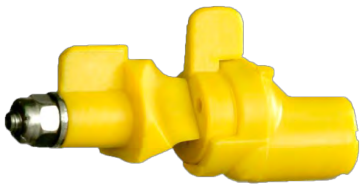
CP PRODUCTS

Part of the TRANSLAND family

Dispersing Quality!

NOZZLES & CHECK VALVES
RETAIL CATALOG

UNBEATABLE
COMBINATIONS!!!



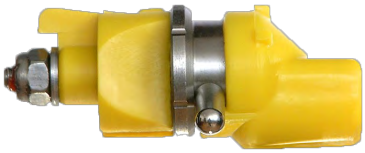
www.TranslandLLC.com

CP-03's ?
CP-09's?
CP-11's?
What Nozzle will work best for You!

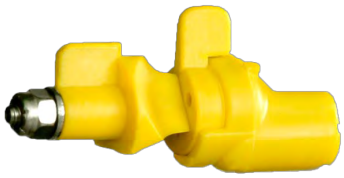
CP Products of Transland manufactures a variety of Aerial Nozzles to best fit any Aerial Application need. CP nozzles are easy to use and easy to maintain. The Multiple orifice options on all CP nozzles keep applicators working with minimum time spent changing nozzles.
Whether flying slow or flying fast CP has a nozzle that works.

Below is a representative chart of different nozzles at different speeds at similar settings.

CP-11TT
#25 40° Flat Fan
2.5 gpm—40 psi



CP-07 and CP-09
.125 Orifice, 0 Deflector
2.60 gpm—40 psi



CP-03
.125 Orifice, 30° Deflector
2.60 gpm—40 psi

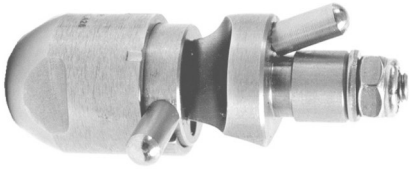
VMD (Volume Median Diameter) and Droplet Classification

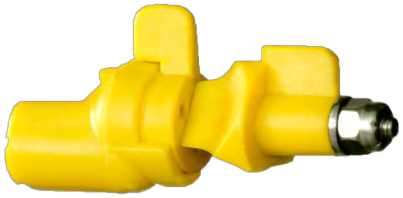
	CP-11TT with 4025Tip	CP-07/09 .125 orifice	CP-03 .125 Orifice
160 mph	303 Medium	332 Medium	208 Fine
150 mph	336 Medium	367 Medium	229 Fine
140 mph	371 Medium	412 Medium	251 Fine
130 mph	408 Coarse	466 Coarse	276 Medium
120 mph	448 Coarse	530 Very Coarse	302 Medium
100mph	606 Ext Coarse	854 Ext Coarse	452 Coarse
90 mph	654 Ext Coarse	999 Ext Coarse	503 Very Coarse

*Based on Spray Nozzle Models, USDA ARS Aerial Application Technology Research Unit, College Station, TX

5/2/2017

CP-01-03 & CP-03
Standard Arial Nozzle
(Stainless or Polly)





CP-01-03 and CP-03 are the original standard aerial nozzles created by CP. These nozzles work best with slower air speeds of 130mph or less. Nozzles have a four orifice selector plate with orifice sizes .061, .078, .125, and .172 to meter flow and a 3-way deflector with deflection planes of 30°, 55° and 90° for droplet spectrum. The 30° deflection plane typically produces larger droplets. Each deflection plane produces an even flat fan pattern.

Special Variations with Poly Body or Stainless Body and Stainless or Poly selector/deflector are also available. See parts breakdown section for different combinations.

Stainless bodies have a slight restriction that reduces flow rates, see Aerial Flow Chart for rates. See below for representative settings of nozzles at different speed and angles of deflection.

VMD (Volume Median Diameter) and Droplet Classification.
Droplet gets smaller the higher the deflection angle.

CP-03 ➡ All at 40psi	.078 Orifice with 30° Deflection	.078 Orifice with 55° Deflection	.078 Orifice with 90° Deflection
90 mph	435 Coarse	321 Medium	286 Medium
100mph	395 Medium	289 Medium	266 Medium
120 mph	301 Medium	211 Fine	210 Fine

*Based on Spray Nozzle Models, USDA ARS Aerial Application Technology Research Unit, College Station, TX

To Find what settings will work for your needs
Visit our website at www.TranslandLLC.com
Our Resources section has multiple tools available.
Use the CP Quick Calibration Calculator to find the orifice and estimated pressure for desired settings.
Use the USDA-ARS Atomization Models to view Droplet Spectrum data.

CP® AERIAL FLOW CHART

For Selector & Deflector Handle placement

CP-03 CP-09-3P CP-09-3E

CP® NOZZLE FLOW RATE—POLY BODIES

(Flow rates for all CP nozzles made with CPA203-B body)

PSI	Orifice .062	Orifice .078	Orifice .093*	Orifice .125	Orifice .172
30	0.48	0.84	1.15	2.24	3.82
40	0.58	0.97	1.33	2.60	4.50
50	0.66	1.07	1.49	2.97	4.91
60	0.72	1.19	1.63	3.19	5.30

* Special Variation

CP-01-3 CP-07-3P CP-07-3E

CP® NOZZLE FLOW RATE—STAINLESS BODIES

(Flow rates for all CP nozzles made with CPA201 body)

PSI	Orifice .062	Orifice .078	Orifice .093*	Orifice .125	Orifice .172
30	0.48	0.68	0.97	1.78	2.85
40	0.58	0.79	1.15	2.00	3.30
50	0.66	0.89	1.29	2.30	3.63
60	0.72	0.98	1.41	2.50	3.95

* Special Variation

Visit us at

www.TranslandLLC.com

For Droplet Spectrum Models, Part Information And so Much More!

Or call!

Toll Free 866 303-0600

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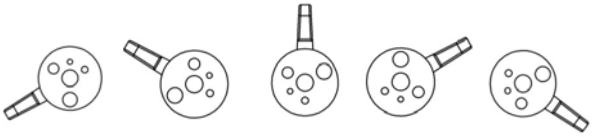
Dispersing Quality!

SELECTOR HANDLE PLACEMENT FOR CP-03 & CP-01-03



.172 Orifice | OFF Position | .078 Orifice | .062 Orifice | .125 Orifice

DEFLECTOR HANDLE PLACEMENT FOR CP-03 & CP-01-03

90° Deflection | 30° Deflection | 55° Deflection

Align the handles of the Selector & Deflector with the raised notches on the body to set the nozzle at desired flow rate and deflection.

SELECTOR HANDLE PLACEMENT FOR CP-09-3P, CP-09-3E, CP-07-3E, & CP-07-3P

.172 Orifice | OFF Position | .078 Orifice | .062 Orifice | .125 Orifice

DEFLECTOR HANDLE PLACEMENT FOR CP-09-3P,CP-09-3E, CP-07-3E, & CP-07-3P

5° Deflection | 0° Straight Stream | 30° Deflection

CP-09-3E & CP-09-3P
Straight Stream Nozzle
(Stainless Deflection or Poly)

CP-09-3E and CP-09-3P were designed when aircraft speed started to increase to 140mph, plus. These nozzles work best with a medium range of air speeds. Similar to the CP-03 with a four orifice selector plate with orifice sizes .061, .078, .125, and .172 however this selector has a built in 9° angle that aligns with the deflector planes of 0° straight stream, 5° , and 30°.
Typically CP-09's are used for their straight stream setting. The 0° deflection plane produces larger droplets and is excellent for drift mitigation.
(CP-09-3PA is a special variation of CP-09's with a Deflector plane of 0°, 30°, 90°)
Complete stainless steel versions are available under part number CP-07-3E

See below for representative settings of CP-09-3P at different speed and Deflection settings.

VMD (Volume Median Diameter) and Droplet Classification.
Droplet gets smaller the higher the deflection angle.

CP-09-3P All at 40psi	.078 Orifice with 0° Deflection	.078 Orifice with 5° Deflection	.078 Orifice with 30° Deflection
120 mph	551 Very Coarse	393 Coarse	242 Fine
130mph	482 Coarse	329 Medium	201 Fine
140 mph	422 Coarse	274 Medium	169 Fine
150 mph	372 Medium	229 Fine	147 Fine

*Based on Spray Nozzle Models, USDA ARS Aerial Application Technology Research Unit, College Station, TX

To Find what settings will work for your needs
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Our Resources section has multiple tools available.
Use the CP Quick Calibration Calculator to find the orifice and estimated pressure for desired settings.
Use the USDA-ARS Atomization Models to view Droplet Spectrum data.

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CP PRODUCTS

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Dispersing Quality!

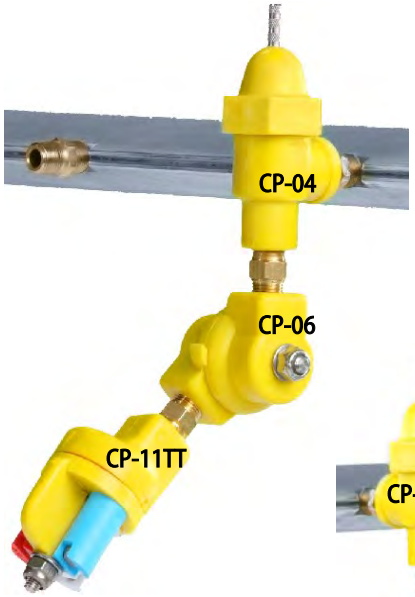
CP-11TT
Triple Tip Nozzle
(Tips of Customers Choice Installed)

CP-11TT's are the most versatile nozzles for the full range of airspeeds. In most instances, flat fan tips offer the best drift mitigation. CP-11TT's have a wide range of tips to choose from; Straight Stream, 20°, 40°, and 80° flat fan options are available. The wide range of tips styles available make both large and small droplet spectra possible. Nozzle tips are installed to customers specifications, making this nozzle truly unique to each applicators specific needs.

To Find what tips/settings will work for your needs
Visit our website at www.TranslandLLC.com
Our Resources section has multiple tools available.
Use the CP Quick Calibration Calculator to find the orifice and estimated pressure for desired settings.
Use the USDA-ARS Atomization Models to view Droplet Spectrum data.

Tip Number	Pressure (PSI)	Capacity 1-Nozzle (GPM)
CP256-8002 80° Tip (only available in 80°)	30	0.17
	40	0.20
	50	0.22
	60	0.24
CP256-8003 80° Tip (only available in 80°)	30	0.26
	40	0.30
	50	0.34
	60	0.37
CP256-2004 20° Tip CP256-4004 40° Tip CP256-8004 80° Tip	25	.32
	30	.35
	40	.40
	50	.45
	60	.49
CP256-8005 80° Tip (Only available in 80°)	30	0.43
	40	0.50
	50	0.56
	60	0.61
CP256-2006 20° Tip CP256-4006 40° Tip CP256-8006 80° Tip CP256-0006 St. Stream	25	.47
	30	.52
	40	.60
	50	.67
	60	.73
CP256-2008 20° Tip CP256-4008 40° Tip CP256-8008 80° Tip CP256-0008 St. Stream	25	.63
	30	.69
	40	.80
	50	.89
	60	.98
CP256-2010 20° Tip CP256-4010 40° Tip CP256-8010 80° Tip CP256-0010 St. Stream	30	.87
	40	1.0
	50	1.18
	60	1.23
CP256-2012 20° Tip CP256-4012 40° Tip CP256-8012 80° Tip CP256-0012 St. Stream	30	1.04
	40	1.2
	50	1.42
	60	1.47
CP256-2015 20° Tip CP256-4015 40° Tip CP256-8015 80° Tip CP256-0015 St. Stream	30	1.3
	40	1.5
	50	1.68
	60	1.84
CP256-2020 20° Tip CP256-4020 40° Tip CP256-8020 80° Tip CP256-0020 St. Stream	30	1.73
	40	2.00
	50	2.24
	60	2.45
CP256-4025 40° Tip CP256-8025 80° Tip CP256-0025 St. Stream	30	2.17
	40	2.5
	50	2.95
	60	3.06
CP256-4030 40° Tip CP256-8030 80° Tip	30	2.60
	40	3.00
	50	3.54
	60	3.67

5/2/2017



CP PRODUCTS
Part of the TRANSLAND family
Dispersing Quality!

CP-06 Swivel (Used with CP-11TT)

The CP-06 Swivel enhances operator control of the droplet spectrum. Used with the CP-11TT, quickly change from large droplets to small droplets all at the same flow rate.
Swivel has a range of 0-90° each click is in 15° increments.
Know what angle in the airstream the nozzle is set at with the CP-06.
See Below for representative settings of swivel in use at different speeds and angles all at 40psi with 4020 tip.

VMD (Volume Median Diameter) and Droplet Classification.
Droplet gets smaller at each increase of nozzle angle down.

CP-11TT with CP-06 Swivel ➡	4020 Tip set at 0° (same as just attached at boom)	4020 Tip set at 15° (one click down of the CP-06)	4020 Tip set at 30° (two clicks down of the CP-06)
160 mph	297 Medium	253 Fine	217 Fine
150 mph	328 Medium	280 Medium	240 Fine
140 mph	361 Medium	309 Medium	265 Fine
130 mph	396 Coarse	340 Medium	293 Medium
120 mph	433 Coarse	374 Medium	323 Medium
100mph	566 Ext Coarse	543 Ext Coarse	486 Very Coarse
90 mph	609 Ext Coarse	581 Ext Coarse	520 Very Coarse

*Based on Spray Nozzle Models, USDA ARS Aerial Application Technology Research Unit, College Station, TX

5/2/2017

CP PRODUCTS

Part of the TRANSLAND family

Dispersing Quality!

CP-02 & CP-04
Check Valve
(Stainless or Poly)

CP Check Valves are available in stainless steel (CP-02) and Glass filled Polypropylene (CP-04) with ⅛" threaded female inlets and outlets.
Using a patented needle/seat design, they provide instant shut off.
The stainless needle seats into an O-Ring in a stainless core.
There is Viton diaphragm protected by a Teflon diaphragm on the needle.

Flow capacity is 5.2gpm at 40psi, springs will begin to open at approximately 12psi.
For entire boom to open it is recommended that a minimum of 30psi be applied.

Accessories

CP offers a variety of brass or stainless elbows and nipples in ⅛" male NPT.
Reducer nipple ¼" x ⅛ male NPT and Reducer Elbow ¼" x ⅛" male NPT.

CP308-B Brass 90° Elbow ⅛" Male/Male
CP308-SS Stainless 90° Elbow ⅛" Male/Male

CP307-B Brass Hex Nipple ⅛" Male/Male
CP307-SS Stainless Hex Nipple ⅛" Male/Male

CP308-BR Brass 90° Elbow Reducer
¼" x ⅛" Male/Male

CP307-BR Brass Hex Reducer Nipple
¼" x ⅛" Male/Male

Nozzle Installation

Follow these tips for installing CP nozzles.

- Do Not use wrenches or any other tools on CP's. Use hand pressure only when installing nozzles or check valves. CP's have a tapered female thread, that when over tightened will crack body.
- Use Teflon paste, instead of Teflon tape. Teflon tape can have tiny strands which can cause drip problems.
- Check tension on each nozzle and check valve cap while installing. Tension should be loose enough on the nozzle to allow changing of orifice or deflector by hand but tight enough to prevent movement once set. Check valve cap should be tight.
- Check nozzles for tightness each day for several days after initial installation. Components tend to "seat" and only need to be periodically checked after that.
- Mount nozzle so that liquid is released parallel to airstream in non-turbulent areas on spray boom.

How to identify if nozzle is parallel with airstream.
Each nozzle has a top section that should be faced up.

For Specific settings use CP Aerial Flow chart for CP-01's, 03's, 07's and 09's.

CP-11TT will click into place when set on tip for use. Tip in use will be on bottom

Check Valves attach to the boom at the inlet section & attach to the nozzle at the out let section.

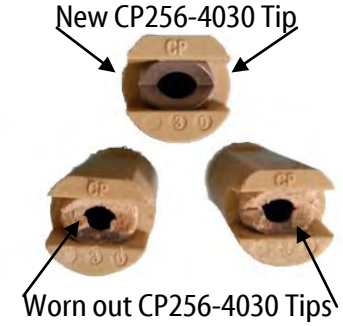
Nozzle Maintenance

Maintenance keeps all equipment functioning properly. All data presented on nozzles assume nozzles are new or well maintained. If nozzles are worn out with altered orifices or chipped and cracked deflector surfaces, metering could be off and patters could be distorted.
Timely maintenance and replacement of nozzles, when necessary,
is critical to nozzle performance.
Replacement parts are available for all CP nozzles and Check valves.
Find a Dealer at www.TranslandLLC.com

Chipping or cracks in deflectors will cause bad patterns and droplet spectrum alteration.

When changing settings on nozzle deflectors, give a visual check to identify any damage or cracks on deflectors.

Cracking can also occur on body of nozzle when tightened down too far and will cause additional leaks.



When orifices become worn out and altered, flow rates will change. A good practice to keep nozzles at their best is to flush system clean when done for the day. This offers a good opportunity to give a visual check to orifices for any build up or wear.

The tips pictured to the left is an example of what can happen when system is not flushed clean at the end of the day. Material can build up on the orifice and alter the orifice size, giving an unintended flow rate and droplet spectrum.

Another method of checking tips/orifices is doing a flow test to measure if there has been an increase. It is recommended to replace tips if flow has increased 10-20%.

Teflon seals are found inside all nozzles. Teflon and Viton diaphragms are found inside check valve. When seals become damaged or worn out this can lead to leaks and check valves not shutting off.

Its recommended that seals and diaphragms be replaced on an annual basis to ensure a proper function of the nozzle or check valve.

Issues to look for; are crinkles in diaphragms and scoring or stretching on seals.

Another important part of maintenance is pattern testing. Operation S.A.F.E clinics offer Pattern Deposition Analysis to help guide and calibrate equipment to optimum performance. Find optimal swath, droplet size and solve equipment problems before starting a new season.
More information on Operation S.A.F.E. can be found at the NAAA website www.agaviation.org

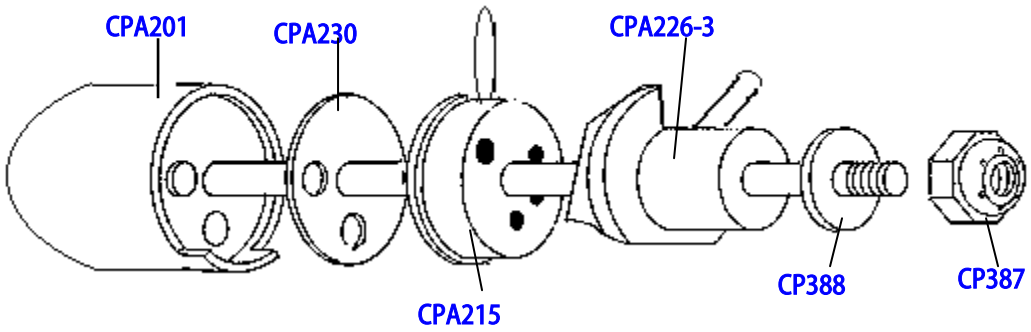
5/2/2017

CP-01-03

Stainless Steel Aerial Nozzle w/3-way Deflector

Selector Plate 4 Orifices .061, .078, .125, .172

3-Way Deflector 30°, 55°, and 90°

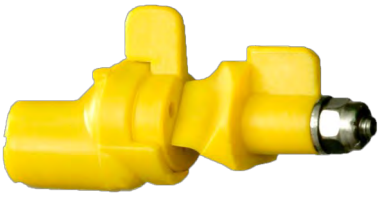


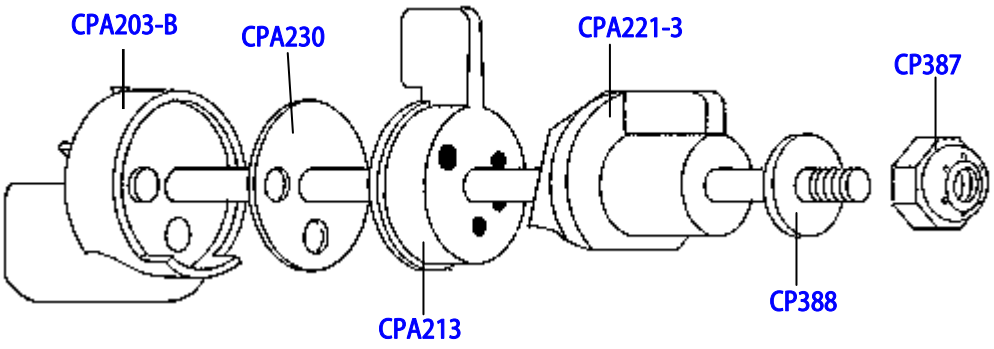
CP-03

Standard Poly Aerial Nozzle

Selector Plate 4 Orifices .061, .078, .125, .172

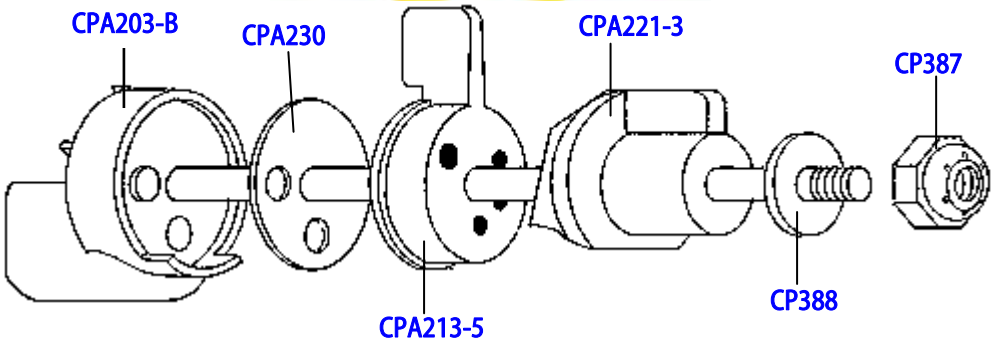
3-Way Deflector 30°, 55°, and 90°





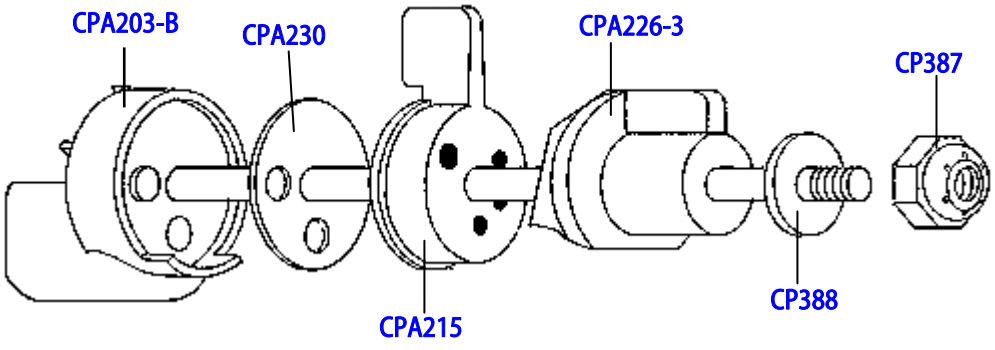
CP-03-05

Poly Aerial Nozzle
5-Hole Selector with NO Shut-off
Selector Plate 5 Orifices .061, .078, .093, .125, .172
3-Way Deflector 30°, 55°, and 90°



CP-03-SDS

Poly/Stainless Aerial Nozzle
Selector Plate Stainless 4 Orifices .061, .078, .125, .172
3-Way Stainless Deflector 30°, 55°, and 90°

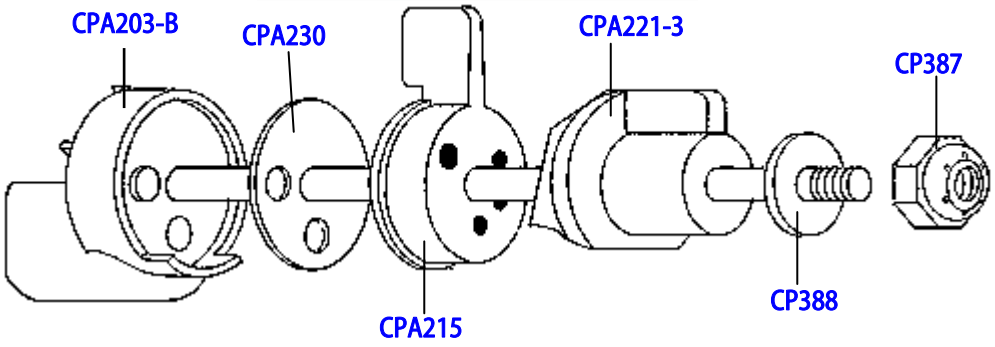


CP-03-SS

Poly/Stainless Aerial Nozzle

Selector Plate Stainless 4 Orifices .061, .078, .125, .172

3-Way Poly Deflector 30°, 55°, and 90°

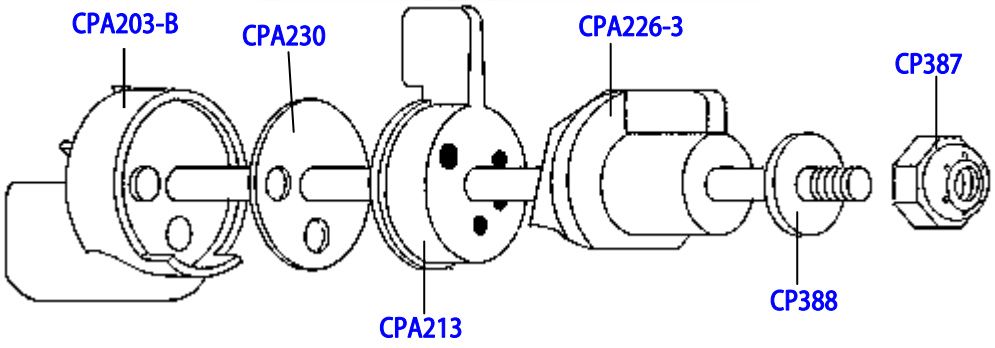


CP-03-SD

Poly/Stainless Aerial Nozzle

Selector Plate Poly 4 Orifices .061, .078, .125, .172

3-Way Stainless Deflector 30°, 55°, and 90°

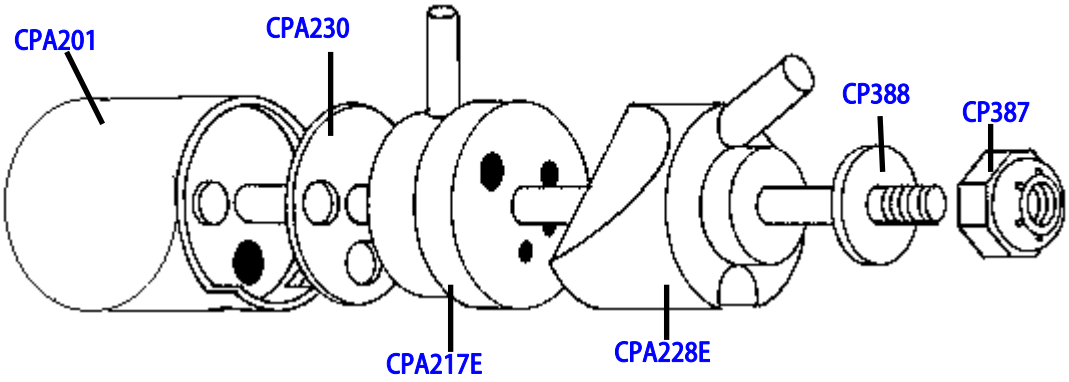


CP-07-3E

Stainless Steel Straight Stream Nozzle

Selector Plate Stainless 4 Orifices .061, .078, .125, .172

Stainless Straight Stream Deflector 0°, 5°, and 30°

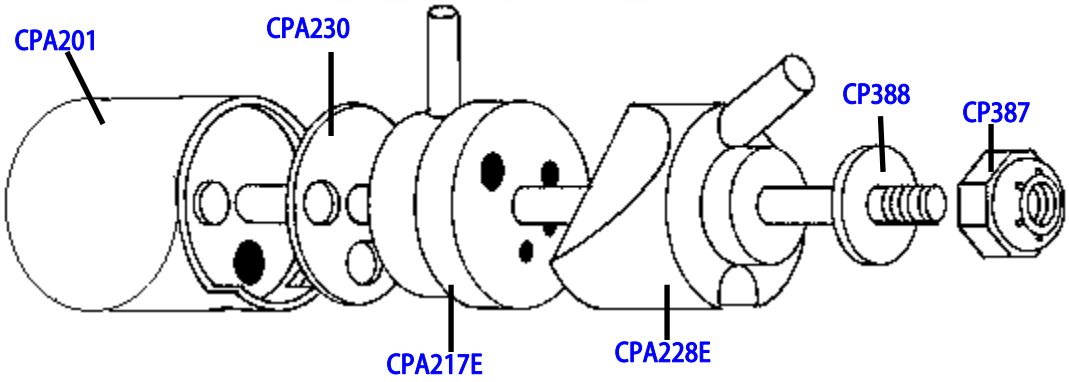


CP-07-3P

Stainless Steel Straight Stream Nozzle

Selector Plate Stainless 4 Orifices .061, .078, .125, .172

Poly Straight Stream Deflector 0°, 5°, and 30°

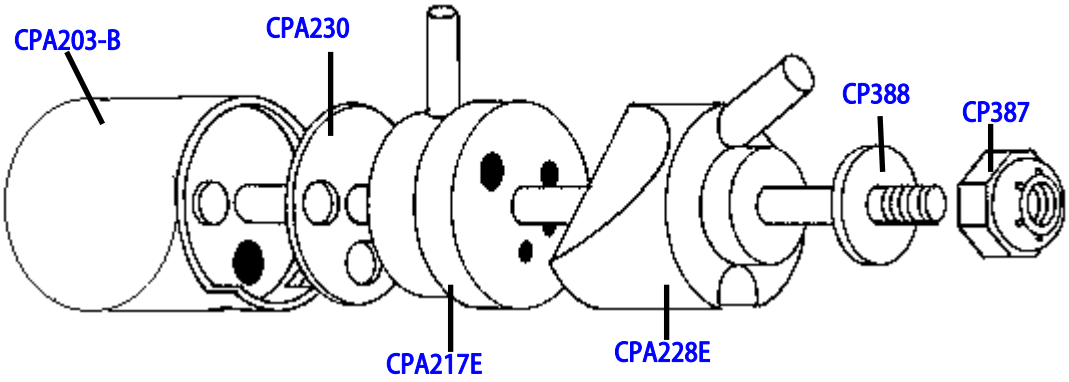


CP-09-3E

Poly/Stainless Straight Stream Nozzle

Selector Plate Stainless 4 Orifices .061, .078, .125, .172

Stainless Straight Stream Deflector 0°, 5°, and 30°

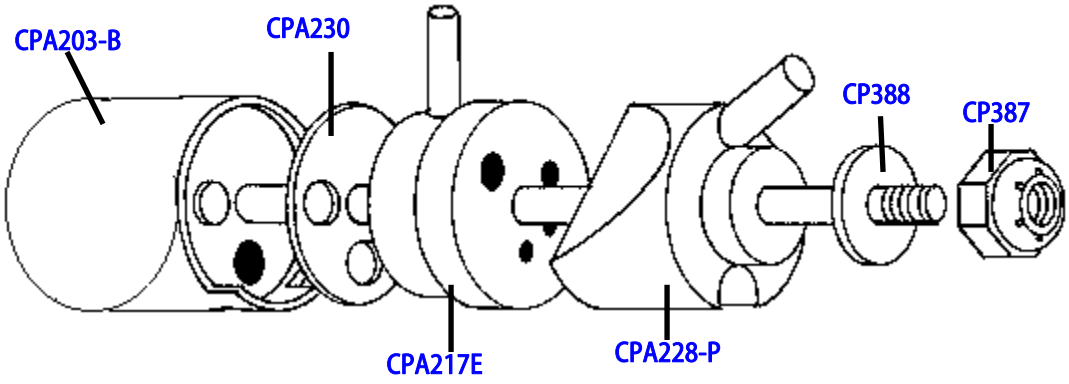


CP-09-3P

Poly Straight Stream Nozzle

Selector Plate Stainless 4 Orifices .061, .078, .125, .172

Poly Straight Stream Deflector 0°, 5°, and 30°

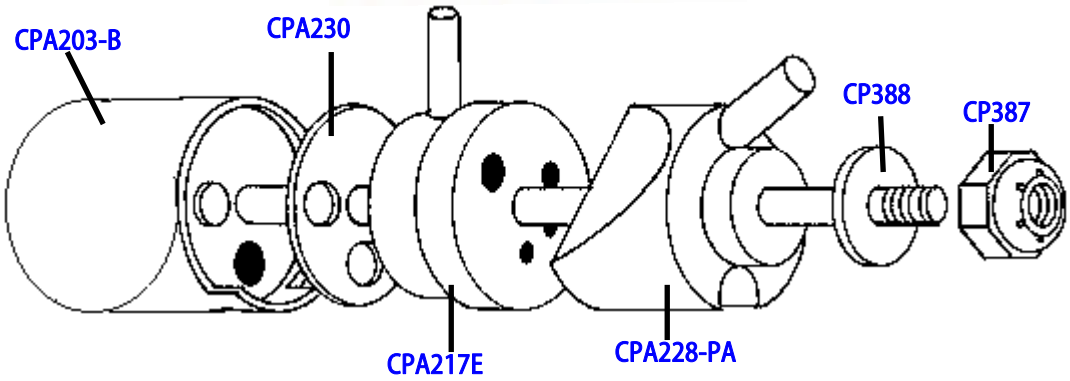


CP-09-3PA

Poly Australian Straight Stream Nozzle

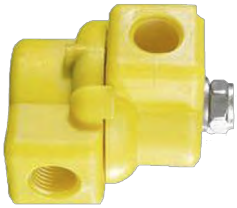
Selector Plate Stainless 4 Orifices .061, .078, .125, .172

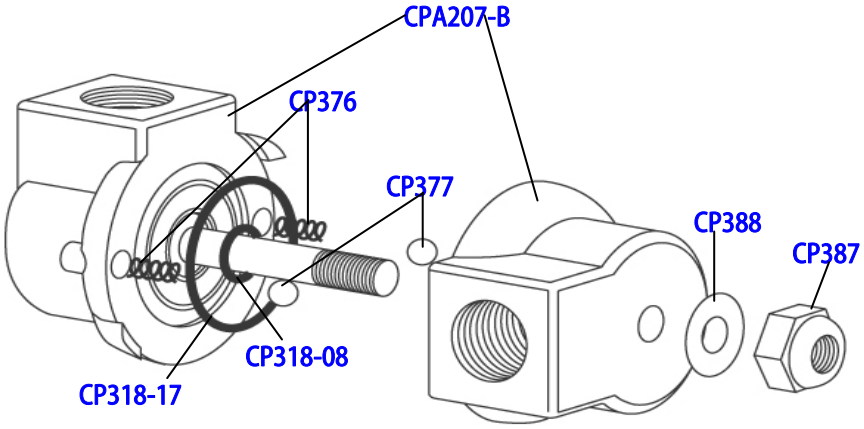
Poly Straight Stream Deflector 0°, 30°, and 90°



CP-06

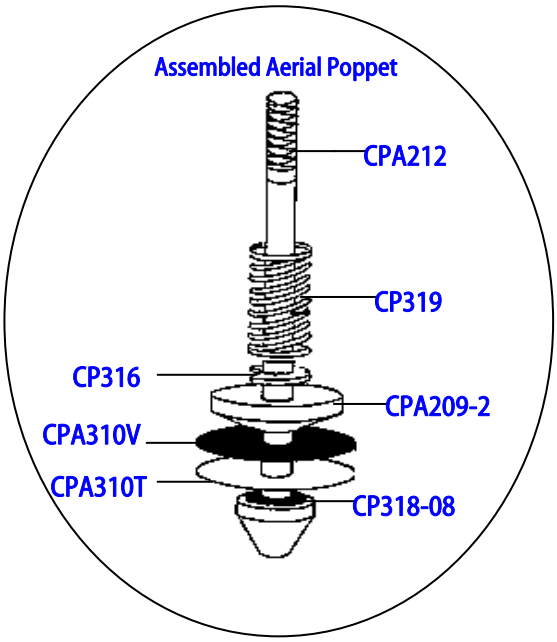
Poly Aerial Swivel

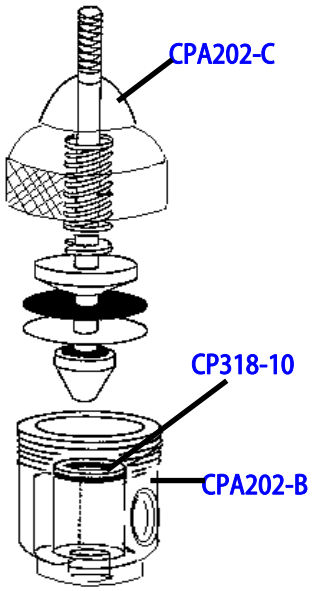




CP-02

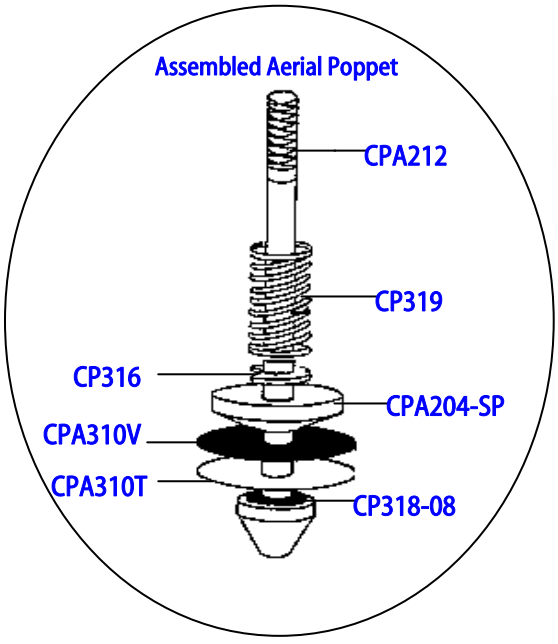
Stainless Steel Aerial Check Valve

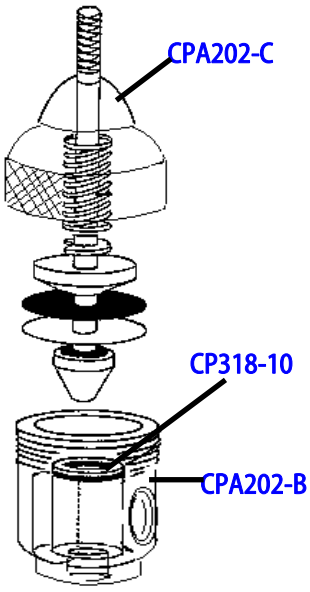




CP-04

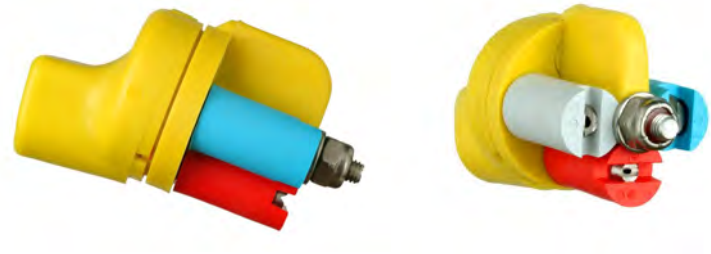
Poly Aerial Check Valve

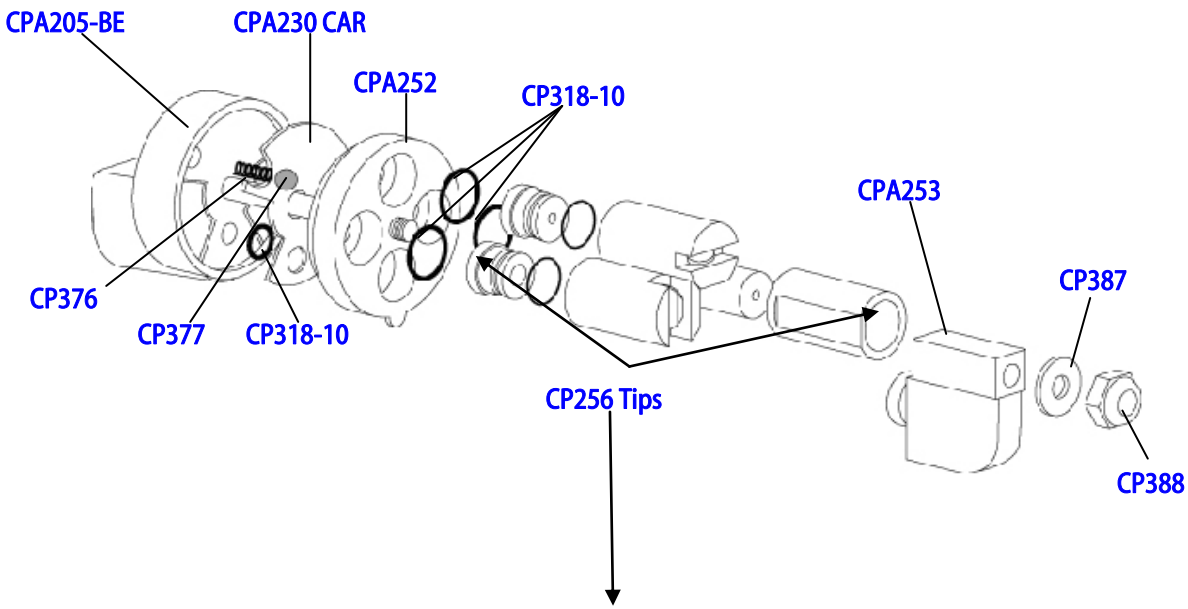




CP-11TT

Poly Aerial 8° Triple Tip Nozzle





Tips installed in the CP-11TT are sold as complete tips.

CP-11TT is not sold without tips installed.

Chart to help identify tip style is on next page.

CP Aerial Tips for CP-11TT

CP256– STRAIGHT STREAM

0006 0008 0010 0012 0015 0020 0025

CP256– 40˚ Flat Fans

4004 4006 4008 4010 4012 4015 4020

4025 4030

CP256– 80˚ Flat Fans

8002 8003 8004 8005 8006 8008 8010

8012 8015 8020 8025

Tips also available in 20° and 110° Flat Fans
* 8030 (no image available)

5/2/2017