

**American Owned - ISO Q9001:2008 Certified**

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# GREEN LEAF INCORPORATED

I N C Ó R P O R A T E D

# MANUFACTURER OF LIQUID HANDLING PRODUCTS

**BOLTED VALVES** ..... 1-5

X Series - Steel Handled Ball Valves  
 X Series Replacement Parts  
 4 & 6 Bolt Valves - V & VF Series  
 4 & 6 Bolt Replacement Parts

**SINGLE UNION VALVES** ..... 6**TRUE UNION BALL VALVES** ..... 7-8**HM QUICK SHUT OFF VALVE** ..... 7-8

Ball Valve  
 Repair Kit & Individual Parts

**Gator Lock®** ..... 9-14**CAM LEVER COUPLINGS**

Original— Series A    Series D    Series PL  
                   Series B    Series E    Series CAP  
                   Series C    Series F

Spool Adapter  
 45° F and 90° Series (AL, CL, DL, FL)  
 Green Arm Couplings  
 Garden Hose Cams (QVA, QA, QB, QD, QF, QYD)  
 200-300 Series

**DRY DISCONNECTS** ..... 15**DISPENSING NOZZLE** ..... 16**SWIVEL FITTING** ..... 16**HEAVY DUTY FITTINGS** ..... 17-22

Bulkhead Fittings  
 Siphon Tube  
 Combination Hose Nipples (Polypropylene & Steel)  
 Pin Lug Couplers  
 Heavy Duty: Nipples, Reducing Nipples, Caps, Plugs,  
                   Hose Menders, Street Elbows, Elbows & Couplings  
 Line Filters  
 Strainers (Polypropylene & Steel)  
 Tank Flanges

**HOSE FITTINGS** ..... 23-26

Straight Adapter (MPT x barb)  
 90° Elbow (MPT x barb)  
 90° Elbow (FPT x barb)  
 Hose Mender (barbed)  
 Tee Adapter (MPT x barb)  
 Elbow (barbed)  
 Insert Tee (three barbed)  
 Straight Adapter (FPT x barb)  
 Cross (barbed)  
 Flat Seat Hose Barb

**PIPE FITTINGS** ..... 27-29

Reducer Bushing (MPT x FPT)  
 Elbow (FPT)  
 Coupling (FPT)  
 Plug (MPT with hex)  
 Nipple (MPT)  
 Nipple (reducing)  
 Tee (FPT)  
 Tee (FPT with gauge port)  
 Street Elbow (MPT x FPT)

**EXPLANATION OF ABBREVIATIONS**

P - Polypropylene  
 HB - Hose Barb  
 MPT - Male Pipe Tapered Thread  
 FPT - Female Pipe Tapered Thread  
 MPS - Male Pipe Straight Thread  
 FPS - Female Pipe Straight Thread  
 MGHT - Male Garden Hose Thread 3/4"  
 FGHT - Female Garden Hose Thread 3/4"  
 SPT - Standard Pipe Thread  
 UN - Unified National (used on nozzle fittings)

**GARDEN HOSE FITTINGS** ..... 30-32

Adapter (MGHT x FPT) -- Adapter (MPT x FGHT)  
 Adapter (MPT x MGHT) -- Adapter (MGHT x FGHT)  
 Coupling (FGHT x FPT)  
 Swivel Cap (FGHT & FPS)  
 Plug (MGHT with hex)  
 Tee Adapter (MPT x barb)  
 Adapter (MGHT x barb)  
 Elbow (MGHT x barb)  
 Nipple (reducing)  
 Swivel Nut (FGHT)  
 Washers (for garden hose)  
 Three Piece Barb Assembly  
 Garden Hose Shutoff Valves

**NOZZLE FITTINGS** ..... 33-34

Spray Tip Blank  
 Male Adapter  
 Boom Clamp  
 Female Adapter  
 Swivel Nut (for spray tips)  
 Winged Swivel Nut (for spray tips)  
 Metering Barb  
 Hex Nut  
 Straight Adapter  
 Elbow  
 Cross  
 Tee

**LECHLER SPRAY GUIDE** ..... 35-53

Spray Nozzles: LU, ES, IDK, ID, ST,  
 AD, FT, IS, IDKT, FD, TWIN CAP,  
 TR, DF, OC,

**NOZZLE BODIES** ..... 54-55**WINGED BAYONET CAPS** ..... 54**NOZZLES FILTERS** ..... 56**SPRAY GUNS** ..... 57**SPRAY CHARTS & INFO** ..... 58-60**PRESSURE GAUGES** ..... 61**STEEL BOOM CLAMPS** ..... 61**SOLENOID VALVES** ..... 62**WIRING HARNESSSES** ..... 62**ROPE WICK** ..... 63

String Wing (5ft. assembly)  
 Weed Thief (hand held wick)  
 Cone Washer  
 Adapter (through hole)  
 Standard Fitting Assembly  
 Replacement Wick Kits

**ATV STRING WING** ..... 64**WONDER WINDER** Extension Cord Winder ..... 65**CUSTOM MOLDING** ..... 66**PACKAGING/MERCHANDISING** ..... 67-68**PRESSURE & TEMP. RATING** ..... 69**CHEMICAL RESISTANCE CHARTS** ..... 70-74**WEBSITE INFO** ..... 75**SALES CONTACT** ..... 76

When ordering fittings, always order by part number. In applicable cases part numbers represent thread size first and barb second.

Example: Part # A 3412 fitting would have a 3/4" MPT & a 1/2" hose barb.

Teflon® is a registered trademark of the DuPont Company.  
 Viton® is a registered trademark of DuPont Dow Elastomers.



# Green Leaf® Incorporated



## QUALITY POLICY

*QUALITY, SERVICE AND COMMITMENT IS NEVER COMPROMISED.*

## MISSION STATEMENT

To meet or exceed our customers needs and expectations today and to anticipate their requirements of tomorrow.

We will accomplish this through continuously improving processes, ongoing employee training, and ongoing market studies to ensure we provide the very best products at the best value..

It is our goal to build a relationship with our suppliers and customers to ensure that quality, service and commitment is never compromised.

### PRICING

All prices are subject to change without notice. Orders will be invoiced at current prices on the date shipment is made. All prices are F.O.B. Green Leaf®, Inc.

### TERMS

An invoice is a contract in which Green Leaf®, Inc. terms will prevail. Unless otherwise stated, payment terms are 2% 10 days net 30 days, (D.O.I.). Green Leaf®, Inc. reserves the right to place a customer on credit hold if deemed necessary. Up to a 5% service charge will be added per month on all past due accounts.

### ORDERING

Please order by Green Leaf's® part number.  
US Orders: A \$10.00 handling charge will be added to all orders under \$50.00.  
International Orders: A \$25.00 processing fee will be added to all orders under \$200.00.

### NEW ACCOUNTS

Green Leaf®, Inc. welcomes all new accounts. Green Leaf® will provide a credit application for new customers to sign agreeing to our terms. When opening an account the customer agrees to pay invoices in 30 days, pay up to a 5% service charge monthly on any invoices 31 days or older, and to pay any and all collection agencies, attorney fees and/or court fees necessary to collect on the account.

### SHIPPING

Please notify us with your shipping instructions. Freight, air, parcel post or UPS. If no instruction is given, we will send best way. Freight shipments should be specified, via truck or rail, with line preference. A handling/service charge of \$2.00 will be added to all invoices.

### SAME DAY SHIPMENTS

Same day shipments will incur a service charge of \$10.00 or 5%, whichever is greater.

### WEIGHT VARIANCE

To control the cost of processing your orders, Green Leaf® uses electronic counting scales. It is our policy to have each scale certified for accuracy on a schedule recommended by the scale manufacturer. Electronic scales have an accuracy range that is acceptable by most of our customers. If your policy does not allow for a small overage/underage, please contact our marketing department and advise them that you require 100% accuracy of all quantities. Your account will be marked as hand count only. There is a charge of plus 5% of order value for all orders processed in this manner.

### RETURNED GOODS POLICY

Returns must be received within 30 days from shipment and must be approved by Green Leaf®, Inc. A document with our return authorization number (RGA Number) and ship to address will be faxed or mailed to the customer. Any goods returned that do not have this document clearly attached to the outside of the carton will be refused. All returns must be freight prepaid. A 20% minimum restocking fee will be assessed to all returns. Returns will only be accepted if the products are in new and original condition, and contain no markings or labels other than Green Leaf®, Inc's.

### SHORTAGES

Claims must be made within 30 days after receipt of shipment; otherwise order will be considered shipped as ordered.

### LOSS OR DAMAGE

In order to expedite your shipment to its destination in good condition, all orders are packed and shipped with care. Green Leaf®, Inc. assumes no responsibility for items lost or damaged in transit. Claims will be made with carriers immediately. The purchaser is responsible for claims on freight collect shipments.

### GUARANTEE

Green Leaf®, Inc. warrants all merchandise to be as represented in our catalog. We will replace or make satisfactory adjustment if found otherwise.

### USE OF PRODUCTS

Products manufactured by Green Leaf® and illustrated within this catalog are produced using resins that are prime and certifiable in grade. The chemical resistance & physical properties of these resins are available from Green Leaf's® engineering department. Improper use of these products could result in environmental spills, serious injury or death.

### MATERIALS

As stated, Green Leaf, Inc's stock fittings are always manufactured using quality prime resins; however, in order to insure that we continue to provide the best value to our customers, we reserve the right to change specific grades and/or manufacturers of resin without notice. Please keep this in mind when specifying our stock fittings for use in your applications. Due to the infinite end use possibilities of our products, the customer is responsible for determining the suitability of our products for their application. Data sheets indicating the manufacturer, grade, and properties of current production materials are available and may be requested at anytime. Should your application require a specific material, please contact our sales department for a custom quotation.



# THE X S.E.R.I.E.S

- Gravity-Slide Self Locking Handles
- Locks in Open and Close Position



**VX 4 BOLT**



**VXN 204 FP**



**VX 6 BOLT**

## Four Bolt Valve

PART #	DESCRIPTION	PRICE ea.	CTN. QTY
VX 050 FP	1/2" Full Port	\$47.64	24
VX 075 FP	3/4" Full Port	\$47.64	24
VX 100	1" Standard Port	\$47.64	24
VX 100 FP	1" Full Port	\$53.32	24
VX 125	1 1/4" Standard Port	\$53.32	24
VX 125 FP	1 1/4" Full Port	\$63.05	24
VX 150 FP	1 1/2" Full Port	\$79.79	24
VX 200	2" Standard Port	\$79.79	24

## Nozzle Valves - 4 Bolt

PART #	DESCRIPTION	PRICE ea.	CTN. QTY
VXN 204 FP	2" Full Port Nozzle Valve with 90° Elbow	\$108.27	4

## Six Bolt Valves

PART #	DESCRIPTION	PRICE ea.	CTN. QTY
VX 200 FP	2" Full Port	\$104.36	8
VX 300 FP	3" Full Port	\$194.80	6

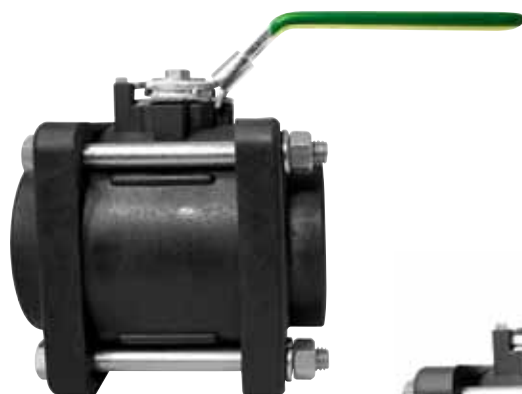
## Eight Bolt Valves

PART #	DESCRIPTION	PRICE ea.	CTN. QTY
VX 400 FP	4" Full Port	\$412.54	2

## Nozzle Valves - 6 Bolt

PART #	DESCRIPTION	PRICE ea.	CTN. QTY
VXN 200 FP	2" Full Port Nozzle Valve with 90° Elbow	\$130.33	4
VXN 300 FP	3" Full Port Nozzle Valve with 90° Elbow	\$215.70	2





**VX 204 FP**



**VXA 204 FP**



**VXM 204 FP**



**VXMA 204 FP**

## **X SERIES** *features*

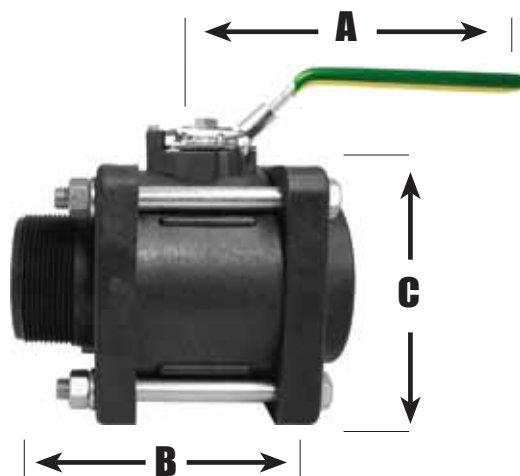
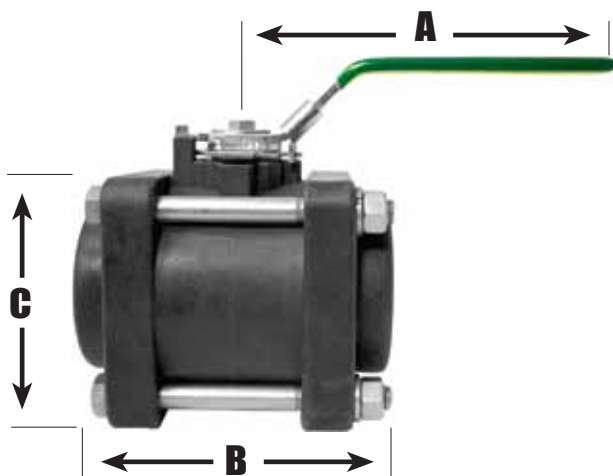
- Stainless Steel Bolts
- Stainless Steel Handles with New Ergonomic Design and Locking feature for added safety.
- Precision molded in polypropylene. Polypropylene is reinforced with fiberglass for additional strength. Self-aligning ball moves freely against the Teflon® seats for smooth operation. The valve opens and closes with little pressure on the handle.
- Ball is diamond turned, after molding, to make it spherically perfect, which provides precise contact between ball and seats.
- Viton® "O" rings.
- Teflon® self-lubricating stem bushings and seats cannot stick or bind.
- 4 Bolt — Maximum operating pressure 150 PSI@ 70°F. 75 PSI@ 150°F.
- 6 Bolt — Maximum operating pressure 100 PSI@ 70°F. 75 PSI@ 150°F.

### **Xtra Small Valves** "XS Valves"

PART #	DESCRIPTION	PRICE ea.	CTN. QTY
VX 204 FP	2" Female NPT x 2" Female NPT, Full Port	\$85.93	12
VXM 204 FP	2" Female NPT x 2" Male NPT, Full Port	\$85.93	12
VXA 204 FP	2" Female NPT x 2" Male Adapter, Full Port	\$85.93	12
VXMA 204 FP	2" Male NPT x 2" Male Adapter, Full Port	\$85.93	12



## VX Ball Valves: Dimensional Data



### 4 & 6 Bolt: Dimensional Data

Part #	Dimensions (Inches)		
	A	B	C
VX 050 FP	4.17	3.43	2.52
VX 075 FP	4.17	3.43	2.52
VX 100	4.17	3.43	2.52
VX 100 FP	4.17	4.09	2.99
VX 125	4.17	4.09	2.99
VX 125 FP	4.65	4.61	3.54
VX 150 FP	4.65	4.61	3.54
VX 200	4.65	4.61	3.54
VX 200 FP	11.02	5.35	4.80
VX 300	11.02	5.98	5.55
VX 300 FP	11.02	6.61	6.30
VX 400	11.02	7.99	7.17

### XS Series: Dimensional Data

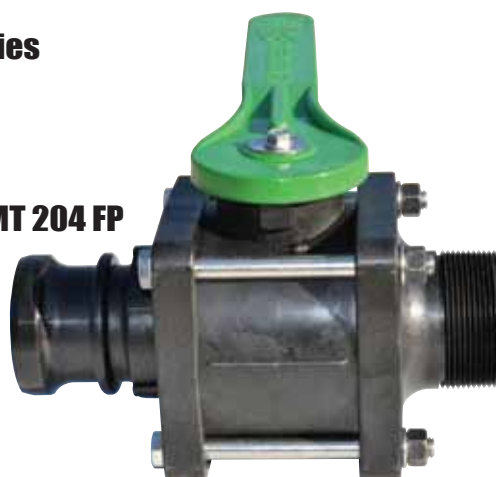
Part #	Dimensions (Inches)		
	A	B	C
VX 2015 RP	5.39	4.88	4.17
VX 204 FP	5.39	4.88	4.17
VXM 204 FP	5.39	5.63	4.17
VXA 204 FP	5.39	6.14	4.17
VXMA 204 FP	5.39	6.89	4.17
VXMM 204 FP	5.39	6.38	4.17



**6 Bolt Series**



**VF 204 FP**



**VFMT 204 FP**

- Stainless Steel Bolts
- Precision molded in polypropylene.
- Polypropylene is reinforced with fiberglass for additional strength.
- Self-aligning ball moves freely against the Teflon® seats for smooth operation.
- The valve opens and closes with little pressure on the handle.
- Ball is diamond turned, after molding, to make it spherically perfect, which provides precise contact between ball and seats.
- Viton® "O" rings.
- Teflon® self-lubricating stem bushings and seats cannot stick or bind.
- 4 Bolt — Maximum operating pressure 150 PSI@ 70°F. 75 PSI@ 150°F.
- V 204 FP — Maximum operating pressure 125 PSI@ 70°F. 75 PSI@ 150°F.
- 6 Bolt — Maximum operating pressure 100 PSI@ 70°F. 75 PSI@ 150°F.

## Four Bolt Valves

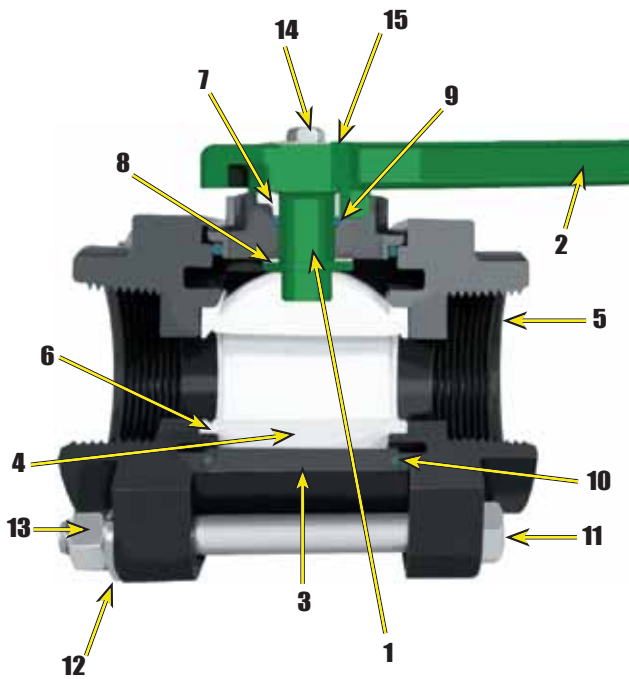
PART #	DESCRIPTION	MAXIMUM PSI	OPENING THRU BALL	PRICE ea.	CTN. QTY
V 125 FP	1 1/4" Full Port	150 psi @ 70° F	1 1/2"	\$79.05	12
V 150 FP	1 1/2" Full Port	150 psi @ 70° F	1 1/2"	\$79.05	12
V 200	2" Standard Port	150 psi @ 70° F	1 1/2"	\$79.05	12
V 204 FP	2" Female Full Port	125 psi @ 70° F	2"	\$92.01	6
VF 204 FP	2" Female NPT x 2" Male Adapter, Full Port	125 psi @ 70° F	2"	\$93.65	6
VFMT 204 FP	2" Male NPT x 2" Male Adapter, Full Port	125 psi @ 70° F	2"	\$98.45	6

## Six Bolt Valves

PART #	DESCRIPTION	MAXIMUM PSI	OPENING THRU BALL	PRICE ea.	CTN. QTY
V 200 FP	2" Full Port	150 psi @ 70° F	2"	\$113.83	6
V 300	3" Standard Port	100 psi @ 70° F	2 1/2"	\$167.18	6
V 300 FP	3" Full Port	100 psi @ 70° F	3"	\$246.52	6



## Replacement Parts: 4 Bolt & 6 Bolt Valves



REF#	DESCRIPTION	PART #	PRICE ea.
1	Stem - 4 Bolt Series	V 20151	\$7.53
1	Stem - 6 Bolt Series	V 25151	\$11.59
2	Handle Straight - 4 Bolt Series	V 20153	\$7.53
2	Handle Straight - 6 Bolt Series	V 25153	\$11.59
3	Body - 4 Bolt Series	V 20254	\$10.46
3	Body - V 200 FP / V 204 FP	V 25254	\$14.35
3	Body - V 300	V 30254	\$21.25
3	Body - V 300 FP	V 35254	\$29.44
4	Ball - 4 Bolt Series	V 20255	\$10.34
4	Ball - V 200 FP / V 204 FP	V 25255	\$11.07
4	Ball - V 300	V 30255	\$19.97
4	Ball - V 300 FP	V 35255	\$32.05
5	1 1/4" End Plate - V 125 FP	V 20267	\$11.01
5	1 1/2" End Plate - V 150 FP	V 20257	\$11.01
5	2" End Plate - V 200	V 20256	\$11.01
5	2" End Plate - V 204 FP	V 24256	\$13.94
5	2" End Plate - V 200 FP	V 25256	\$16.09
5	3" End Plate - V 300	V 30264	\$28.90
5	3" End Plate - V 300 FP	V 35264	\$41.86
6	Teflon® Seats - 4 Bolt Series	V 20258	\$8.36
6	Teflon® Seats - V 200 FP / V 204 FP	V 25258	\$10.19
6	Teflon® Seats - V 300	V 30258	\$11.06
6	Teflon® Seats - V 300 FP	V 35258	\$18.00
7	Upper Stem Bushing - 4 Bolt Series	V 20159	\$2.62
7	Upper Stem Bushing - 6 Bolt Series / V 204 FP	V 25160	\$3.66
8	Thrust Washer - 4 Bolt Series	V 20060	\$1.83
8	Thrust Washer - 6 Bolt Series / V 204 FP	V 25060	\$1.83
9	Stem O-Ring (Viton®) - 4 Bolt Series	V 20163	\$2.29
9	Stem O-Ring (Viton®) - 6 Bolt Series/V204FP	V 25163	\$3.17
10	Valve Body O-Ring (Viton®) - 4 Bolt Series	V 20264	\$8.36
10	Valve Body O-Ring (Viton®) - V200 FP/V204FP	V 25264	\$8.50
10	Valve Body O-Ring (Viton®) - V 300	V 30265	\$9.83
10	Valve Body O-Ring (Viton®) - V 300 FP	V 35265	\$12.03
11	3/8" S.S. Bolt - 4 Bolt Series	V 20017	\$1.49
11	3/8" S.S. Bolt - V 200 FP / V 204 FP	V 25017	\$2.09
11	3/8" S.S. Bolt - V 300	V 30017	\$3.01
11	3/8" S.S. Bolt - V 300 FP	V 35017	\$4.26
12	3/8" S.S. Lock Washer - 4 & 6 Bolt Series	V 20018	\$0.37
13	3/8" S.S. Nut - 4 & 6 Bolt Series	V 20019	\$0.91
14	S.S. Handle Bolt - 4 & 6 Bolt Series	V 20020	\$1.20
15	S.S. Handle Washer - 4 & 6 Bolt Series	V 20021	\$0.37
	Valve Repair Kit - 4 Bolt Series	V 20200	\$35.33
	Valve Repair Kit - V 200 FP	V 25200	\$46.45
	Valve Repair Kit - V 204 FP	V 20400	\$52.22
	Valve Repair Kit - V 300	V 30200	\$65.39
	Valve Repair Kit - V 300 FP	V 35200	\$113.83

\* Parts highlighted in gray are included in kits.

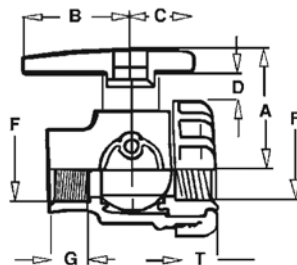
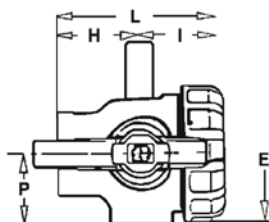




## Single Union Ball Valves

- Sturdy Construction, fiberglass reinforced polypropylene body
- PTFE seats for smooth operation.
- E.P.D.M. seals standard
- 125 P.S.I. @ 140° F

PART #	SIZE	PRICE ea.	CTN. QTY
SU 050 E	1/2"	\$30.25	90
SU 075 E	3/4"	\$30.25	90
SU 100 E	1"	\$31.76	50
SU 125 E	1 1/4"	\$60.60	30
SU 150 E	1 1/2"	\$72.14	22
SU 200 E	2"	\$83.44	24



F/F NPT Threads (F)	Type	Dimensions (Inches)										
		A	B	C	D	E	G	H	I	L	P	T
1/2"		2.36	1.65	1.65	0.63	2.32	0.91	1.71	1.75	3.46		0.91
3/4"		2.36	1.65	1.65	0.63	2.32	0.91	1.71	1.75	3.46		0.91
1"	1	2.87	1.65	2.09	0.79	2.72	0.91	1.83	2.05	3.88	1.46	0.98
1 1/4"	1	3.15	1.65	3.03	0.79	3.23	0.98	2.11	2.17	4.27	1.69	1.02
1 1/2"	2	3.43	1.93	3.15	0.79	3.90	1.10	2.46	2.50	4.96	2.01	1.10
2"	2	4.33	1.93	5.12	0.98	4.53	1.18	2.87	2.97	5.85	2.01	1.18

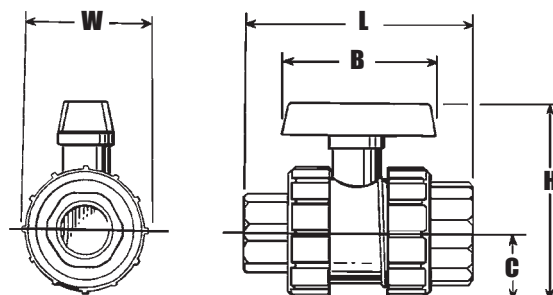


- True Union, in-line repairable
- Sturdy construction, chemical couple polypropylene
- Precision machined ball & multiple "O" rings seals prevent leaking
- 125 P.S.I. @ 140° F
- PTFE filled Polyethylene Seats
- E.P.D.M. seals standard (optional for Viton® & Buna seals)
- Optional Lever Handles

## True Union Ball Valve

PART #	SIZE	DESCRIPTION	PRICE ea.
TU 050 E	1/2"	Full Port (T handle)	\$31.68
TU 050 EL	1/2"	Full Port (lever handle)	\$34.36
TU 075 E	3/4"	Full Port (T handle)	\$35.02
TU 075 EL	3/4"	Full Port (lever handle)	\$37.70
TU 100 E	1"	Standard Port (T handle)	\$39.02
TU 100 EL	1"	Standard Port (lever handle)	\$41.71
TU 125 E	1-1/4"	Full Port (T handle)	\$52.36
TU 125 EL	1-1/4"	Full Port (lever handle)	\$55.02
TU 150 E	1-1/2"	Full Port (T handle)	\$55.02
TU 150 EL	1-1/2"	Full Port (lever handle)	\$57.69
TU 200 E	2"	Standard Port (T handle)	\$65.70
TU 200 EL	2"	Standard Port (lever handle)	\$68.38

SIZE	B	L	H	C	W
1-1/4", 1-1/2", 2"	4-1/4"	6-1/4"	5-1/2"	1-7/8"	3-3/4"
1/2", 3/4", 1"	3-1/2"	4-3/4"	3-3/8"	1-1/8"	2-3/8"



## HM Quick Shut Off Valve

One quarter turn polypropylene ball valve. Used in liquid plumbing applications as a quick shut off valve.

PART #	DESCRIPTION	PRICE ea.
HM 50 B	1/2" FPT With Buna "O" Ring	\$20.92
HM 75 B	3/4" FPT With Buna "O" Ring	\$20.92
HM 38 V	3/8" FPT With Viton® "O" Ring	\$21.89
HM 50 V	1/2" FPT With Viton® "O" Ring	\$21.89
HM 75 V	3/4" FPT With Viton® "O" Ring	\$21.89



## Optional Lever Handle (True Union)

PART #	DESCRIPTION	PRICE ea.
TU 25	Lever handle for Small Valve (1/2" thru 1")	\$10.14
TU 26	Lever handle for Large Valve (1 1/4" thru 2")	\$15.38



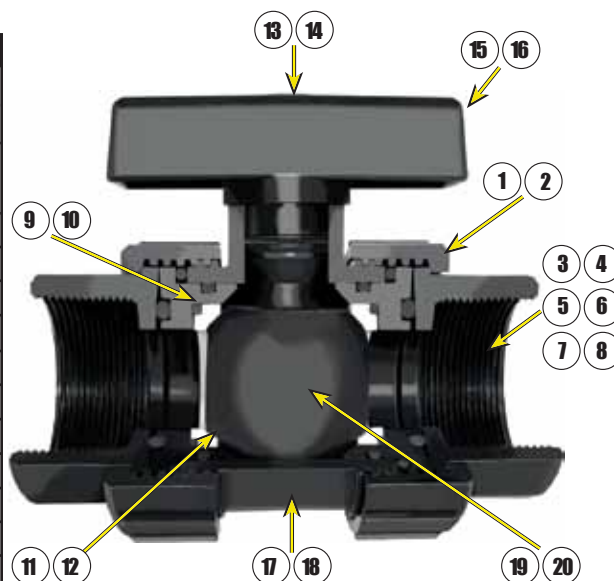
## Valve Repair Kit (True Union)

PART #	DESCRIPTION	PRICE ea.
TUES	9 - EPDM "O" Rings for 1/2" thru 1"	\$4.57
TUEL	9 - EPDM "O" Rings for 1 1/4" thru 2"	\$11.43

\* For Viton® or Buna "O" Rings — contact the sales dept.

## Individual Parts (True Union)

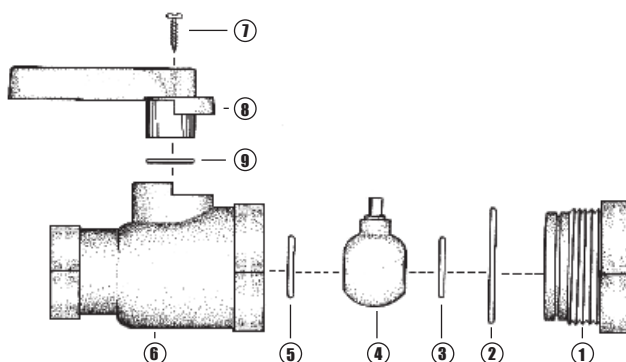
REF #	PART #	DESCRIPTION & SIZE	PRICE ea.
1	TU 01	End Nut - Small (for 1/2" thru 1")	\$11.43
2	TU 02	End Nut - Large (for 1 1/4" thru 2")	\$18.00
3	TU 03	Thread Adapter - 1/2"	\$14.73
4	TU 04	Thread Adapter - 3/4"	\$14.73
5	TU 05	Thread Adapter - 1"	\$14.73
6	TU 06	Thread Adapter - 1 1/4"	\$21.25
7	TU 07	Thread Adapter - 1 1/2"	\$21.25
8	TU 08	Thread Adapter - 2"	\$21.25
9	TU 09	Seat Holder - Small (for 1/2" thru 1")	\$14.73
10	TU 10	Seat Holder - Large (for 1 1/4" thru 2")	\$14.73
11	TU 11	PTFE filled PE Seats - Small (for 1/2" thru 1")	\$8.18
12	TU 12	PTFE filled PE Seats - Large (for 1 1/4" thru 2")	\$18.00
13	TU 13	Screw - Small (for 1/2" thru 1")	\$2.29
14	TU 14	Screw - Large (for 1 1/4" thru 2")	\$2.29
15	TU 15	Tee Handle - Small (for 1/2" thru 1")	\$8.18
16	TU 16	Tee Handle - Large (for 1 1/4" thru 2")	\$14.73
17	TU 17	Body - Small (for 1/2" thru 1")	\$11.43
18	TU 18	Body - Large (for 1 1/4" thru 2")	\$18.00
19	TU 19	Small Ball - Small (for 1/2" thru 1")	\$11.43
20	TU 20	Large Ball - Large (for 1 1/4" thru 2")	\$18.00



Small = 1/2", 3/4", 1"  
Large = 1 1/4", 1 1/2", 2"

## Individual Parts (HM Quick Shut Off Valve)

REF #	DESCRIPTION
1	End Cap
2	"O" Ring End Cap
3	"O" Ring Ball
4	Ball
5	"O" Ring Ball
6	Body
7	Screw
8	Handle
9	"O" Ring Stem





Green Leaf® , Inc. has brought exciting innovations to a product that has existed for years without change. These innovations have prepared this product for use in the 21st century while maintaining interchangeability with other designs.

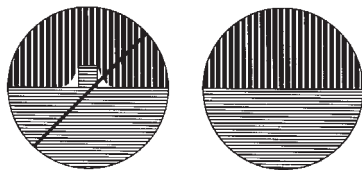
Some features include:

### ENHANCED SAFETY-

Exclusive Cam Lever Locking Mechanism helps to reduce the possibility of unintentionally opening the cam levers, which could result in personal injury and costly spills.

### SMOOTH SEALING SURFACE-

Parting lines have been removed from the sealing area of the male couplings, as illustrated below, this reduces the possibility of leaks and wear to the rubber seal.



### EXPANDED PRODUCT APPLICATION-

By extending the nipple length of the "B" series this coupling can now be used in applications which would normally require an additional fitting to cam properly.

These improvements and many others have been made to the Gator Lock® cam lever couplings which allows Green Leaf®, Inc. to offer you a significantly improved product at a price that is competitive to products without these improvements.



## A SERIES

SIZE & DESCRIPTION	PART #	PRICE ea.
Male Adapter/ 1/2"- Female Thread	GLP 050 A	\$7.00
Male Adapter/ 3/4"- Female Thread	GLP 075 A	\$7.00
Male Adapter/ 1"- Female Thread	GLP 100 A	\$6.52
Male Adapter/ 1 1/4"- Female Thread	GLP 125 A	\$6.52
Male Adapter/ 1 1/2"- Female Thread	GLP 150 A	\$7.68
Male Adapter/ 1 3/4"- Female Thread	GLP 150125 A	\$8.53
Male Adapter/ 2"- Female Thread	GLP 200 A	\$8.98
Male Adapter/ 3"- Female Thread	GLP 300 A	\$20.27
Male Adapter/ 4"- Female Thread	GLP 400 A	\$34.03



**SERIES "A"**



#### Specifications:

- 1/2" through 2" maximum operating pressure 125 psi @ 70° F.
- 3" and 4" maximum operating pressure 90 psi @ 70° F.
- EPDM Gaskets
- 1/2" series couplings interchange with 3/4" size couplings. Coupling ends are 3/4" size.
- 1-1/4" series couplings interchange with 1" size couplings. Coupling ends are 1" size.

## B SERIES

SIZE & DESCRIPTION	PART #	PRICE ea.	PART #	PRICE ea.
	LOCKING		NON-LOCKING	
Female Coupler/ 1/2" - Male Thread	GLP 050 B	\$15.91	GLP 050 B NL	\$13.26
Female Coupler/ 3/4" - Male Thread	GLP 075 B	\$16.00	GLP 075 B NL	\$13.32
Female Coupler/ 1" - Male Thread	GLP 100 B	\$19.59	GLP 100 B NL	\$14.43
Female Coupler/ 1 1/4" - Male Thread	GLP 125 B	\$19.65	GLP 125 B NL	\$15.76
Female Coupler/ 1 1/2" - Male Thread	GLP 150 B	\$24.29	GLP 150 B NL	\$19.50
Female Coupler/ 1 3/4" - Male Thread			GLP 150125 B NL	\$22.35
Female Coupler/ 2" - Male Thread	GLP 200 B	\$26.29	GLP 200 B NL	\$23.74
Female Coupler/ 3" - Male Thread			GLP 300 B NL	\$38.00
Female Coupler/ 4" - Male Thread			GLP 400 B NL	\$86.42



**SERIES "B"**

## C SERIES

SIZE & DESCRIPTION	PART #	PRICE ea.	PART #	PRICE ea.
	LOCKING		NON-LOCKING	
Female Coupler/ 1/2" - Hose Shank	GLP 050 C	\$15.99	GLP 050 C NL	\$13.32
Female Coupler/ 3/4" - Hose Shank	GLP 075 C	\$16.01	GLP 075 C NL	\$13.32
Female Coupler/ 1" - Hose Shank	GLP 100 C	\$19.39	GLP 100 C NL	\$15.61
Female Coupler/ 1 1/4" - Hose Shank	GLP 125 C	\$19.39	GLP 125 C NL	\$15.72
Female Coupler/ 1 1/2" - Hose Shank	GLP 150 C	\$23.98	GLP 150 C NL	\$19.24
Female Coupler/ 1 3/4" - Hose Shank			GLP 150125 C NL	\$22.35
Female Coupler/ 2" - Hose Shank	GLP 200 C	\$26.29	GLP 200 C NL	\$23.74
Female Coupler/ 3" - Hose Shank			GLP 300 C NL	\$42.55
Female Coupler/ 4" - Hose Shank			GLP 400 C NL	\$86.42



**SERIES "C"**

## D SERIES

SIZE & DESCRIPTION	PART #	PRICE ea.	PART #	PRICE ea.
	LOCKING		NON-LOCKING	
Female Coupler/ 1/2" - Female Thread	GLP 050 D	\$18.65	GLP 050 D NL	\$15.53
Female Coupler/ 3/4" - Female Thread	GLP 075 D	\$18.62	GLP 075 D NL	\$15.56
Female Coupler/ 1" - Female Thread	GLP 100 D	\$22.25	GLP 100 D NL	\$18.20
Female Coupler/ 1 1/4" - Female Thread	GLP 125 D	\$22.27	GLP 125 D NL	\$18.22
Female Coupler/ 1 1/2" - Female Thread	GLP 150 D	\$23.98	GLP 150 D NL	\$21.58
Female Coupler/ 1 3/4" - Female Thread			GLP 150125 D NL	\$23.36
Female Coupler/ 2" - Female Thread	GLP 200 D	\$27.27	GLP 200 D NL	\$23.74
Female Coupler/ 3" - Female Thread			GLP 300 D NL	\$37.15
Female Coupler/ 4" - Female Thread			GLP 400 D NL	\$86.42



**SERIES "D"**



**SERIES "E"****SERIES "F"****"PL" SERIES****"CAP" SERIES****E SERIES**

SIZE & DESCRIPTION	PART #	PRICE ea.
Male Adapter/ 1/2" - Hose Shank	GLP 050 E	\$7.69
Male Adapter/ 3/4" - Hose Shank	GLP 075 E	\$7.69
Male Adapter/ 1" - Hose Shank	GLP 100 E	\$7.84
Male Adapter/ 1 1/4" - Hose Shank	GLP 125 E	\$7.84
Male Adapter/ 1 1/2" - Hose Shank	GLP 150 E	\$8.09
Male Adapter/ 1 1/4" - Hose Shank	GLP 150125 E	\$9.02
Male Adapter/ 2" - Hose Shank	GLP 200 E	\$11.22
Male Adapter/ 3" - Hose Shank	GLP 300 E	\$22.58
Male Adapter/ 4" - Hose Shank	GLP 400 E	\$34.15

**F SERIES**

SIZE & DESCRIPTION	PART #	PRICE ea.
Male Adapter/ 1/2" - Male Thread	GLP 050 F	\$7.69
Male Adapter/ 3/4" - Male Thread	GLP 075 F	\$7.69
Male Adapter/ 1" - Male Thread	GLP 100 F	\$7.84
Male Adapter/ 1 1/4" - Male Thread	GLP 125 F	\$7.84
Male Adapter/ 1 1/2" - Male Thread	GLP 150 F	\$8.09
Male Adapter/ 1 1/4" - Male Thread	GLP 150125 F	\$9.02
Male Adapter/ 2" - Male Thread	GLP 200 F	\$11.22
Male Adapter/ 3" - Male Thread	GLP 300 F	\$21.71
Male Adapter/ 4" - Male Thread	GLP 400 F	\$34.15

**PL SERIES**

SIZE & DESCRIPTION	PART #	PRICE ea.
1/2" - Plug for Female Coupler	GLP 050 PL	\$7.04
3/4" - Plug for Female Coupler	GLP 075 PL	\$7.04
1" - Plug for Female Coupler	GLP 100 PL	\$7.04
1 1/4" - Plug for Female Coupler	GLP 125 PL	\$7.04
1 1/2" - Plug for Female Coupler	GLP 150 PL	\$7.84
2" - Plug for Female Coupler	GLP 200 PL	\$10.57
3" - Plug for Female Coupler	GLP 300 PL	\$19.45
4" - Plug for Female Coupler	GLP 400 PL	\$26.86

**CAP SERIES**

SIZE & DESCRIPTION	PART #	PRICE ea.		
			LOCKING	NON-LOCKING
1/2" - CAP for Male Adapter	GLP 050 CAP	\$15.88	GLP 050 CAP NL	\$13.71
3/4" - CAP for Male Adapter	GLP 075 CAP	\$15.88	GLP 075 CAP NL	\$13.71
1" - CAP for Male Adapter	GLP 100 CAP	\$19.27	GLP 100 CAP NL	\$15.61
1 1/4" - CAP for Male Adapter	GLP 125 CAP	\$19.27	GLP 125 CAP NL	\$15.61
1 1/2" - CAP for Male Adapter	GLP 150 CAP	\$23.98	GLP 150 CAP NL	\$19.22
2" - CAP for Male Adapter	GLP 200 CAP	\$26.29	GLP 200 CAP NL	\$23.74
3" - CAP for Male Adapter			GLP 300 CAP NL	\$39.51
4" - CAP for Male Adapter			GLP 400 CAP NL	\$63.06

**Specifications:**

- 1/2" through 2" maximum operating pressure 125 psi @ 70° F.
- 3" and 4" maximum operating pressure 90 psi @ 70° F.
- EPDM Gaskets
- 1/2" series couplings interchange with 3/4" size couplings. Coupling ends are 3/4" size.
- 1-1/4" series couplings interchange with 1" size couplings. Coupling ends are 1" size.



**SPOOL ADAPTER**

SIZE & DESCRIPTION	PART #	PRICE ea.
	NON - LOCKING	
2" Spool Adapter	GLP 200 SA	\$12.35

**45° F**

SIZE & DESCRIPTION	PART #	PRICE ea.
	NON - LOCKING	
45° 2" Male Adapter/ 2" Male Thread	GLP 200 F45	\$12.35



**90° SERIES**

SIZE & DESCRIPTION	PART #	PRICE ea.
	NON - LOCKING	
90° Male Adapter/ 1 1/2" Female Thread	GLP 150 AL	\$15.56
90° Male Adapter/ 2" Female Thread	GLP 200 AL	\$17.50
90° Female Coupler/ 1 1/2" Hose Shank	GLP 150 CL NL	\$32.57
90° Female Coupler/ 2" Hose Shank	GLP 200 CL NL	\$38.90
90° Female Coupler/ 1 1/2" Female Thread	GLP 150 DL NL	\$32.58
90° Female Coupler/ 2" Female Thread	GLP 200 DL NL	\$38.90
90° Male Adapter/ 1 1/2" Male Thread	GLP 150 FL	\$19.01
90° Male Adapter/ 2" Male Thread	GLP 200 FL	\$19.57



**REPLACEMENT GASKET**

SIZE & DESCRIPTION	PART #	PRICE ea.
1/2" & 3/4" EPDM Replacement Gasket	90043	\$0.48
1" & 1 1/4" EPDM Replacement Gasket	90042	\$0.57
1 1/2" EPDM Replacement Gasket	90041	\$0.68
2" EPDM Replacement Gasket	90040	\$0.83
3" EPDM Replacement Gasket	90039	\$3.82
4" EPDM Replacement Gasket	90038	\$3.23





**300 B-200 A**



**200-300 A**



**200-300 F**

## Gator Lock 200-300 Series

SIZE & DESCRIPTION	PART #	PRICE ea.
2" Male Adapter x 3" Female Thread	GLP 200-300 A	\$13.51
2" Male Adapter x 3" Male Thread	GLP 200-300 F	\$13.51
3" Female Coupler x 2" Male Adapter	GLP 300 B-200 A	\$45.03



**SERIES "B"**



**SERIES "C"**



**SERIES "D"**



**"CAP" SERIES**

## Green Arm Couplings

- Same features as Green Leaf's® original Gator Lock® Couplings, but with the Economical Plastic Arms
- Glass-Filled Polypropylene
- Arms have Lifetime Warranty
- Maximum operating pressure 90 psi @ 70° F
- Non-Locking
- EPDM Gaskets
- 1-1/2" and 2" sizes available

**Reinforced Polypropylene  
Arms with Lifetime  
Warranty**

ITEM	DESCRIPTION	1 1/2"	PRICE ea.	2"	PRICE ea.
B	Female Coupler/Male Thread	GLP 150 B NLP	\$16.05	GLP 200 B NLP	\$17.80
C	Female Coupler/Hose Shank	GLP 150 C NLP	\$16.05	GLP 200 C NLP	\$17.80
D	Female Coupler/Female Thread	GLP 150 D NLP	\$16.97	GLP 200 D NLP	\$17.80
CAP	Cap for Male Adapter	GLP 150 CAP NLP	\$16.05	GLP 200 CAP NLP	\$17.80



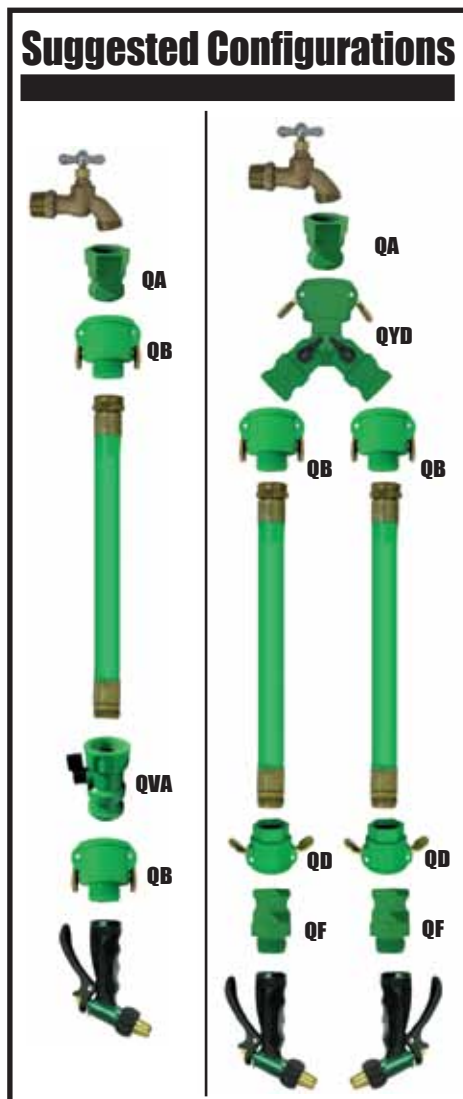


# GATOR LOCK<sup>®</sup>

*Couplings*



## Suggested Configurations



## Garden Hose Couplings

Polypropylene Garden Hose Couplings used to connect a FGHT to a MGHT

PART #	SIZE & DESCRIPTION	PRICE ea.
GLP 075 QVA	3/4" FGHT x 3/4" Male Adapter with On-Off Valve	\$13.06
GLP 075 QA	3/4" FGHT x 3/4" Male Adapter	\$6.03
GLP 075 QB	3/4" MGHT x 3/4" Female Adapter	\$14.83
GLP 075 QD	3/4" FGHT x 3/4" Female Coupler	\$14.83
GLP 075 QF	3/4" MGHT x 3/4" Male Adapter	\$6.03
GLP 075 QYD	3/4" Female Coupler x (2) 3/4" Male Adapter with On-Off Valve	\$25.22

Use either of the valve connectors as a quick shutoff at the end of any garden hose.



*Applications:*

- Agriculture
- Industrial
- Pharmaceutical
- Chemical processing

Male Adapter & Female Coupler shown coupled together.  
Male Adapter & Female Coupler sold separately as shown below.

## Dry Poppet Couplings

*Features:*

- Lightweight.
- Minimal fluid spillage.
- Easy to use.
- Economical.
- Reduces risk of exposure.
- Wide range of chemical resistance.
- Maximum operating pressure 70 P.S.I. @ 70°F.
- Maximum operating temperature 150°F.
- 30 GPM maximum flow.
- Precision molded in polypropylene.
- 1" Female NPT threads.

PART #	DESCRIPTION	PRICE ea.
QD 100 F	Female Dry Poppet Coupler, 1" Female NPT Threads FKM (viton type) Seals	\$130.78
QD 100 M	Male Dry Poppet Adapter, 1" Female NPT Threads FKM (viton type) Seals	\$103.65

**Male Adapter Dry Poppet — QD 100 M**



**Female Coupling Dry Poppet — QD 100 F**



*Male & Female sold separately.*





## Dispensing Nozzle

Glass Filled Polypropylene — Stainless Steel Handle, Spring and Pin

PART #	DESCRIPTION	PRICE ea.
VN 100	1" Poly Dispensing Nozzle, 75 PSI max	\$90.49



## Swivel Fitting

75 PSI Maximum

PART #	DESCRIPTION	PRICE ea.
SW 100	1" Male x 1" Female Swivel	\$23.05
SW 150	1 1/2" Male x 1 1/2" Female Swivel	\$27.71
SW 200	2" Male x 2" Female Swivel	\$32.15



## Bulkhead Fitting

External Thread and nut are left hand threads.

Internal Thread is FPT.

For use with tanks having a wall thickness of 1/16" to 1/2".

Material:

- Body and Nut are either Nylon (N) or Polypropylene (P)
- Friction washer is Polyethylene
- Sealing washer is either Buna (B) or EPDM (E).

*Nylon, Buna and Polyethylene used in manufacturing are FDA approved grade.*

PART #						THREAD	WASHER	HOLE SIZE
INTERNAL SEALING								
NYLON	PRICE ea.	CTN. QTY	POLYPROPYLENE	PRICE ea.	CTN. QTY			
TF 12 N-B	\$9.58	150	TF 12 P-B	\$9.58	150	1/2" FPT	BUNA	1 1/2"
TF 12 N-E	\$9.09	150	TF 12 P-E	\$9.09	150	1/2" FPT	EPDM	1 1/2"
TF 34 N-B	\$9.09	150	TF 34 P-B	\$9.09	150	3/4" FPT	BUNA	1 1/2"
TF 34 N-E	\$9.09	150	TF 34 P-E	\$8.49	150	3/4" FPT	EPDM	1 1/2"
			TF 100 P-E	\$10.89	100	1" FPT	EPDM	2 3/8"
			TF 125 P-E	\$10.29	100	1 1/4" FPT	EPDM	2 3/8"
			TF 150 P-E	\$12.70	60	1 1/2" FPT	EPDM	3"
			TF 200 P-E	\$12.70	60	2" FPT	EPDM	3"
			TF 300 P-E	\$47.98	18	3" FPT	EPDM	4 1/2"
			TF 400 P-E	\$150.55	2	4" FPT	EPDM	5 3/4"



## Siphon Tube

PART #	DESCRIPTION	PRICE ea.
ST 200	2" Poly Siphon Tube	\$5.40



## Steel Plated Combination Nipples

PART #	SIZE & DESCRIPTION	PRICE ea.
CN 050 SP	1/2" Hose Barb x NPT Thread	\$4.54
CN 075 SP	3/4" Hose Barb x NPT Thread	\$4.74
CN 100 SP	1" Hose Barb x NPT Thread	\$6.09
CN 125 SP	1-1/4" Hose Barb x NPT Thread	\$8.19
CN 150 SP	1-1/2" Hose Barb x NPT Thread	\$10.50
CN 200 SP	2" Hose Barb x NPT Thread	\$14.30



## Heavy Duty Poly Combination Nipples

PART #	SIZE & DESCRIPTION	PRICE ea.
CN 050 P	1/2" NPT Thread x 1/2" Hose Barb	\$2.45
CN 075-050 P	3/4" NPT Thread x 1/2" Hose Barb	\$2.62
CN 075 P	3/4" NPT Thread x 3/4" Hose Barb	\$2.62
CN 075-100 P	3/4" NPT Thread x 1" Hose Barb	\$3.06
CN 100-075 P	1" NPT Thread x 3/4" Hose Barb	\$3.06
CN 100 P	1" NPT Thread x 1" Hose Barb	\$3.06
CN 100-125 P	1" NPT Thread x 1-1/4" Hose Barb	\$4.17
CN 125-100 P	1-1/4" NPT Thread x 1" Hose Barb	\$4.17
CN 125 P	1-1/4" NPT Thread x 1-1/4" Hose Barb	\$4.17
CN 150-125 P	1-1/2" NPT Thread x 1-1/4" Hose Barb	\$4.52
CN 150 P	1-1/2" NPT Thread x 1-1/2" Hose Barb	\$4.52
CN 150-200 P	1-1/2" NPT Thread x 2" Hose Barb	\$5.59
CN 200-150 P	2" NPT Thread x 1-1/2" Hose Barb	\$5.59
CN 200 P	2" NPT Thread x 2" Hose Barb	\$5.59
CN 300 P	3" NPT Thread x 3" Hose Barb	\$14.10



## Pin Lug Couplers

- Pin Lug Hose Shank Couplers (Full Sets)
- Aluminum Shank with Brass Swivel Nut

PART #	DESCRIPTION	PRICE ea.
PL 150 DP	1-1/2"	\$25.92
PL 200 DP	2"	\$34.35
PG 150 NBR	1-1/2" Gasket	\$0.79
PG 200 NBR	2" Gasket	\$0.85



**M**

## Heavy Duty Poly Nipple

Used in fluid plumbing application to connect FPT fittings

PART #	DESCRIPTION	PRICE ea.
M 1124 HD	1-1/2" Long X 4" Long	\$8.35
M 1126 HD	1-1/2" Long X 6" Long	\$9.38
M 2004 HD	2" Long X 4" Long	\$9.39
M 2006 HD	2" Long X 6" Long	\$11.07
M 3000 HD	3" Long X 3" Long	\$16.28
M 3006 HD	3" Long X 6" Long	\$26.92



**CAP**

## Heavy Duty Pipe Caps

Used in fluid plumbing applications to cap off a Long fitting

PART #	DESCRIPTION	PRICE ea.
CAP 050 HD	1/2" Poly Cap	\$3.16
CAP 075 HD	3/4" Poly Cap	\$5.67
CAP 100 HD	1" Poly Cap	\$5.67
CAP 125 HD	1-1/4" Poly Cap	\$6.30
CAP 150 HD	1-1/2" Poly Cap	\$7.88
CAP 200 HD	2" Poly Cap	\$9.40
CAP 300 HD	3" Poly Cap	\$27.01



**RM**

## Heavy Duty Reducing Nipple

PART #	DESCRIPTION	PRICE ea.
RM 200-150 HD	2" Long x 1-1/2" Long	\$3.60
RM 300-200 HD	3" Long x 2" Long	\$12.61



**SHM**

## Heavy Duty Straight Hose Mender

PART #	DESCRIPTION	PRICE ea.
SHM 200 HD	2" Hose Barb x 2" Hose Barb	\$4.51
SHM 300 HD	3" Hose Barb x 3" Hose Barb	\$11.70



## Heavy Duty Street Elbow

PART #	DESCRIPTION	PRICE ea.
SE 200 HD	2" FPT x 2" Long 90° Street Elbow	\$11.25
SE 150-45 HD	1-1/2" FPT x 1-1/2" Long 45° Street Elbow	\$11.25
SE 200-45 HD	2" FPT x 2" Long 45° Street Elbow	\$11.25
SE 300 HD	3" FPT x 3" Long 90° Street Elbow	\$65.34



**SE**

## Heavy Duty Elbow

PART #	DESCRIPTION	PRICE ea.
EL 150 HD	1-1/2" Long x 1-1/2" Long Hose Barb 90° Elbow	\$7.14
EL 200 HD	2" Long x 2" Long Hose Barb 90° Elbow	\$8.10
EL 300 HD	3" Long x 3" Long Hose Barb 90° Elbow	\$22.51



**EL**

## Heavy Duty Plug

PART #	DESCRIPTION	PRICE ea.
F 150 HD	1-1/2" Long Plug	\$4.51
F 200 HD	2" Long Plug	\$4.51
F 300 HD	3" Long Plug	\$18.01



**F**

## Heavy Duty Coupling

PART #	DESCRIPTION	PRICE ea.
FTC 075 HD	3/4" FPT x 3/4" FPT	\$3.60
FTC 100 HD	1" FPT x 1" FPT	\$4.06
FTC 150 HD	1-1/2" FPT x 1-1/2" FPT	\$9.00
FTC 200 HD	2" FPT x 2" FPT	\$9.91
FTC 200-100 HD	2" FPT x 1" FPT	\$9.91
FTC 200-150 HD	2" FPT x 1-1/2" FPT	\$9.91
FTC 300 HD	3" FPT x 3" FPT	\$33.45
FTC 300-200 HD	3" FPT x 2" FPT	\$17.55



**FTC**



**FTC 300-200**





## Line Filters

- Polypropylene Body
- EPDM Gaskets
- Stainless Steel Screens

Available in 40 & 80 Mesh

PART #	DESCRIPTION	PRICE ea.
LST 050 40	1/2" Poly T-Strainer 40 Mesh	\$38.55
LST 050 80	1/2" Poly T-Strainer 80 Mesh	\$38.55
LST 075 40	3/4" Poly T-Strainer 40 Mesh	\$38.55
LST 075 80	3/4" Poly T-Strainer 80 Mesh	\$38.55
LST 100 40	1" Poly T-Strainer 40 Mesh	\$42.58
LST 100 80	1" Poly T-Strainer 80 Mesh	\$42.58
LST 125 40	1-1/4" Poly T-Strainer 40 Mesh	\$82.91
LST 125 80	1-1/4" Poly T-Strainer 80 Mesh	\$89.99
LST 150 40	1-1/2" Poly T-Strainer 40 Mesh	\$82.91
LST 150 80	1-1/2" Poly T-Strainer 80 Mesh	\$89.99

*\*\*Replacement Gaskets & Screens Available\*\**



## Strainers

Helps prevent debris from entering a suction line.  
Sizes: 1-1/2" & 2"

### Basket Suction Strainer

Polypropylene Strainer

PART #	DESCRIPTION	PRICE ea.
SR 150 P	1-1/2" FPT	\$18.79
SR 200 P	2" FPT	\$18.79
SR 300 P	3" FPT	\$32.10



### Round Hole Steel Strainer

Zinc Plated, with standard Pipe Threads

PART #	DESCRIPTION	PRICE ea.
SR 125 SP	1-1/4" FPT	\$28.74
SR 150 SP	1-1/2" FPT	\$28.74
SR 200 SP	2" FPT	\$34.78
SR 300 SP	3" FPT	\$50.45



## Outlet Flange (OF)

**For use when access to inside of tank is available**

*Fits Tank Wall thickness from 1/4" - 1/2"*

- Polypropylene Flanges
- Stainless Steel bolts, nuts & washers
- EPDM Gaskets

**Sizes:** 1-1/4", 1-1/2", 2" Standard Port, 2" Full Port

PART #	DESCRIPTION	PRICE ea.
OF 125	1-1/4" Full Port	\$43.62
OF 150	1-1/2" Full Port	\$43.62
OF 200	2" Standard Port	\$43.62
OF 200 FP	2" Full Port	\$50.06



## Inside Bolt Seal Double Seal Flange (DS)

**Nuts are tightened from outside of tank**

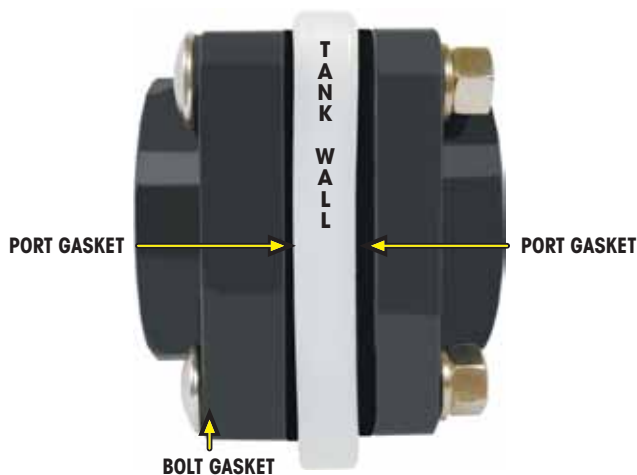
*Fits Tank Wall thickness from 1/4" - 1/2"*

- Polypropylene Flanges
- Stainless Steel bolts, nuts & washers
- EPDM Gaskets

**Sizes:** 1-1/4", 1-1/2", 2" Standard Port, 2" Full Port

PART #	INLET	x	OUTLET	PRICE ea.
DS 125	2" SP*		1-1/4" Full Port	\$60.95
DS 150	2" SP*		1-1/2" Full Port	\$60.95
DS 200	2" SP*		2" Standard Port	\$60.95
DS 200 FP	2" Full Port		2" Full Port	\$67.37

\*SP = 1 1/2" Port



## Additional Flange Hardware

PART #	DESCRIPTION	QTY.	PRICE ea.
PG 1000	Port Gasket for Flange Fittings (EPDM)	ea.	\$9.44
BG 1000	Bolt Gasket for Flange Fittings (EPDM)	pk of 4	\$7.04
OF 1000	3/8" S.S. Bolt for OF Flange	ea.	\$3.39
OF 1001	3/8" S.S. Flat Washer for OF Flange	ea.	\$0.33
DS 1000	3/8" S.S. Bolt for DS Flange	ea.	\$4.00
F 20019	3/8" S.S. Nut	ea.	\$0.87
F 20018	3/8" S.S. Lock Washer	ea.	\$0.36



## Straight Adapter

Used in fluid plumbing applications requiring straight connection to a FPT fitting and a hose.

PART #				THREAD	BARB
NYLON	PRICE ea.	POLY	PRICE ea.	MPT x BARB	
A 18316	\$0.88			1/8" MPT	3/16"
A 1814	\$0.66	A 1814 P	\$0.96	1/8" MPT	1/4"
A 18516	\$0.91			1/8" MPT	5/16"
A 1838	\$0.67	A 1838 P	\$0.96	1/8" MPT	3/8"
A 1812	\$0.73	A 1812 P	\$0.97	1/8" MPT	1/2"
A 1414	\$0.66	A 1414 P	\$0.94	1/4" MPT	1/4"
A 14516	\$1.08			1/4" MPT	5/16"
A 1438	\$0.68	A 1438 P	\$0.95	1/4" MPT	3/8"
A 1412	\$0.71	A 1412 P	\$0.97	1/4" MPT	1/2"
A 1458	\$1.29	A 1458 P	\$1.82	1/4" MPT	5/8"
A 1434	\$1.32	A 1434 P	\$1.87	1/4" MPT	3/4"
A 3814	\$0.70	A 3814 P	\$0.97	3/8" MPT	1/4"
A 38516	\$1.28			3/8" MPT	5/16"
A 3838	\$0.71	A 3838 P	\$0.97	3/8" MPT	3/8"
A 3812	\$0.72	A 3812 P	\$0.97	3/8" MPT	1/2"
A 3858	\$0.71	A 3858 P	\$0.97	3/8" MPT	5/8"
A 3834	\$0.88	A 3834 P	\$1.08	3/8" MPT	3/4"
A 1214	\$0.76	A 1214 P	\$1.00	1/2" MPT	1/4"
A 1238	\$0.77	A 1238 P	\$1.03	1/2" MPT	3/8"
A 1212	\$0.78	A 1212 P	\$0.99	1/2" MPT	1/2"
A 1258	\$0.85	A 1258 P	\$1.04	1/2" MPT	5/8"
A 1234	\$0.98	A 1234 P	\$1.08	1/2" MPT	3/4"
A 1210	\$1.30	A 1210 P	\$1.42	1/2" MPT	1"
A 12-114	\$6.91	A 12-114 P	\$7.71	1/2" MPT	1-1/4"
A 3414	\$1.22	A 3414 P	\$1.24	3/4" MPT	1/4"
A 3438	\$0.88	A 3438 P	\$1.07	3/4" MPT	3/8"
A 3412	\$0.90	A 3412 P	\$1.08	3/4" MPT	1/2"
A 3458	\$1.46	A 3458 P	\$1.49	3/4" MPT	5/8"
A 3434	\$0.98	A 3434 P	\$1.04	3/4" MPT	3/4"
A 3410	\$1.22	A 3410 P	\$1.24	3/4" MPT	1"
A 34-114	\$2.39	A 34-114 P	\$2.68	3/4" MPT	1-1/4"
A 1038	\$1.26	A 1038 P	\$1.27	1" MPT	3/8"
A 1012	\$1.22	A 1012 P	\$1.24	1" MPT	1/2"
A 1058	\$1.24	A 1058 P	\$1.26	1" MPT	5/8"
A 1034	\$1.26	A 1034 P	\$1.27	1" MPT	3/4"
A 1010	\$1.42	A 1010 P	\$1.38	1" MPT	1"
A 1114	\$2.88	A 1114 P	\$3.14	1" MPT	1-1/4"
A 114-34	\$4.12	A 114-34 P	\$3.71	1-1/4" MPT	3/4"
A 1141	\$3.09	A 1141 P	\$3.31	1-1/4" MPT	1"
A 114	\$2.88	A 114 P	\$3.20	1-1/4" MPT	1-1/4"
A 114-112	\$3.19	A 114-112 P	\$3.37	1-1/4" MPT	1-1/2"
A 112-1	\$3.41	A 112-1 P	\$3.62	1-1/2" MPT	1"
A 112	\$3.20	A 112 P	\$3.46	1-1/2" MPT	1-1/2"
A 112-114	\$3.37	A 112-114 P	\$3.53	1-1/2" MPT	1-1/4"
A 112-200	\$9.98	A 112-200 P	\$10.92	1-1/2" MPT	2"
A 200-112	\$8.47	A 200-112 P	\$8.98	2" MPT	1-1/2"
A 200	\$4.31	A 200 P	\$4.37	2" MPT	2"



## 90 Degree Elbow

Used in fluid plumbing applications requiring 90 degree connection to a FPT fitting and a hose.

PART #				THREAD	BARB
NYLON	PRICE ea.	POLY	PRICE ea.	MPT x BARB	
EL 18316	\$1.87			1/8"	3/16"
EL 1814	\$0.88	EL 1814 P	\$0.95	1/8"	1/4"
EL 1838	\$1.97			1/8"	3/8"
EL 1414	\$0.84	EL 1414 P	\$0.94	1/4"	1/4"
EL 14516	\$1.87			1/4"	5/16"
EL 1438	\$0.86	EL 1438 P	\$0.97	1/4"	3/8"
EL 1412	\$0.97	EL 1412 P	\$1.00	1/4"	1/2"
EL 1458	\$1.22	EL 1458 P	\$1.24	1/4"	5/8"
EL 3814	\$1.03	EL 3814 P	\$1.04	3/8"	1/4"
EL 38516	\$2.05			3/8"	5/16"
EL 3838	\$1.09	EL 3838 P	\$1.10	3/8"	3/8"
EL 3812	\$1.09	EL 3812 P	\$1.10	3/8"	1/2"
EL 3858	\$1.14	EL 3858 P	\$1.16	3/8"	5/8"
EL 1214	\$2.16	EL 1214 P	\$2.33	1/2"	1/4"
EL 1238	\$1.14	EL 1238 P	\$1.16	1/2"	3/8"
EL 1212	\$1.16	EL 1212 P	\$1.18	1/2"	1/2"
EL 1258	\$1.42	EL 1258 P	\$1.44	1/2"	5/8"
EL 1234	\$1.51	EL 1234 P	\$1.54	1/2"	3/4"
EL 3414	\$2.43	EL 3414 P	\$2.40	3/4"	1/4"
EL 3438	\$1.31	EL 3438 P	\$1.34	3/4"	3/8"
EL 3412	\$1.37	EL 3412 P	\$1.39	3/4"	1/2"
EL 3458	\$1.46	EL 3458 P	\$1.49	3/4"	5/8"
EL 3434	\$1.56	EL 3434 P	\$1.58	3/4"	3/4"
EL 3410	\$1.61	EL 3410 P	\$1.63	3/4"	1"
EL 1038	\$1.53	EL 1038 P	\$1.55	1"	3/8"
EL 1012	\$1.53	EL 1012 P	\$1.55	1"	1/2"
EL 1058	\$1.63	EL 1058 P	\$1.67	1"	5/8"
EL 1034	\$1.73	EL 1034 P	\$1.76	1"	3/4"
EL 1010	\$1.89	EL 1010 P	\$1.92	1"	1"
EL 1114	\$4.21	EL 1114 P	\$4.09	1"	1-1/4"
EL 114-34	\$8.01	EL 114-34 P	\$7.08	1-1/4"	3/4"
EL 1141	\$3.27	EL 1141 P	\$3.44	1-1/4"	1"
EL 114	\$3.49	EL 114 P	\$3.60	1-1/4"	1-1/4"
EL 114-112	\$7.06	EL 114-112 P	\$7.23	1-1/4"	1-1/2"
EL 112	\$4.50	EL 112 P	\$4.54	1-1/2"	1-1/2"
EL 200	\$5.94	EL 200 P	\$6.01	2"	2"



## 90 Degree Elbow

Used in fluid plumbing applications requiring 90 degree connection to a MPT fitting and a hose.

PART #				THREAD	BARB
NYLON	PRICE ea.	POLY	PRICE ea.	FPT x BARB	
EL 1212 F	\$1.77	EL 1212 F P	\$1.63	1/2"	1/2"
EL 3412 F	\$1.77	EL 3412 F P	\$1.92	3/4"	1/2"
EL 3434 F	\$2.14	EL 3434 F P	\$2.34	3/4"	3/4"





## Straight Hose Mender

Used in fluid plumbing applications requiring the connection of two hoses. Commonly called a hose splice fitting or a shim fitting.

PART #				BARB 1	BARB 2
NYLON	PRICE ea.	POLY	PRICE ea.	BARB x BARB	
SHM 1800	\$0.73	SHM 1800 P	\$0.91	1/8"	1/8"
SHM 3160	\$0.74	SHM 3160 P	\$0.92	3/16"	3/16"
SHM 1418	\$0.98			1/4"	1/8"
SHM 14316	\$0.98			1/4"	3/16"
SHM 1400	\$0.64	SHM 1400 P	\$0.92	1/4"	1/4"
SHM 5160	\$0.84	SHM 5160 P	\$0.93	5/16"	5/16"
SHM 3800	\$0.71	SHM 3800 P	\$0.94	3/8"	3/8"
SHM 3814	\$0.89	SHM 3814 P	\$1.37	3/8"	1/4"
SHM 1214	\$1.04	SHM 1214 P	\$1.00	1/2"	1/4"
SHM 1200	\$0.90	SHM 1200 P	\$0.96	1/2"	1/2"
SHM 1238	\$0.73	SHM 1238 P	\$0.95	1/2"	3/8"
SHM 1258	\$1.03	SHM 1258 P	\$1.04	1/2"	5/8"
SHM 5800	\$1.03	SHM 5800 P	\$1.04	5/8"	5/8"
SHM 3412	\$2.64			3/4"	1/2"
SHM 3400	\$1.14	SHM 3400 P	\$1.16	3/4"	3/4"
SHM 1000	\$1.34	SHM 1000 P	\$1.38	1"	1"
SHM 114	\$2.20	SHM 114 P	\$2.71	1-1/4"	1-1/4"
SHM 112	\$5.36	SHM 112 P	\$4.72	1-1/2"	1-1/2"
SHM 200	\$9.00	SHM 200 P	\$9.68	2"	2"



## Tee Adapter

Used in fluid plumbing applications requiring a connection of two hoses to a FPT fitting and a hose.

PART #				THREAD	BARB
NYLON	PRICE ea.	POLY	PRICE ea.	MPT x BARB	
MT 1234	\$1.91	MT 1234 P	\$2.56	1/2" MPT	3/4"
MT 3438	\$1.78	MT 3438 P	\$2.43	3/4" MPT	3/8"
MT 3412	\$1.87	MT 3412 P	\$2.51	3/4" MPT	1/2"
MT 3434	\$2.03	MT 3434 P	\$2.67	3/4" MPT	3/4"
MT 1038	\$1.93	MT 1038 P	\$2.58	1" MPT	3/8"
MT 1012	\$2.02	MT 1012 P	\$2.65	1" MPT	1/2"
MT 1034	\$2.19	MT 1034 P	\$2.81	1" MPT	3/4"

## Elbow Barb

Used in fluid plumbing applications requiring 90 degree connection of two hoses. Fitting will reduce amount of hose required to make a 90 degree turn.

PART #				BARB 1	BARB 2
NYLON	PRICE ea.	POLY	PRICE ea.	BARB x 90 DEGREE BARB	
EB 1414	\$1.59	EB 1414 P	\$2.03	1/4"	1/4"
EB 3838	\$1.44	EB 3838 P	\$1.41	3/8"	3/8"
EB 1212	\$1.03	EB 1212 P	\$1.05	1/2"	1/2"
EB 5858	\$1.66	EB 5858 P	\$1.64	5/8"	5/8"
EB 3434	\$1.31	EB 3434 P	\$1.45	3/4"	3/4"
EB 1010	\$3.73			1"	1"
EB 114	\$5.29	EB 114 P	\$5.71	1-1/4"	1-1/4"
EB 112	\$5.72	EB 112 P	\$5.47	1-1/2"	1-1/2"
EB 200	\$10.53	EB 200 P	\$10.67	2"	2"







## Insert Tee

Used in fluid plumbing applications requiring the connection of three hoses. Commonly called a branch tee or a feeder tee.

PART #				BARB 1	BARB 2	BARB 3
NYLON	PRICE ea.	POLY	PRICE ea.			
T 18	\$1.71	T 18 P	\$1.81	1/8"	1/8"	1/8"
T 3160	\$1.89			3/16"	3/16"	3/16"
T 14	\$1.28	T 14 P	\$1.84	1/4"	1/4"	1/4"
T 38	\$1.33	T 38 P	\$1.89	3/8"	3/8"	3/8"
T 3812	\$1.40	T 3812 P	\$1.93	1/2"	1/2"	3/8"
T 12	\$1.38	T 12 P	\$1.88	1/2"	1/2"	1/2"
T 58	\$1.47	T 58 P	\$1.99	5/8"	5/8"	5/8"
T 3412	\$1.47	T 3412 P	\$1.99	1/2"	1/2"	3/4"
T 34	\$1.74	T 34 P	\$1.98	3/4"	3/4"	3/4"
T 100	\$3.06	T 100 P	\$3.10	1"	1"	1"
T 114	\$4.46	T 114 P	\$4.53	1-1/4"	1-1/4"	1-1/4"
T 112	\$5.43	T 112 P	\$5.43	1-1/2"	1-1/2"	1-1/2"
T 200	\$12.22	T 200 P	\$12.36	2"	2"	2"



## Straight Adapter

Used in fluid plumbing applications requiring straight connection to a MPT fitting and a hose.

PART #				THREAD	BARB
NYLON	PRICE ea.	POLY	PRICE ea.		
AF 1414	\$2.08			1/4" FPT	1/4"
AF 1438	\$4.89			1/4" FPT	3/8"
AF 3838	\$5.59	AF 3838 P	\$6.00	3/8" FPT	3/8"
		AF 3812 P	\$4.68	3/8" FPT	1/2"
AF 1212	\$1.43	AF 1212 P	\$1.57	1/2" FPT	1/2"
AF 1238	\$1.71	AF 1238 P	\$1.72	1/2" FPT	3/8"
		AF 1234 P	\$4.83	1/2" FPT	3/4"
AF 3412	\$5.74	AF 3412 P	\$5.14	3/4" FPT	1/2"
AF 3458	\$1.80	AF 3458 P	\$1.82	3/4" FPT	5/8"
AF 3434	\$1.80	AF 3434 P	\$1.82	3/4" FPT	3/4"



## Cross Barb

Used in fluid applications requiring the connection of four hoses. Commonly called a junction fitting.

PART #				BARB
NYLON	PRICE ea.	POLY	PRICE ea.	
X 14	\$1.42	X 14 P	\$1.57	1/4"



## Flat Seat Hose Barb

Used with swivel nut B 3400 and washer W 406 shown on page 31 of this catalog. Combining the three pieces allows for a swivel connection of common size hoses.

PART #				BARB
NYLON	PRICE ea.	POLY	PRICE ea.	BARB x FLAT SEAT
C 1800	\$0.91	C 1800 P	\$0.96	1/8"
C 1400	\$0.69	C 1400 P	\$0.95	1/4"
C 3800	\$0.68	C 3800 P	\$0.97	3/8"
C 1200	\$0.69	C 1200 P	\$0.98	1/2"
C 5800	\$0.68	C 5800 P	\$0.98	5/8"
C 3400	\$0.69	C 3400 P	\$0.99	3/4"





## Reducer Bushing

Used in fluid plumbing applications to connect a FPT thread to a reduced size of a MPT fitting.



PART #				THREAD	THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	MPT X FPT	
RB 14-18	\$1.23	RB 14-18 P	\$1.42	1/4" MPT	1/8" FPT
RB 38-18	\$1.28	RB 38-18 P	\$1.46	3/8" MPT	1/8" FPT
RB 38-14	\$1.24	RB 38-14 P	\$1.42	3/8" MPT	1/4" FPT
RB 12-18	\$1.92	RB 12-18 P	\$3.19	1/2" MPT	1/8" FPT
RB 12-14	\$1.31	RB 12-14 P	\$1.49	1/2" MPT	1/4" FPT
RB 12-38	\$1.29	RB 12-38 P	\$1.47	1/2" MPT	3/8" FPT
RB 34-18	\$1.43	RB 34-18 P	\$1.57	3/4" MPT	1/8" FPT
RB 34-14	\$1.71	RB 34-14 P	\$1.89	3/4" MPT	1/4" FPT
RB 34-38	\$1.81	RB 34-38 P	\$1.85	3/4" MPT	3/8" FPT
RB 34-12	\$1.32	RB 34-12 P	\$1.56	3/4" MPT	1/2" FPT
RB 10-12	\$2.38	RB 10-12 P	\$2.42	1" MPT	1/2" FPT
RB 10-34	\$1.63	RB 10-34 P	\$1.67	1" MPT	3/4" FPT
RB 114-34	\$2.95	RB 114-34 P	\$3.20	1-1/4" MPT	3/4" FPT
RB 114-1	\$2.81	RB 114-1 P	\$3.10	1-1/4" MPT	1" FPT
RB 112-34	\$3.26	RB 112-34 P	\$3.42	1-1/2" MPT	3/4" FPT
RB 112-1	\$3.19	RB 112-1 P	\$3.37	1-1/2" MPT	1" FPT
RB 112-114	\$2.83	RB 112-114 P	\$3.96	1-1/2" MPT	1-1/4" FPT
RB 200-1	\$5.67	RB 200-1 P	\$5.74	2" MPT	1" FPT
RB 200-114	\$4.31	RB 200-114 P	\$4.37	2" MPT	1-1/4" FPT
RB 200-112	\$3.91	RB 200-112 P	\$3.96	2" MPT	1-1/2" FPT
RB 300-200	\$9.69	RB 300-200 P	\$9.82	3" MPT	2" FPT

## Elbow

Used in fluid plumbing applications to connect to MPT fittings at 90 degrees.



PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	FPT x 90 DEGREE FPT
ELF 12	\$3.91	ELF 12 P	\$3.96	1/2" FPT
ELF 34	\$4.43	ELF 34 P	\$4.49	3/4" FPT
ELF 100	\$6.30	ELF 100 P	\$6.36	1" FPT
ELF 114	\$8.53	ELF 114 P	\$8.64	1-1/4" FPT
ELF 112	\$10.15	ELF 112 P	\$10.27	1-1/2" FPT
ELF 200	\$14.87	ELF 200 P	\$14.61	2" FPT

## Coupling

Used in fluid plumbing applications to connect two MPT fittings.



PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	FPT x FPT
		FTC 1800 P	\$5.53	1/8" FPT
FTC 14	\$5.95	FTC 14 P	\$6.27	1/4" FPT
FTC 38	\$5.95			3/8" FPT
FTC 12	\$4.12	FTC 12 P	\$4.32	1/2" FPT
FTC 34	\$5.01	FTC 34 P	\$5.08	3/4" FPT
FTC 3412	\$4.09			3/4" FPT x 1/2" FPT
FTC 100	\$5.68	FTC 100 P	\$5.76	1" FPT
FTC 114	\$8.00	FTC 114 P	\$8.09	1-1/4" FPT
FTC 112	\$9.54	FTC 112 P	\$9.64	1-1/2" FPT
FTC 200	\$14.08	FTC 200 P	\$14.24	2" FPT



## Plug

Used in fluid plumbing applications to plug off a FPT fitting.

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	MPT x HEX
F 1800	\$0.64	F 1800 P	\$0.92	1/8" MPT
F 1400	\$0.65	F 1400 P	\$0.92	1/4" MPT
F 3800	\$0.68	F 3800 P	\$0.95	3/8" MPT
F 1200	\$0.69	F 1200 P	\$0.96	1/2" MPT
F 5800	\$0.46			5/8" MPT
F 3400	\$0.78	F 3400 P	\$1.03	3/4" MPT
F 1000	\$0.98	F 1000 P	\$1.12	1" MPT
F 1014	\$1.53	F 1014 P	\$1.55	1-1/4" MPT
F 112	\$4.27	F 112 P	\$4.47	1-1/2" MPT
F 200	\$5.22			2" MPT



## Nipple

Used in fluid plumbing application to connect two FPT fittings.

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	MPT x MPT
M 1800	\$0.95	M 1800 P	\$0.91	1/8" MPT
M 1400	\$0.67	M 1400 P	\$0.94	1/4" MPT
M 3800	\$0.79	M 3800 P	\$0.99	3/8" MPT
M 1200	\$0.78	M 1200 P	\$1.00	1/2" MPT
M 3400	\$0.97	M 3400 P	\$1.13	3/4" MPT
M 1000	\$1.63	M 1000 P	\$1.67	1" MPT
M 1140	\$3.06	M 1140 P	\$3.31	1-1/4" MPT
M 1120	\$3.70	M 1120 P	\$3.77	1-1/2" MPT
M 2000	\$5.33	M 2000 P	\$5.40	2" MPT



## Reducing Nipple

Used in fluid plumbing application to connect two FPT fittings.

PART #				THREAD	
NYLON	PRICE ea.	POLY	PRICE ea.	MALE x MALE	
RM 1438	\$0.93	RM 1438 P	\$0.97	1/4" MPT	3/8" MPT
RM 3818	\$1.12			3/8" MPT	1/8" MPT
RM 3812	\$1.00	RM 3812 P	\$1.03	3/8" MPT	1/2" MPT
RM 38116	\$1.00	RM 38116 P	\$1.03	3/8" MPT	11/16" UN
RM 12116	\$1.00	RM 12116 P	\$1.03	1/2" MPT	11/16" UN
RM 1214	\$0.93	RM 1214 P	\$1.00	1/2" MPT	1/4" MPT
RM 3438	\$1.80	RM 3438 P	\$2.01	3/4" MPT	3/8" MPT
RM 3412	\$1.00	RM 3412 P	\$1.07	3/4" MPT	1/2" MPT
RM 34116	\$1.07	RM 34116 P	\$1.13	3/4" MPT	11/16" UN
RM 114-1	\$2.41	RM 114-1 P	\$3.20	1-1/4" MPT	1" MPT





## Tee

Used in fluid plumbing applications requiring the connection of three fittings or pipes all having MPT threads.

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	FPT x FPT x FPT
TT 14	\$5.21	TT 14 P	\$5.35	1/4" FPT
TT 12	\$4.97	TT 12 P	\$5.03	1/2" FPT
TT 34	\$6.92	TT 34 P	\$6.99	3/4" FPT
TT 100	\$8.80	TT 100 P	\$8.91	1" FPT
TT 114	\$12.09	TT 114 P	\$12.25	1-1/4" FPT
TT 112	\$13.59	TT 112 P	\$13.75	1-1/2" FPT
TT 200	\$18.57	TT 200 P	\$18.81	2" FPT
		TT 300 P	\$74.17	3" FPT



## Tee with Gauge Port

Used in fluid plumbing applications requiring the connection of three fittings or pipes all having MPT threads. Special port extends from center of body for a gauge.

PART #				THREAD	PORT
NYLON	PRICE ea.	POLY	PRICE ea.		
TT 12-18	\$6.92	TT 12-18 P	\$7.99	1/2" FPT	1/8" FPT
TT 12-14	\$6.92	TT 12-14 P	\$7.83	1/2" FPT	1/4" FPT
TT 34-18	\$8.81	TT 34-18 P	\$9.73	3/4" FPT	1/8" FPT
TT 34-14	\$8.81	TT 34-14 P	\$9.73	3/4" FPT	1/4" FPT
TT 100-14	\$10.97	TT 100-14 P	\$10.63	1" FPT	1/4" FPT
TT 114-14	\$12.06			1-1/4" FPT	1/4" FPT
TT 112-14	\$13.52			1-1/2" FPT	1/4" FPT



## Street Elbow

Used in fluid plumbing applications to connect a FPT fitting and a MPT fitting at 90 degrees. This fitting is very useful when working space is a minimum.

PART #				THREAD	THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	MPT x 90 Degree	FPT
SE 14	\$3.28	SE 14 P	\$5.31	1/4" MPT	1/4" FPT
SE 38	\$3.28	SE 38 P	\$3.64	3/8" MPT	3/8" FPT
SE 12	\$3.28	SE 12 P	\$3.65	1/2" MPT	1/2" FPT
SE 1234	\$6.88	SE 1234 P	\$7.51	1/2" MPT	3/4" FPT
SE 34	\$4.84	SE 34 P	\$4.89	3/4" MPT	3/4" FPT
SE 100	\$6.89	SE 100 P	\$6.98	1" MPT	1" FPT
SE 114	\$8.68	SE 114 P	\$8.79	1-1/4" MPT	1-1/4" FPT
SE 112	\$10.34	SE 112 P	\$10.47	1-1/2" MPT	1-1/2" FPT
SE 200	\$12.38	SE 200 P	\$12.54	2" MPT	2" FPT



## Adapter

Garden Hose fitting used to connect a FGHT fitting to a MPT fitting.

PART #				THREAD	THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	3/4" MGHT x FPT	
G 3412	\$2.72	G 3412 P	\$3.02	3/4" MGHT	1/2" FPT
G 3434	\$2.68	G 3434 P	\$2.99	3/4" MGHT	3/4" FPT



## Adapter

Garden Hose fitting used to connect a FPT fitting to a MGHT fitting.

PART #				THREAD	THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	MPT x 3/4" FGHT	
H 3434	\$2.65	H 3434 P	\$2.96	3/4" MPT	3/4" FGHT



## Adapter

Garden Hose fitting used to connect two female fittings.

PART #				THREAD	THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	MALE x MALE	
E 3412	\$1.00	E 3412 P	\$1.07	3/4" MGHT	1/2" MPT
E 3438	\$1.80	E 3438 P	\$2.01	3/4" MGHT	3/8" MPT
E 3434	\$0.98	E 3434 P	\$1.24	3/4" MGHT	3/4" MPT
EE 3434	\$1.29	EE 3434 P	\$1.36	3/4" MGHT	3/4" MGHT



## Adapter

Garden Hose fitting used to connect a FGHT to a MGHT fitting. FGHT requires a W 406 washer.

PART #				THREAD	THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	3/4" MGHT x 3/4" FGHT	
I 3434	\$2.62	I 3434 P	\$2.94	3/4" MGHT	3/4" FGHT



## Coupling

Garden Hose fitting used to connect a MGHT to a MPT fitting. FGHT requires a W 406 washer.

PART #				THREAD	THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	3/4" FGHT x FPT	
J 3412	\$2.70	J 3412 P	\$3.01	3/4" FGHT	1/2" FPT



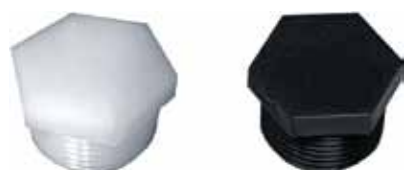




## Cap

Female thread x Closed end. Requires W 406 washer.

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	FGHT & FPS
N 3400	\$1.09	N 3400 P	\$1.10	3/4" FGHT
N 3400 F	\$1.09	N 3400 F P	\$1.10	3/4" FPS



## Plug

Garden Hose fitting used to plug off a FPT fitting.

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	3/4" MGHT x HEX
F 3400 GHT	\$0.85	F 3400 GHT P	\$1.04	3/4" MGHT



## Tee Adapter

Garden Hose fitting used to connect 3/4" FGHT fitting to two hoses.

PART #				THREAD	BARB
NYLON	PRICE ea.	POLY	PRICE ea.	MGHT x BARB	
MT 3438 G	\$1.77	MT 3438 G P	\$2.42	3/4" MGHT	3/8"
MT 3412 G	\$1.86	MT 3412 G P	\$2.51	3/4" MGHT	1/2"
MT 3434 G	\$2.03	MT 3434 G P	\$2.66	3/4" MGHT	3/4"



## Adapter

Garden Hose fitting used to connect 3/4" FGHT fitting to a hose.

PART #				THREAD	BARB
NYLON	PRICE ea.	POLY	PRICE ea.		
D 3414	\$0.93	D 3414 P	\$1.07	3/4" MGHT	1/4"
D 3438	\$0.97	D 3438 P	\$1.07	3/4" MGHT	3/8"
D 3412	\$0.98	D 3412 P	\$1.13	3/4" MGHT	1/2"
D 3458	\$1.03	D 3458 P	\$1.13	3/4" MGHT	5/8"
D 3434	\$1.11	D 3434 P	\$1.13	3/4" MGHT	3/4"
D 3410	\$1.22	D 3410 P	\$1.24	3/4" MGHT	1"



## Elbow

Garden Hose fitting used to connect 3/4" FGHT to a hose at 90 degrees.

PART #				THREAD	BARB
NYLON	PRICE ea.	POLY	PRICE ea.	3/4" MGHT x 90 degree	
EL 3438 G	\$1.31	EL 3438 G P	\$1.34	3/4" MGHT	3/8"
EL 3412 G	\$1.29	EL 3412 G P	\$1.32	3/4" MGHT	1/2"
EL 3458 G	\$1.46	EL 3458 G P	\$1.49	3/4" MGHT	5/8"
EL 3434 G	\$1.51	EL 3434 G P	\$1.53	3/4" MGHT	3/4"
EL 3410 G	\$1.53	EL 3410 G P	\$1.55	3/4" MGHT	1"



## Reducing Nipple

Garden Hose fitting used to connect two FPT fittings.

PART #				THREAD	
NYLON	PRICE ea.	POLY	PRICE ea.	MALE X MALE	
RM 34116 G	\$1.13	RM 34116 GP	\$1.16	3/4" MGHT	1 1/16" UN



## Swivel Nut

Garden Hose fitting used to connect a hose using a C series fitting with a washer.

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	3/4" FGHT
B 3400	\$0.76	B 3400 P	\$1.00	3/4" FGHT
B 3400 F	\$0.79	B 3400 F P	\$1.00	3/4" SPT



## Washers

Vinyl Garden Hose washer. Used with all 3/4" FGHT fittings in this catalog.

PART #	PRICE ea.	DESCRIPTION
W 406	\$0.18	Vinyl Garden Hose Washer
W 40650 S	\$1.59	Vinyl Garden Hose Washer with 50 mesh screen



## 3-Piece Barb Assembly

Garden Hose fitting with swivel connection. Used to connect 3/4" FGHT to a hose. Washer is vinyl in both nylon and poly assemblies.

PART #				SWIVEL	BARB	WASHER
NYLON	PRICE ea.	POLY	PRICE ea.			
B 3414 W	\$2.14	B 3414 W P	\$2.21	B 3400	1/4"	W 406
B 3438 W	\$2.13	B 3438 W P	\$2.23	B 3400	3/8"	W 406
B 3412 W	\$2.14	B 3412 W P	\$2.66	B 3400	1/2"	W 406
B 3458 W	\$2.13	B 3458 W P	\$2.63	B 3400	5/8"	W 406
B 3434 W	\$2.15	B 3434 W P	\$2.67	B 3400	3/4"	W 406



## Garden Hose Shutoff Valves

Single and double garden hose valves with 3/4" GHT. 100 PSI maximum operating pressure. ABS construction.

PART #	PRICE ea.	DESCRIPTION
G 3434 V	\$7.58	3/4" FGHT (inlet) x 3/4" MGHT (1 outlet)
G 3434 YV	\$10.54	3/4" FGHT (inlet) x 3/4" MGHT (2 outlets)



**G 3434 V**



**G 3434 YV**



## Hex Nut

Used to lock nozzle fitting on page 34 into Boom Clamp fittings.

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	
N1116	\$0.44	N1116 P	\$0.63	11/16" Female UN

## Straight Adapter

Thread 11/16" male UN x hose barb, nut included. Used on the terminating ends of spray boom or a boom using a manifold.

PART #				BARB SIZE
NYLON	PRICE ea.	POLY	PRICE ea.	
3838 D	\$1.31	3838 D P	\$1.34	3/8"
3812 D	\$1.34	3812 D P	\$1.38	1/2"
3834 D	\$1.70	3834 D P	\$1.66	3/4"

## Elbow

Thread 11/16" male UN x hose barb, nut included. Used on the terminating ends of spray boom.

PART #				BARB SIZE
NYLON	PRICE ea.	POLY	PRICE ea.	
NTL 38	\$1.71	NTL 38 P	\$1.74	3/8"
NTL 12	\$1.79	NTL 12 P	\$1.81	1/2"
NTL 34	\$1.87	NTL 34 P	\$1.90	3/4"

## Cross

Thread 11/16" male UN x hose barb, nut included. Used in the center of boom sections as a main feed line.

PART #				BARB SIZE
NYLON	PRICE ea.	POLY	PRICE ea.	
T 38 C	\$1.58	T 38 C P	\$1.95	3/8"
T 12 C	\$1.87	T 12 C P	\$2.01	1/2"
T 34 C	\$1.98	T 34 C P	\$2.15	3/4"

## Tee

Thread 11/16" male UN x hose barb, nut included. Used between the main feed lines and termination end of boom sections.

PART #				BARB SIZE
NYLON	PRICE ea.	POLY	PRICE ea.	
NTT 38	\$1.85	NTT 38 P	\$1.89	3/8"
NTT 12	\$1.89	NTT 12 P	\$1.92	1/2"
NTT 34	\$2.30	NTT 34 P	\$2.33	3/4"



## Spray Tip Blank

Blanks for Boom Drops, used when changing row spacing.

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	
8028	\$0.60	8028 P	\$0.66	11/16" Female UN



## Male Adapter

Allows 1/4" female boom drops to be converted to accept 11/16" UN swivel cap.

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	
NB 164	\$0.81	NB 164 P	\$0.95	11/16" Male UN x 1/4" MPT
NB 168	\$0.85	NB 168 P	\$0.98	11/16" Male UN x 1/8" MPT



## Boom Clamp

Boom Clamps fit all nozzle thread fittings on page 34-35 of this catalog.

PART #				SIZE
NYLON	PRICE ea.	POLY	PRICE ea.	
B 11-1	\$1.89	B 11-1 P	\$2.07	Fits 1" Round or Square Tubing
B 11-114	\$2.02	B 11-114 P	\$2.21	Fits 1 1/4" Round or Square Tubing



## Female Adapter

Allows 11/16" UN nozzle fittings on page 34-35 to be converted to accept 1/4" MPT flood tips.

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	
1116 A	\$1.49	1116 A P	\$1.52	11/16" Female UN x 1/4" FPT



## Swivel Nut

For use with Male Adapter on this page and all nozzle fittings on page 34-35. Fastens spray tips to nozzle fittings.

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	
8027	\$0.58	8027 P	\$0.66	11/16" Female UN
8027 W	\$0.86	8027 W P	\$0.87	



## Metering Barb

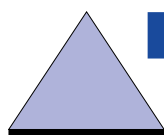
Used to run a line from spray boom to a gauge visible to operate for monitoring boom pressure. Connects to Male Adapter on this page and all nozzle fittings on page 35 with a 8027 swivel nut.

PART #				BARB SIZE
NYLON	PRICE ea.	POLY	PRICE ea.	
K 8414	\$0.65	K 8414 P	\$0.66	1/4"
K 8438	\$0.68	K 8438 P	\$0.69	3/8"
K 8412	\$0.72	K 8412 P	\$0.72	1/2"





PARTNERS IN SPRAYING



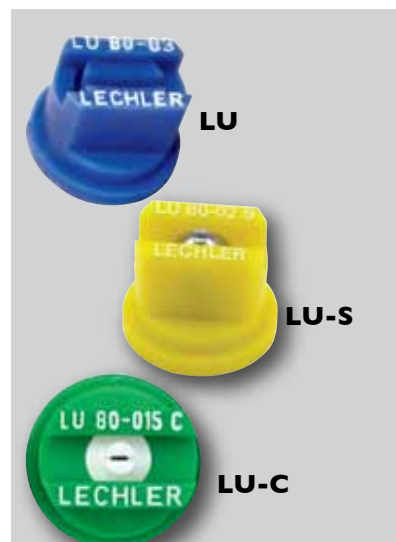
**LU**

•multi range universal flat spray nozzles

**Spray angle:** 80°, 110°

90°, 120° available upon request

**Material:** POM, POM/Ceramic,  
POM/Stainless Steel



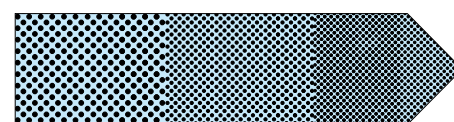
**Features**

- Multi range universal flat spray nozzle
- **Low to medium drift potential**
- Coarse to fine droplets
- Even droplet distribution spectrum at higher pressures
- Best performance range 20-75 psi
- Low drift applications up to 40 psi
- Fits 8 mm cap, #Y8253048 series

**Range of application**

Herbicides, plant growth regulators

List Price ea.	
LU 80-01	\$3.51
LU 80-015	\$3.51
LU 80-02	\$3.51
LU 80-03	\$3.51
LU 80-04	\$3.51
LU 80-05	\$3.51
LU 80-06	\$3.51
LU 80-08	\$3.51
<b>STAINLESS STEEL</b>	
LU 80-01 S	\$9.52
LU 80-015 S	\$9.52
LU 80-02 S	\$9.52
LU 80-03 S	\$9.52
LU 80-04 S	\$9.52
LU 80-05 S	\$9.52
LU 80-06 S	\$9.52
LU 80-08 S	\$9.52
<b>CERAMIC</b>	
LU 80-01 C	\$11.24
LU 80-015 C	\$11.24
LU 80-02 C	\$11.24
LU 80-03 C	\$11.24
LU 80-04 C	\$11.24
LU 80-05 C	\$11.24
LU 80-06 C	\$11.24
LU 80-08 C	\$11.24
LU 110-01	\$3.51
LU 110-015	\$3.51
LU 110-02	\$3.51
LU 110-03	\$3.51
LU 110-04	\$3.51
LU 110-05	\$3.51
LU 110-06	\$3.51
LU 110-08	\$3.51



20 psi ————— 70 psi  
Change in droplet size via spray pressure variation in LU nozzles

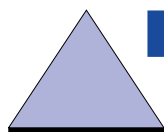
**Application-specific adjustment of droplet size characteristics**

- LU nozzles are characterized by an optimized (well balanced) droplet size spectrum.
- The gallons per acre rate required for a given range of application, and the corresponding droplet size category (coarse, medium or fine droplets) are achieved by using nozzles of the appropriate size and varying the spray pressure as necessary.







PARTNERS IN SPRAYING



**LU**

•multi range universal flat spray nozzles

CONT....

 ( )	ASABE S-572	 psi	Capacity per nozzle		Gallons/Acre							
			gpm	oz/min	4 mph	5 mph	6 mph	7 mph	8 mph	10 mph	12 mph	14 mph
<b>LU</b> 80-01 110-01 (50/100 M)	M	15	0.061	8	4.5	3.6	3	2.6	2.3	1.8	1.5	1.3
	M	20	0.071	9	5.3	4.2	3.5	3	2.6	2.1	1.8	1.5
	M	30	0.087	11	6.5	5.2	4.3	3.7	3.2	2.6	2.2	1.8
	F	40	0.1	13	7.4	5.9	5	4.2	3.7	3	2.5	2.1
	F	50	0.11	14	8.2	6.5	5.4	4.7	4.1	3.3	2.7	2.3
	F	60	0.12	15	8.9	7.1	5.9	5.1	4.5	3.6	3	2.5
<b>LU</b> 80-015 110-015 (50/100 M)	M	15	0.092	12	6.8	5.5	4.6	3.9	3.4	2.7	2.3	2
	M	20	0.11	14	8.2	6.5	5.4	4.7	4.1	3.3	2.7	2.3
	M	30	0.13	17	9.7	7.7	6.4	5.5	4.8	3.9	3.2	2.8
	M	40	0.15	19	11.1	8.9	7.4	6.4	5.6	4.5	3.7	3.2
	F	50	0.17	22	12.6	10.1	8.4	7.2	6.3	5	4.2	3.6
	F	60	0.18	23	13.4	10.7	8.9	7.6	6.7	5.3	4.5	3.8
<b>LU</b> 80-02 110-02 (50 M)	M	15	0.12	15	8.9	7.1	5.9	5.1	4.5	3.6	3	2.5
	M	20	0.14	18	10.4	8.3	6.9	5.9	5.2	4.2	3.5	3
	M	30	0.17	22	12.6	10.1	8.4	7.2	6.3	5	4.2	3.6
	M	40	0.2	26	14.9	11.9	9.9	8.5	7.4	5.9	5	4.2
	M	50	0.22	28	16.3	13.1	10.9	9.3	8.2	6.5	5.4	4.7
	F	60	0.24	31	17.8	14.3	11.9	10.2	8.9	7.1	5.9	5.1
<b>LU</b> 80-03 110-03 (50 M)	C	15	0.18	23	13.4	10.7	8.9	7.6	6.7	5.3	4.5	3.8
	M	20	0.21	27	15.6	12.5	10.4	8.9	7.8	6.2	5.2	4.5
	M	30	0.26	33	19.3	15.4	12.9	11	9.7	7.7	6.4	5.5
	M	40	0.3	38	22	17.8	14.9	12.7	11.1	8.9	7.4	6.4
	M	50	0.34	44	25	20	16.8	14.4	12.6	10.1	8.4	7.2
	M	60	0.37	47	27	22	18.3	15.7	13.7	11	9.2	7.8
<b>LU</b> 80-04 110-04 (50 M)	C	15	0.24	31	18	14.3	11.9	10.2	8.9	7.1	5.9	5.1
	C	20	0.28	36	21	16.6	13.9	11.9	10.4	8.3	6.9	5.9
	C	30	0.35	45	26	21	17.3	14.9	13	10.4	8.7	7.4
	M	40	0.4	51	30	24	19.8	17	14.9	11.9	9.9	8.5
	M	50	0.45	58	33	27	22	19.1	16.7	13.4	11.1	9.5
	M	60	0.49	63	36	29	24	21	18.2	14.6	12.1	10.4
<b>LU</b> 80-05 110-05 (50/30 M)	VC	15	0.31	40	23	18.4	15.3	13.2	11.5	9.2	7.7	6.6
	VC	20	0.35	45	26	21	17.3	14.9	13	10.4	8.7	7.4
	C	30	0.43	55	32	26	21	18.2	16	12.8	10.6	9.1
	C	40	0.5	64	37	30	25	21	18.6	14.9	12.4	10.6
	M	50	0.56	72	42	33	28	24	21	16.6	13.9	11.9
	M	60	0.61	78	45	36	30	26	23	18.1	15.1	12.9
<b>LU</b> 80-06 110-06 (50/30 M)	VC	15	0.37	47	27	22	18.3	15.7	13.7	11	9.2	7.8
	VC	20	0.42	54	31	25	21	17.8	15.6	12.5	10.4	8.9
	VC	30	0.52	67	39	31	26	22	19.3	15.4	12.9	11
	C	40	0.6	77	45	36	30	25	22	17.8	14.9	12.7
	C	50	0.67	86	50	40	33	28	25	19.9	16.6	14.2
	M	60	0.73	93	54	43	36	31	27	22	18.1	15.5
<b>LU</b> 80-08 110-08 (50/30 M)	VC	15	0.49	63	36	29	24	21	18.2	14.6	12.1	10.4
	VC	20	0.57	73	42	34	28	24	21	16.9	14.1	12.1
	VC	30	0.69	88	51	41	34	29	26	20	17.1	14.6
	VC	40	0.8	102	59	48	40	34	30	24	19.8	17
	VC	50	0.89	114	66	53	44	38	33	26	22	18.9
	C	60	0.98	125	73	58	49	42	36	29	24	21

**ASABE S-572  
Droplet size classification**

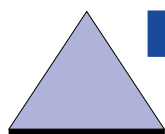
<b>VF</b>	Very fine
<b>F</b>	Fine
<b>M</b>	Medium
<b>C</b>	Coarse
<b>VC</b>	Very coarse
<b>EC</b>	Extremely coarse

Classifications are subject to change

**Sample order**

Type + spray angle +	nozzle size +	material	=	order number
LU 110°	015	POM	=	LU 110-015
LU 110°	015	S (Stainless Steel)	=	LU 110-015 S
LU 110°	015	C (Ceramic)	=	LU 110-015 C

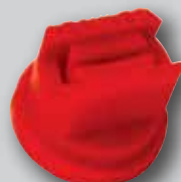
- Spray pressure measured at the nozzle tip.
- The stated gallons per acre rates apply to water.
- Check your nozzle flow rates prior to each spray season.
- Make sure that all nozzles have the same designed flow rate.



**ES**

•even flat spray nozzles

**Spray angle:** 80°  
90° available upon request  
**Material:** POM, Brass



**ES**



**ES-B**

#### Features

- Even distribution 80°, 90° flat spray nozzle
- **Medium drift potential**
- Best performance range 15-60 psi
- Short spray height pattern

#### Range of application

Ideal for banding and tillage implements

#### Application-rate reduction

Be sure to adjust your gpa rate once you determine the surface that will be treated.

Band height inches	Spray width inches	Application rate* (in %) for a row spacing, S, of		
		20"	30"	40"
3	4	20	13	10
4	6	30	20	15
5	8	40	27	20
6	10	50	33	25

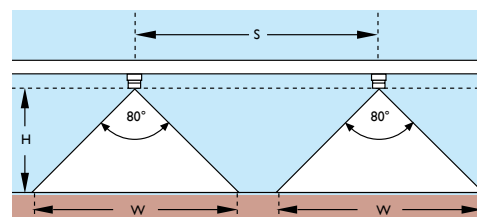
\*Percentages in comparison with full area treatment

#### List Price ea.

ES 80-01	\$4.71
ES 80-015	\$4.71
ES 80-02	\$4.71
ES 80-03	\$4.71
ES 80-04	\$4.71
ES 80-05	\$4.71
ES 80-06	\$4.71
ES 80-08	\$4.71

#### BRASS

ES 80-01 B	\$6.89
ES 80-015 B	\$6.89
ES 80-02 B	\$6.89
ES 80-03 B	\$6.89
ES 80-04 B	\$6.89
ES 80-05 B	\$6.89
ES 80-06 B	\$6.89
ES 80-08 B	\$6.89



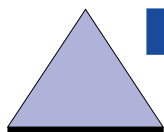
#### Nozzle Alignment

Lechler's ES even flat spray nozzles enable extremely short spray heights (H), thus extensively avoiding band drift.

The width of the spray band (W) can be varied by altering the spray height (H) and/or rotating the spray axis to change the spray offset. This presumes the nozzle spacing (S) is constant.





PARTNERS IN SPRAYING



**ES**

•even flat spray nozzles

CONT....

		Capacity per nozzle		Gallons/Acre						
		gpm	oz/min	4 mph	5 mph	6 mph	7 mph	8 mph	9 mph	10 mph
<b>ES</b> 80-01 (100/50 M)	15	0.061	8	4.5	3.6	3	2.6	2.3	2	1.8
	20	0.071	9	5.3	4.2	3.5	3	2.6	2.3	2.1
	30	0.087	11	6.5	5.2	4.3	3.7	3.2	2.9	2.6
	40	0.10	13	7.4	5.9	5	4.2	3.7	3.3	3
	50	0.11	14	8.2	6.5	5.4	4.7	4.1	3.6	3.3
	60	0.12	15	8.9	7.1	5.9	5.1	4.5	4	3.6
<b>ES</b> 80-015 (100/50 M)	15	0.092	12	6.8	5.5	4.6	3.9	3.4	3	2.7
	20	0.11	14	8.2	6.5	5.4	4.7	4.1	3.6	3.3
	30	0.13	17	9.7	7.7	6.4	5.5	4.8	4.3	3.9
	40	0.15	19	11.1	8.9	7.4	6.4	5.6	5	4.5
	50	0.17	22	12.6	10.1	8.4	7.2	6.3	5.6	5
	60	0.18	23	13.4	10.7	8.9	7.6	6.7	5.9	5.3
<b>ES</b> 80-02 (50 M)	15	0.12	15	8.9	7.1	5.9	5.1	4.5	4	3.6
	20	0.14	18	10.4	8.3	6.9	5.9	5.2	4.6	4.2
	30	0.17	22	12.6	10.1	8.4	7.2	6.3	5.6	5
	40	0.20	26	14.9	11.9	9.9	8.5	7.4	6.6	5.9
	50	0.22	28	16.3	13.1	10.9	9.3	8.2	7.3	6.5
	60	0.24	31	17.8	14.3	11.9	10.2	8.9	7.9	7.1
<b>ES</b> 80-03 (50 M)	15	0.18	23	13.4	10.7	8.9	7.6	6.7	5.9	5.3
	20	0.21	27	15.6	12.5	10.4	8.9	7.8	6.9	6.2
	30	0.26	33	19.3	15.4	12.9	11	9.7	8.6	7.7
	40	0.30	38	22	17.8	14.9	12.7	11.1	9.9	8.9
	50	0.34	44	25	20	16.8	14.4	12.6	11.2	10.1
	60	0.37	47	27	22	18.3	15.7	13.7	12.2	11
<b>ES</b> 80-04 (50 M)	15	0.24	31	18	14.3	11.9	10.2	8.9	7.9	7.1
	20	0.28	36	21	16.6	13.9	11.9	10.4	9.2	8.3
	30	0.35	45	26	21	17.3	14.9	13	11.6	10.4
	40	0.40	51	30	24	19.8	17	14.9	13.2	11.9
	50	0.45	58	33	27	22	19.1	16.7	14.9	13.4
	60	0.49	63	36	29	24	21	18.2	16.2	14.6
<b>ES</b> 80-05 (50/30 M)	15	0.31	40	23	18.4	15.3	13.2	11.5	10.2	9.2
	20	0.35	45	26	21	17.3	14.9	13	11.6	10.4
	30	0.43	55	32	26	21	18.2	16	14.2	12.8
	40	0.50	64	37	30	25	21	18.6	16.5	14.9
	50	0.56	72	42	33	28	24	21	18.5	16.6
	60	0.61	78	45	36	30	26	23	20	18.1
<b>ES</b> 80-06 (50/30 M)	15	0.37	47	27	22	18.3	15.7	13.7	12.2	11
	20	0.42	54	31	25	21	17.8	15.6	13.9	12.5
	30	0.52	67	39	31	26	22	19.3	17.2	15.4
	40	0.60	77	45	36	30	25	22	19.8	17.8
	50	0.67	86	50	40	33	28	25	22	19.9
	60	0.73	93	54	43	36	31	27	24	22
<b>ES</b> 80-08 (50/30 M)	15	0.49	63	36	29	24	21	18.2	16.2	14.6
	20	0.57	73	42	34	28	24	21	18.8	16.9
	30	0.69	88	51	41	34	29	26	23	20
	40	0.80	102	59	48	40	34	30	26	24
	50	0.89	114	66	53	44	38	33	29	26
	60	0.98	125	73	58	49	42	36	32	29

**ASABE S-572**  
Droplet size classification

<b>VF</b>	Very fine
<b>F</b>	Fine
<b>M</b>	Medium
<b>C</b>	Coarse
<b>VC</b>	Very coarse
<b>EC</b>	Extremely coarse

Classifications are subject to change

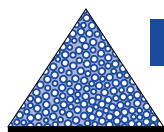
**Sample order**

Type + spray angle + nozzle size + material = order number  
 ES 80° 02 Brass = ES 80-02 Brass  
 ES 80° 02 POM = ES 80-02

- Spray pressure measured at the nozzle tip.
- The stated gallons per acre rates apply to water.
- Check your nozzle flow rates prior to each spray season.
- Make sure that all nozzles have the same designed flow rate.



PARTNERS IN SPRAYING



**IDK**

•venturi air induction nozzles

**Spray angle:** 110°  
90°, 120° available upon request  
**Material:** POM, POM/Ceramic, PolyPro/Ceramic



**IDK**



**IDK-C**

#### Features

- Venturi air induction flat spray nozzle
- **Very low drift potential**
- Very coarse to medium droplets
- Best performance range 25-90 psi  
15-90 psi for size 05  
30-290 psi for orchard/vineyard
- Fits 8 mm caps,  
#Y8253048 series

#### Range of application

Herbicides, fungicides, insecticides,  
liquid fertilizers, plant growth  
regulators

#### Main benefits of IDK nozzles

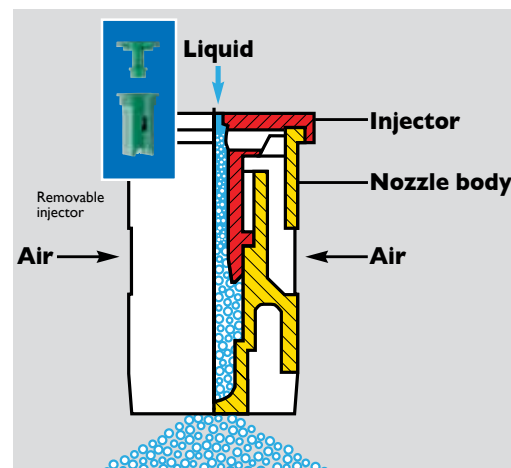
- Sturdy design
- Removable fixed position injector
- Channel design minimizes clogging
- Compact, one-piece nozzle design
- Operates at lower relative pressures  
than full length air induction nozzles
- Very good deposition structure and  
crop canopy penetration

#### List Price ea.

IDK 110-01	\$13.10
IDK 110-015	\$13.10
IDK 110-02	\$13.10
IDK 110-025	\$13.10
IDK 110-03	\$13.10
IDK 110-04	\$13.10
IDK 110-05	\$13.10

#### CERAMIC

IDK C 110-025	\$34.11
IDK C 110-03	\$34.11
IDK C 110-04	\$34.11
IDK C 110-05	\$34.11



#### ASABE S-572 Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extremely coarse

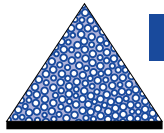
Classifications are subject to change

#### Sample order

Type	+	spray angle	+	nozzle size	+	material	=	order number
IDK		110°		01		C (Ceramic)	=	IDK 110-01C
IDK		110°		01		POM	=	IDK 110-01
IDK		110°		03		PP (Polypro)	=	IDK 110-03 PP





PARTNERS IN SPRAYING



**IDK**

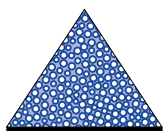
•venturi air induction nozzles

CONT....

	ASABE S-572		Capacity per nozzle		Gallons/Acre								
			gpm	oz/min	4 mph	5 mph	6 mph	7 mph	8 mph	10 mph	12 mph	14 mph	16 mph
<b>IDK I 110-01 (50/100 M)</b>	C	15	0.061	8	4.5	3.6	3	2.6	2.3	1.8	1.5	1.3	1.1
	C	20	0.071	9	5.3	4.2	3.5	3	2.6	2.1	1.8	1.5	1.3
	C	30	0.087	11	6.5	5.2	4.3	3.7	3.2	2.6	2.2	1.8	1.6
	C	35	0.094	12	7	5.6	4.7	4	3.5	2.8	2.3	2	1.7
	C	40	0.1	13	7.4	5.9	5	4.2	3.7	3	2.5	2.1	1.9
	M	50	0.11	14	8.2	6.5	5.4	4.7	4.1	3.3	2.7	2.3	2
	M	60	0.12	15	8.9	7.1	5.9	5.1	4.5	3.6	3	2.5	2.2
<b>IDK I 110-015 (50/100 M)</b>	C	30	0.13	17	9.7	7.7	6.4	5.5	4.8	3.9	3.2	2.8	2.4
	C	40	0.15	19	11.1	8.9	7.4	6.4	5.6	4.5	3.7	3.2	2.8
	C	50	0.17	22	12.6	10.1	8.4	7.2	6.3	5	4.2	3.6	3.2
	M	60	0.18	23	13.4	10.7	8.9	7.6	6.7	5.3	4.5	3.8	3.3
	M	70	0.2	26	14.9	11.9	9.9	8.5	7.4	5.9	5	4.2	3.7
	M	80	0.21	27	15.6	12.5	10.4	8.9	7.8	6.2	5.2	4.5	3.9
	M	90	0.23	29	17.7	13.7	11.4	9.8	8.5	6.8	5.7	4.9	4.3
<b>IDK I 110-02 (50 M)</b>	C	30	0.17	22	12.6	10.1	8.4	7.2	6.3	5	4.2	3.6	3.2
	C	40	0.2	26	14.9	11.9	9.9	8.5	7.4	5.9	5	4.2	3.7
	C	50	0.22	28	16.3	13.1	10.9	9.3	8.2	6.5	5.4	4.7	4.1
	M	60	0.24	31	17.8	14.3	11.9	10.2	8.9	7.1	5.9	5.1	4.5
	M	70	0.26	33	19.3	15.4	12.9	11	9.7	7.7	6.4	5.5	4.8
	M	80	0.28	36	21	16.6	13.9	11.9	10.4	8.3	6.9	5.9	5.2
	M	90	0.3	38	22	17.8	14.9	12.7	11.1	8.9	7.4	6.4	5.6
<b>IDK I 110-025 (50 M)</b>	VC	30	0.22	28	16.3	13.1	10.9	9.3	8.2	6.5	5.4	4.7	4.1
	C	40	0.25	32	18.6	14.9	12.4	10.6	9.3	7.4	6.2	5.3	4.6
	C	50	0.28	36	21	16.6	13.9	11.9	10.4	8.3	6.9	5.9	5.2
	C	60	0.31	40	23	18.4	15.3	13.2	11.5	9.2	7.7	6.6	5.8
	M	70	0.33	42	25	19.6	16.3	14	12.3	9.8	8.2	7	6.1
	M	80	0.35	45	26	21	17.3	14.9	13	10.4	8.7	7.4	6.5
	M	90	0.38	49	28	23	18.8	16.1	14.1	11.3	9.4	8.1	7.1
<b>IDK I 110-03 (50 M)</b>	VC	30	0.26	33	19.3	15.4	12.9	11	9.7	7.7	6.4	5.5	4.8
	VC	40	0.3	38	22	17.8	14.9	12.7	11.1	8.9	7.4	6.4	5.6
	C	50	0.34	44	25	20	16.8	14.4	12.6	10.1	8.4	7.2	6.3
	C	60	0.37	47	27	22	18.3	15.7	13.7	11	9.2	7.8	6.9
	C	70	0.4	51	30	24	19.8	17	14.9	11.9	9.9	8.5	7.4
	C	80	0.42	54	31	25	21	17.8	15.6	12.5	10.4	8.9	7.8
	M	90	0.45	58	33	27	22	19.1	16.7	13.4	11.1	9.5	8.4
<b>IDK I 110-04 (50 M)</b>	VC	30	0.35	45	26	21	17.3	14.9	13	10.4	8.7	7.4	6.4
	VC	40	0.4	51	30	24	19.8	17	14.9	11.9	9.9	8.5	7.4
	C	50	0.45	58	33	27	22	19.1	16.7	13.4	11.1	9.5	8.4
	C	60	0.49	63	36	29	24	21	18.2	14.6	12.1	10.4	9.1
	C	70	0.53	68	39	31	26	22	19.7	15.7	13.1	11.2	9.8
	C	80	0.57	73	42	34	28	24	21	16.9	14.1	12.1	10.6
	M	90	0.6	77	45	36	30	25	22	17.8	14.9	12.7	11.1
<b>IDK I 110-05 (50/30 M)</b>	VC	30	0.43	55	32	26	21	18.2	16	12.8	10.6	9.1	8
	VC	40	0.5	64	37	30	25	21	18.6	14.9	12.4	10.6	9.3
	VC	50	0.56	72	42	33	28	24	21	16.6	13.9	11.9	10.4
	C	60	0.61	78	45	36	30	26	23	18.1	15.1	12.9	11.3
	C	70	0.66	84	49	39	33	28	25	19.6	16.3	14	12.3
	C	80	0.71	91	53	42	35	30	26	21	17.6	15.1	13.2
	M	90	0.75	96	56	45	37	32	28	22	18.6	15.9	13.9
	M	100	0.79	101	59	47	39	34	29	23	19.6	16.8	14.7

- Spray pressure measured at the nozzle tip.
- The stated gallons per acre rates apply to water.
- Check your nozzle flow rates prior to each spray season.
- Make sure that all nozzles have the same designed flow rate.





**ID**

**•air induction nozzles**

**Spray angle:** 80°, 110°  
90°, 120° available upon request  
**Material:** POM, POM/Ceramic



**ID**

**Features**

- Venturi air induction flat spray nozzle
- **Extremely low drift potential, even for higher pressures**
- Extra coarse to coarse droplets
- Uniform, large droplet size
- Best performance range  
30-115 psi  
40-290 psi for orchard/vineyard
- Use with IS end nozzle for boom ends
- Fits 10 mm caps, #Y8253049 series

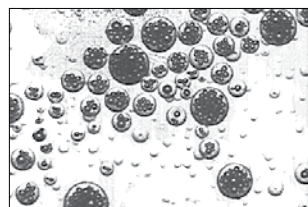
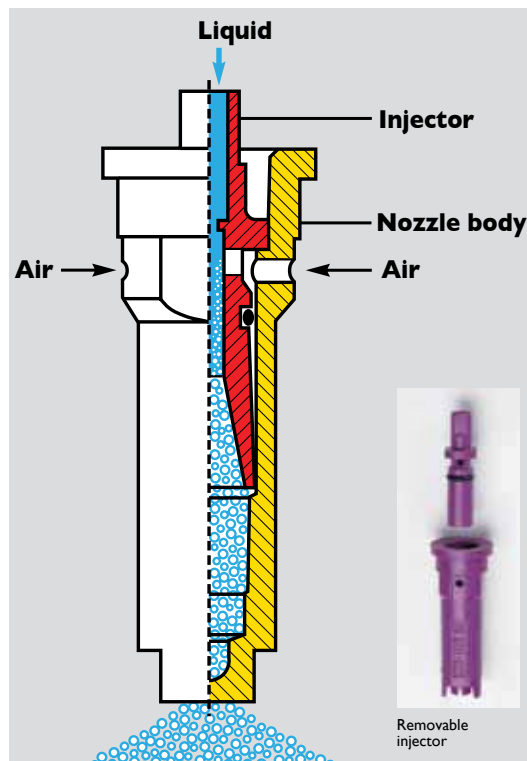
**Range of application**

Herbicides, fungicides, insecticides, liquid fertilizers, plant growth regulators

List Price ea.	
ID 80-01	\$6.58
ID 80-015	\$6.58
ID 80-02	\$6.58
ID 80-025	\$6.58
ID 80-03	\$6.58
ID 80-04	\$6.58
ID 80-05	\$6.58
ID 80-06	\$6.58
ID 80-08	\$6.58
ID 110-01	\$6.58
ID 110-015	\$6.58
ID 110-02	\$6.58
ID 110-025	\$6.58
ID 110-03	\$6.58
ID 110-04	\$6.58
ID 110-05	\$6.58
ID 110-06	\$6.58
ID 110-08	\$6.58

**Main benefits of ID nozzles**

- Sturdy design
- Easily removable injector for cleaning
- Hard wearing — non clogging
- Very good deposition structure and crop canopy penetration





Aeration effect



PARTNERS IN SPRAYING



SPRAY TIPS & ACCESSORIES

	ASABE S-572		Capacity per nozzle		Gallons/Acre							
			psi	gpm	oz/min	4 mph	5 mph	6 mph	7 mph	8 mph	10 mph	12 mph
<b>ID</b> 80-01 110-01 (50/100 M)	C	40	0.1	13	7.4	5.9	5.0	4.2	3.7	3.0	2.5	2.1
	C	50	0.11	14	8.2	6.5	5.4	4.7	4.1	3.3	2.7	2.3
	C	60	0.12	15	8.9	7.1	5.9	5.1	4.5	3.6	3.0	2.5
	C	70	0.13	17	9.7	7.7	6.4	5.5	4.8	3.9	3.2	2.8
	C	80	0.14	18	10.4	8.3	6.9	5.9	5.2	4.2	3.5	3.0
	C	90	0.15	19	11.0	8.9	7.4	6.4	5.6	4.5	3.7	3.2
	C	100	0.16	20	11.9	9.5	7.9	6.8	5.9	4.8	4.0	3.4
<b>ID</b> 80-015 110-015 (50/100 M)	VC	30	0.13	17	9.7	7.7	6.4	5.5	4.8	3.9	3.2	2.8
	VC	40	0.15	19	11.1	8.9	7.4	6.4	5.6	4.5	3.7	3.2
	C	50	0.17	22	12.6	10.1	8.4	7.2	6.3	5	4.2	3.6
	C	60	0.18	23	13.4	10.7	8.9	7.6	6.7	5.3	4.5	3.8
	C	70	0.2	26	14.9	11.9	9.9	8.5	7.4	5.9	5	4.2
	C	80	0.21	27	15.6	12.5	10.4	8.9	7.8	6.2	5.2	4.5
	C	90	0.23	29	17.7	13.7	11.4	9.8	8.5	6.8	5.7	4.9
<b>ID</b> 80-02 110-02 (50 M)	C	100	0.24	31	17.8	14.3	11.9	10.2	8.9	7.1	5.9	5.1
	VC	30	0.17	22	12.6	10.1	8.4	7.2	6.3	5	4.2	3.6
	VC	40	0.2	26	14.9	11.9	9.9	8.5	7.4	5.9	5	4.2
	VC	50	0.22	28	16.3	13.1	10.9	9.3	8.2	6.5	5.4	4.7
	C	60	0.24	31	17.8	14.3	11.9	10.2	8.9	7.1	5.9	5.1
	C	70	0.26	33	19.3	15.4	12.9	11	9.7	7.7	6.4	5.5
	C	80	0.28	36	21	16.6	13.9	11.9	10.4	8.3	6.9	5.9
<b>ID</b> 80-025 110-025 (50 M)	C	90	0.3	38	22	17.8	14.9	12.7	11.1	8.9	7.4	6.4
	C	100	0.32	41	24	19	15.8	13.6	11.9	9.5	7.9	6.8
	VC	30	0.22	28	16.3	13.1	10.9	9.3	8.2	6.5	5.4	4.7
	VC	40	0.25	32	18.6	14.9	12.4	10.6	9.3	7.4	6.2	5.3
	VC	50	0.28	36	21	16.6	13.9	11.9	10.4	8.3	6.9	5.9
	VC	60	0.31	40	23	18.4	15.3	13.2	11.5	9.2	7.7	6.6
	VC	70	0.33	42	25	19.6	16.3	14	12.3	9.8	8.2	7
<b>ID</b> 80-03 110-03 (50 M)	VC	80	0.35	45	26	21	17.3	14.9	13	10.4	8.7	7.4
	VC	90	0.38	49	28	23	18.8	16.1	14.1	11.3	9.4	8.1
	C	100	0.4	51	30	24	19.8	17	14.9	11.9	9.9	8.5
	VC	30	0.26	33	19.3	15.4	12.9	11	9.7	7.7	6.4	5.5
	VC	40	0.3	38	22	17.8	14.9	12.7	11.1	8.9	7.4	6.4
	VC	50	0.34	44	25	20	16.8	14.4	12.6	10.1	8.4	7.2
	VC	60	0.37	47	27	22	18.3	15.7	13.7	11	9.2	7.8
<b>ID</b> 80-04 110-04 (50 M)	VC	70	0.4	51	30	24	19.8	17	14.9	11.9	9.9	8.5
	VC	80	0.42	54	31	25	21	17.8	15.6	12.5	10.4	8.9
	C	90	0.45	58	33	27	22	19.1	16.7	13.4	11.1	9.5
	C	100	0.47	60	35	28	23	19.9	17.4	14	11.6	10
	EC	30	0.35	45	26	21	17.3	14.9	13	10.4	8.7	7.4
	VC	40	0.4	51	30	24	19.8	17	14.9	11.9	9.9	8.5
	VC	50	0.45	58	33	27	22	19.1	16.7	13.4	11.1	9.5
<b>ID</b> 80-05 110-05 (50/30 M)	VC	60	0.49	63	36	29	24	21	18.2	14.6	12.1	10.4
	VC	70	0.53	68	39	31	26	22	19.7	15.7	13.1	11.2
	VC	80	0.57	73	42	34	28	24	21	16.9	14.1	12.1
	VC	90	0.6	77	45	36	30	25	22	17.8	14.9	12.7
	C	100	0.63	81	47	37	31	27	23	18.7	15.6	13.4
	EC	30	0.43	55	32	26	21	18.2	16	12.8	10.6	9.1
	EC	40	0.5	64	37	30	25	21	18.6	14.9	12.4	10.6
<b>ID</b> 80-06 110-06 (50/30 M)	EC	50	0.56	72	42	33	28	24	21	16.6	13.9	11.9
	VC	60	0.61	78	45	36	30	26	23	18.1	15.1	12.9
	VC	70	0.66	84	49	39	33	28	25	19.6	16.3	14
	VC	80	0.71	91	53	42	35	30	26	21	17.6	15.1
	VC	90	0.75	96	56	45	37	32	28	22	18.6	15.9
	VC	100	0.79	101	59	47	39	34	29	23	19.6	16.8
	EC	30	0.52	67	39	31	26	22	19.3	15.4	12.9	11
<b>ID</b> 80-08 110-08 (50/30 M)	EC	40	0.6	77	45	36	30	25	22	17.8	14.9	12.7
	EC	50	0.67	86	50	40	33	28	25	19.9	16.6	14.2
	EC	60	0.73	93	54	43	36	31	27	22	18.1	15.5
	VC	70	0.79	101	59	47	39	34	29	23	19.6	16.8
	VC	80	0.85	109	63	50	42	36	32	25	21	18
	VC	90	0.9	115	67	53	45	38	33	27	22	19.1
	VC	100	0.95	122	71	56	47	40	35	28	24	20
<b>ID</b> 80-08 110-08 (50/30 M)	EC	30	0.70	90	52	42	34.6	29.8	26	20.8	17.4	14.8
	EC	40	0.80	102	60	48	39.6	34	29.8	23.8	19.8	17
	EC	50	0.90	116	66	54	44	38.2	33.4	26.8	22.2	19
	EC	60	0.98	126	72	58	48	42	36.4	29.2	24.2	20.8
	EC	70	1.06	136	78	62	52	44	39.4	31.4	26.2	22.4
	VC	80	1.14	146	84	68	56	48	42	33.8	28.2	24.2
	VC	90	1.20	154	90	72	60	50	44	35.6	29.8	25.4
<b>ID</b> 80-08 110-08 (50/30 M)	VC	100	1.26	162	94	74	62	54	46	37.4	31.2	26.8

#### ASABE S-572 Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extremely coarse

Classifications are subject to change

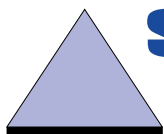
#### Sample order

Type + spray angle + nozzle size + material	=	order number
ID 110° 025 (POM)	=	ID 110-025
ID 110° 025 C (Ceramic)	=	ID 110-025C

- Spray pressure measured at the nozzle tip.
- The stated gallons per acre rates apply to water.
- Check your nozzle flow rates prior to each spray season.
- Make sure that all nozzles have the same designed flow rate.



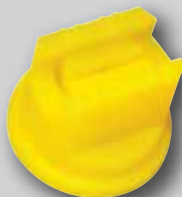
PARTNERS IN SPRAYING



**ST**

•standard flat spray nozzles

**Spray angle:** 80°, 110°  
**Material:** POM, POM/Ceramic,  
 Brass or Stainless Steel available upon request



ST

### Features

- Standard flat spray nozzle
- **Medium drift potential**
- Medium droplets
- Best performance range 30-75 psi
- Fits 8mm caps, #Y8253048 series

### Range of application

Herbicides, fungicides, insecticides, liquid fertilizers, plant growth regulators

### Main benefits of ST nozzles

- An economical choice
- Color coded for agricultural standards

	psi	Capacity per nozzle		Gallons/Acre							
		gpm	oz/min	4 mph	5 mph	6 mph	7 mph	8 mph	9 mph	10 mph	12 mph
<b>ST</b>	30	0.09	11.0	6.5	5.2	4.3	3.7	3.2	2.9	2.6	2.2
80-01	40	0.10	13.0	7.4	5.9	5.0	4.2	3.7	3.3	3.0	2.5
110-01	50	0.11	14.0	8.2	6.5	5.4	4.7	4.1	3.6	3.3	2.7
(50/100 M)	60	0.12	15.0	8.9	7.1	5.9	5.1	4.5	4.0	3.6	3.0
	75	0.14	17.0	10.1	8.0	6.7	5.8	5.1	4.5	4.1	3.4
<b>ST</b>	30	0.13	17.0	9.7	7.7	6.4	5.5	4.8	4.3	3.9	3.2
80-015	40	0.15	19.0	11.1	8.9	7.4	6.4	5.6	5.0	4.5	3.7
110-015	50	0.17	22.0	12.6	10.1	8.4	7.2	6.3	5.6	5.0	4.2
(50/100 M)	60	0.18	23.0	13.4	10.7	8.9	7.6	6.7	5.9	5.3	4.5
	75	0.20	25.7	15.0	12.0	9.9	8.5	7.5	6.6	5.9	5.0
<b>ST</b>	30	0.17	22.0	12.6	10.1	8.4	7.2	6.3	5.6	5.0	4.2
80-02	40	0.20	26.0	14.9	11.9	9.9	8.5	7.4	6.6	5.9	5.0
110-02	50	0.22	28.0	16.3	13.1	10.9	9.3	8.2	7.3	6.5	5.4
(50 M)	60	0.24	31.0	17.8	14.3	11.9	10.2	8.9	7.9	7.1	5.9
	75	0.27	34.8	20.0	16.1	13.4	11.5	10.0	8.9	8.0	6.6
<b>ST</b>	30	0.26	33.0	19.3	15.4	12.9	11.0	9.7	8.6	7.7	6.4
80-03	40	0.30	38.0	22.0	17.8	14.9	12.7	11.1	9.9	8.9	7.4
110-03	50	0.34	44.0	25.0	20.0	16.8	14.4	12.6	11.2	10.1	8.4
(50 M)	60	0.37	47.0	27.0	22.0	18.3	15.7	13.7	12.2	11.0	9.2
	75	0.42	52.9	30.4	24.8	20.6	17.7	15.4	13.7	12.4	10.4
<b>ST</b>	30	0.35	45.0	26.0	21.0	17.3	14.9	13.0	11.6	10.4	8.7
80-04	40	0.40	51.0	30.0	24.0	19.8	17.0	14.9	13.2	11.9	9.9
110-04	50	0.45	58.0	33.0	27.0	22.0	19.1	16.7	14.9	13.4	11.1
(50 M)	60	0.49	63.0	36.0	29.0	24.0	21.0	18.2	16.2	14.6	12.1
	75	0.55	70.7	40.4	32.6	27.0	23.6	20.4	18.2	16.4	13.6
<b>ST</b>	30	0.43	55.0	32.0	26.0	21.0	18.2	16.0	14.2	12.8	10.6
80-05	40	0.50	64.0	37.0	30.0	25.0	21.0	18.6	16.5	14.9	12.4
110-05	50	0.56	72.0	42.0	33.0	28.0	24.0	21.0	18.5	16.6	13.9
(50/30 M)	60	0.61	78.0	45.0	36.0	30.0	26.0	23.0	20.0	18.1	15.1
	75	0.67	86.0	49.6	39.7	33.1	28.7	25.4	22.1	20.0	16.7
<b>ST</b>	30	0.52	67.0	39.0	31.0	26.0	22.0	19.3	17.2	15.4	12.9
80-06	40	0.6	77.0	45.0	36.0	30.0	25.0	22.0	19.8	17.8	14.9
110-06	50	0.67	86.0	50.0	40.0	33.0	28.0	25.0	22.0	19.9	16.6
(50/30 M)	60	0.73	93.0	54.0	43.0	36.0	31.0	27.0	24.0	22.0	18.1
	75	0.82	104.1	60.4	48.1	40.3	34.7	30.2	26.9	24.6	20.3
<b>ST</b>	30	0.69	88.0	51.0	41.0	34.0	29.0	26.0	23.0	20.0	17.1
80-08	40	0.80	102.0	59.0	48.0	40.0	34.0	30.0	26.0	24.0	19.8
110-08	50	0.89	114.0	66.0	53.0	44.0	38.0	33.0	29.0	26.0	22.0
(50/30 M)	60	0.98	125.0	73.0	58.0	49.0	42.0	36.0	32.0	29.0	24.0
	75	1.09	140.0	81.8	65.0	54.9	47.0	40.3	35.8	32.5	26.9

### List Price ea.

ST 110-01	\$2.17
ST 110-015	\$2.17
ST 110-02	\$2.17
ST 110-03	\$2.17
ST 110-04	\$2.17
ST 110-05	\$2.17
ST 110-06	\$2.17
ST 110-08	\$2.17

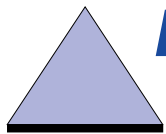
### Sample order

Type + spray angle + nozzle size + material = order number  
 ST 110° 06 POM = ST 110-06  
 ST 110° 06 C (Ceramic) = ST 110-06 C

- Spray pressure measured at the nozzle tip.
- The stated gallons per acre rates apply to water.
- Check your nozzle flow rates prior to each spray season.
- Make sure that all nozzles have the same designed flow rate.



PARTNERS IN SPRAYING



**AD**

•anti-drift flat spray nozzles

**Spray angle:** 110°

90°, 120° available upon request

**Material:** POM, POM/Ceramic





**AD**

#### Features

- one-piece nozzle with removable insert and integrated pre-chamber
- **Low drift potential**
- Medium to coarse droplet size
- Best performance range 20-90 psi for row crops  
30-290 psi for orchard, vineyard and grove crops
- Fits 8mm caps, #Y8253048 series

#### Range of application

Herbicides, fungicides, insecticides, plant growth regulators and liquid fertilizers (up to 35 psi)

	ASABE S-572		Capacity per nozzle		Gallons/Acre											
			psi	gpm	oz/min	4 mph	5 mph	6 mph	7 mph	8 mph	9 mph	10 mph	12 mph	14 mph	16 mph	18 mph
<b>AD</b> 110-015 (50/100 M)	M	30	0.13	17		9.7	7.7	6.4	5.5	4.8	4.3	3.9	3.2	2.8	2.4	2.1
	M	40	0.15	19		11.1	8.9	7.4	6.4	5.6	5	4.5	3.7	3.2	2.8	2.5
	M	50	0.17	22		12.6	10.1	8.4	7.2	6.3	5.6	5	4.2	3.6	3.2	2.8
	F	60	0.18	23		13.4	10.7	8.9	7.6	6.7	5.9	5.3	4.5	3.8	3.3	3
	F	70	0.2	26		14.9	11.9	9.9	8.5	7.4	6.6	5.9	5	4.2	3.7	3.3
	F	80	0.21	27		15.6	12.5	10.4	8.9	7.8	6.9	6.2	5.2	4.5	3.9	3.5
	F	90	0.23	29		17.7	13.7	11.4	9.8	8.5	7.6	6.8	5.7	4.9	4.3	3.8
<b>AD</b> 110-02 (50 M)	M	30	0.17	22		12.6	10.1	8.4	7.2	6.3	5.6	5	4.2	3.6	3.2	2.8
	M	40	0.2	26		14.9	11.9	9.9	8.5	7.4	6.6	5.9	5	4.2	3.7	3.3
	M	50	0.22	28		16.3	13.1	10.9	9.3	8.2	7.3	6.5	5.4	4.7	4.1	3.6
	M	60	0.24	31		17.8	14.3	11.9	10.2	8.9	7.9	7.1	5.9	5.1	4.5	4
	F	70	0.26	33		19.3	15.4	12.9	11	9.7	8.6	7.7	6.4	5.5	4.8	4.3
	F	80	0.28	36		21	16.6	13.9	11.9	10.4	9.2	8.3	6.9	5.9	5.2	4.6
	F	90	0.3	38		22	17.8	14.9	12.7	11.1	9.9	8.9	7.4	6.4	5.6	5
<b>AD</b> 110-03 (50 M)	C	30	0.26	33		19.3	15.4	12.9	11	9.7	8.6	7.7	6.4	5.5	4.8	4.3
	C	40	0.3	38		22	17.8	14.9	12.7	11.1	9.9	8.9	7.4	6.4	5.6	5
	M	50	0.34	44		25	20	16.8	14.4	12.6	11.2	10.1	8.4	7.2	6.3	5.6
	M	60	0.37	47		27	22	18.3	15.7	13.7	12.2	11	9.2	7.8	6.9	6.1
	M	70	0.4	51		30	24	19.8	17	14.9	13.2	11.9	9.9	8.5	7.4	6.6
	M	80	0.42	54		31	25	21	17.8	15.6	13.9	12.5	10.4	8.9	7.8	6.9
	F	90	0.45	58		33	27	22	19.1	16.7	14.9	13.4	11.1	9.5	8.4	7.4
<b>AD</b> 110-04 (50 M)	C	30	0.35	45		26	21	17.3	14.9	13	11.6	10.4	8.7	7.4	6.4	5.8
	C	40	0.4	51		30	24	19.8	17	14.9	13.2	11.9	9.9	8.5	7.4	6.6
	C	50	0.45	58		33	27	22	19.1	16.7	14.9	13.4	11.1	9.5	8.4	7.4
	M	60	0.49	63		36	29	24	21	18.2	16.2	14.6	12.1	10.4	9.1	8.1
	M	70	0.53	68		39	31	26	22	19.7	17.5	15.7	13.1	11.2	9.8	8.7
	M	80	0.57	73		42	34	28	24	21	18.8	16.9	14.1	12.1	10.6	9.4
	M	90	0.6	77		45	36	30	25	22	19.8	17.8	14.9	12.7	11.1	9.9

#### Sample order

Type + spray angle + nozzle size + material = order number  
 AD 110° 02 POM = AD 110-02  
 AD 110° 02 C (Ceramic) = AD 110-02 C

#### ASABE S-572

#### Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extremely coarse

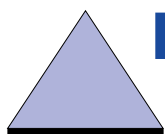
Classifications are subject to change

#### List Price ea.

AD 110-015	\$6.23
AD 110-02	\$6.23
AD 110-03	\$6.23
AD 110-04	\$6.23





PARTNERS IN SPRAYING



# FT

•flood nozzles

**Spray angle:** 140°  
**Material:** POM, Stainless Steel upon request

		Capacity per nozzle		Gallons/Acre							
				30" spacing				40" spacing			
		psi	gpm	oz/min	5 mph	6 mph	7 mph	8 mph	5 mph	6 mph	7 mph
<b>FT</b> 1.0 (50 M)	10	0.10	13	3.95	3.30	2.85	2.50	2.95	2.50	2.10	1.9
	20	0.14	18	5.55	4.60	3.95	3.45	4.15	3.45	2.95	2.6
	30	0.18	23	6.95	5.80	4.95	4.35	5.20	4.35	3.70	3.3
	40	0.20	26	7.90	6.60	5.65	4.95	5.95	4.95	4.25	3.7
<b>FT</b> 1.5 (50 M)	10	0.15	20	5.93	4.95	4.28	3.75	4.43	3.75	3.15	2.8
	20	0.21	27	8.33	6.90	5.93	5.18	6.23	5.18	4.43	3.9
	30	0.26	34	10.43	8.70	7.43	6.53	7.80	6.53	5.55	4.9
	40	0.30	38	11.85	9.90	8.48	7.43	8.93	7.43	6.38	5.6
<b>FT</b> 2.0 (50 M)	10	0.20	26	7.9	6.6	5.7	5.0	5.9	5.0	4.2	3.7
	20	0.28	36	11.1	9.2	7.9	6.9	8.3	6.9	5.9	5.2
	30	0.35	45	13.9	11.6	9.9	8.7	10.4	8.7	7.4	6.5
	40	0.40	51	15.8	13.2	11.3	9.9	11.9	9.9	8.5	7.4
<b>FT</b> 2.5 (50/30 M)	10	0.25	32	9.9	8.3	7.1	6.2	7.5	6.2	5.3	4.7
	20	0.36	46	14.0	11.5	10.0	8.8	10.5	8.8	7.6	6.6
	30	0.44	56	17.0	14.5	12.5	11.0	13.0	11.0	9.3	8.1
	40	0.50	64	20.0	16.5	14.0	12.5	15.0	12.5	10.5	9.3
<b>FT</b> 3.0 (50/30 M)	10	0.30	39	11.9	9.9	8.6	7.5	8.9	7.5	6.3	5.6
	20	0.42	54	16.7	13.8	11.9	10.4	12.5	10.4	8.9	7.8
	30	0.53	68	20.9	17.4	14.9	13.1	15.6	13.1	11.1	9.8
	40	0.60	77	23.7	19.8	17.0	14.9	17.9	14.9	12.8	11.1
<b>FT</b> 4.0 (30 M)	10	0.40	52	15.8	13.2	11.4	10.0	11.8	10.0	8.4	7.4
	20	0.56	72	22.2	18.4	15.8	13.8	16.6	13.8	11.8	10.4
	30	0.70	90	27.8	23.2	19.8	17.4	20.8	17.4	14.8	13.0
	40	0.80	102	32	26.4	22.6	19.8	23.8	19.8	17.0	14.8
<b>FT</b> 5.0 (30 M)	10	0.50	64	20	16.5	14.1	12.4	14.9	12.4	10.6	9.3
	20	0.71	91	28	23	20	17.6	21	17.6	15.1	13.2
	30	0.87	111	34	29	25	22	26	22	18.5	16.1
	40	1.00	128	40	33	28	25	30	25	21.0	18.6
<b>FT</b> 7.5 (30 M)	10	0.75	96	30	25	21	19	22	19	15.9	14.0
	20	1.07	137	42	35	30	26	32	26	23	19.8
	30	1.31	167	51	44	38	33	39	33	28	24
	40	1.50	192	60	50	42	38	45	38	32	28
<b>FT</b> 10.0 (30 M)	10	1.00	128	40	33	28	25	30	25	21	19
	20	1.42	182	56	46	40	35	42	35	30	26
	30	1.74	222	68	58	50	44	52	44	37	32
	40	2.00	256	80	66	56	50	60	50	42	37



FT

## Features

- Flat spray nozzle
- **Low/Medium drift potential**
- Extremely coarse droplets
- Best performance range 15-45 psi
- Fits round caps, #Y8253051 series

## Range of application

Soil-incorporated herbicides, liquid fertilizers in a drop tube configuration

## List Price ea.

FT 140- 1.0	\$2.50
FT 140-1.5	\$2.50
FT 140- 2.0	\$2.50
FT 140- 2.5	\$2.50
FT 140- 3.0	\$2.50
FT 140- 4.0	\$2.50
FT 140- 5.0	\$2.50
FT 140- 7.5	\$2.50
FT 140- 10	\$2.50

## Sample order

Type + spray angle + material = order number  
 FT 2.0 140° S (Stainless Steel) = FT 2.0 S  
 FT 2.0 140° POM = FT 2.0

- Spray pressure measured at the nozzle tip.
- The stated gallons per acre rates apply to water.
- Check your nozzle flow rates prior to each spray season.
- Make sure that all nozzles have the same designed flow rate.

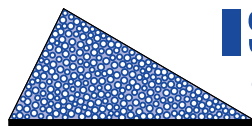
## ASABE S-572

### Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extremely coarse

Classifications are subject to change






## IS

### off-center air induction nozzles

**Spray angle:** 80°  
**Material:** POM

Nozzle (  )	Flow rate in gpm per nozzle					
	psi					
	40	60	75	90	100	115
<b>IS</b> 80-02 (50 M)	0.15	0.19	0.21	0.23	0.24	0.25
<b>IS</b> 80-025 (50 M)	0.21	0.25	0.31	0.34	0.35	0.37
<b>IS</b> 80-03 (50 M)	0.26	0.33	0.37	0.4	0.42	0.45
<b>IS</b> 80-04 (50 M)	0.33	0.43	0.48	0.52	0.54	0.58
<b>IS</b> 80-05 (50/30 M)	0.37	0.48	0.53	0.58	0.6	0.65
<b>IS</b> 80-06 (50/30 M)	0.41	0.53	0.59	0.65	0.67	0.72

List Price ea.	
IS 80-02	\$22.23
IS 80-025	\$22.23
IS 80-03	\$22.23
IS 80-04	\$22.23
IS 80-05	\$22.23
IS 80-06	\$22.23



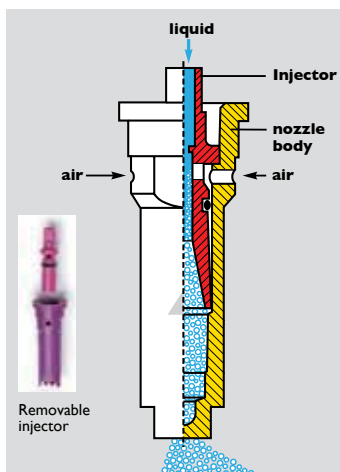
IS

#### Features

- Venturi air induction flat spray nozzle
- Best performance range 30-115 psi  
30-220 psi for orchard/vineyard
- **Very low drift potential**
- Uniform, large droplet size
- Available in polyacetal
- Removable injector system for easy cleaning
- Use with ID nozzle as companion boom end nozzle
- Fits 10mm caps, #Y8253049 series

#### Range of application

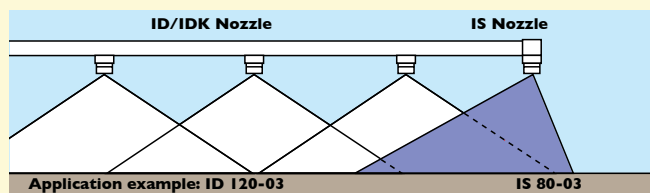
Herbicides, fungicides, insecticides, liquid fertilizers, plant growth regulators, row crop banding



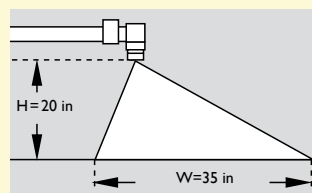
#### Sample order

Type + spray angle + nozzle size + material = order number  
IS 80° 02 (POM) = IS 80-02

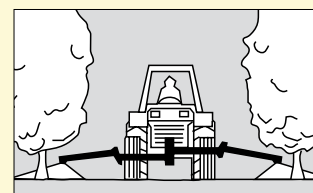
- Spray pressure measured at the nozzle tip.
- The stated gallons per acre rates apply to water.
- Check your nozzle flow rates prior to each spray season.
- Make sure that all nozzles have the same designed flow rate.



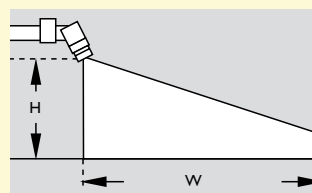
#### Defined edge spraying



Spray dimensions



Band spraying in orchards/vineyards

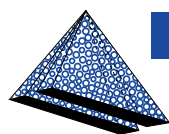


Accessories: swivel nozzle bodies, etc.





PARTNERS IN SPRAYING



## IDKT

•compact venturi air induction nozzles

**Spray angle:** 120°

**Material:** POM. POM/Ceramic



IDKT

### Features

- Compact venturi air induction twin flat spray nozzle
- **Very low drift potential**
- Very coarse to medium droplets
- 120° nozzle, featuring two angled spray fans, 30° forwards and 30° backwards
- Best performance range 15-90 psi
- Removable fixed position injector
- Fits 8 mm caps, #Y8253048 series

### Range of application

Herbicides, fungicides, insecticides, liquid fertilizers, plant growth regulators

### Main benefits of IDKT nozzles

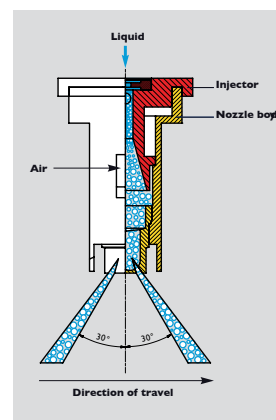
- Compact design minimizes clogging and breakage
- Excellent coverage on dense foliage and vertical targets

### List Price ea.

IDKT 120-02	\$16.09
IDKT 120-025	\$16.09
IDKT 120-03	\$16.09
IDKT 120-04	\$16.09
IDKT 120-05	\$16.09

### CERAMIC

IDKT 120-015C	\$35.37
IDKT 120-02C	\$35.37
IDKT 120-025C	\$35.37
IDKT 120-03C	\$35.37
IDKT 120-04C	\$35.37
IDKT 120-05C	\$35.37



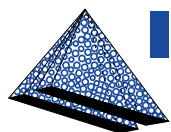
### Sample order

Type	+	spray angle	+	nozzle size	+	material	=	order number
IDKT		120°		04		POM	=	IDKT 120-04
IDKT		120°		04		C (Ceramic)	=	IDKT 120-04 C

- Spray pressure measured at the nozzle tip.
- The stated gallons per acre rates apply to water.
- Check your nozzle flow rates prior to each spray season.
- Make sure that all nozzles have the same designed flow rate.





PARTNERS IN SPRAYING



# IDKT

•compact venturi air induction nozzles

CONT...

	ASABE S-572		Capacity per nozzle		Gallons/Acre									
			psi	gpm	oz/min	4 mph	5 mph	6 mph	7 mph	8 mph	10 mph	12 mph	14 mph	16 mph
<b>IDKT</b> 120-02 (50 M)	VC	20	0.14	18	10.4	8.3	6.9	5.9	5.2	4.2	3.5	3	2.6	
	C	30	0.17	22	12.6	10.1	8.4	7.2	6.3	5	4.2	3.6	3.2	
	C	40	0.20	26	14.9	11.9	9.9	8.5	7.4	5.9	5	4.2	3.7	
	M	50	0.22	28	16.3	13.1	10.9	9.3	8.2	6.5	5.4	4.7	4.1	
	M	60	0.24	31	17.8	14.3	11.9	10.2	8.9	7.1	5.9	5.1	4.5	
	M	70	0.26	33	19.3	15.4	12.9	11	9.7	7.7	6.4	5.5	4.8	
	M	80	0.28	36	21	16.6	13.9	11.9	10.4	8.3	6.9	5.9	5.2	
	M	90	0.30	38	22	17.8	14.9	12.7	11.1	8.9	7.4	6.4	5.6	
<b>IDKT</b> 120-025 (50 M)	VC	20	0.18	23	13.4	10.7	8.9	7.8	6.7	5.3	4.5	3.8	3.4	
	VC	30	0.22	28	16.3	13.1	10.9	9.3	8.2	6.5	5.4	4.7	4.1	
	C	40	0.25	32	18.6	14.9	12.4	10.6	9.3	7.4	6.2	5.3	4.6	
	C	50	0.28	36	21	16.6	13.9	11.9	10.4	8.3	6.9	5.9	5.2	
	C	60	0.31	40	23	18.4	15.3	13.2	11.5	9.2	7.7	6.6	5.8	
	M	70	0.33	42	25	19.6	16.3	14	12.3	9.8	8.2	7	6.1	
	M	80	0.35	45	26	21	17.3	14.9	13	10.4	8.7	7.4	6.5	
	M	90	0.38	49	28	23	18.8	16.1	14.1	11.3	9.4	8.1	7.1	
<b>IDKT</b> 120-03 (50 M)	VC	20	0.21	27	15.6	12.5	10.4	8.9	7.8	6.2	5.2	4.5	3.9	
	VC	30	0.26	33	19.3	15.4	12.9	11.0	9.7	7.7	6.4	5.5	4.8	
	C	40	0.30	38	22.0	17.8	14.9	12.7	11.1	8.9	7.4	6.4	5.6	
	C	50	0.34	44	25.0	20.0	16.8	14.4	12.6	10.1	8.4	7.2	6.3	
	C	60	0.37	47	27.0	22.0	18.3	15.7	13.7	11.0	9.2	7.8	6.9	
	C	70	0.40	51	30.0	24.0	19.8	17.0	14.9	11.9	9.9	8.5	7.4	
	M	80	0.42	54	31.0	25.0	21.0	17.8	15.6	12.5	10.4	8.9	7.8	
	M	90	0.45	58	33.0	27.0	22.0	19.1	16.7	13.4	11.1	9.5	8.4	
<b>IDKT</b> 120-04 (50 M)	VC	20	0.28	36	21.0	16.8	14.0	12.0	10.5	8.4	7.0	6.0	5.3	
	VC	30	0.35	45	26.0	21.0	17.3	14.9	13.0	10.4	8.7	7.4	6.4	
	VC	40	0.40	51	30.0	24.0	19.8	17.0	14.9	11.9	9.9	8.5	7.4	
	C	50	0.45	58	33.0	27.0	22.0	19.1	16.7	13.4	11.1	9.5	8.4	
	C	60	0.49	63	36.0	29.0	24.0	21.0	18.2	14.6	12.1	10.4	9.1	
	C	70	0.53	68	39.0	31.0	26.0	22.0	19.7	15.7	13.1	11.2	9.8	
	M	80	0.57	73	42.0	34.0	28.0	24.0	21.0	16.9	14.1	12.1	10.6	
	M	90	0.60	77	45.0	36.0	30.0	25.0	22.0	17.8	14.9	12.7	11.1	
<b>IDKT</b> 120-05 (50/30 M)	VC	20	0.35	45	26.3	21.0	17.5	15.0	13.1	10.5	8.8	7.5	6.6	
	VC	30	0.43	55	32.0	26.0	21.0	18.2	16.0	12.8	10.6	9.1	8.0	
	VC	40	0.50	64	37.0	30.0	25.0	21.0	18.6	14.9	12.4	10.6	9.3	
	VC	50	0.56	72	42.0	33.0	28.0	24.0	21.0	16.6	13.9	11.9	10.4	
	VC	60	0.61	78	45.0	36.0	30.0	26.0	23.0	18.1	15.1	12.9	11.3	
	C	70	0.66	84	49.0	39.0	33.0	28.0	25.0	19.6	16.3	14.0	12.3	
	C	80	0.71	91	53.0	42.0	35.0	30.0	26.0	21.0	17.6	15.1	13.2	
	M	90	0.75	96	56.0	45.0	37.0	32.0	28.0	22.0	18.6	15.9	13.9	

## ASABE S-572

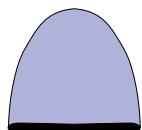
### Droplet size classification

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extremely coarse

Classifications are subject to change




PARTNERS IN SPRAYING



**FD**

•liquid fertilizer nozzles

**Spray angle:** 130°  
**Material:** POM

	Spray angle @ 40 psi	Gallons/minute @ 40 psi
<b>FD 04</b>	130°	0.38
<b>FD 05</b>	130°	0.48
<b>FD 06</b>	130°	0.65
<b>FD 08</b>	130°	0.85
<b>FD 10</b>	130°	1.05
<b>FD 15</b>	130°	1.60
<b>FD 20</b>	130°	2.10

**Sample order**

Type + nozzle size + material = order number  
FD 06 POM = FD 06

List Price ea.	
FD 04	\$29.35
FD 05	\$29.35
FD 06	\$29.35
FD 08	\$29.35
FD 10	\$29.35
FD 15	\$29.35
FD 20	\$29.35



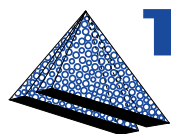
**FD**

**Features**

- One piece-nozzle and cap fits most standard nozzle bodies
- **Very low drift potential**
- Coarse droplets minimize crop damage and streaking
- Best performance range 20-60 psi
- ISO coded for agricultural standard

**Range of application**

Ideal for liquid fertilizer application, turfgrass, irrigation systems



## Twin Spray Cap



Twin-Air Low Pressure



Twin-Air



Twin-Air Ceramic



Twin-Air

### Features

- **Very low drift potential**
- Twin-Air Low Pressure
  - 30-50 psi working range
  - Medium to fine droplets
  - Excellent canopy penetration
  - IDK air induction spray in front position and extended range LU spray nozzle in back position
- Twin-Air
  - 15-90 psi working range
  - Ideal balance between uniform coverage, canopy penetration and drift control
  - Successful applications of fungicides to combat Asian Soybean Rust
  - IDK air induction spray in front and back position
- Twin-Air Ceramic
  - 80 psi and up working range
  - Provides extended wear and performance while maintaining drift control
  - Ideally suited for high pressure applications
- All include cap, #09216356A0000

### Range of application

Successful applications of fungicides to combat Asian Soybean Rust: Excellent canopy penetration, high foliar coverage at the lower and mid range positions, and effective drift control

List Price ea.

09216356A000

\$13.33

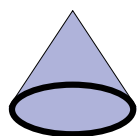
### Sample order

Type	=	order number
TwinSprayCap System MULTIJET (incl. Gasket no. 095.015.6C.08.59.0)	=	092. 163. 56. 00
TwinSprayCap System Hardi (incl. Gasket no. 095.015.73.01.60.0)	=	092. 163. 56. 01





PARTNERS IN SPRAYING

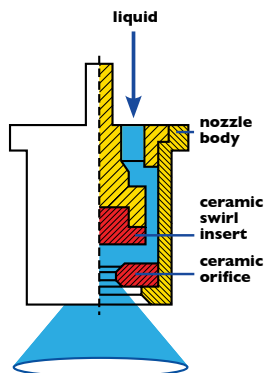


**TR**

•hollow cone nozzles with insert

**Spray angle:** 80°

**Material:** POM/Ceramic



List Price ea.	
TR 80-005	\$13.33
TR 80-0067	\$13.33
TR 80-01	\$13.33
TR 80-015	\$13.33
TR 80-02	\$13.33
TR 80-025	\$13.33
TR 80-03	\$13.33
TR 80-04	\$13.33
TR 80-05	\$13.33



**TR**

#### Features

- Hollow cone spray nozzle with ceramic insert
- Removable insert for easy cleaning
- **Medium drift potential**
- Medium to fine droplets
- Best performance range 40-120 psi for row crops  
40-290 psi for orchard/vineyard and grove crops
- Very good wear and chemical resistance
- Good crop penetration
- Fits round caps, #Y8253050 series

#### Range of application

Excellent for contact fungicides, insecticides, and plant growth regulators where surface coverage is critical

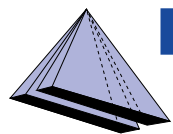
	Flow rate in gpm per nozzle																	
	 psi																	
	30	40	50	60	70	80	90	100	120	140	160	180	200	220	240	260	280	300
<b>TR</b> 80-005 (100 M)	0.043	0.05	0.055	0.06	0.064	0.068	0.071	0.075	0.081	0.086	0.092	0.096	0.102	0.105	0.109	0.113	0.118	0.121
<b>TR</b> 80-0067 (50 M)	0.058	0.067	0.074	0.081	0.086	0.092	0.096	0.102	0.11	0.117	0.125	0.132	0.139	0.145	0.151	0.157	0.163	0.168
<b>TR/ITR</b> 80-01 (50 M)	0.088	0.1	0.111	0.12	0.129	0.138	0.145	0.153	0.165	0.178	0.188	0.198	0.208	0.218	0.226	0.234	0.243	0.251
<b>TR/ITR</b> 80-015 (50 M)	0.131	0.15	0.167	0.182	0.196	0.209	0.221	0.233	0.254	0.273	0.291	0.308	0.325	0.339	0.353	0.367	0.38	0.393
<b>TR/ITR</b> 80-02 (50 M)	0.174	0.2	0.223	0.244	0.261	0.279	0.296	0.31	0.337	0.364	0.388	0.41	0.433	0.452	0.471	0.489	0.508	0.525
<b>TR</b> 80-025 (50 M)	0.22	0.25	0.28	0.3	0.324	0.347	0.368	0.387	0.424	0.458	0.49	0.519	0.548	0.574	0.6	0.624	0.648	0.67
<b>TR</b> 80-03 (50 M)	0.26	0.3	0.335	0.367	0.396	0.423	0.448	0.473	0.517	0.558	0.597	0.633	0.668	0.698	0.731	0.759	0.788	0.816
<b>TR</b> 80-04 (50M)	0.347	0.4	0.447	0.489	0.528	0.564	0.598	0.63	0.69	0.745	0.796	0.843	0.889	0.932	0.973	1.02	1.05	1.1
<b>TR</b> 80-05 (50 M)	0.43	0.5	0.57	0.61	0.67	0.71	0.75	0.79	0.87	0.94	1.01	1.06	1.12	1.17	1.22	1.27	1.31	1.38

#### Sample order

Type + spray angle + nozzle size + material = order number  
TR 80° 02 C (Ceramic) = TR 80-02 C



PARTNERS IN SPRAYING



**DF**

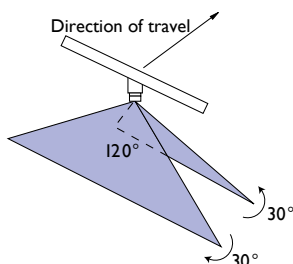
•twin flat spray nozzles

**Spray angle:** 120°

**Material:** Stainless Steel

**List Price ea.**

DF 120-02	\$19.43
DF 120-03	\$19.43
DF 120-04	\$19.43
DF 120-05	\$19.43
DF 120-06	\$19.43



**Features**

- Twin flat spray nozzle
- **Medium drift potential**
- Medium to fine droplets
- 120° nozzle, featuring two angled spray fans, 30° forward and 30° backwards
- Best performance range 30-75 psi
- Fits 10 mm caps, #Y8253049 series





**DF**

**Range of application**

Herbicides, fungicides, insecticides, liquid fertilizers, plant growth regulators

**Main benefits of DF nozzles**

- Special purpose nozzle for fine spray applications
- Excellent for contact fungicides and surface coverage

		Capacity per nozzle		Gallons/Acre											
		psi	gpm	oz/min	4 mph	5 mph	6 mph	7 mph	8 mph	9 mph	10 mph	12 mph	14 mph	16 mph	18 mph
<b>DF</b> 120-02 (50 M)	30	0.17	22.0	12.6	10.1	8.4	7.2	6.3	5.6	5.0	4.2	3.6	3.2	2.8	
	40	0.20	26.0	14.9	11.9	9.9	8.5	7.4	6.6	5.9	5.0	4.2	3.7	3.3	
	50	0.22	28.0	16.3	13.1	10.9	9.3	8.2	7.3	6.5	5.4	4.7	4.1	3.6	
	60	0.24	31.0	17.8	14.3	11.9	10.2	8.9	7.9	7.1	5.9	5.1	4.5	4.0	
	75	0.27	34.8	20.0	16.1	13.4	11.5	10.0	8.9	8.0	6.6	5.7	5.1	4.5	
<b>DF</b> 120-03 (50 M)	30	0.26	33.0	19.3	15.4	12.9	11.0	9.7	8.6	7.7	6.4	5.5	4.8	4.3	
	40	0.30	38.0	22.0	17.8	14.9	12.7	11.1	9.9	8.9	7.4	6.4	5.6	5.0	
	50	0.34	44.0	25.0	20.0	16.8	14.4	12.6	11.2	10.1	8.4	7.2	6.3	5.6	
	60	0.37	47.0	27.0	22.0	18.3	15.7	13.7	12.2	11.0	9.2	7.8	6.9	6.1	
	75	0.42	52.9	30.4	24.8	20.6	17.7	15.4	13.7	12.4	10.4	8.8	7.8	6.9	
<b>DF</b> 120-04 (50 M)	30	0.35	45.0	26.0	21.0	17.3	14.9	13.0	11.6	10.4	8.7	7.4	6.5	5.8	
	40	0.40	51.0	30.0	24.0	19.8	17.0	14.9	13.2	11.9	9.9	8.5	7.4	6.6	
	50	0.45	58.0	33.0	27.0	22.0	19.1	16.7	14.9	13.4	11.1	9.5	8.4	7.4	
	60	0.49	63.0	36.0	29.0	24.0	21.0	18.2	16.2	14.6	12.1	10.4	9.1	8.1	
	75	0.55	70.7	40.4	32.6	27.0	23.6	20.4	18.2	16.4	13.6	11.7	10.2	9.1	
<b>DF</b> 120-05 (50/30 M)	30	0.43	55.0	32.0	26.0	21.0	18.2	16.0	14.2	12.8	10.6	9.1	8.0	7.1	
	40	0.50	64.0	37.0	30.0	25.0	21.0	18.6	16.5	14.9	12.4	10.6	9.3	8.3	
	50	0.56	72.0	42.0	33.0	28.0	24.0	21.0	18.5	16.6	13.9	11.9	10.4	9.2	
	60	0.61	78.0	45.0	36.0	30.0	26.0	23.0	20.0	18.1	15.1	12.9	11.3	10.1	
	75	0.67	86.0	49.6	39.7	33.1	28.7	25.4	22.1	20.0	16.7	14.2	12.5	11.1	
<b>DF</b> 120-06 (50/30 M)	30	0.52	67.0	39.0	31.0	26.0	22.0	19.3	17.2	15.4	12.9	11.0	9.7	8.6	
	40	0.6	77.0	45.0	36.0	30.0	25.0	22.0	19.8	17.8	14.9	12.7	11.1	9.9	
	50	0.67	86.0	50.0	40.0	33.0	28.0	25.0	22.0	19.9	16.6	14.2	12.4	11.1	
	60	0.73	93.0	54.0	43.0	36.0	31.0	27.0	24.0	22.0	18.1	15.5	13.6	12.0	
	75	0.82	104.1	60.4	48.1	40.3	34.7	30.2	26.9	24.6	20.3	17.3	15.2	13.4	

**Sample order**

Type + spray angle + nozzle size + material = order number  
DF 120° 02 S (Stainless Steel) = DF 120-02 S

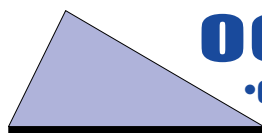
- Spray pressure measured at the nozzle tip.
- The stated gallons per acre rates apply to water.
- Check your nozzle flow rates prior to each spray season.
- Make sure that all nozzles have the same designed flow rate.

**ASABE S-572**

**Droplet size classification**

VF	Very fine
F	Fine
M	Medium
C	Coarse
VC	Very coarse
EC	Extremely coarse

Classifications are subject to change



**OC**

•off center flat spray nozzles  
(small sizes)

**Spray angle:** 90°

**Material:** Brass

List Price ea.

OC 90-02 B	\$16.14
OC 90-03 B	\$16.14
OC 90-04 B	\$16.14



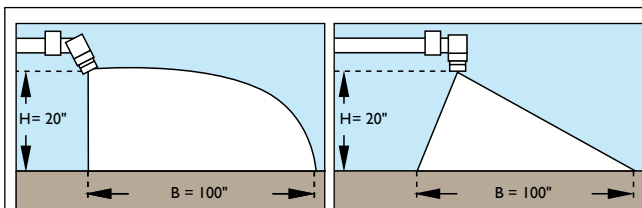
**DF**

### Features

- Asymmetrical 90° flat spray nozzle
- Ideal for banding, underleaf applications, boom end spray patterns
- **Medium drift potential**
- Best performance range 30-75 psi
- ISO coded for agricultural standards
- Minimal clogging
- Choose 8 mm cap, # Y8253048 series

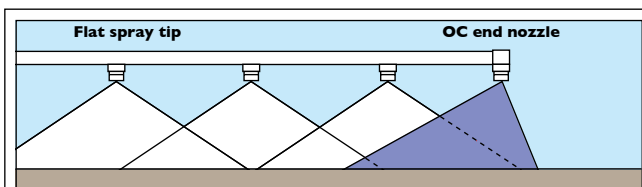
### Range of application

Herbicides, fungicides, insecticides, plant growth regulators, and liquid fertilizer

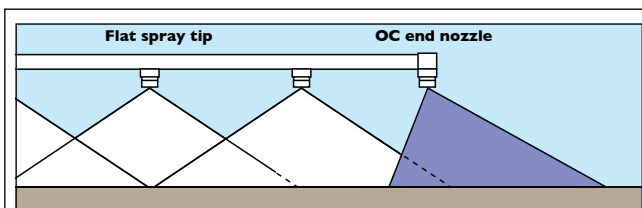


Spray dimensions

OC nozzles mounted on individual or double swivel joints allow adjustment to any angle and, therefore, wide and narrow covered areas.



Defined edge spraying



### Adaption of boom width

For adaption of boom width replace the flat spray nozzle at the end of the boom by an OC nozzle. The effective extension of the boom amounts to 20" (10" to each side). However, optimal cross distribution will be achieved by using a double swivel nozzle holder at the final nozzle body for the flat spray and OC nozzle.

Nozzle	psi	Nozzle capacity gpm	Spray width in inches	Gallons/Acre 18" spraying height		
				3 mph	4 mph	5 mph
<b>OC 90-02</b> (50 M)	30	0.17	68	5.0	3.7	3.0
	40	0.20	70	5.7	4.2	3.4
	60	0.24	72	6.6	5.0	4.0
	75	0.27	73	7.6	5.9	4.5
<b>OC 90-03</b> (50 M)	30	0.26	77	6.7	5.0	4.0
	40	0.30	80	7.4	5.6	4.5
	60	0.37	82	8.9	6.7	5.4
	75	0.43	83	10.1	7.6	5.9
<b>OC 90-04</b> (50 M)	30	0.35	91	7.6	5.7	4.6
	40	0.40	93	8.5	6.4	5.1
	60	0.49	94	10.3	7.7	6.2
	75	0.57	95	11.7	8.7	7.1
<b>OC 90-05</b> (50 M)	30	0.44	95	9.0	6.8	5.4
	40	0.50	97	10.2	7.6	6.1
	60	0.61	98	12.3	9.2	7.4
	75	0.71	99	13.9	10.1	8.4
<b>OC 90-06</b> (50 M)	30	0.52	99	10.4	7.8	6.2
	40	0.60	101	11.8	8.8	7.1
	60	0.73	102	14.2	10.6	8.5
	75	0.84	103	16.1	11.5	9.7
<b>OC 90-08</b> (50 M)	30	0.69	100	13.7	10.2	8.2
	40	0.80	102	15.5	11.6	9.3
	60	0.98	104	18.7	14.0	11.2
	75	1.13	105	21.2	15.9	12.7
<b>OC 90-12</b> (30 M)	30	1.04	102	20.0	15.1	12.1
	40	1.20	104	23.0	17.1	13.7
	60	1.47	105	28.0	21.0	16.6
	75	1.69	106	32.0	23.0	18.9

- Application data valid for water
- Gauge the nozzle flow rates prior to each spraying season
- Spray pressure at the nozzle tip (gauged with a diaphragm valve)

### Sample order

Type	+	material	=	order number
OC 2		Brass	=	OC 2 Brass
OC 2		S (Stainless Steel)	=	OC 2 S



## Nozzle Bodies

DESCRIPTION	PART #	PRICE ea.
Swivel nozzle body, nylon	Y8247015	1/4" F \$20.46



DESCRIPTION	PART #	PRICE ea.
Quick fit adapter, 1/4", nylon, QD adapter	Y8230021	1/4" \$5.89



DESCRIPTION	PART #	PRICE ea.
Dry boom nozzle body, 3/8", elbow barb	Y8231001	3/8" \$6.90
Dry boom nozzle body, 1/2", elbow barb	Y8231003	1/2" \$6.90
Dry boom nozzle body, 3/4", elbow barb	Y8231005	3/4" \$6.90



DESCRIPTION	PART #	PRICE ea.
Dry boom nozzle body, 3/8", tee barb	Y8231007	3/8" \$6.90
Dry boom nozzle body, 1/2", tee barb	Y8231009	1/2" \$6.90
Dry boom nozzle body, 3/4", tee barb	Y8231011	3/4" \$6.90



DESCRIPTION	PART #	PRICE ea.
Dry boom nozzle body, 3/8", cross barb	Y8231013	3/8" \$6.90
Dry boom nozzle body, 1/2", cross barb	Y8231015	1/2" \$6.90
Dry boom nozzle body, 3/4", cross barb	Y8231017	3/4" \$6.90





## Nozzle Bodies

DESCRIPTION	PART #		PRICE ea.
Dry boom nozzle body, 3/8", elbow, top diaphragm	Y8235019	3/8"	\$14.95
Dry boom nozzle body, 1/2", elbow, top diaphragm	Y8235021	1/2"	\$14.95
Dry boom nozzle body, 3/4", elbow, top diaphragm	Y8235023	3/4"	\$14.95

DESCRIPTION	PART #		PRICE ea.
Dry boom nozzle body, 3/8", tee, top diaphragm	Y8235025	3/8"	\$14.95
Dry boom nozzle body, 1/2", tee, top diaphragm	Y8235027	1/2"	\$14.95
Dry boom nozzle body, 3/4", tee, top diaphragm	Y8235029	3/4"	\$14.95

DESCRIPTION	PART #		PRICE ea.
Dry boom nozzle body, 3/8", cross barb, side diaphragm	Y8235013	3/8"	\$14.71
Dry boom nozzle body, 1/2", cross barb, side diaphragm	Y8235015	1/2"	\$17.81
Dry boom nozzle body, 3/4", cross barb, side diaphragm	Y8235017	3/4"	\$17.81

DESCRIPTION	PART #		PRICE ea.
1/2" pipe wet boom nozzle body, diaphragm, EPDM, .39"	Y8234007	1/2"	\$13.33
3/4" pipe wet boom nozzle body, diaphragm, EPDM, .39"	Y8234009	3/4"	\$15.51
1" pipe wet boom nozzle body, diaphragm, EPDM, .39"	Y8234051	1"	\$15.54

DESCRIPTION	PART #		PRICE ea.
Rotary nozzle body, 3 way, diaphragm right, wet boom, EPDM, .39" port	Y8244138	1"	\$34.49

DESCRIPTION	PART #		PRICE ea.
Single hose barb for Rotary to dry boom, 1/2", for .41" port	Y8294014	1/2"	\$2.60
Single hose barb for Rotary to dry boom, 3/4", for .41" port	Y8294015	3/4"	\$2.60
Single hose barb for Rotary to dry boom, 3/4", for .41" port	Y8294028	3/4"	\$3.32
Single hose barb for Rotary to dry boom, 1", for .41" port	Y8294029	1"	\$3.32

DESCRIPTION	PART #		PRICE ea.
Double hose barb for Rotary to dry boom, 1/2", for .41" port	Y8294017	1/2"	\$2.60
Double hose barb for Rotary to dry boom, 3/4", for .41" port	Y8294018	3/4"	\$2.60
Double hose barb for Rotary to dry boom, 3/4", for .41" port	Y8294030	3/4"	\$3.32
Double hose barb for Rotary to dry boom, 1", for .41" port	Y8294031	1"	\$3.32





**Y8253040**



**Y8253050**



**YG00002020**

## Winged Bayonet Caps

DESCRIPTION	PART #		PRICE ea.
Winged bayonet caps, ID, IS, DF, FL, 10 mm across flats	Y8253049	black	\$2.12
Winged bayonet caps, TR, ITR, poly FT, round	Y8253050	black	\$2.12
Winged bayonet caps, poly FT self aligning	Y8253051	black	\$2.12
Winged bayonet caps, closed	Y8253040	black	\$2.12
Winged bayonet caps, 8 mm/10 mm Universal	Y8253080	black	\$2.12
Replacement W B Cap gaskets	YG00002020	black	\$0.72



**Y8139002**



**Y8139003**



**Y8139004**



**Y8139005**



**Y8139011**

## Spray Tip Filters

DESCRIPTION	PART #		PRICE ea.
Nozzle filters, poly, stainless screen, 50 mesh	Y8139002	black	\$2.17
Nozzle filters, poly, stainless screen, 100 mesh	Y8139003	yellow	\$2.17
Nozzle filters, poly, 50 mesh, stainless screen, w/ check valve	Y8139004	blue	\$2.54
Nozzle filters, poly, 100 mesh, stainless screen, w/ check valve	Y8139005	red	\$2.54

Nozzle filters, brass, 50 mesh, stainless screen, w/ check valve	Y8139009	brass	\$8.84
Nozzle filters, brass, 100 mesh, stainless screen, w/ check valve	Y8139010	brass	\$8.84
Nozzle filters, brass, stainless screen, 50 mesh	Y8139011	brass	\$7.78
Nozzle filters, brass, stainless screen, 100 mesh	Y8139012	brass	\$7.78



## Suction Filters

DESCRIPTION	PART #	PRICE ea.
Suction Filter for detergents (with counterweight)	600146	\$2.47



## Hose Drop

DESCRIPTION	PART #	PRICE ea.
Hose Drop Tube Assembly; 15"; Bayonet Connection	Y8251000	\$21.70
Hose Drop Tube Assembly; 24"; Bayonet Connection	Y8251002	\$22.90



## 18" Deluxe Pistol Grip Spray Gun

- Heavy Duty Construction
- Working pressure up to 300 PSI
- #18 Adjustable Brass Pattern Tip
- Suggested Usage: Applying Insecticides and Herbicides
- Ideal For Use With ATV Sprayers, Spot Sprayers, and Trailer Sprayers

PART #	PRICE ea.
600147	\$54.38



## Spot Spray Gun

- Spray Gun with #18 orifice
- 18" overall length
- 3/8" hose barb connection
- Filter in handle
- Working pressure 200 PSI

PART #	PRICE ea.
WNS 21110	\$25.49

**Nozzle Types & Spray Patterns****Flat Fan**— AD, LU, DF, ID, IS, IDK, IDK-T, ES, ST, OC**Hollow Cone**— TR, ITR**Flood / Fertilizer**— FD, FT, FL**Recommended windspeed duty limits for key Lechler® nozzles**

Type	Name	Maximum wind speed
Flat Fan	LU	7 MPH
Flat Fan w/insert	AD	9 MPH
Air assisted compact flat fan	IDK, IDK-T	11 MPH
Air assisted flat fan	ID, IS	11 MPH

**ASABE S572 Droplet Size Classifications By Nozzle**

Symbol	Color Code	Droplet Size Category	Nozzle
VF	Red	Very Fine	DF, TR
F	Orange	Fine	LU, DF, IDK-T
M	Yellow	Medium	AD, LU, IDK, IDK-T, OC, ST, ES
C	Blue	Coarse	AD, ID, IS, IDK, IDK-T, ITR
VC	Green	Very Coarse	AD, ID, IS, IDK, IDK-T, ITR, FT
XC	White	Extremely Coarse	ID, IS, FD, FL, ITR

**Lechler® ISO 10625 Nozzle Color & Volume Code Chart**

Size/Color	Gallons/Minute @ 40 PSI
005-Blue Lilac	0.05
0067-Olive Green	0.07
0075-Light Pink	0.08
01-Pure Orange	0.11
015-Traffic Green	0.16
02-Zinc Yellow	0.21
025-Signal Violet	0.26
03-Genetian Blue	0.31
035-Brown Red	0.37
04-Flame Red	0.42
05-Nut Brown	0.52
06-Signal Grey	0.62
08-Traffic White	0.83
10-Light Blue	1.06
15-Yellow Green	1.59
20-Black	2.11

**Sprayer Data to Note for Correct Tip Selection****CROP CONDITIONS:**Bare Ground  
Row Crop/Canopied Height  
Banding

Overall working boom width

L Section End  
L Section Inner  
Middle Section  
R Section Inner  
R Section End**Nozzle Identification**Nozzle Type  
Material: POM  
80° Spray Angle  
0.15 GPM @ 40 PSI  
Brand Name**GENERAL SPRAYER INFORMATION:**Boom target height above crop  
Nozzle body spacing width, inchesGallons/Acre Target  
Gallons/Minute TargetMinimum Field Working Speed  
Maximum Field Working Speed  
Sprayer Tank SizeWorking pump pressure target  
Maximum pump pressureSpray controller model  
Speed sensor typeSpray material used  
Adjuvant used

Wind conditions expected

Special equipment needs

Nozzle Materials	Best Applications	Characteristics	Approximate Wear Life
Brass	Plant protection materials	Not for fertilizers. May corrode.	Shortest Wear Life
Stainless Steel	Plant protection materials; Liquid fertilizers	For use with high flow rate, high pressure & abrasive compounds.	2-3X brass
Polypropylene	For acidic tank mixes; Cotton defoliation	Good chemical resistance. May use ceramic core.	More wear resistant than SS; 3-4X SS
POM	Plant protection materials; Liquid fertilizers	Good chemical resistance. Very wear resistant. Cost efficient. Equal or better wear than SS.	More wear resistant than SS; 3-5X SS
Ceramic	Plant protection materials; Liquid fertilizers	Extremely wear resistant. Best for air blast sprayer applications. Will not corrode.	More than 4 times longer than POM

**Lechler® Nozzle Best Use Recommendations**

	ID	IS	IDK	IDK-T	LU	ST	AD	DF	OC	ES	TR	ITR	FT	FL	FD
<b>Drift Potential</b>	EX	VL	VL	VL	L/M	M	L	M/H	M	M	M/H	EX	L/M	VL	VL
<b>Herbicides</b>															
Soil Incorporated	E	E	E		E	VG	E		E	VG			E	E	E
Pre Emergence	E	E	E		E	VG	E		E	VG		G	E	E	E
Post E Systemic	E	E	E	E	E	VG	E	G	E	VG	G	G	G		
Post E Contact	VG	VG	VG	E	E	VG	VG	E	E	VG	E		G		
<b>Fungicides</b>															
Systemic	E	E	VG	E	E	VG	E	E	E	VG	VG	VG	G		
Contact	VG	VG	E	E	E	VG	VG	VG	E	VG	E	G	G		
<b>Insecticides</b>															
Systemic	E	E	VG	E	E	VG	E	E	E	VG	VG	VG	G		
Contact	VG	VG	E	E	E	VG	VG	E	E	VG	E	G	G		
<b>Liquid Fertilizer</b>															
	E	E	E		VG	VG	E		VG	G			E	E	E
<b>Plant Growth Regulator</b>															
	E	E	E	E	E	VG	E	G	E	VG	G	G	G		
<b>Boom Irrigation</b>															
	E	E	E		VG	VG	E		VG	VG		VG	G		E

Suitability Ratings: E=Excellent VG=Very Good G=Good

Drift Potential: EX=Extremely Low VL=Very Low L=Low M=Medium H=High



# PARTNERS IN SPRAYING



SPRAY TIPS & ACCESSORIES

## Theoretical Coverage, Single Nozzle, Spray Height & Spray Angle

Spray Angle	NOZZLE SPACING				
	12"	20"	24"	30"	40"
80°	20.2"	33.5"	40.5"	50.5"	66.5"
90°	24"	40"	48"	60"	84"
110°	34.3"	56.5"	68.5"	85.5"	117"
120°	41.5"	70"	83"	104"	134.5"
130°	51.5"	85"	103"	134"	175"
140°	68.5"	106.5"	132"	164.5"	210"

## Suggested Minimum, Optimal Boom Heights...

Nozzle Spray Angle	15"		20"		30"	
	Min.	Optimal	Min.	Optimal	Min.	Optimal
80°	13-15"	22"	17-20"	30"	26-28"	43"
110°	10-11"	15"	15-18"	20"	20-22"	30"
120°	8-10"	15"	12-15"	20"	16-20"	30"

## Boom Height needed to meet desired overlap of Spray Pattern

Nozzle Spacing	20"	30"	40"	60"
% Overlap	Height In Inches			
20%	24"	36"	48"	72"
30%	26"	39"	52"	78"
40%	28"	42"	56"	84"
50%	30"	45"	60"	90"
60%	32"	48"	64"	96"
70%	34"	51"	68"	102"
80%	36"	54"	72"	108"
90%	38"	57"	76"	114"
100%	40"	60"	80"	120"

## Gallons Sprayed per Acre...

$$GPA = \frac{GPM \times 5940}{MPH \times W}$$

**GPA** is gallons per acre of spray applied.

**GPM** is gallons per minute output of each nozzle.

**MPH** is ground speed in miles per hour.

**W** is actual spray width per nozzle in inches.

**5940** is a constant that converts GPM, MPH and W in inches to gallons per acre.

## Each Nozzle's Flow Rate...

$$GPM = \frac{GPA \times MPH \times W}{5940}$$

## US Standard Metric Volume...

Convert	To	Multiply By
Pints	Liters	0.473
Quarts	Liters	0.948
Gallons	Liters	3.785
Ounces	Kilograms	0.029
Pounds	Kilograms	0.454

## US Standard Metric Length...

Inches	Equals
1/4"	6.5 mm
1/2"	13 mm
3/4"	19 mm
1"	25 mm
1-1/4"	32 mm
1-1/2"	38 mm
1-3/4"	44 mm
2"	51 mm
20"	51 cm
30"	76 cm
40"	102 cm
50"	127 cm
60"	152 cm

## Metric Conversions...

Convert	To	Multiply By
Inches	Centimeters	2.54
	Meters	0.025
	Feet	0.083
	Yards	0.027
Miles	Feet	5280
	Yards	1760
	Kilometers	1.609
Centimeters	Inches	0.394
	Feet	0.032
Meters	Inches	39.37
	Feet	3.281
	Yards	1.093
Kilometers	Miles	0.621

## Gallons Per Acre By Boom Width & Speed

60 MPH = 316,800 feet per hour  
43,560 square feet/acre

20 MPH = 105,600 ft/hr  
18 MPH = 95,040 ft/hr  
16 MPH = 84,480 ft/hr  
14 MPH = 73,920 ft/hr  
12 MPH = 63,360 ft/hr  
10 MPH = 52,800 ft/hr  
8 MPH = 42,240 ft/hr  
6 MPH = 31,680 ft/hr  
4 MPH = 21,120 ft/hr

### 60' BOOM SYSTEM

	GPM NEEDED AT BOOM TO SPRAY:							
	5 GPA	10 GPA	15 GPA	20 GPA	30 GPA	40 GPA		
20 MPH	145.5	2.4	12.1	24.2	36.4	48.5	72.7	97.0
18 MPH	130.9	2.2	10.9	21.8	32.7	43.6	65.5	87.3
16 MPH	116.4	1.9	9.7	19.4	29.1	38.8	58.2	77.6
14 MPH	101.8	1.7	8.5	17.0	25.5	33.9	50.9	67.9
12 MPH	87.3	1.5	7.3	14.5	21.8	29.1	43.6	58.2
10 MPH	72.7	1.2	6.1	12.1	18.2	24.2	36.4	48.5
8 MPH	58.2	1.0	4.8	9.7	14.5	19.4	29.1	38.8
6 MPH	43.6	0.7	3.6	7.3	10.9	14.5	21.8	29.1
4 MPH	29.1	0.5	2.4	4.8	7.3	9.7	14.5	19.4

### 75' BOOM SYSTEM

	GPM NEEDED AT BOOM TO SPRAY:							
	5 GPA	10 GPA	15 GPA	20 GPA	30 GPA	40 GPA		
20 MPH	182	3.0	15.1	30.3	45.4	60.6	90.9	121.2
18 MPH	164	2.7	13.6	27.3	40.9	54.5	81.8	109.1
16 MPH	145	2.4	12.1	24.2	36.4	48.5	72.7	96.9
14 MPH	127	2.1	10.6	21.2	31.8	42.4	63.6	84.8
12 MPH	109	1.8	9.1	18.2	27.3	36.4	54.5	72.7
10 MPH	91	1.5	7.6	15.1	22.7	30.3	45.4	60.6
8 MPH	73	1.2	6.1	12.1	18.2	24.2	36.4	48.5
6 MPH	55	0.9	4.5	9.1	13.6	18.2	27.3	36.4
4 MPH	36	0.6	3.0	6.1	9.1	12.1	18.2	24.2

### 90' BOOM SYSTEM

	GPM NEEDED AT BOOM TO SPRAY:							
	5 GPA	10 GPA	15 GPA	20 GPA	30 GPA	40 GPA		
20 MPH	218	3.6	18.2	36.4	54.5	72.7	109.1	145.5
18 MPH	196	3.3	16.4	32.7	49.1	65.5	98.2	130.9
16 MPH	175	2.9	14.5	29.1	43.6	58.2	87.3	116.4
14 MPH	153	2.5	12.7	25.5	38.2	50.9	76.4	101.8
12 MPH	131	2.2	10.9	21.8	32.7	43.6	65.5	87.3
10 MPH	109	1.8	9.1	18.2	27.3	36.4	54.5	72.7
8 MPH	87	1.5	7.3	14.5	21.8	29.1	43.6	58.2
6 MPH	65	1.1	5.5	10.9	16.4	21.8	32.7	43.6
4 MPH	44	0.7	3.6	7.3	10.9	14.5	21.8	29.1

### 120' BOOM SYSTEM

	GPM NEEDED AT BOOM TO SPRAY:							
	5 GPA	10 GPA	15 GPA	20 GPA	30 GPA	40 GPA		
20 MPH	291	4.8	24.2	48.5	72.7	97.0	145.5	193.9
18 MPH	262	4.4	21.8	43.6	65.5	87.3	130.9	174.5
16 MPH	233	3.9	19.4	38.8	58.2	77.6	116.4	155.2
14 MPH	204	3.4	17.0	33.9	50.9	67.9	101.8	135.8
12 MPH	175	2.9	14.5	29.1	43.6	58.2	87.3	116.4
10 MPH	145	2.4	12.1	24.2	36.4	48.5	72.7	97.0
8 MPH	116	1.9	9.7	19.4	29.1	38.8	58.2	77.6
6 MPH	87	1.5	7.3	14.5	21.8	29.1	43.6	58.2
4 MPH	58	1.0	4.8	9.7	14.5	19.4	29.1	38.8

## Speed & Travel Distance

MPH = Distance in feet x 60/time in seconds x 88

Speed	Time to Cover 300 feet
1 MPH	205 seconds
2 MPH	102 seconds
3 MPH	68 seconds
4 MPH	51 seconds
5 MPH	41 seconds
6 MPH	34 seconds
7 MPH	29 seconds
8 MPH	26 seconds
9 MPH	23 seconds
10 MPH	21 seconds
12 MPH	17 seconds
15 MPH	14 seconds
20 MPH	11 seconds

## GPM per Nozzle...

$$GPA \times MPH \times W$$

5940

## GPM per Nozzle in turf...

$$\frac{Gal/1000 \text{ sq ft} \times MPH \times W}{136}$$

## US Standard Volumes...

1 gallon = 126 fluid ounces  
1 gallon = 8 pints  
1 gallon = 4 quarts

## Conversion Factors, Water & Solutions

Weight of Solution	Specific Gravity	Conversion Factor
7.0 lbs/ gallon	0.84	0.92
8.0 lbs/ gallon	0.96	0.98
8.34 lbs/ gallon	1.00 for Water	1
9.0 lbs/ gallon	1.08	1.04
10.0 lbs/ gallon	1.2	1.1
10.65 lbs/ gallon	1.28-28% N Solution	1.13
11.0 lbs/ gallon	1.32	1.15
12.0 lbs/ gallon	1.44	1.2
14.0 lbs/ gallon	1.68	1.3

**Lechler Inc. Spray Nozzles And Parts—**

To meet your spraying needs, Lechler Inc. offers a full line of spray tips and boom components. Each region of the country stocks component parts, sizes, materials, and quantities aimed at the crops and needs of their area. A full range of sizes and larger quantities are available by Catalog order. Use this information to select the best nozzles and parts for your sprayer, and keep in mind that there are many ways to get the job done.

The coverage of a nozzle is determined by the spray angle and spray height (*the distance between the nozzle and the target surface*). **Flat Fan** nozzles are the most common type used on boom sprayers, and they should be used in combination to overlap each other for best coverage. **Air Induction** nozzles create larger droplet sizes, while **Even Spray** and **Off Center** nozzles should be used for banding and directed spray programs. **Flood** nozzles create wide, flat patterns at low pressures, and **Hollow Cone** nozzles are used for foliar treatments. Overlapping with flat fan nozzles for broadcast spraying will ensure uniform distribution across the entire boom, and the key is to use nozzles with the same pattern rating (all 80°, 110°, or 120°, etc.). Wider spray angles will allow you to lower your boom height and maintain coverage. When changing tips, use matched sets and sizes.

**Selecting nozzles and spray tips—**

The type of nozzle needed is determined by many factors, and the major points to consider include:

- 1- the crop to be sprayed,
- 2- the time of the season and crop's growth stage,
- 3- the weeds or pests to be controlled,
- 4- the characteristics of the pesticide to be used and the label requirements, and
- 5- the size/capacity of your spray unit.

When you are switching crops or programs in season, the most important factors when deciding when to use another tip is the output capacity and pressure range. To double the output of a tip, the pressure must be increased four times. Higher spray rates may put the droplet size, boom pressure, pump demands, etc., beyond their satisfactory ranges of performance. Our charts will help you determine the size and types that will be needed.

**Pre-Season Inspection And Maintenance—**

It is difficult to see wear in a set of spray nozzles. Catch or measure the output from your tips during your testing procedures. Use marked/measured containers if you have them available, or similar size and shaped containers can be used. Check all your tips at a constant flow rate, pressure, and spraying time. A good rule is that if you measure 10% variance or see an uneven pattern, replace your nozzles.

Before replacing a tip, inspect it since it may only need cleaning. Many fungicides or adjuvants can cause clogging, so use a brush with soft bristles to remove any material. When you are switching spray programs, especially when changing crops, flush all hoses, reinspect the line filters, and install new nozzle filters to help reduce contamination and future clogging events.

A nozzle made by one company that is the same type and color will interchange with another company's item and the performance will be fine. For example, a 110° flat fan, "02" Yellow nozzle, will always yield 0.2 GPA flow at 40 PSI when it is new, no matter the material its made of or what company made the part.

**Spray Tip Materials And Wear—**

Nozzles approved for use with plant protection products are made from materials that have different wear characteristics and costs. These materials include **polyacetal plastic (called POM)**, **stainless steel**, **POM/ceramic core**, **brass**, or **polypropylene/ceramic core**.

**The American Society of Agricultural and Biological Engineers**

is our reference group. Their focus is drift reduction, and they categorize spray tips as producing Very Fine (Red), Fine (Orange), Medium (Yellow), Coarse (Blue), Very Coarse (Green), and Extremely Coarse (White) droplets. These standards help you select tips when coverage and drift reduction both are considerations. The crop protection product label may tell you the recommended droplet size for the best drift control.

**How to reduce spray drift—**

You can work within your seasonal weather conditions if you plan ahead. There are several decisions you can make that will help you keep off target spray damage to a minimum.

If drift has been a problem for you in the past, redesign your boom plumbing and tip spacing to be lower and as close to the target zone as practical for your spraying speeds. Tip spray angle can be changed or drop tubes added to improve location and coverage. Some nozzles are designed to create an even pattern at lower pressures, and directional flat fan tips can be aimed to place material where needed.

Check your weather forecast, and take note of daily wind speeds—spray when wind speeds are less than 11 MPH when using air assisted flat fan tips. Avoid times when the air is completely calm or the temperature will exceed 85°, as the spray material may move off target. Be aware of the wind direction and note where sensitive plants are downwind, you may need to create a buffer zone between crops.

Increasing the droplet size and reducing pressure will produce coarser droplets, and the key is to select a tip that will result in the best crop coverage with the least amount of small particles created. Venturi style, anti-drift flat fan, and flood tips are designed for that purpose. Changing to a larger size nozzle of the same style you have been using will help since you will be working in a lower part of the tip's pressure range. You may need to increase the tank mix volume to match these changes. Read the product label for the manufacturer's recommendations regarding tank mixes and adjuvants that may be used.

In some areas, Lechler nozzles are rated and approved for specific drift reduction management practices when local rules apply. ES tips for banding, AD tips for air assist sprayers, and ID/IDK tips for minimizing the setback distance near bodies of water are good examples. Ask us for more information and see how we can help you.





SG 100



SG 200



LG 100



LG 200



AG 060



B 11-1 R



B 11-1 SQ



BQ 11-114 R



BQ 11-114 SQ

## Pressure Gauges

### Standard Gauge

PART #	DESCRIPTION	PRICE ea.
SG 060	Standard Gauge, 60 PSI	\$11.77
SG 100	Standard Gauge, 100 PSI	\$11.77
SG 200	Standard Gauge, 200 PSI	\$11.77
SG 400	Standard Gauge, 400 PSI	\$11.77
SG 1004	4" Standard Gauge, 100 PSI	\$31.65

### Liquid Gauge

PART #	DESCRIPTION	PRICE ea.
LG 100	2-1/2" Liquid Filled, 100 PSI	\$24.16
LG 200	2-1/2" Liquid Filled, 200 PSI	\$24.16

### Ammonia Gauge

PART #	DESCRIPTION	PRICE ea.
AG 060	2-1/2" Ammonia, 60 PSI	\$24.77

## Steel Boom Clamps

### Standard Clamps-Round

PART #	DESCRIPTION	PRICE ea.
B 11-34 R	3/4"	\$4.74
B 11-1 R	1"	\$4.74

### Standard Clamps-Square

PART #	DESCRIPTION	PRICE ea.
B 11-1 SQ	1"	\$4.74
B 11-114 SQ	1-1/4"	\$4.74

### Quick Clamps-Round

PART #	DESCRIPTION	PRICE ea.
BQ 11-34 R	3/4"	\$6.66
BQ 11-1 R	1"	\$6.66
BQ 11-114 R	1-1/4"	\$6.66

### Quick Clamps-Square

PART #	DESCRIPTION	PRICE ea.
BQ 11-34 SQ	3/4"	\$6.66
BQ 11-1 SQ	1"	\$6.66
BQ 11-114 SQ	1-1/4"	\$6.66
BQ 11-112 SQ	1-1/2"	\$6.66



## 2-Way Solenoid Valves

### Large Solenoid Valve

12-Volt DC Electric Boom Shutoff Valves have a 3/4" NPT Female inlet, 3/4" NPT male bypass outlet and a 1/2" NPT female boom outlet.

This direct operating valve is designed for 100 PSI maximum operating pressure and 10GPM. (only 5 PSI pressure is lost @ 10 GPM)

- Draws 2 amps per valve at 12 volts.
- Viton seals and o-rings.
- Wetted parts are made of 430 SS and glass filled nylon.

PART #	DESCRIPTION	PRICE ea.
2500B-1	Solenoid Shutoff Valve, Single	\$236.55
2352	Repair Kit for 2500B-1 Solenoid Valve	\$28.57

### Manual Valve

2750 Manual Valve

This manual valve has a 3/4" NPT male and female inlet and bypass and a 1/2" NPT female boom outlet.

- 0-10 GPM, 175 PSI
- Viton Seals and o-rings.
- Wetted parts are made of 302 SS and glass filled nylon.

*\*The 2750 is a manual valve with a 1/4" NPT pump pressure point that needs to be drilled to function.*

PART #	DESCRIPTION	PRICE ea.
2750	Manual Shutoff Valve	\$167.98

### Wiring Harnesses

- 96" wiring harness with on/off switch & 2-pin connector
- 12 volt

PART #	DESCRIPTION	PRICE ea.
WH 101 CA	12V with car adapter connection 7 amp tube fuse — 20 gauge wire	\$12.82
WH 102 BC	12V with 30 amp battery clips no fuse — 18 gauge wire	\$12.82
WH 104	12V with car adapter & battery clip 7 amp tube fuse — 20 gauge wire	\$21.37
WH 105	12V with car adapter & battery clip 15 amp mini blade fuse — 16 gauge wire	\$31.12



**2500B-1**



**2750**



**WH 101 CA**



**WH 102 BC**



## String Wing

---- New wick arrangement gives a double wipe which means an even application rate and a better kill.

---- Because wick runs from top to bottom rather than side to side you never have to worry about the top row of wicks drying out as have been a problem on the first generation of wick applicators.

---- 5' sections help reduce wicks from drying out when applying on uneven ground where the wick bar is constantly tilted.

---- Build any length applicator you want with the "String Wing", the convenient 5' sections allow you to build 10', 15', 20', etc. sections.

---- The special design of alternating wicks on the end cap means when you put "String Wings" end to end you get full swath coverage; (No spots missed).

---- Each "String Wing" has its own 1 1/4" fill opening and a breather to prevent vapor locking or pressure surges due to weather temperatures.

**See Our Mount for ATU's!**

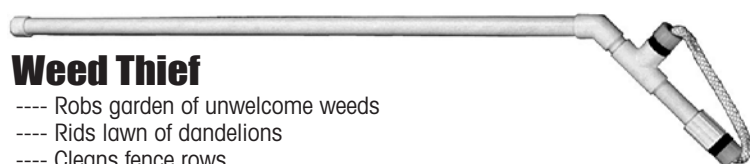


EG 3434

## Rope Wick Fitting

REF#	PART #				DESCRIPTION
	NYLON	PRICE ea.	POLY	PRICE ea.	
1	E 3434	\$0.98	E 3434 P	\$1.24	3/4" MGHT X 3/4" MPT Nylon
2	W 407	\$0.25			Cone Washer
3	B 3450	\$0.71	B 3450 P	\$0.99	3/4" FGHT x 1/2" opening
3	B 3458	\$0.71	B 3458 P	\$0.99	3/4" FGHT x 5/8"
1, 2, 3	E 3434 C	\$1.74	E 3434 C P	\$3.51	1ea. E3434, B3450 & W407
EG 3434	EG 3434	\$1.80	Glue on Body. Designed to fit over 3" schedule 40 PVC pipe only.		

PART #	PRICE ea.
SW	\$289.87



## Weed Thief

---- Robs garden of unwelcome weeds

---- Rids lawn of dandelions

---- Cleans fence rows

---- Kills weeds in row crops

---- Easy to use

---- Lightweight 2 1/2 pounds when filled

---- Economical

PART #	PRICE ea.
WT 1	\$47.75

## Adapter

This fitting was used in early model rope wick applicators. Requires the use of N 1116 Nut and either an "O" ring for wick bar use or a W406 washer if used as a tank fitting. ("O" ring are special order)

PART #				THREAD
NYLON	PRICE ea.	POLY	PRICE ea.	
1116 B	\$0.88	1116 B P	\$1.14	11/16"

## Cone Washer

Used for sealing wick in fitting. Fits 1/2" or 5/8" wick material.

PART #	PRICE ea.
W 407	\$0.24



## Wick Replacement Kit

PART #	DESCRIPTION	PRICE ea.
WK1	Wick replacement for String Wing, includes 14 each 18" wicks with 28 each B 3450 fittings and W 407 cone washers installed.	\$91.09
WK2	Wick Replacement Kit for a 20' wick bar. Parallel wick rows. Includes 50 each 18" wicks with 100 ea. B 3450 fittings & W 407 cone washers installed.	\$322.30
WK3	Wick Replacement includes 50 each 18" wicks. No fittings or cone washers. Wick ends are heat sealed.	\$216.37
WK4	1 - 18" Wick; 2 - B 3450 fittings and 2 - W407 cone washers. Wick ends are heat sealed.	\$7.28
WK5	String Wing Do-It-Yourself Kit - 5ft. Includes everything needed to make your own String Wing, excluding 3-inch pipe.	\$153.01
WK10	String Wing Do-It-Yourself Kit - 10ft. Includes 54-EG 3434; 2-SW 300 CAP DWF; 2-WK1; 1-SW 1140 CAP; 1-M 1140; 1-SW Breather	\$316.73
WK15	String Wing Do-It-Yourself Kit - 15ft. Includes 81-EG 3434; 2-SW 300 CAP DWF; 3-WK1; 1-SW 1140 CAP; 1-M 1140; 1-SW Breather	\$475.10
WK20	String Wing Do-It-Yourself Kit - 20ft. Includes 108-EG 3434; 2-SW 300 CAP DWF; 4-WK1; 1-SW 1140 CAP; 1-M 1140; 1-SW Breather	\$633.47





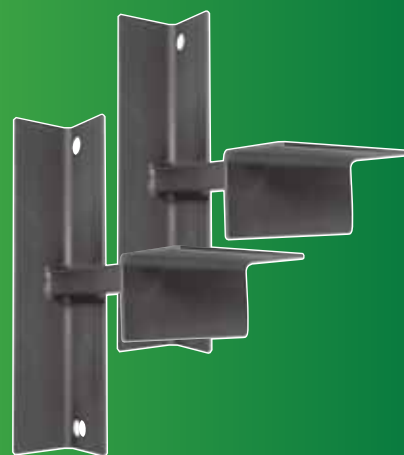
# STRING WING ATV Mount



**EASILY  
MOUNTS  
STRING WING  
TO THE  
FRONT OF  
ANY ATV\***

**Use with  
Your Choice  
of Herbicide  
& Wick Away  
Unwanted  
Weeds**

**KEEP FOOD PLOTS WEED FREE**



## **ATV Mount**

Set includes 2 Brackets & Clamps for mounting the String Wing to an ATV.

**PRICE per SET (2 brackets)**

**\$156.62**

\*STRING WING & STRAPS SOLD SEPARATELY





# Wonder Winder®

## Electrical Power At Your Fingertips

- **PORTABLE**  
*Use indoors or outdoors*
- **FAST & EASY**  
*Winds 100 ft. of cord in 30 seconds*
- **3-YR WARRANTY**  
*Heavy duty construction.*

**LARGE CAPACITY**  
holds 100 ft. of cord!!

### Unlimited Year Round Uses

- |          |        |
|----------|--------|
| ▶ Garage | ▶ Lawn |
| ▶ Shop   | ▶ Farm |
| ▶ Home   | ▶ RV   |



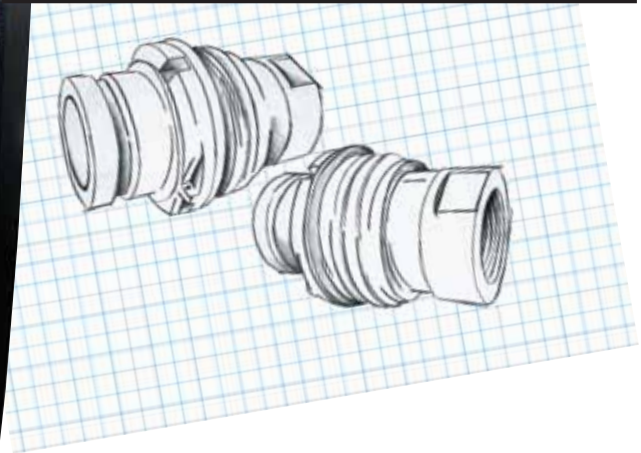
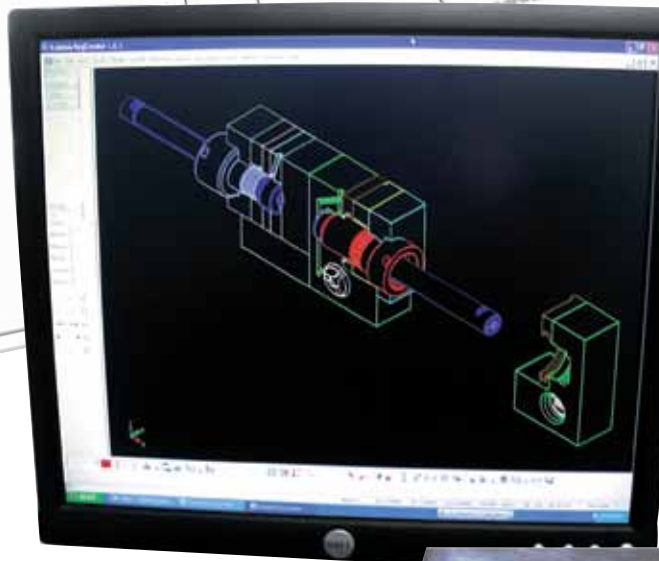
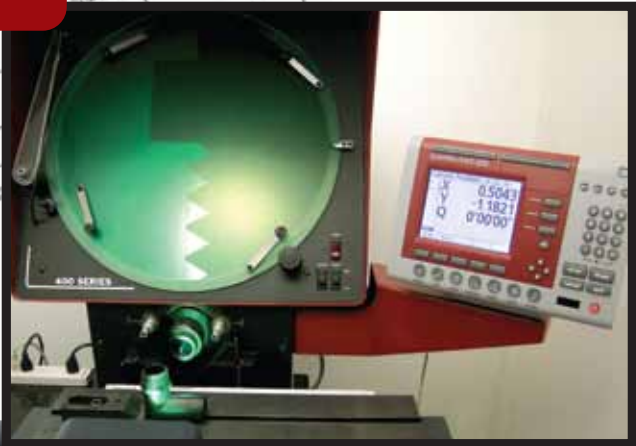
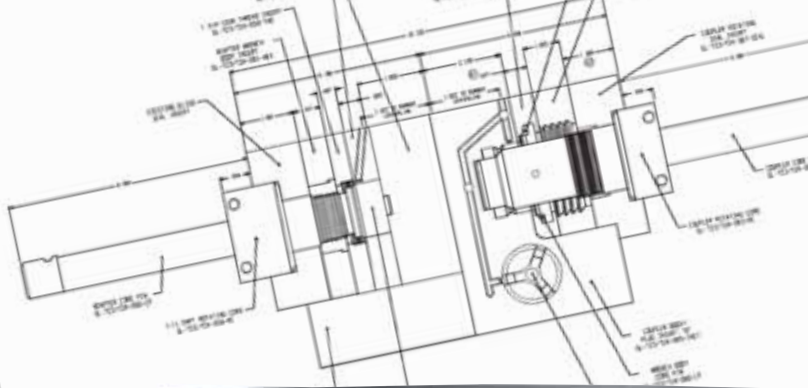
\* Cord Not Included







**From Concept and Design...  
...to Completed Project,  
Custom products can be manufactured  
to meet your specific needs.**



- **State-of-the-Art**  
— **Plastic Production Technology**
- **Press Sizes 40-450 tons**  
— **Fully Automated Robotics**
- **Design & Development Assistance**
- **Computer-aided Design (Auto CAD)**



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## Packaging • Bagging • Labeling • UPC Codes



Zip Lock  
Style Bags  
Available





**Green Leaf can help you set and planogram.....  
.....or even customize a display for your specific needs.**



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## Maximum and Minimum Continuous Use Temperature

Maximum continuous use temperature for a material is typically derived from a testing procedure developed by Underwriters Laboratories, Inc. The UL temperature index is reported for three different categories: electrical, mechanical with impact, and mechanical without impact. The value for each category represents the temperature at which specific properties will decrease to 1/2 of their original values after 60,000 hours of exposure.

Minimum continuous use temperature for a material must be based on the property requirements of the end use product. Properties such as: Tensile Strength, Elongation at Break, and Yield Strength are published down to -40°F in some cases.

We have taken the above information into consideration and developed the following guidelines for use with Green Leaf, Inc® Proprietary fittings (not including GatorLock® Cam Lock Couplings and Valves):

Nylon 6/6 Fittings:	167°F—32°F @ 75psi
Polypropylene Fittings:	140°F—32°F @ 75psi

These guidelines should not be used as specific limits or used alone to determine suitability for end use. It is impossible for Green Leaf, Inc® to anticipate all factors that can influence the maximum and minimum continuous use temperature. Therefore, Green Leaf, Inc® can make no guarantee of results and can assume no liability in connection with the use of this information. Confirmation of the validity of this information and the suitability of our products for any specific end use should be attained independently.

Green Leaf, Inc®  
Engineering Department





## Guide\* For Chemical Resistance

\*These ratings have been developed from technical publications, material suppliers and laboratory tests, and are presented for your evaluation and not as a guarantee.

- Failure, improper selection, or improper use of the products and / or systems referred to and described herein or related items can cause death, personal injury or property damage.
- This document and other information provides product and / or system options for further investigation by users having technical expertise.
- It is important that you analyze all aspects of your application and review the information concerning the product or system.
- Due to the variety of operating conditions and applications for these products or systems, the user, through his or her own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements are met.
- The materials described and referred to herein are subject to change at any time without notice.
- Unless otherwise stated, all recommendations are based on room temperature (72° F) exposure. Compatibility results may deviate from these recommendations at elevated temperatures. Recommendations are based on presence of listed chemical only.
- Mixtures containing more than one chemical can greatly affect chemical compatibility.
- Polypropylene products and components should not be used with low flash point chemicals, regardless of chemical compatibility results.

RATING CODES (A) Excellent (B) Good (C) Fair (X) Unsuitable ( ) Insufficient Data	ELASTOMERS				METALS	METALS	METALS	METALS	PLASTICS		
	BUNA N (NITRILE)	EPDM	NEOPRENE®	VITON®/FLUOROELASTOMER					NYLON	POLYPROPYLENE* (PPR)	TEFLON® (TFE)
CHEMICAL NAME					STAINLESS STEEL (302-305, 630)	STAINLESS STEEL (316)	STAINLESS STEEL (403-416)	ALUMINUM			
<b>A</b>											
ACETATE SOLVENTS	X	X	X	X	A	A		B	B	X	A
ACETIC ACID	C	C	X	X	B	A		B	X	B	A
ACETIC ACID 95%					B	X				A	
ACETONE	X	C	X	X	C	A	A	A	A	A	A
ALCOHOL	B	X	X	X	A	A	A	B	B	X	A
ALUM	C	B	B	B	X	C	X		C	A	A
ALUMINUM CHLORIDE	X	B	B	B	X	C		B	B	A	A
AMMONIA	X	C	A	X					A		A
AMMONIA-AQUEOUS 30%	X	B			B	A				A	
AMMONIA, ANHYDROUS	C		A	X	A	A		B			
AMMONIUM, CHLORIDE	X		B	B	X	B	C	C	B	A	A
AMMONIUM DIHYDROGEN PHOSPHATE										A	
AMMONIUM HYDROXIDE	C	B	C	X	A	A	A	C	C	A	A
AMMONIUM SULFATE	X		B	B	B	B	C	B	B	A	A
<b>B</b>											
BARIUM CHLORIDE	B	X	A	B	A	B		X	B	A	A
BARIUM FLUORIDE	X	X	B	C					C	X	A
BARIUM NITRATE	B	B	A	B	B	B		B	B	A	A
BARIUM SULFATE	X	C	B	B	C	B		X		A	A
BENZENE	X		C	B	A	A	C	B	B	X	A
BENZOIC ACID	X	C	X	C	C	C		B	X	A	A
BORIC ACID	X	C	C	C	C	B	C	B	X	A	A
BRAKE FLUID	B	A	B	X					B	X	A
BUTYL ALCOHOL	X	X	X	A		A			B	A	A



# CHEMICAL RESISTANCE CHART

RATING CODES (A) Excellent (B) Good (C) Fair (X) Unsuitable ( ) Insufficient Data	ELASTOMERS				METALS				PLASTICS		
	BUNA N (NITRILE)	EPDM	NEOPRENE®	VITON®/FLUOROELASTOMER	STAINLESS STEEL (302-305, 630)	STAINLESS STEEL (316)	STAINLESS STEEL (403-416)	ALUMINUM	NYLON	POLYPROPYLENE* (PPR)	TEFLON® (TFE)
CHEMICAL NAME											
C											
CALCIUM BISULFITE	B	B	B	C	C	C	X	C	B	A	A
CALCIUM CHLORIDE	B	B	B	X	C	B		C	B	A	A
CALCIUM HYDROXIDE	B	B	X	X	C	A		C	B	A	A
CALCIUM HYDROXIDE 30%, BOILING					X	C				A	
CALCIUM HYPOCHLORITE, 5%, 70°			C	A	C	B		C		A	
CARBON BISULFIDE	A	X	X	B		B		A	B	X	A
CARBON DISULFIDE	X	X	X	B	A	C	B	C	B	X	A
CARBON TETRACHLORIDE	X	X	X	B	A	B	A	X	B	X	A
CAUSTIC LIQUID	B	B		A						A	
CAUSTIC SODA, ALL CONC., 72° & 140°	B	C	C	X	A	A			B	C	A
CHLORINATED SOLVENTS	X	X	X	B					C		A
CHLORINATED WATER, SATURATE	C		B	B	B	C			C	B	A
CHLORINE	X	X	X	X	X	X			C	X	A
CHLORINE TRIFLUORIDE	X	X	X	C				X	X	X	A
CHLOROACETIC ACID	X	C	X	X	B	X			X	A	A
CHROMIC ACID	X	C	X	B	X	C	C	C	X	B	A
CHROMIC ACID, 10%, 70° F			X					C		A	
CITRIC ACID	X	C	C	C	C	A	C	C	X	A	A
CITRIC ACID, HOT, CONC.					X	X				A	
COPPER SULFATE	X	B	B	B	C	A	A	X		A	A
CORN OIL	A	B	X	X		A			A	A	A
CYCLOHEXANE	C	X	X	A	A	A		A		X	A
D											
DETERGENT SOLUTIONS	C	C	C	C	A	A		A	A	B	A
E											
ETHYL ACETATE	X	X	X	X	B	B		B	B	A	A
ETHYL ALCOHOL	A		A	A		A				A	
ETHYLCELLULOSE	X	X	X	C				B	B	C	A
ETHYL CHLORIDE	X	X	X	C	A	A		X	B	X	A
ETHYLENE GLYCOL	A	A	B	A	A	A	A	A	B	C	A
F											
FERRIC CHLORIDE	X	X	B	C	X	X	X	X	B	A	A
FERRIC SULFATE	X	B	B	B	B	A	A	X	B	A	C
FERROUS CHLORIDE	X	B	B	B	X	X		X	B	A	A
FERROUS SULFATE	X	B	B	B	C	C		X	B	A	A
FLUORINE	X	X	X	X	A	B		X	X	X	X
FORMALDEHYDE	C	B	X	B	A	A	A	A	C	A	A

# CHEMICAL RESISTANCE CHART

RATING CODES (A) Excellent (B) Good (C) Fair (X) Unsuitable ( ) Insufficient Data	ELASTOMERS				METALS				PLASTICS		
	BUNA N (NITRILE)	EPDM	NEOPRENE®	VITON®/FLUOROELASTOMER	STAINLESS STEEL (302-305, 630)	STAINLESS STEEL (316)	STAINLESS STEEL (403-416)	ALUMINUM	NYLON	POLYPROPYLENE* (PPR)	TEFLON® (TFE)
<b>CHEMICAL NAME</b>											
FORMALDEHYDE, 40%			A		A	B				A	
FREON	X	B	X	B	B	A	A	X	X	B	A
FRUIT JUICES	A	B	X	B		A		B	X	A	A
FUEL OIL, NORMAL	C	X	X	A	A	A		A	A	A	A
G											
GASOLINE	C	X	X	B	A	B		A	A	X	A
GLYCERINE OR GLYCEROL	X	X	B	B	A	A	A	A	B	A	A
H											
HYDRAULIC OILS	C	X	A	C	A			A		A	
HYDROCARBONS, PURE		X		B						A	
HYDROCHLORIC ACID	C	B	B	C	X	X	X	X	X	A	A
HYDROCHLORIC ACID, 20%	C		A	A	X	X		X		A	
HYDROFLUORIC ACID	X	C	C	X	X	X	X	X	X	A	A
HYDROFLUORIC ACID, 50%	C		C	A	X	X		X		A	
HYDROFLUOROSILICIC ACID	X	C	C	X	X	X		X	X	A	B
HYDROGEN PEROXIDE	A	X	X	X	C	A	A	A	X	X	A
HYDROGEN PEROXIDE, 50%		A		A	C			A		A	
HYDROGEN SULFIDE	B	B	X	C	X	B	X	X	C	A	A
I											
IODINE	X	X	X	X	C	X		X		C	A
ISOPAR G		X		A						A	
ISOPROPYL ALCOHOL	B		A	A	A	B				A	
L											
LACQUER SOLVENTS	X	X	X	B	A	A	A	A	B	X	A
LIME, 30%					A	A		C		A	
LUBRICATING OIL	A	B	B	A	A	A		A	A	X	A
M											
MAGNESIUM CHLORIDE	X	B	B	C	C	A	C	X	B	A	A
MAGNESIUM HYDROXIDE	X	C	C	X	C	A	A	X	B	A	A
MAGNESIUM SULFIDE	X	C	B	X					B	A	A
MANGANESE CHLORIDE	X	C	B	X	X	X			B	A	A
MANGANESE SULFATE	X	C	B	X					B	A	A
MERCURIC SULFATE	X	C	B	X					B	A	A
METHYL CHLORIDE	C	X	X	X	A	A		X	B	X	A
METHYL ETHYL KETONE	X	A	X	X	A	A		A		A	
MINERAL OILS	C	X	B	B	A	A			A	B	A
MUSTARD	C	B	X	C	A	A		B	A	A	A

# CHEMICAL RESISTANCE CHART

RATING CODES (A) Excellent (B) Good (C) Fair (X) Unsuitable ( ) Insufficient Data	ELASTOMERS				METALS	METALS	METALS	METALS	PLASTICS		
	BUNA N (NITRILE)	EPDM	NEOPRENE®	VITON®/FLUOROELASTOMER					NYLON	POLYPROPYLENE* (PPR)	TEFLON® (TFE)
CHEMICAL NAME					STAINLESS STEEL (302-305, 630)	STAINLESS STEEL (316)	STAINLESS STEEL (403-416)	ALUMINUM			
<b>N</b>											
NICKEL CHLORIDE	X	C	C	X	C	X	X	X	B	A	A
NICKEL SULFATE	X	C	C	X	C	B	X	X	B	A	A
NITRIC ACID	X	X	X	X	C	B	C	X	X	X	A
NITRIC ACID, 20%	X	B	X	B	A	A		X		A	
NITRIC OXIDE	X	C	C	X					C	X	A
<b>O</b>											
OIL - NO. 1 ASTM	B	X	B	A					A	X	A
OIL - NO. 3 ASTM	B	X	B	A					A	X	A
<b>P</b>											
PHOSPHORIC ACID	X	C	C	C	A			X	X	A	A
PHOSPHORIC ACID, 10%					A	B		X		A	
PHOTO CHEMICALS - STANDARD TYPES										A	
PHOTOGRAPHIC - DEVELOPERS	X	B	C	C	C	A		C	B	A	A
PHOTOGRAPHIC - FIXER	C	A	B	B	C	B				A	
POTASSIUM BICARBONATE	A		A	A	B	C		C		A	
POTASSIUM CARBONATE	C	B	B	B	C	C		C	C	A	A
POTASSIUM CHLORATE	X	B	B	C	A	C		B	B	A	A
POTASSIUM CHLORIDE	X	B	B	C	C	B	C	B	B	A	A
POTASSIUM DICHROMATE, 40%					A	A		A		A	
POTASSIUM HYDROXIDE	C	B	X	X	B	B	A	X	B	B	A
POTASSIUM NITRATE	X	B	B	C	A	C		B	B	A	A
POTASSIUM SULFATE	X	B	B	C	C	B	A	A	B	A	A
PROPYLENE GLYCOL	A	A	C	A	C	B		A	B	C	A
<b>S</b>											
SALINE SOLUTION - ALL CONC.										A	
SILICONE OILS & GREASES	X	C	C	B	B	A			A	A	A
SODIUM BICARBONATE	X	B	B	X	A	A	A	A	B	A	A
SODIUM BISULFATE	X	B	C	B	X	A	X	X	B	A	A
SODIUM CARBONATE	X	X	B	X	C	A		C	B	A	A
SODIUM CHLORATE	X	B	B	B	C	C		B	B	A	A
SODIUM CYANIDE	X	B	B	B	C	A	A	X	B	A	A
SODIUM HYDROSULFITE	X	B	B	B					C	A	A
SODIUM HYDROXIDE	B	A	B	A	C	X	A	X	C	A	A
SODIUM HYDROXIDE, 40-80%, 175°F	A		A		X	C		X		A	
SODIUM HYPOCHLORITE	X	B	X	B	X	X	X	X	C	B	A
SODIUM HYPOCHLORITE, 5%		A		A	B	A		X		B	
SODIUM IODIDE	C	B	B	X					B	C	A

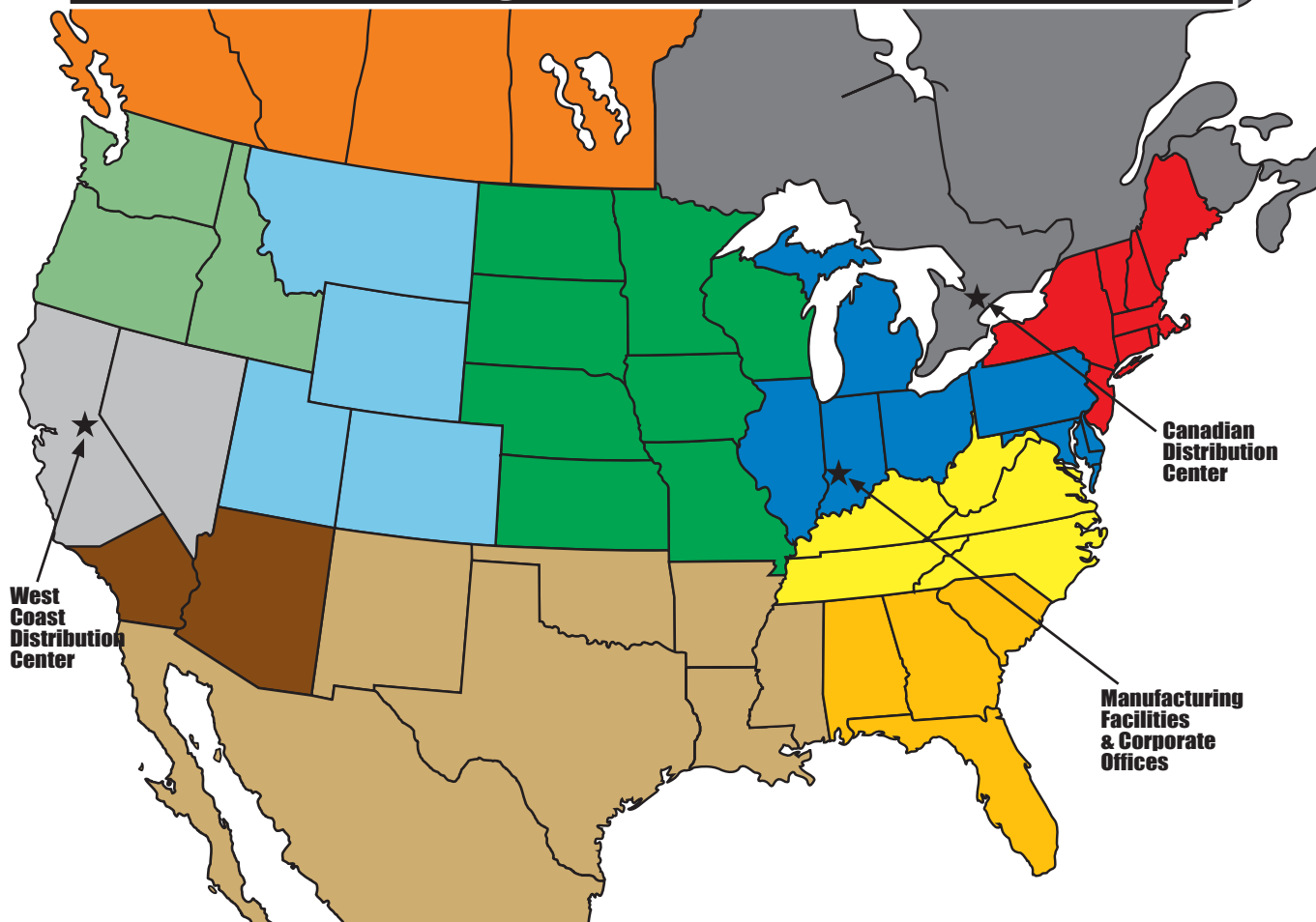


# CHEMICAL RESISTANCE CHART

RATING CODES (A) Excellent (B) Good (C) Fair (X) Unsuitable ( ) Insufficient Data	ELASTOMERS				METALS				PLASTICS		
CHEMICAL NAME	BUNA N (NITRILE)	EPDM	NEOPRENE®	VITON®/FLUOROELASTOMER	STAINLESS STEEL (302-305, 630)	STAINLESS STEEL (316)	STAINLESS STEEL (403-416)	ALUMINUM	NYLON	POLYPROPYLENE* (PPR)	TEFLON® (TFE)
SODIUM NITRATE	X	B	C	B	C	C	A	A	B	A	A
SODIUM PEROXIDE	X	X	X	X	A	A	A	X	X	X	A
SODIUM PHOSPHATE	X	B	B	B	B	B		X	B	A	A
SODIUM SULFATE	X	B	B	B	A	B	A	B	B	A	A
SODIUM SULFIDE	X	B	B	B	X	B	A	X	B	A	A
SODIUM SULFITE	X	B	B	B	A	A			B	A	A
SODIUM THIOSULFATE	X	B	B	B	B	A	A	B	B	A	A
SOFT DRINK SYRUPS										A	
SOLVENT - TONER KEROSENE BASE										A	
SOYBEAN OIL	A	B	X	A	A	A			A	B	A
STANNIC CHLORIDE	X	B	C	B	X	X		X	B	A	A
STANNOUS CHLORIDE	X	B	B	B	X				B	A	A
SULFUR CHLORIDE	X	X	X	A	C	X	X	X	C	B	A
SULFUR DIOXIDE	X	X	X	A	A	B		X	C	B	A
SULFUR TRIOXIDE	X	X	X	A	C	C		X			A
SULFURIC ACID	X	C	X	B	C	B		X	X	C	A
SULFUROUS ACID	X	C	X	C	C	C	X	X	X	A	A
T											
TOLUENE OR TOLUOL	X	X	X	X	A	A	C	A		X	A
TRIBUTYL PHOSPHATE	X	X	X	X	A	A			B	B	A
TRICHLOROETHYLENE	X	X	X	C	A	C	A	X	C	X	A
TURPENTINE	C	X	X	B	C	A	C	A	C	X	A
V											
VEGETABLE OILS	B	B	C	A	C	C	C	A	A	X	A
VINEGAR	C	C	C	C	C	B	C	X	C	A	A
W											
WATER, DEIONIZED	C	A	C	A	A	A			B	A	A
WATER, FRESH	C	A	B	A	A	A	A	A	B	A	A
WATER, GLYCOL	C	B	B	B					B	A	A
WETTING AGENTS		A		A						A	
Z											
ZINC CHLORIDE	X	B	B	B	X	X	X	X	B	A	A
ZINC SULFATE	X	B	B	B	C	A	C	X	B	A	A



## Contact Your Regional Sales Representative



### — SALES & MARKETING —

#### **Teko A. Goda**

Vice President of Sales & Marketing  
Email: tagoda@grnleafinc.com

#### **Gene Botteron**

U.S. Sales  
(CT, MA, ME, NJ, NH, NY, RI, VT)  
Email: GeneBotteron@cox.net

#### **Tom Smith**

Canada Sales (AB, BC, MB & SK)  
Email: tom@tascoales.ca

#### **Steve Smith**

Canada Sales (AB, BC, MB & SK)  
Email: steve@tascoales.ca

#### **Gord Holbrook**

Canada Sales (NB, NL, NS, ON, PE, QC)  
Email: gord@cfaindustries.com

#### **Scott Fetter**

Senior Sales Manager  
Email: sfetter@grnleafinc.com

#### **Robert Reeve**

U.S. Sales (AZ, CA & NV)  
Email: bob@pacwestmarketing.com

#### **Andy Alston**

U.S. Sales (AZ & CA)  
Email: Andy@pacwestmarketing.com

#### **George Schneider**

U.S. Sales (ID, OR & WA)  
Email: prowestmkt@aol.com

#### **Steve Van Tiggelen**

U.S. Sales (CO, MT, UT & WY)  
Email: evt@svt-consulting.com

#### **Kevin J. Payton**

U.S. Sales - South East Region  
Email: kipayton@grnleafinc.com

#### **John Ledel**

U.S. Sales  
(AL, FL, GA & SC)  
Email: john@bdiledel.com

#### **Alf Mole**

U.S. Sales  
(AR, LA, MS, NM, OK & TX)  
Mexico Sales  
Email: amole@grnleafinc.com

#### **Becky Denham**

Email: bjukes@grnleafinc.com

#### **CUSTOMER SERVICE**

#### **Sasha Stanton**

Email: sstanton@grnleafinc.com

#### **Brandon Norton**

Email: bnorton@grnleafinc.com





## View Our Complete Product Line at [www.grnleafinc.com](http://www.grnleafinc.com)

Including: True Union/HM/Single Union and Bolt Valves;  
GatorLock Couplings; Garden Hose Couplings; Bulkhead Fittings;  
Strainers & Line Filters; Sprayer Tanks, Nozzles & Accessories;  
Nozzle/Hose/Pipe/Garden Hose Fittings;  
Rope Wick Applicators; and the Wonder Winder

The screenshot shows the Green Leaf, Inc. website. At the top, there's a navigation bar with a search icon and a close button (X). Below the bar, the URL <http://www.grnleafinc.com> is displayed. The main header features the Green Leaf Incorporated logo on the left and the phone number 800.654.9808 on the right. Below the logo, it states "An ISO 9001 Certified Company" and "Green Leaf, Inc". A sidebar on the left contains a menu with links: Home, Capabilities, Custom Molding, Catalog--Buy Online!, Gator Lock® Couplings (highlighted with a mouse cursor), Customer Support, and Wonder Winder®. Below the menu, there's a "Quick SUPPORT:" section with links for Contact Us, Catalog Request, RFQ, and '13 Catalog PDF. The main content area features a large image of various liquid handling products. To the right of the image, there's a text block stating: "Green Leaf®, Incorporated is an ISO 9001 certified company with a scope of designing and manufacturing injection molded products." Below this, three paragraphs describe the company's history and capabilities. At the bottom of the screenshot, there's a "QUALITY ASSURANCE-" section with a mission statement and a goal.

**GREEN LEAF**  
INCORPORATED

800.654.9808

*Manufacturer of Nylon and Polypropylene Liquid Handling Products*

An ISO 9001 Certified Company  
**Green Leaf, Inc**

Home  
Capabilities  
Custom Molding  
Catalog--Buy Online!  
**Gator Lock® Couplings**  
Customer Support  
Wonder Winder®

Quick SUPPORT:  
Contact Us  
Catalog Request  
RFQ  
'13 Catalog PDF

**Green Leaf®, Incorporated is an ISO 9001 certified company with a scope of designing and manufacturing injection molded products.**

---Green Leaf®, Incorporated began manufacturing products for the agricultural industry in 1979. Since then, Green Leaf®, Incorporated has grown and specializes in injection molding of nylon and polypropylene.

---Our corporation is proud of its complete line of liquid handling products, which includes valves, cam lever couplings and fittings.

---In keeping pace with technology throughout the years, we have added fully automated robotics in manufacturing and the latest equipment in product stamping and special packaging to our secondary operations.

**QUALITY ASSURANCE-**  
---It is our mission to meet or exceed our customers quality needs and expectations today and anticipate their requirements of tomorrow. We will accomplish this through continuously improving processes, ongoing employee training, and ongoing auditing of all processes.  
---Our goal is to build a relationship with our suppliers and customers to ensure that...  
**"Quality, Service and Commitment is never compromised."**

## Visit Our Customer Support Area For:

- RFQ's
- Catalog Requests & PDF downloads
- Manuals & Instruction Guides
- Chemical Resistance Charts
- Green Leaf Inc Contact & Sales Info
- Customer Credit Application

# GATOR LOCK®



*Couplings*



P.O. Box 88  
9490 N. Baldwin Street  
Fontanet, IN 47851

P: 812-877-1546  
P: 800-654-9808  
F: 812-877-4278

Web: [www.grnleafinc.com](http://www.grnleafinc.com)  
E: [sales@grnleafinc.com](mailto:sales@grnleafinc.com)

