .39 | .47 | .55 | 15 |
| | 0025 | .33 | .40 | .57 | .70 | .81 | 15 |
| | 0033 | .38 | .53 | .75 | .92 | 1.1 | 17 |
| | 0039 | .41 | .63 | .89 | 1.1 | 1.3 | 17 |
| | 0050 | .46 | .81 | 1.1 | 1.4 | 1.6 | 17 |
| | 0055 | .48 | .88 | 1.3 | 1.5 | 1.8 | 17 |
| | 0067 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 20 |
| | 0080 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 21 |
| | 01 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 22 |
| | 015 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 22 |
| | 02 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 22 |
| 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 22 | |
| 04 | 1.3 | 6.4 | 9.1 | 11.2 | 12.9 | 22 | |
| 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 22 | |
| 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 22 | |
| 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 22 | |
| 10 | 2.0 | 16.1 | 23 | 28 | 32 | 22 | |

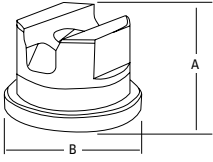
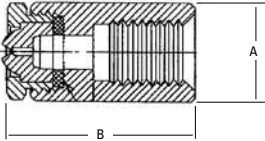
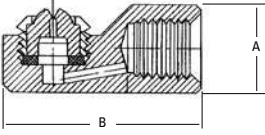
| Spray Angle at 3 bar | Capacity Size | Equiv. Orifice Dia. (mm) | Capacity* (liters per minute) | | | | Approx.** Spray Pattern Width (cm) at 30 cm distance |
|----------------------|---------------|--------------------------|-------------------------------|---------|---------|---------|--|
| | | | 50 bar | 100 bar | 150 bar | 200 bar | |
| 15° | 0004 | .13 | .06 | .09 | .11 | .13 | 10 |
| | 0006 | .15 | .10 | .14 | .17 | .19 | 10 |
| | 0008 | .18 | .13 | .18 | .22 | .26 | 11 |
| | 0011 | .23 | .18 | .25 | .31 | .35 | 11 |
| | 0017 | .28 | .27 | .39 | .47 | .55 | 12 |
| | 0025 | .33 | .40 | .57 | .70 | .81 | 12 |
| | 0033 | .38 | .53 | .75 | .92 | 1.1 | 13 |
| | 0039 | .41 | .63 | .89 | 1.1 | 1.3 | 15 |
| | 0044 | .43 | .71 | 1.0 | 1.2 | 1.4 | 15 |
| | 0050 | .46 | .81 | 1.1 | 1.4 | 1.6 | 15 |
| | 0067 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 16 |
| | 0080 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 17 |
| | 01 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 17 |
| | 015 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 17 |
| | 02 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 17 |
| 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 17 | |
| 04 | 1.3 | 6.4 | 9.1 | 11.2 | 12.9 | 17 | |
| 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 17 | |
| 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 17 | |
| 07 | 1.7 | 11.3 | 16.0 | 19.5 | 23 | 17 | |
| 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 17 | |
| 10 | 2.0 | 16.1 | 23 | 28 | 32 | 17 | |
| 15 | 2.5 | 24 | 34 | 42 | 48 | 17 | |
| 10° | 0004 | .13 | .06 | .09 | .11 | .13 | 7 |
| | 0006 | .15 | .10 | .14 | .17 | .19 | 7 |
| | 0008 | .18 | .13 | .18 | .22 | .26 | 9 |
| | 0011 | .23 | .18 | .25 | .31 | .35 | 9 |
| | 0017 | .28 | .27 | .39 | .47 | .55 | 10 |
| | 0025 | .33 | .40 | .57 | .70 | .81 | 10 |
| | 0033 | .38 | .53 | .75 | .92 | 1.1 | 11 |
| | 0039 | .41 | .63 | .89 | 1.1 | 1.3 | 12 |
| | 0050 | .46 | .81 | 1.1 | 1.4 | 1.6 | 12 |
| | 0067 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 13 |
| | 0080 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 13 |
| | 01 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 15 |
| | 015 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 15 |
| | 02 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 15 |
| | 5° | 0004 | .13 | .06 | .09 | .11 | .13 |
| 0008 | | .18 | .13 | .18 | .22 | .26 | 6 |
| 0011 | | .23 | .18 | .25 | .31 | .35 | 6 |
| 0017 | | .28 | .27 | .39 | .47 | .55 | 7 |
| 0025 | | .33 | .40 | .57 | .70 | .81 | 7 |
| 0033 | | .38 | .53 | .75 | .92 | 1.1 | 8 |
| 0039 | | .41 | .63 | .89 | 1.1 | 1.3 | 10 |
| 0050 | | .46 | .81 | 1.1 | 1.4 | 1.6 | 10 |
| 0067 | | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 10 |
| 01 | | .66 | 1.1 | 1.5 | 1.9 | 2.2 | 10 |
| 015 | | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 10 |
| 02 | | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 10 |
| 03 | | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 10 |

* Tabulated capacities based on water.

** Spray pattern width is based on liquid with viscosity of 20 seconds, #4 Zahn Cup spraying at 1600 psi (110 bar). Coverage will vary with viscosities and pressures.





DIMENSIONS AND WEIGHTS

| | Nozzle | A (mm) | B (mm) | Net Weight (kg) |
|---|-------------------|--------|--------|-----------------|
|  | TP-TC | 9.5 | 15 | .01 |
|  | 12020-TM-TC 9501* | 9.4 | 18.6 | 0.007 |
|  | 12017-TM-TC 9501* | 9.4 | 21.4 | 0.008 |

Based on largest/heaviest version of each type.

***Request data sheets 14644, 14644-1 and 14644-2 for more information.**

EXTENSIONS AND ASSEMBLIES

| Extension | Extension Type | Max. Pressure bar | Inlet Conn. in. | Material | Lengths mm | Special Features |
|---|----------------|-------------------|---------------------|------------|--|---|
|  | 9702A | 138 | 11/16-16 UniJet THD | Mild steel | 203 254 457 610 762 914 1219 1524 | Projects spray at 90° angle to inlet Refer to Data Sheet 9702-1 |
|  | 9702C | 138 | 11/16-16 UniJet THD | Mild steel | 203 254 457 610 762 914 1219 1524 | Curved extension Refer to Data Sheet 9702-1 |

Wide range of extensions available request data sheets 9702-1, 9702-1 and 9018 for more information



DISTINCT HEAVY EDGE PATTERN COMBINED WITH LONG WEAR LIFE



FEATURES AND BENEFITS

- Heavy edge distribution for pronounced edge pattern
- Erosion- and corrosion-resistant tungsten carbide orifice insert provides long wear life
- Tip orifice insert is recessed in a stainless steel tip body to protect against damage

SPECIFICATIONS:

Maximum pressure: 4000 psi (276 bar)

Spray pattern: Flat spray

Materials: Stainless steel with tungsten carbide orifice insert



IDEAL FOR:

- Road paint striping
- Pavement marking
- Parking lot striping

ORDERING INFORMATION

HEAVY EDGE TC SPRAY TIP



Example



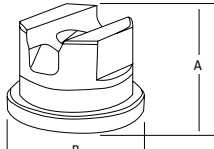
PERFORMANCE DATA: HEAVY EDGE TC SPRAY TIP

| Spray Angle at 3 bar | Capacity Size | Equiv. Orifice Dia. (mm) | Capacity* (liters per minute) | | | | | |
|----------------------|---------------|--------------------------|-------------------------------|---------|---------|---------|---------|---------|
| | | | 50 bar | 100 bar | 150 bar | 200 bar | 250 bar | 275 bar |
| 65° | 0033 | 0.38 | 0.53 | 0.75 | 0.92 | 1.1 | 1.2 | 1.25 |
| | 07 | 1.7 | 11.3 | 16.0 | 19.5 | 23 | 25 | 27 |
| | 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 29 | 30 |
| 50° | 0050 | 0.46 | 0.81 | 1.1 | 1.4 | 1.6 | 1.7 | 1.8 |
| | 01 | 0.66 | 1.6 | 2.3 | 2.8 | 3.2 | 3.6 | 3.8 |
| | 015 | 0.79 | 2.4 | 3.4 | 4.2 | 4.8 | 5.4 | 5.6 |
| | 02 | 0.91 | 3.2 | 4.6 | 5.6 | 6.4 | 7.3 | 7.6 |
| | 025 | 1.0 | 4.0 | 5.7 | 7.0 | 8.1 | 9.0 | 9.5 |
| | 04 | 1.3 | 6.4 | 9.1 | 11.2 | 12.9 | 14.4 | 15.1 |
| | 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 18 | 19 |
| | 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 21.7 | 22.7 |
| | 07 | 1.7 | 11.3 | 16.0 | 19.5 | 23 | 25 | 27 |
| | 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 29 | 30 |
| | 09 | 1.9 | 14.5 | 21 | 25 | 29 | 33.2 | 34.8 |
| 40° | 0033 | 0.38 | 0.53 | 0.75 | 0.92 | 1.1 | 1.2 | 1.25 |
| | 01 | 0.66 | 1.6 | 2.3 | 2.8 | 3.2 | 3.6 | 3.8 |
| | 02 | 0.91 | 3.2 | 4.6 | 5.6 | 6.4 | 7.3 | 7.6 |
| | 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 10.8 | 11.3 |
| | 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 18 | 19 |
| | 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 21.7 | 22.7 |
| | 07 | 1.7 | 11.3 | 16.0 | 19.5 | 23 | 25 | 27 |
| | 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 29 | 30 |
| | 09 | 1.9 | 14.5 | 21 | 25 | 29 | 33.2 | 34.8 |
| 35° | 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 21.7 | 22.7 |

| Spray Angle at 3 bar | Capacity Size | Equiv. Orifice Dia. (mm) | Capacity* (liters per minute) | | | | | |
|----------------------|---------------|--------------------------|-------------------------------|---------|---------|---------|---------|---------|
| | | | 50 bar | 100 bar | 150 bar | 200 bar | 250 bar | 275 bar |
| 30° | 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 21.7 | 22.7 |
| | 07 | 1.7 | 11.3 | 16.0 | 19.5 | 23 | 25 | 27 |
| | 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 29 | 30 |
| | 09 | 1.9 | 14.5 | 21 | 25 | 29 | 33.2 | 34.8 |
| 25° | 0025 | 0.33 | 0.40 | 0.57 | 0.70 | 0.81 | 0.90 | 0.95 |
| | 01 | 0.66 | 1.6 | 2.3 | 2.8 | 3.2 | 3.6 | 3.8 |
| | 015 | 0.79 | 2.4 | 3.4 | 4.2 | 4.8 | 5.4 | 5.6 |
| | 02 | 0.91 | 3.2 | 4.6 | 5.6 | 6.4 | 7.3 | 7.6 |
| | 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 10.8 | 11.3 |
| | 04 | 1.3 | 6.4 | 9.1 | 11.2 | 12.9 | 14.4 | 15.1 |
| | 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 18 | 19 |
| | 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 21.7 | 22.7 |
| | 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 29 | 30 |
| | 10 | 2.0 | 16.1 | 23 | 28 | 32 | 37 | 38 |
| 20° | 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 10.8 | 11.3 |
| 15° | 0080 | 0.58 | 1.3 | 1.8 | 2.2 | 2.6 | 2.9 | 3.0 |
| | 01 | 0.66 | 1.6 | 2.3 | 2.8 | 3.2 | 3.6 | 3.8 |
| | 015 | 0.79 | 2.4 | 3.4 | 4.2 | 4.8 | 5.4 | 5.6 |
| | 02 | 0.91 | 3.2 | 4.6 | 5.6 | 6.4 | 7.3 | 7.6 |
| | 03 | 1.1 | 4.8 | 6.8 | 8.4 | 9.7 | 10.8 | 11.3 |
| | 04 | 1.3 | 6.4 | 9.1 | 11.2 | 12.9 | 14.4 | 15.1 |
| | 05 | 1.4 | 8.1 | 11.4 | 14.0 | 16.1 | 18 | 19 |
| | 06 | 1.6 | 9.7 | 13.7 | 16.7 | 19.3 | 21.7 | 22.7 |
| | 08 | 1.8 | 12.9 | 18.2 | 22 | 26 | 29 | 30 |
| 10° | 025 | 1.0 | 4.0 | 5.7 | 7.0 | 8.1 | 9.0 | 9.5 |

*Tabulation is based on water spraying at temperature at 70°F (21°C).

DIMENSIONS AND WEIGHTS

|  | Nozzle | A (mm) | B (mm) | Net Weight (kg) |
|---|-----------------------------|--------|--------|-----------------|
| | Small capacity (up to -025) | | 9.5 | 15.1 |
| Large capacity (-03 and larger) | | 12.7 | 15.1 | .01 |

Based on largest/heaviest version of each type.

REPEATABLE, UNIFORM SPRAY COVERAGE FOR PRECISION SPRAY APPLICATIONS



FEATURES AND BENEFITS

- Best coverage tolerances in TC tip line
- Tapered edge spray pattern provides even coverage when sprays overlap
- Flow channel design minimizes heavy spray pattern edges
- Tips have flats to ensure accurate spray pattern alignment every time
- Tip orifice insert is recessed in a stainless steel tip body to protect against damage
- Erosion-resistant tungsten carbide orifice insert provides longer wear life than standard stainless steel tips

SPECIFICATIONS:

Maximum pressure: 4000 psi (276 bar)

Spray pattern: Flat spray or solid stream

Materials: Stainless steel body with tungsten carbide orifice



IDEAL FOR:

- Robotic equipment in precise, repetitive paint spraying applications
- Sealant/coating spraying
- Operations where overspray is undesirable

ORDERING INFORMATION

ROBOTIC TC TIPS – ROBTC



Example



REDUCED BUILD-UP & CLOGGING EXTENDS PRODUCTION TIME BETWEEN MAINTENANCE



FEATURES AND BENEFITS

- Special tip design guides spray solution away from the orifice and reduces clogging caused by caking and build-up
- Tips have flats to ensure accurate spray pattern alignment every time
- Designed for use in applications where the spray solution tends to dry quickly; shorter tip holder than ROBTC tips

SPECIFICATIONS:

Maximum pressure: 4000 psi (276 bar)

Spray pattern: Flat spray or solid stream

Materials: Stainless steel body with tungsten carbide orifice



IDEAL FOR:

- Robotic equipment in precise, repetitive paint spraying applications
- Sealant/coating spraying
- Operations where overspray is undesirable

ORDERING INFORMATION

ROBOTIC TC TIPS – CDROBTC



Example



ROBOTIC TC TIPS – ROBTC AND CDROBTC

PERFORMANCE DATA: ROBOTIC/CDROBTC TC TIPS

| Spray Angle at 3 bar | Capacity Size | Equiv. Orifice Dia.* (mm) | Capacity (liters per minute)*** | | | | | | | | Approx.** Spray Pattern Width (cm) at 30 cm Distance |
|----------------------|---------------|---------------------------|---------------------------------|--------|--------|---------|---------|---------|---------|---------|--|
| | | | 25 bar | 50 bar | 75 bar | 100 bar | 150 bar | 200 bar | 250 bar | 275 bar | |
| 110° | 0067 | .53 | .76 | 1.08 | 1.3 | 1.5 | 1.9 | 2.2 | 2.4 | 2.5 | 53-56 |
| | 0080 | .58 | .91 | 1.3 | 1.6 | 1.8 | 2.2 | 2.6 | 2.9 | 3.0 | 55-57 |
| | 01 | .66 | 1.1 | 1.6 | 2.0 | 2.3 | 2.8 | 3.2 | 3.6 | 3.8 | 60-62 |
| | 015 | .79 | 1.7 | 2.4 | 3.0 | 3.4 | 4.2 | 4.8 | 5.4 | 5.7 | 64-66 |
| | 02 | .91 | 2.3 | 3.2 | 3.9 | 4.6 | 5.6 | 6.4 | 7.2 | 7.6 | 66-69 |
| 95° | 0080 | .58 | .91 | 1.3 | 1.6 | 1.8 | 2.2 | 2.6 | 2.9 | 3.0 | 50-52 |
| | 02 | .91 | 2.3 | 3.2 | 3.9 | 4.6 | 5.6 | 6.4 | 7.2 | 7.6 | 55-57 |
| 80° | 0044 | .43 | .50 | .71 | .87 | 1.0 | 1.2 | 1.4 | 1.6 | 1.7 | 37-39 |
| | 0050 | .46 | .57 | .81 | .99 | 1.1 | 1.4 | 1.5 | 1.8 | 1.9 | 38-41 |
| | 0055 | .48 | .63 | .89 | 1.1 | 1.3 | 1.5 | 1.8 | 2.0 | 2.1 | 37-39 |
| | 0067 | .53 | .76 | 1.08 | 1.3 | 1.5 | 1.9 | 2.2 | 2.4 | 2.5 | 43-46 |
| | 0080 | .58 | .91 | 1.3 | 1.6 | 1.8 | 2.2 | 2.6 | 2.9 | 3.0 | 43-46 |
| | 01 | .66 | 1.1 | 1.6 | 2.0 | 2.3 | 2.8 | 3.2 | 3.6 | 3.8 | 47-50 |
| | 015 | .79 | 1.7 | 2.4 | 3.0 | 3.4 | 4.2 | 4.8 | 5.4 | 5.7 | 47-50 |
| | 02 | .91 | 2.3 | 3.2 | 3.9 | 4.6 | 5.6 | 6.4 | 7.2 | 7.6 | 47-50 |
| | 03 | 1.1 | 3.4 | 4.8 | 5.9 | 6.8 | 8.4 | 9.7 | 10.8 | 11.3 | 47-50 |
| | 04 | 1.3 | 4.6 | 6.4 | 7.8 | 9.1 | 11.2 | 12.9 | 14.4 | 15.1 | 47-50 |
| 65° | 0039 | .41 | .44 | .63 | .77 | .89 | 1.1 | 1.3 | 1.4 | 1.5 | 29-32 |
| | 0044 | .43 | .50 | .71 | .87 | 1.0 | 1.2 | 1.4 | 1.6 | 1.7 | 32-34 |
| | 0050 | .46 | .57 | .81 | .99 | 1.1 | 1.4 | 1.6 | 1.8 | 1.9 | 32-34 |
| | 0055 | .48 | .63 | .89 | 1.1 | 1.3 | 1.5 | 1.8 | 2.0 | 2.1 | 32-34 |
| | 0067 | .53 | .76 | 1.08 | 1.3 | 1.5 | 1.9 | 2.2 | 2.4 | 2.5 | 37-39 |
| | 0080 | .58 | .91 | 1.3 | 1.6 | 1.8 | 2.2 | 2.6 | 2.9 | 3.0 | 37-39 |
| | 01 | .66 | 1.1 | 1.6 | 2.0 | 2.3 | 2.8 | 3.2 | 3.6 | 3.8 | 41-43 |
| | 015 | .79 | 1.7 | 2.4 | 3.0 | 3.4 | 4.2 | 4.8 | 5.4 | 5.7 | 39-42 |
| | 02 | .91 | 2.3 | 3.2 | 3.9 | 4.6 | 5.6 | 6.4 | 7.2 | 7.6 | 38-41 |
| | 03 | 1.1 | 3.4 | 4.8 | 5.9 | 6.8 | 8.4 | 9.7 | 10.8 | 11.3 | 39-42 |
| 50° | 0044 | .43 | .50 | .71 | .87 | 1.0 | 1.2 | 1.4 | 1.6 | 1.7 | 27-29 |
| | 0050 | .46 | .57 | .81 | .99 | 1.1 | 1.4 | 1.6 | 1.8 | 1.9 | 27-29 |
| | 0055 | .48 | .63 | .89 | 1.1 | 1.3 | 1.5 | 1.8 | 2.0 | 2.1 | 27-29 |
| | 0067 | .53 | .76 | 1.08 | 1.3 | 1.5 | 1.9 | 2.2 | 2.4 | 2.5 | 32-34 |
| | 0080 | .58 | .91 | 1.3 | 1.6 | 1.8 | 2.2 | 2.6 | 2.9 | 3.0 | 32-34 |
| | 01 | .66 | 1.1 | 1.6 | 2.0 | 2.3 | 2.8 | 3.2 | 3.6 | 3.8 | 34-37 |
| | 015 | .79 | 1.7 | 2.4 | 3.0 | 3.4 | 4.2 | 4.8 | 5.4 | 5.7 | 34-37 |
| | 02 | .79 | 2.3 | 3.2 | 3.9 | 4.6 | 5.6 | 6.4 | 7.2 | 7.6 | 34-37 |
| | 03 | 1.1 | 3.4 | 4.8 | 5.9 | 6.8 | 8.4 | 9.7 | 10.8 | 11.3 | 34-37 |
| | 10 | 2.0 | 11.4 | 16.1 | 19.6 | 23 | 28 | 32 | 36 | 38 | 34-37 |
| 40° | 0011 | .23 | .13 | .18 | .22 | .25 | .31 | .35 | .40 | .42 | 17-19 |
| | 0017 | .28 | .19 | .27 | .33 | .39 | .47 | .55 | .61 | .64 | 17-19 |
| | 0025 | .33 | .28 | .40 | .49 | .57 | .70 | .81 | .91 | .95 | 18-20 |
| | 0044 | .43 | .50 | .71 | .87 | 1.0 | 1.2 | 1.4 | 1.6 | 1.7 | 22-24 |
| | 0050 | .46 | .57 | .81 | .99 | 1.1 | 1.4 | 1.6 | 1.8 | 1.9 | 22-24 |
| | 0055 | .48 | .63 | .89 | 1.1 | 1.3 | 1.5 | 1.8 | 2.0 | 2.1 | 22-24 |
| | 0067 | .53 | .76 | 1.08 | 1.3 | 1.5 | 1.9 | 2.2 | 2.4 | 2.5 | 27-29 |
| | 0080 | .58 | .91 | 1.3 | 1.6 | 1.8 | 2.2 | 2.6 | 2.9 | 3.0 | 27-29 |
| | 01 | .66 | 1.1 | 1.6 | 2.0 | 2.3 | 2.8 | 3.2 | 3.6 | 3.8 | 29-32 |
| | 015 | .79 | 1.7 | 2.4 | 3.0 | 3.4 | 4.2 | 4.8 | 5.4 | 5.7 | 29-32 |
| 02 | .91 | 2.3 | 3.2 | 3.9 | 4.6 | 5.6 | 6.4 | 7.2 | 7.6 | 29-32 | |

* For solid stream tips, the actual orifice diameter is listed.

** Spray pattern width is based on liquid with viscosity of 20 seconds, #4 Zahn Cup spraying at 1600 psi (110 bar).

*** Tabulation is based on spraying water at temperature at 70°F (21°C).



PERFORMANCE DATA: ROBOTIC/CDROBTC TC TIPS

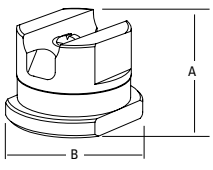
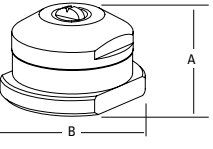
| Spray Angle at 3 bar | Capacity Size | Equiv. Orifice Dia.* (mm) | Capacity (liters per minute)*** | | | | | | | | Approx.** Spray Pattern Width (cm) at 30 cm Distance |
|----------------------|---------------|---------------------------|---------------------------------|--------|--------|---------|---------|---------|---------|---------|--|
| | | | 25 bar | 50 bar | 75 bar | 100 bar | 150 bar | 200 bar | 250 bar | 275 bar | |
| 25° | 0017 | .28 | .19 | .27 | .33 | .39 | .47 | .55 | .61 | .64 | 14-17 |
| | 0039 | .41 | .44 | .63 | .77 | .89 | 1.1 | 1.3 | 1.4 | 1.5 | 17-19 |
| | 0050 | .46 | .57 | .81 | .99 | 1.1 | 1.4 | 1.6 | 1.8 | 1.9 | 19-22 |
| | 0055 | .48 | .63 | .89 | 1.1 | 1.3 | 1.5 | 1.8 | 2.0 | 2.1 | 19-22 |
| | 0067 | .53 | .76 | 1.08 | 1.3 | 1.5 | 1.9 | 2.2 | 2.4 | 2.5 | 22-24 |
| | 0080 | .58 | .91 | 1.3 | 1.6 | 1.8 | 2.2 | 2.6 | 2.9 | 3.0 | 22-24 |
| | 01 | .66 | 1.1 | 1.6 | 2.0 | 2.3 | 2.8 | 3.2 | 3.6 | 3.8 | 22-24 |
| | 015 | .79 | 1.7 | 2.4 | 3.0 | 3.4 | 4.2 | 4.8 | 5.4 | 5.7 | 24-27 |
| | 02 | .91 | 2.3 | 3.2 | 3.9 | 4.6 | 5.6 | 6.4 | 7.2 | 7.6 | 22-24 |
| 5° | 0011 | .23 | .13 | .18 | .22 | .25 | .31 | .35 | .40 | .42 | 5-8 |
| | 0039 | .41 | .44 | .63 | .77 | .89 | 1.1 | 1.3 | 1.4 | 1.5 | 10-13 |
| | 0050 | .46 | .57 | .81 | .99 | 1.1 | 1.4 | 1.6 | 1.8 | 1.9 | 10-13 |
| | 0067 | .53 | .76 | 1.08 | 1.3 | 1.5 | 1.9 | 2.2 | 2.4 | 2.5 | 10-13 |
| | 01 | .66 | 1.1 | 1.6 | 2.0 | 2.3 | 2.8 | 3.2 | 3.6 | 3.8 | 13-15 |
| | 015 | .79 | 1.7 | 2.4 | 3.0 | 3.4 | 4.2 | 4.8 | 5.4 | 5.7 | 14-17 |
| | 02 | .91 | 2.3 | 3.2 | 3.9 | 4.6 | 5.6 | 6.4 | 7.2 | 7.6 | 14-17 |
| 0° | 0009 | .66 | .97 | 1.4 | 1.7 | 1.9 | 2.4 | 2.7 | 3.1 | 3.2 | — |
| | 001 | .71 | 1.4 | 1.9 | 2.4 | 2.7 | 3.4 | 3.9 | 4.3 | 4.5 | — |
| | 0015 | .79 | 2.0 | 2.8 | 3.5 | 4.0 | 4.9 | 5.7 | 6.3 | 6.6 | — |
| | 002 | .99 | 2.6 | 3.7 | 4.5 | 5.2 | 6.4 | 7.4 | 8.3 | 8.7 | — |
| | 003 | 1.1 | 3.2 | 4.5 | 5.5 | 6.4 | 7.8 | 9.0 | 10.1 | 10.6 | — |
| | 004 | 1.3 | 4.9 | 6.9 | 8.5 | 9.8 | 12.0 | 13.9 | 15.5 | 16.3 | — |
| | 005 | 1.4 | 5.5 | 7.7 | 9.5 | 10.9 | 13.4 | 15.5 | 17.3 | 18.1 | — |
| | 006 | 1.6 | 6.8 | 9.7 | 11.8 | 13.7 | 16.8 | 19.3 | 21.6 | 22.7 | — |

* For solid stream tips, the actual orifice diameter is listed.

** Spray pattern width is based on liquid with viscosity of 20 seconds, #4 Zahn Cup spraying at 1600 psi (110 bar).

*** Tabulation is based on spraying water at temperature at 70°F (21°C).

DIMENSIONS AND WEIGHTS

| | Nozzle | A (mm) | B (mm) | Locating Flats (mm) | Net Weight (kg) |
|---|------------|--------|--------|---------------------|-----------------|
|  | TP-ROBTC | 9.5 | 15.1 | 12.7 | .01 |
|  | TP-CDROBTC | 7.9 | 15.1 | 12.7 | .01 |

Based on largest/heaviest version of each type.



EVEN SPRAY DISTRIBUTION, MINIMAL OVERSPRAY



FEATURES AND BENEFITS

- Flat spray pattern with uniform distribution ensures even coverage
- Even distribution across spray pattern
- Tip orifice insert is recessed in a stainless steel tip body to protect against damage
- Erosion-resistant tungsten carbide orifice insert provides longer wear life than standard stainless steel tips
- CDECRTC tips feature a shorter tip holder than ECRTC tips and are designed for use in applications where the spray solution tends to dry quickly. The tip design helps the solution slide away from the orifice and prevents clogging caused by caking and build-up

SPECIFICATIONS:

Maximum pressure: 4000 psi (276 bar)

Spray pattern: Even flat spray

Materials: Stainless steel body with tungsten carbide orifice



IDEAL FOR:

- Spraying viscous solutions such as thick paints, epoxies, adhesives and other solutions prone to clogging
- High particulate solution spraying

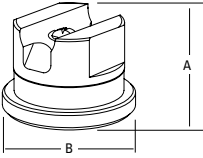
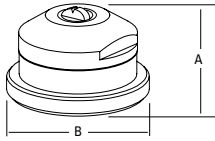
PERFORMANCE DATA: ECRTC/CDECRTC TIPS

| Spray Angle at 3 bar | Capacity Size | Equiv. Orifice Dia. (mm) | Capacity (liters per minute)** | | | | | | Approx. Spray Pattern Width (cm) at 30 cm distance |
|----------------------|---------------|--------------------------|--------------------------------|---------|---------|---------|---------|---------|--|
| | | | 50 bar | 100 bar | 150 bar | 200 bar | 250 bar | 275 bar | |
| 110° | 0017 | 0.28 | 0.27 | 0.39 | 0.47 | 0.55 | 0.62 | 0.65 | 38 |
| | 0025 | 0.33 | 0.40 | 0.57 | 0.70 | 0.81 | 0.90 | 0.95 | 41 |
| | 0039 | 0.41 | 0.63 | 0.89 | 1.1 | 1.3 | 1.4 | 1.5 | 46 |
| | 0050 | 0.46 | 0.81 | 1.1 | 1.4 | 1.6 | 1.7 | 1.8 | 50 |
| | 067 | 0.53 | 1.08 | 1.5 | 1.9 | 2.2 | 2.4 | 2.5 | 52 |
| | 0080 | 0.58 | 1.3 | 1.8 | 2.2 | 2.6 | 2.9 | 3.0 | 56 |
| 95° | 01 | 0.66 | 1.6 | 2.3 | 2.8 | 3.2 | 3.4 | 3.8 | 60 |
| | 0017 | 0.28 | 0.27 | 0.39 | 0.47 | 0.55 | 0.62 | 0.65 | 33 |
| 95° | 0039 | 0.41 | 0.63 | 0.89 | 1.1 | 1.3 | 1.4 | 1.5 | 41 |
| | 0039 | 0.41 | 0.63 | 0.89 | 1.1 | 1.3 | 1.4 | 1.5 | 36 |
| 80° | 0050 | 0.46 | 0.81 | 1.1 | 1.4 | 1.6 | 1.7 | 1.8 | 38 |
| | 0055 | 0.48 | 0.88 | 1.3 | 1.5 | 1.8 | 2.1 | 2.2 | 38 |
| | 0067 | 0.53 | 1.08 | 1.5 | 1.9 | 2.2 | 2.4 | 2.5 | 44 |
| | 0080 | 0.58 | 1.3 | 1.8 | 2.2 | 2.6 | 2.9 | 3.0 | 44 |
| 65° | 0017 | 0.28 | 0.27 | 0.39 | 0.47 | 0.55 | 0.62 | 0.65 | 24 |
| | 0025 | 0.33 | 0.40 | 0.57 | 0.70 | 0.81 | 0.90 | 0.95 | 25 |
| | 0039 | 0.41 | 0.63 | 0.89 | 1.1 | 1.3 | 1.4 | 1.5 | 31 |
| | 0050 | 0.46 | 0.81 | 1.1 | 1.4 | 1.6 | 1.7 | 1.8 | 33 |
| 65° | 0067 | 0.53 | 1.1 | 1.5 | 1.9 | 2.2 | 2.4 | 2.5 | 38 |
| | 0050 | 0.46 | 0.81 | 1.1 | 1.4 | 1.6 | 1.7 | 1.8 | 28 |
| 50° | 0055 | 0.48 | 0.88 | 1.3 | 1.5 | 1.8 | 2.1 | 2.2 | 23 |

* Spray pattern width is based on liquid with viscosity of 20 seconds, #4 Zahn Cup spraying at 1600 psi (110 bar).

** Tabulation is based on spraying water at temperature at 70°F (21°C).

DIMENSIONS AND WEIGHTS

| | Nozzle | A (mm) | B (mm) | Net Weight (kg) |
|---|------------|--------|--------|-----------------|
|  | TP-ECRTC | 9.5 | 15.1 | .01 |
|  | TP-CDECRTC | 7.9 | 15.1 | .01 |

Based on largest/heaviest version of each type.

ORDERING INFORMATION

ECRTC TIPS

| | | | | | |
|----------|-------------|---------------|---|----------|--------------------|
| Tip Code | Spray Angle | Capacity Size | — | Tip Type | Example |
| | | | | | TP 50 0050 — ECRTC |

CDECRTC TIPS

| | | | | | |
|----------|-------------|---------------|---|----------|----------------------|
| Tip Code | Spray Angle | Capacity Size | — | Tip Type | Example |
| | | | | | TP 50 0050 — CDECRTC |

HYDRAULIC FINE SPRAY – VERY SMALL DROPS WITHOUT COMPRESSED AIR



FEATURES AND BENEFITS

- High-pressure tip with tungsten carbide orifice for long wear life
- Hollow cone spray pattern with circular impact area
- Excellent atomization without use of costly compressed air

SPECIFICATIONS:

Maximum pressure: 2000 psi (138 bar)

Spray pattern: Hollow cone

Materials: 303 stainless steel with tungsten carbide orifice



IDEAL FOR:

- Coating inside piping/tubing
- Evaporative cooling

ORDERING INFORMATION

TN-SSTC SPRAY TIP



Example



PERFORMANCE DATA: FINE SPRAY TC TIPS

| Capacity Size | Equiv. Orifice Dia. (mm) | Capacity* (liters per minute) | | | | | Approx.** Spray Pattern Width (cm) at 30 cm distance |
|---------------|--------------------------|-------------------------------|--------|--------|---------|---------|--|
| | | 30 bar | 50 bar | 70 bar | 100 bar | 140 bar | |
| .60 | .41 | .12 | .16 | .19 | .23 | .27 | 7.6 |
| .80 | .34 | .17 | .21 | .25 | .30 | .36 | 7.6 |
| .90 | .41 | .19 | .24 | .29 | .34 | .40 | 7.6 |
| 1 | .51 | .21 | .27 | .32 | .38 | .45 | 8.9 |
| 1.5 | .51 | .31 | .40 | .48 | .57 | .67 | 8.9 |
| 1.8 | .64 | .37 | .48 | .57 | .68 | .81 | 11.4 |
| 2 | .71 | .42 | .54 | .64 | .76 | .90 | 11.4 |
| 3 | .71 | .62 | .81 | .95 | 1.1 | 1.3 | 15.2 |
| 4 | 1.1 | .83 | 1.1 | 1.3 | 1.5 | 1.8 | 20.3 |
| 6 | 1.1 | 1.2 | 1.6 | 1.9 | 2.3 | 2.7 | 25.4 |
| 8 | 1.5 | 1.7 | 2.1 | 2.5 | 3.0 | 3.6 | 30.5 |
| 9 | 1.5 | 1.9 | 2.4 | 2.9 | 3.4 | 4.0 | 35.6 |
| 10 | 1.6 | 2.1 | 2.7 | 3.2 | 3.8 | 4.5 | 40.6 |
| 12 | 1.9 | 2.5 | 3.2 | 3.8 | 4.6 | 5.4 | 45.7 |
| 14 | 1.9 | 2.9 | 3.8 | 4.4 | 5.3 | 6.3 | 35.6 |
| 15 | 2.1 | 3.1 | 4.0 | 4.8 | 5.7 | 6.7 | 40.6 |
| 16 | 2.2 | 3.3 | 4.3 | 5.1 | 6.1 | 7.2 | 45.7 |
| 18 | 1.9 | 3.7 | 4.8 | 5.7 | 6.8 | 8.1 | 40.6 |
| 20 | 2.1 | 4.2 | 5.4 | 6.4 | 7.6 | 9.0 | 45.7 |
| 22 | 1.9 | 4.6 | 5.9 | 7.0 | 8.4 | 9.9 | 30.5 |
| 24 | 2.1 | 5.0 | 6.4 | 7.6 | 9.1 | 10.8 | 33 |
| 26 | 2.2 | 5.4 | 7.0 | 8.3 | 9.9 | 11.7 | 35.6 |

* Tabulated capacities based on water.

** Spray pattern diameter is based on liquid with viscosity of 20 seconds, #4 Zahn Cup spraying at 1600 psi (110 bar). Coverage will vary with viscosities and pressures.

DIMENSIONS AND WEIGHTS

| | Nozzle | A (mm) | B (mm) | Net Weight (kg) |
|---|---------|--------|--------|-----------------|
|  | TN-SSTC | 15.0 | 15.9 | .01 |

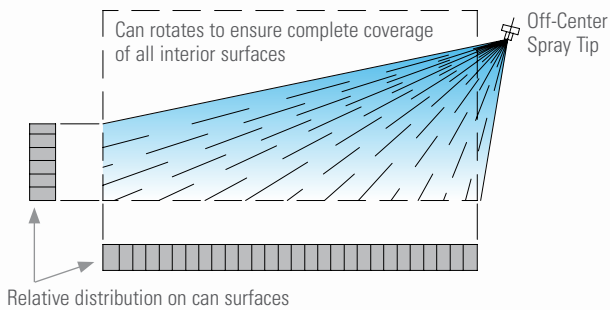
Based on largest/heaviest version of each type.

DESIGNED FOR UNIFORM COATING OF CAN INTERIORS



FEATURES AND BENEFITS

- Off-centered, flat spray pattern – resulting uniform coating thickness on the interior of cans



IDEAL FOR:

- Can coating applications

SPECIFICATIONS:

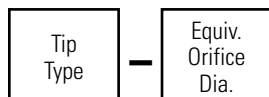
Maximum pressure: 4000 psi (275 bar)

Spray pattern: Flat spray

Materials: Stainless steel tip holder with tungsten carbide orifice insert

ORDERING INFORMATION

OFF-CENTERED FLAT SPRAY TIPS



Example

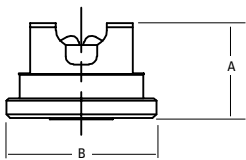
15754 - 1



PERFORMANCE DATA: OFF-CENTERED FLAT SPRAY TIPS

| Spray Tip No. | Equiv. Orifice Dia. (mm) | Capacity (liters per minute) | | Spray angle at 35 bar |
|---------------|--------------------------|------------------------------|--------|-----------------------|
| | | 35 bar | 70 bar | |
| 15754-1 | 0.38 | 0.44 | 0.63 | 80° |
| 15754-2 | 0.23 | 0.17 | 0.24 | 30° |
| 15754-3 | 0.43 | 0.58 | 0.82 | 82° |
| 15754-4 | 0.33 | 0.34 | 0.48 | 75° |
| 15754-5 | 0.33 | 0.34 | 0.48 | 40° |
| 15754-6 | 0.33 | 0.34 | 0.48 | 50° |
| 15754-7 | 0.56 | 0.98 | 1.39 | 25° |
| 15754-8 | 0.66 | 1.35 | 1.91 | 25° |
| 15754-9 | 0.23 | 0.17 | 0.24 | 80° |

DIMENSIONS AND WEIGHTS

| | Nozzle | A (mm) | B (mm) | Net Weight (kg) |
|---|--------|--------|--------|-----------------|
|  | 15754 | 9.5 | 15.1 | .01 |

Based on largest/heaviest version of each type.



CLEAR CLOGS QUICKLY & EASILY; MAXIMIZE PRODUCTIVITY



FEATURES AND BENEFITS

- Simply rotate handle 180° and blow obstructions out of the opening in the back of the tip – it's fast and easy
- Tungsten carbide orifice provides maximum erosion resistance for high-pressure spraying
- Easy to replace the orifice – no need to disassemble
- Guard safety feature

SPECIFICATIONS:

Maximum pressure: 5000 psi (345 bar)

Spray pattern: Flat spray

Materials: Stainless steel holder with tungsten carbide orifice insert and protective nylon lugs



IDEAL FOR:

- Manual spraying
- High-pressure paint spraying
- Road paint striping
- Fiberglass manufacturing

ORDERING INFORMATION

ROTOCLEAN AIRLESS SPRAY NOZZLES

RotoClean
Number

+

Orifice/Handle
Insert Kit

Example

AA225 – 6

+

26081-813



PERFORMANCE DATA: ROTOCLEAN AIRLESS SPRAY NOZZLES

| For 225 Handle/Orifice Insert No. 26081- | Equiv. Orifice Dia. (mm) | Flow Rate Capacity* (liters per minute) | | | | Approx.** Spray Pattern Width (cm) at 30 cm distance |
|--|--------------------------|---|---------|---------|---------|--|
| | | 50 bar | 100 bar | 150 bar | 200 bar | |
| 813 | .33 | .40 | .57 | .70 | .81 | 42 |
| 815 | .38 | .53 | .75 | .92 | 1.1 | 43 |
| 918 | .46 | .81 | 1.1 | 1.4 | 1.6 | 48 |
| 1021 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 53 |
| 1023 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 56 |
| 1126 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 58 |
| 611 | .28 | .27 | .39 | .47 | .55 | 33 |
| 713 | .33 | .40 | .57 | .70 | .81 | 36 |
| 715 | .38 | .53 | .75 | .92 | 1.1 | 38 |
| 818 | .46 | .81 | 1.1 | 1.4 | 1.6 | 43 |
| 921 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 48 |
| 923 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 48 |
| 1026 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 53 |
| 1031 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 53 |
| 1036 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 56 |
| 511 | .28 | .27 | .39 | .47 | .55 | 29 |
| 613 | .33 | .40 | .57 | .70 | .81 | 31 |
| 615 | .38 | .53 | .75 | .92 | 1.1 | 33 |
| 718 | .46 | .81 | 1.1 | 1.4 | 1.6 | 38 |
| 821 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 43 |
| 823 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 43 |
| 926 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 48 |
| 931 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 48 |
| 936 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 48 |
| 513 | .33 | .40 | .57 | .70 | .81 | 26 |
| 515 | .38 | .53 | .75 | .92 | 1.1 | 27 |
| *** | .43 | .71 | 1.0 | 1.2 | 1.4 | 32 |
| 618 | .46 | .81 | 1.1 | 1.4 | 1.6 | 33 |
| *** | .48 | .88 | 1.3 | 1.5 | 1.8 | 33 |
| 721 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 38 |
| 723 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 38 |
| 726 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 40 |
| 731 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 40 |
| 736 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 40 |
| 411 | .28 | .27 | .39 | .47 | .55 | 21 |
| 413 | .33 | .40 | .57 | .70 | .81 | 22 |
| 415 | .38 | .53 | .75 | .92 | 1.1 | 25 |
| *** | .43 | .71 | 1.0 | 1.2 | 1.4 | 26 |
| 518 | .46 | .81 | 1.1 | 1.4 | 1.6 | 28 |
| *** | .48 | .88 | 1.3 | 1.5 | 1.8 | 28 |

| For 225 Handle/Orifice Insert No. 26081- | Equiv. Orifice Dia. (mm) | Flow Rate Capacity* (liters per minute) | | | | Approx.** Spray Pattern Width (cm) at 30 cm distance |
|--|--------------------------|---|---------|---------|---------|--|
| | | 50 bar | 100 bar | 150 bar | 200 bar | |
| 621 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 30 |
| 623 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 33 |
| 626 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 35 |
| 631 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 35 |
| 636 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 35 |
| 311 | .28 | .27 | .39 | .47 | .55 | 19 |
| 313 | .33 | .40 | .57 | .70 | .81 | 20 |
| *** | .43 | .71 | 1.0 | 1.2 | 1.4 | 24 |
| 418 | .46 | .81 | 1.1 | 1.4 | 1.6 | 25 |
| *** | .48 | .88 | 1.3 | 1.5 | 1.8 | 25 |
| 521 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 27 |
| 523 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 27 |
| 526 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 30 |
| *** | .74 | 2.1 | 3.0 | 3.6 | 4.2 | 30 |
| 531 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 30 |
| 536 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 30 |
| 315 | .38 | .53 | .75 | .92 | 1.1 | 17 |
| 318 | .46 | .81 | 1.1 | 1.4 | 1.6 | 17 |
| *** | .48 | .88 | 1.3 | 1.5 | 1.8 | 17 |
| 421 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 20 |
| 423 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 21 |
| 426 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 22 |
| 431 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 22 |
| 436 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 22 |
| 211 | .28 | .27 | .39 | .47 | .55 | 12 |
| 213 | .33 | .40 | .57 | .70 | .81 | 12 |
| 215 | .38 | .53 | .75 | .92 | 1.1 | 13 |
| *** | .43 | .71 | 1.0 | 1.2 | 1.4 | 15 |
| 321 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 16 |
| 323 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 17 |
| 326 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 17 |
| 331 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 17 |
| 336 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 17 |
| 218 | .46 | .81 | 1.1 | 1.4 | 1.6 | 12 |
| 221 | .53 | 1.1 | 1.5 | 1.9 | 2.2 | 13 |
| 223 | .58 | 1.3 | 1.8 | 2.2 | 2.6 | 13 |
| 226 | .66 | 1.6 | 2.3 | 2.8 | 3.2 | 15 |
| 231 | .79 | 2.4 | 3.4 | 4.2 | 4.8 | 15 |
| 236 | .91 | 3.2 | 4.6 | 5.6 | 6.4 | 15 |

* Tabulated capacities based on water.

** Spray pattern width is based on liquid with viscosity of 20 seconds, #4 Zahn Cup spraying at 1600 psi (110 bar). Coverage will vary with viscosities and pressures.

*** Available on special request.



DIMENSIONS AND WEIGHTS

|  | Nozzle | A (mm) | B (mm) | Net Weight (kg) |
|---|--------|--------|--------|-----------------|
| | 225 | 62 | 51 | .12 |

Based on largest/heaviest version of each type.

COMPATIBLE SPRAY GUNS

| RotoClean No. | Connection Thread Size | Gasket No. | Compatible Spray Gun |
|---------------|------------------------|------------|---------------------------------------|
| 225-2 | 11/16"-16 | 7894-NY | SPRAYING SYSTEMS CO. 24 AUA AND GRACO |
| 225-3 | 3/4"-16 | 19078-NY | BALCRANK |
| 225-6 | 7/8"-14 | 11918-NY | GRACO |
| 225-8 | 3/8" NPS | 12552-NY | NORDSON |
| 225-9 | 3/8" NPS | 10660-NY | DEVILBISS |
| 225-10 | 3/4"-20 | 19079-NY | BINKS 50 |
| 225-11 | M18 x 1 Metric | 7894-NY | ATLAS COPCO |
| 225-12 | 3/8" NPS | 7894-NY | SPEE-FLO |
| 225-13 | M18 x 1 Metric | 7894-NY | DEICKE & KOPPERSCHMIDT |
| 225-14 | 1-14 | 9632-NY | SPRAYING SYSTEMS CO. 44 AUA |
| 225-15 | 11/16"-16 | 12552-NY | BINKS 43 |
| 225-16 | 5/8"-14 BSPP | 11918-NY | — |
| 225-17 | 11/16"-16 | 13358-NY | WAGNER |
| 225-18 | M18 x 1.5 Metric | 7894-NY | — |

MODEL HV ORIFICE

- Produces a flat spray pattern with feathering spray pattern edges
- Orifice insert produces a fine finish; for use with high-pressure TC tips
- Ideal for high-pressure, high-wear spray applications



Model HV Orifice

DIMENSIONS AND WEIGHTS

| | | | | |
|--|---------|--------|--------|-----------------|
| | Orifice | A (mm) | B (mm) | Net Weight (kg) |
| | HV | 6.35 | 15.1 | .01 |

Based on largest/heaviest version of each type.

ORDERING INFORMATION MODEL HV ORIFICE INSERT

Orifice Type — Capacity Size

Example: **HV** — **8**

PERFORMANCE DATA: MODEL HV ORIFICE INSERT

| Capacity Size | Used With TC Tip | |
|---------------|------------------|--------------------------|
| | Tip Type | Equiv. Orifice Dia. (mm) |
| 8 | -0008TC | .18 |
| 10 | -0011TC | .23 |
| 12 | -0017TC | .28 |
| 14 | -0025TC | .33 |
| 16 | -0033TC | .38 |
| 17 | -0039TC | .41 |
| 19 | -0050TC | .46 |
| 22 | -0067TC | .53 |
| 24 | -0080TC | .58 |
| 27 | -01TC | .66 |

HIGH-PRESSURE 11430 UNIJET® NOZZLE BODY

- Use with TC tips available in a wide range of spray patterns, spray angles and capacity sizes
- Nozzle replacement costs are low because only the spray tips are replaced; the nozzle body can be reused
- Spray tip replacement is quick and easy – simply unscrew the tip retainer cap
- Built-in strainer prevents wear by keeping debris from entering the nozzle orifice





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