



ANNUAL MASTER REFERENCE • VERSION 6

2026 PARTS PRICE LIST

Parts replacement • descriptions • specifications • pricing

CONTENTS

01 High-Pressure Black Nylon Tube	2
02 Slip-Lok Fittings, Adapters & Diagram	3-5
03 Stainless Steel Tube	6
04 Compression Fittings	7
05 Nozzles, Accessories & Adapters	8-10
06 Replacement Pumps	11
07 Pump Station Parts & Supplies	12-14
08 High-Velocity Industrial Basket Fans	15
09 Mist-Rings & Drop-Down Line	16-17
10 FanMist First Principles	18



ORDERING & TERMS

Submit Purchase Orders by email to:
rreiff@industrialhumiditycontrol.com

Shipments delivered to your "SHIP TO" location

Shipments: UPS, FedEx, or USPS Priority Mail

Shipping not included in pricing

Billing (Net 30) by email invoice attachment to:
Your company "Accounts Payable" email
Please provide your accounts payable email address

IHC CONTACTS

Ray Reiff — Operations • 765-702-4083
rreiff@industrialhumiditycontrol.com

Otonas Balciunas — Operations
otonas@industrialhumiditycontrol.com

HOW TO USE THIS PRICE LIST

Prices are per unit unless noted (e.g. /10, /100 paks).
Confirm part numbers against your Pump Station
model before ordering. Parts not listed — including
pump repair kits — are quoted on request by phone
or email.



TUBING • SECTION 01

HIGH-PRESSURE BLACK NYLON TUBE

Nylon (Polyamide 12) semi-flexible, plasticized, heat-stabilized tubing for FanMist high-pressure runs.

3/8" OD NYLON HIGH-PRESSURE TUBE

PART #	DESCRIPTION	PRICE
93072	3/8" High-Pressure Tube – 500' Coil	\$991.66
90063	3/8" High-Pressure Tube – 100' Coil	\$198.32
92700	3/8" High-Pressure Tube – 50' Coil	\$99.16
90025	3/8" High-Pressure Tube – 25'	\$49.59
92714	3/8" Vinyl Coated Steel Wall Clamps	\$0.73

1/2" OD NYLON HIGH-PRESSURE TUBE

PART #	DESCRIPTION	PRICE
90550	1/2" High-Pressure Tube – 500' Coil	\$2,278.86
90551	1/2" High-Pressure Tube – 100' Coil	\$455.77
92680	1/2" Vinyl Coated Steel Wall Clamps	\$1.13

PREPARING THE TUBE CUT EDGE

- Use a tube cutter designed for nylon tube.
- Cut a straight and even edge for a good seal.
- Lightly ease the cut edge with a file or sandpaper.

CUT STRAIGHT

A tube that is not cut straight cannot form a good seal against the O-ring inside the Slip-Lok fitting — and a scratched edge can damage that seal and cause a drip.

PLANNING TUBE RUNS

- 1/2" tube begins from the Pump Outlet fitting.
- Transition fittings reduce runs from 1/2" to 3/8" tube.
- Minimize number of cuts for least number of fittings.
- Use sweeps by bending tube for 90° or angle turns.

WHY 1/2" BEGINS THE TUBE RUN FROM THE PUMP STATION

Beginning with 1/2" tube and reducing to 3/8" tube is for the purpose of preserving maximum PSI to the last nozzle in the tubing run.



500' Coil — high-pressure nylon tube

TUBE SPECIFICATIONS

	3/8" OD	1/2" OD
OD	.375" ± .004"	.500" ± .004"
ID	.275" ± .004"	.375" ± .004"
Wall	.050" ± .004"	.062" ± .004"
500' coil	10 lbs 15" x 15" x 15"	30 lbs 24" x 24" x 12"

INSTALLING TUBE

- Fix tube to walls using vinyl clamps (screw type).
- Use zip ties to attach tube to ceiling trusses/fixtures.
- Apply zip ties every ten feet.



3/8" & 1/2"
Vinyl coated
steel
wall clamp



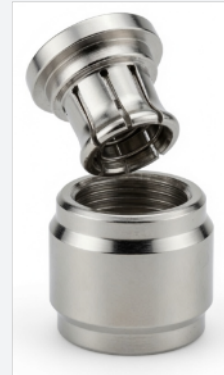
FITTINGS • SECTION 02

SLIP-LOK FITTINGS

Stainless steel push-to-connect fittings designed for quick and secure installation — with an internal locking ferrule and over-sized O-ring for a leak-proof seal — part 1 of 3.

3/8" SLIP-LOK FITTINGS			1/2" SLIP-LOK FITTINGS		
PART #	DESCRIPTION	PRICE	PART #	DESCRIPTION	PRICE
92702	3/8" Slip-Lok Coupling	\$18.05	95702	1/2" Slip-Lok Coupling	\$17.46
92703	3/8" Slip-Lok 90° Elbow	\$19.28	95703	1/2" Slip-Lok 90° Elbow	\$19.17
92704	3/8" Slip-Lok 3-Way Tee	\$21.67	95704	1/2" Slip-Lok 3-Way Tee	\$21.15
92927	3/8" Slip-Lok O-ring (Primary)	\$0.59	92926	1/2" Slip-Lok O-ring (Primary)	\$0.67
92070	3/8" Slip-Lok O-ring (Urethane back-up)	\$0.59	93082	1/2" Slip-Lok O-ring (Urethane back-up)	\$0.67

Accessing the Slip-Lok O-ring



Collar removed from the Slip portion of the Slip-Lok fitting.



O-ring placement inside the Slip-Lok, which the collar seats against.

INSTALLING THE TUBE INTO THE SLIP-LOK FITTING

- Push the tube end into the fitting until it cannot go any further, then pull back to confirm it has locked in place.
- To remove, push in the slip end with an open-end wrench while withdrawing the tubing.



Slip-Lok Coupling



Slip-Lok 90° Elbow



Slip-Lok 3-Way Tee

EXAMPLE FITTINGS — shown for reference only. These fittings represent both the 3/8" and 1/2" Slip-Lok families above.

REPLACING O-RINGS

The function of the collar is to latch onto the tubing with the collar's internal teeth.

To remove the collar in order to modify the O-ring, use a screwdriver for slight leverage to remove the collar.

To remove the O-ring, reach inside with a paperclip to remove the old O-ring, then insert the replacement and reinsert the collar.

BACK-UP O-RING

If a fitting starts to leak over time, replace the O-ring and add a "back-up O-ring" between the collar's teeth and the primary O-ring to protect it.

This "back-up O-ring" acts as a sort of buffer between the two, preventing the teeth from "grinding" up against the O-ring. This "back-up O-ring" is less like a traditional O-ring and more like a flat circular piece of rubber/plastic (urethane material in this case).





FITTINGS • SECTION 02

SLIP-LOK FITTINGS

Slip-Lok fittings for threaded NPT connections, bulkhead fittings & miscellaneous adapters — part 2 of 3.

SLIP-LOK FITTING (STAINLESS STEEL) ADAPTERS

	PART #	DESCRIPTION	PRICE
	93163	3/8" Slip-Lok x 1/8" Male NPT adapter	\$23.03
	92712	3/8" Slip-Lok x 1/4" Male NPT adapter	\$18.78
	92507	3/8" Slip-Lok x 1/4" Female NPT adapter	\$24.51
	92707	3/8" Slip-Lok x 3/8" Male NPT adapter	\$13.14
	92709	3/8" Slip-Lok x 3/8" Female NPT adapter	\$25.59
	92708	3/8" Slip-Lok x 1/2" Male NPT adapter	\$19.20
	92854	1/2" Slip-Lok x 3/8" Male NPT adapter	\$26.03
	92855	1/2" Slip-Lok x 1/2" Male NPT adapter	\$17.75

BULKHEAD SLIP-LOK FITTING CONNECTIONS

	PART #	DESCRIPTION	PRICE
	94130	1/2" Inlet Fitting 1/2" Slip-Lok x 1/2" Male NPT 45° Elbow	\$31.28
	94131	1/2" Inlet Fitting 1/2" Slip-Lok x 1/2" Male NPT 90° Swivel Elbow	\$31.28
	94132	1/2" Inlet Fitting 1/2" Slip-Lok x 3/8" Male NPT 90° Swivel Elbow	\$31.28
	93392	3/8" Slip-Lok Bulkhead HexHead For Drain Bypass (Older pump stations)	\$14.99
	92932	3/8" Barb HexHead For 93392 (not shown)	\$2.99

MISCELLANEOUS ADAPTERS

	PART #	DESCRIPTION	PRICE
	92544	Hose Adapter 3/4" Female GHT x 1/2" Female NPT	\$10.85
	92632	3/8" Ball Valve Stainless steel 3/8" x 3/8" FNPT ports	\$27.75

THREADED CONNECTIONS

Complete all threaded (NPT) connections with plumber's tape. Slip-Lok ends need no tape — push in fully, then pull back to lock.



FITTINGS • SECTION 02

SLIP-LOK FITTINGS

Slip-Lok fittings & tubing diagrammed for the standard routing of tube from the Pump Station to all fans — part 3 of 3.

TUBING DIAGRAMMED — HIGH-PRESSURE LINE FROM THE PUMP STATION TO ALL FANS

TRANSITION FITTINGS — 1/2" Tubing Transition from the Pump Station to 3/8" Tube out to the Fans

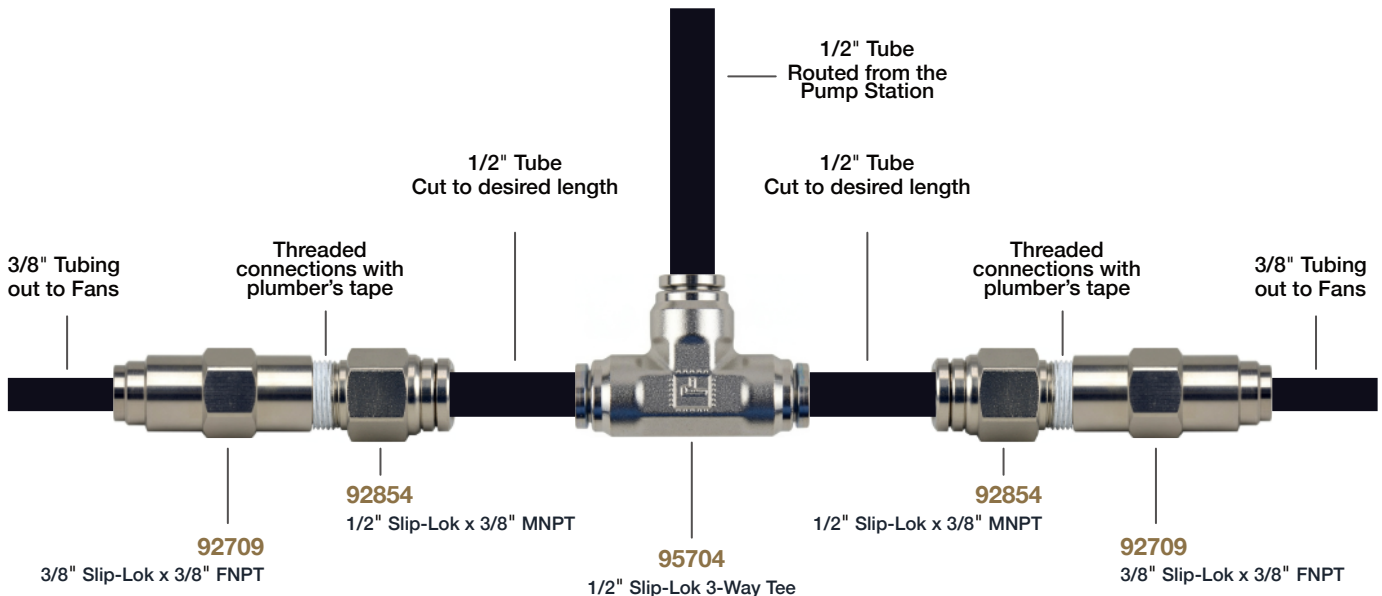


Diagram showing the 1/2" tubing transition from the Pump Station to 3/8" tube out to the fans.

DIAGRAM NOTES

- Graphic shows the 1/2" OD tubing from the Pump Station outlet routed to the 1/2" 3-way tee, then dividing into two legs (cut to desired length) that run to the transition fittings, reducing to 3/8" tubing runs to the fans.
- The positioning of the 1/2" 3-way tee as shown is an example only — the tee can be oriented to allow the legs to run in the direction required.
- If the transition is directly reducing to one 3/8" leg, the 3-way tee would not be required and you would go directly to using the transition fittings as shown.
- The amount of 1/2" tube provided in the equipment package should be utilized as fully as possible in the overall layout — particularly from the tee to the transition fittings.
- All threaded connections are to be completed with plumber's tape.



TUBING • SECTION 03

STAINLESS STEEL TUBE

Blank stock and pre-fabricated nozzle-spaced SS tube runs with threaded 10/24 UNC ports.

3/8" OD STAINLESS STEEL TUBING — BLANK STOCK

PART #	DESCRIPTION	PRICE
92900	3/8" SS Tubing 20' length	\$125.10
92900.10	3/8" SS Tubing 10' length	\$62.57

3/8" OD — NOZZLE-SPACED THREADED PORTS (10/24 UNC)

PART #	DESCRIPTION	PRICE
92951	3/8" SS Tubing — 18" Spacing Pre-Fab 19.5' length, 13 ports	\$408.59
92952	3/8" SS Tubing — 24" Spacing Pre-Fab 20' length, 10 ports	\$380.09
92953	3/8" SS Tubing — 30" Spacing Pre-Fab 20' length, 8 ports	\$370.34
93080	3/8" SS Tubing — 24" Spacing Pre-Fab 10' length, 5 ports	\$185.58
93081	3/8" SS Tubing — 30" Spacing Pre-Fab 10' length, 4 ports	\$175.59

1/2" OD STAINLESS STEEL TUBING — BLANK STOCK

PART #	DESCRIPTION	PRICE
92839	1/2" SS Tubing 20' length	\$129.95

1/2" OD — NOZZLE-SPACED THREADED PORTS (10/24 UNC)

PART #	DESCRIPTION	PRICE
93577	1/2" SS Tubing — 18" Spacing Pre-Fab 19.5' length, 13 ports	\$475.74
93578	1/2" SS Tubing — 24" Spacing Pre-Fab 20' length, 10 ports	\$448.89
93579	1/2" SS Tubing — 30" Spacing Pre-Fab 20' length, 8 ports	\$419.78



Stainless Steel Tubing
with threaded nozzle ports

Shown — precision-welded ports with 10/24 female UNC ports. Choice of port/nozzle spacing: 18", 24", 30" on center — in SS tube lengths of 10' and 20'. All SS tube available in either 3/8" OD or 1/2" OD.



Stainless Steel Tubing
(Blank stock)

Shown — SS blank tube stock in lengths of 5', 10', and 20'. All SS tube available in either 3/8" OD or 1/2" OD.

SHIPPING NOTES

SS tube can be cut as short as 5' and shipped UPS Ground to keep costs down. Lengths of 10' and greater require LTL shipping — quotes provided on request.



FITTINGS • SECTION 04

COMPRESSION FITTINGS

Stainless steel and brass compression fittings for SS tube plumbing runs and Pump Station connections.

STAINLESS STEEL COMPRESSION FITTINGS

PART #	DESCRIPTION	PRICE
92819	3/8" SS Union	\$33.42
92837	3/8" SS 90° Elbow	\$42.35
92836	3/8" SS 3-Way Tee	\$59.33
92852	3/8" SS Cap	\$16.31
98110	3/8" SS compression x 1/8" MNPT	\$15.02
92847	3/8" SS compression x 3/8" MNPT	\$15.02
92860	1/2" SS Union	\$52.89
92863	1/2" SS 90° Elbow	\$72.72
92862	1/2" SS 3-Way Tee	\$90.90
92869	1/2" SS compression x 3/8" MNPT	\$28.85
92835	1/2" SS comp x 3/8" comp reducing union	\$46.29
92874	1/2" SS comp End Cap	\$26.45

BRASS COMPRESSION FITTINGS

PART #	DESCRIPTION	PRICE
92820	3/8" Union	\$10.49
92845	3/8" Union w/ port, 10/24 thread	\$19.82
92822	3/8" 3-Way Tee	\$22.95
92823	3/8" 90° Elbow	\$17.54
92825	3/8" 4-Way Cross	\$24.80
98118	3/8" x 1/8" MNPT	\$10.05
92828	3/8" x 1/4" MNPT	\$8.27
92829	3/8" x 3/8" MNPT	\$8.27
92826	3/8" x 1/4" FNPT	\$9.09
92827	3/8" x 3/8" FNPT	\$9.09
92830	3/8" x 1/4" Reducing Union	\$11.88
92834	3/8" comp End Cap	\$5.93
92831	3/8" comp Nut	\$2.07
92832	3/8" comp Front Ferrule	\$1.65
92833	3/8" comp Back Ferrule	\$1.65
92901	1/2" Union	\$17.07
92902	1/2" 90° Elbow	\$25.23
92903	1/2" 3-Way Tee	\$31.94
92821	1/2" comp x 3/8" comp reducing union	\$17.07
92915	1/2" comp End Cap	\$8.27

Compression Fittings (SS) for 3/8" & 1/2" Tube (SS)

Shown:



92819 & 92860
3/8" & 1/2" Union



92837 & 92863
3/8" & 1/2" 90° Elbow



92836 & 92862
3/8" & 1/2" 3-Way Tee

STAINLESS STEEL COMPRESSION FITTINGS

3/8" & 1/2" stainless steel compression fittings connect stainless steel tube without welding or soldering. A nut and ferrule create a secure, leak-resistant seal that is corrosion-resistant and suitable for high-pressure applications.



ATOMIZATION • SECTION 05

PREMIUM 303 SS NOZZLES

Anti-drip atomizing nozzles with a ruby orifice insert, 300 psi spring assembly, and 5-micron filter — sizing & pricing, part 1 of 3.

NOZZLE SIZING — SPECIFICATIONS & PRICING

	PART #	COLOR BAND	ORIFICE SIZE	FLOW RATE	OUTPUT	EACH	100+
	1.85N	 Orange	0.065 mm / 0.0026"	0.0037 gpm	1.85 lbs/hr	\$24.95	\$23.85
	2.64N	 Black	0.085 mm / 0.0033"	0.0053 gpm	2.64 lbs/hr	\$24.95	\$23.85
	3.97N	 White	0.1 mm / 0.0039"	0.0079 gpm	3.97 lbs/hr	\$24.95	\$23.85
	5.29N	 Red	0.15 mm / 0.006"	0.0106 gpm	5.29 lbs/hr	\$24.42	\$22.90
	7.94N	 Blue	0.2 mm / 0.008"	0.0159 gpm	7.94 lbs/hr	\$24.42	\$22.90
	10.58N	 Clear	0.3 mm / 0.012"	0.0211 gpm	10.58 lbs/hr	\$24.95	\$23.85

Output (lbs/hr) is actual tested capacity with the 5-micron filter installed, at 1000 psi. Prices are per nozzle; order in multiples of ten [10] only.

KEY FUNCTIONS

- Atomizes 1000 psi water into ultra-fine, micron-sized particles
- Opens at 300 psi and closes below it — no drip at startup or shutdown
- Ruby orifice's smooth bore resists scaling and plugging
- Built-in 5-micron filter protects every orifice
- Six color-banded sizes, from 1.85 to 10.58 lbs/hr per nozzle
- Same body, spring and 10/24 UNC thread on every size — any size fits any mist-ring port

CONVERTING FLOW TO OUTPUT

$$\text{lbs/hr} = \text{gpm} \times 8.34 \text{ lb/gal} \times 60 \text{ min/hr}$$

Example — 7.94N: $0.0159 \text{ gpm} \times 8.34 \times 60 \approx 7.96 \text{ lbs/hr}$ (rated 7.94 tested). Total system demand $\approx$ nozzles $\times$ gpm per nozzle; confirm it is within the Pump Station's rated gpm.

ORDERING & PACKAGING



Individually sealed in a protective blister pack — 10 nozzles per pak (7.94N shown)

- Order in multiples of ten [10] only
- Stocked in 10/24 UNC thread; ships USPS Priority Mail
- 12/24 UNC available on 100+ quantities (3-week lead time)
- Convert 10/24 to 12/24 with adapter #92520
- One 5-micron white filter included per nozzle — **the filter is not packing; do not discard**



ATOMIZATION • SECTION 05

PREMIUM 303 SS NOZZLES

Anti-drip atomizing nozzles with a ruby orifice insert, 300 psi spring assembly, and 5-micron filter — construction & output, part 2 of 3.



CONSTRUCTION

- 303 stainless steel body: ruby orifice insert with a smooth inner surface
- Three parts thread together finger-tight: nozzle cap (ruby orifice, Viton O-ring, color band identifies size), spring assembly (300 psi spring with Viton seat), and anti-drip body (male 10/24 UNC thread, holds the 5-micron filter)
- Nozzle O-ring #52000 and 5-micron filter #51000 available separately

SPRING ASSEMBLY — 300 psi CRACKING PRESSURE

The 300 psi cracking point is the nozzle's most critical feature. Below 300 psi, the spring holds the nozzle closed, no weak, dripping discharge while pressure builds. Above 300 psi, the nozzle opens fully for clean atomization from the first burst.

RUBY ORIFICE — RESISTS SCALING

A drilled all-metal orifice carries machining etchings where minerals crystallize and distort the spray. The ruby insert's laser-bored, Teflon-like bore gives minerals little to hold, keeping the spray pattern consistent.

FAIL-SAFE CLOSING

At shutdown — or if power is lost — the Electric Drain Valve opens and the system depressurizes. Each nozzle's spring closes it below 300 psi, so every mist ring stops at the same moment instead of dripping.

INSTALL FINGER TIGHT ONLY

Never use pliers or a wrench — over-tightening compresses and ruptures the O-ring. Finger tightening preserves the elasticity needed for a leak-free seal. Install nozzles during the flushing procedure.

CLEANING NOZZLES

Unscrew the cap and remove the spring assembly. Soak all pieces in a 50/50 warm water & vinegar solution, or in toilet bowl cleaner for 1 minute; rinse and reassemble. Keep the 5-micron filter in place.

MIST-RING OUTPUT BY NOZZLE SIZE (lbs/hr)

Mist Ring	Ports	1.85N	2.64N	3.97N	5.29N	7.94N	10.58N
12" Ring	4	7.4	10.6	15.9	21.2	31.8	42.3
15" Ring	6	11.1	15.8	23.8	31.7	47.6	63.5
18" Ring	8	14.8	21.1	31.8	42.3	63.5	84.6
24" Ring	12	22.2	31.7	47.6	63.5	95.3	127.0
27" Ring	14	25.9	37.0	55.6	74.1	111.2	148.1

Values = ports × rated nozzle output at 1000 psi.

Loading Ratio = Fan CFM ÷ mist-ring output (lbs/hr) — keep loading ratio above **75 CFM per 1 lb/hr** for complete evaporation.

- Ring output ≤ about **133 lbs/hr on a 36" fan** (10,000 CFM);
- Ring output ≤ about **71 lbs/hr on a 24" fan** (5,300 CFM).

Shaded = loading ratio below 75 on a 36" fan.



ATOMIZATION • SECTION 05

NOZZLE ACCESSORIES & ADAPTERS

Filters, plugs, O-rings, swivel adapters, and extensions for the 10/24 UNC nozzle platform — part 3 of 3.

NOZZLE ACCESSORIES & ADAPTERS			
	PART #	DESCRIPTION	PRICE
	51000	5-Micron Nozzle Filter Included with all nozzles — insert filter in threaded end of the nozzle — water pressure maintains filter in place Sold in 100 quantity Pak (1Pk)	\$59.00/100
	52000	Nozzle O-ring Viton — elastic sealed nozzle connection — fits threaded end of nozzles — minimum order of 100 each / Pak (1Pk) O-RING OVER-COMPRESSED At the threaded end of the nozzle, where it seats in the mist-ring port, over-tightening with pliers or a wrench can crush the O-ring and destroy its sealing ability. Finger-tightening preserves the O-ring's elasticity and creates a reliable, leak-free seal.	\$90.00/100
	93505	Nozzle Plug 10/24 male UNC — Nickel plated only Sold in multiples of ten/pak (1Pk)	\$32.00/10
	95041	Nozzle Swivel Adapter 10/24 male UNC — Nickel plated only — Swivels in any direction up to 30° Install finger tight only — Sold in multiples of ten/pak (1Pk) SWIVEL ADAPTER PLACEMENT Locate swivel adapters on every other nozzle, angled up to 30° toward the center of the air plume — keeps droplets from combining into larger ones. A reasonable choice for lower ceilings and busier ceiling areas.	\$130.00/10
	92520	Nozzle Adapter for Reducing 12/24 UNC to 10/24 UNC Converts 12/24 UNC ports to accept 10/24 UNC nozzles Brass only (Available in SS: part #92520.SS / not quoted)	\$5.19
	92519	Nozzle Adapter for 1/8" Male NPT × 10/24 Female UNC Adapter converts 1/8" male NPT to 10/24 female UNC Brass only	\$6.74
	94506	Stainless Steel 6" & 12" Nozzle Extensions 10/24 female UNC × 10/24 male UNC	\$28.38
	94512	<i>#94506 typically provided in Maintenance & Spares Pak for FanMist Systems — used for system flushing procedure after complete installation and before system startup</i>	\$29.85



HIGH-PRESSURE PUMPS • SECTION 06

Replacement Pumps

EP series high-pressure pumps by general pump. EP series pumps as of 2026 are the standard high-pressure pump for all FanMist humidity control pump stations and the replacement pumps for all TX series pumps.

EP SERIES HIGH-PRESSURE PUMPS

PART #	DESCRIPTION	PRICE
EP1508S34	Bare Pump (15mm) Right-handed shaft	\$519.25
EP1812S17	Bare Pump (18mm) Right-handed shaft	\$519.25
Zfeetevo	Replacement Rail Mount Foot Hex screw, washer & foot (2 of each/set) 1 set required per pump	\$16.00

SPECIFICATIONS

Pump Model	EP1508S34	EP1812S17
GPM	3.4	4
PSI	3045	2500
RPM	3400	1750
Bore	0.591 in./15 mm	0.709 in./18 mm
Stroke	0.315 in./8 mm	0.472 in./12 mm
HP	7.1 EBHP*	6.8 EBHP*
Shaft Diameter	0.945 in./24 mm	
Weight	15.4 lbs	
Oil Capacity	15 oz	

* EBHP = electric brake horsepower

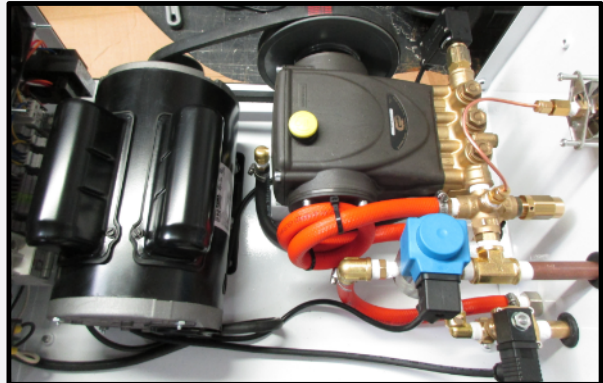
CHART OF COMPATIBLE OILS

General Pump	Series 100
BP	Visco 2000
Castrol	CWX
Mobil	SUPER
Shell	HELIX SUPER
Total	QUARTZ 4000-5000

CHANGE OF OIL

- First oil change after the first 50 hours –
- Changed every three months or 500 hours –

Bare high-pressure EP series pump, right-hand shaft



Pump installed in FanMist pump station

Pump Notes

- Right-handed shaft on all bare pump SKUs
- General Pump advises the replacement pump does not necessarily require a replacement Rail Mount Foot, as the existing foot for the TX series is generally left in place during replacement, depending on the condition of the existing foot
- Confirm the Pump Model Number before ordering parts or repair kits

Guidance for Pump Repair Kits & Parts

All EP and TX pump series repair kits and parts not listed in this price list are quoted upon request by phone or email.



PUMP STATION • SECTION 07

PUMP STATION PARTS & SUPPLIES

Replacement parts and supplies for the FanMist Pump Station — part 1 of 3.

PUMP STATION PARTS & SUPPLIES

PART # DESCRIPTION PRICE



- 93222 GP Pump Oil (16 oz)** **\$10.77**
- Minimum order quantity – 2 each
 - Change pump oil every 3 months or 500 hours
 - Pumps use 30-weight non-detergent oil

PUMP STATION PARTS & SUPPLIES

PART # DESCRIPTION PRICE



- PGTA Pressure Gauge Tubing Assembly** **\$14.00**
- Consists of three parts connecting to part #93108:
- 93122 Copper Tubing (1/8" x 7")
 - 93127 Brass Compression (1/8" x 1/4" Male)
 - 93128 Brass Compression (1/8" x 1/8" Female)



Valve

- 95001 Danfoss Electric Drain Valve** **\$430.35**
- Valve only, coil sold separately
- 2/2-Way – Normally Open (NO)
 - For automatic depressurization
 - With 2 ports (one inlet & one outlet)
 - With 2 positions (fully open or fully closed)



- 93108 2" Panel Mount Pressure Gauge** **\$25.26**
- Includes mounting hardware
 - 0-2000 psi / 140 bar
 - 1/8" MNPT, glycerin filled



- 95003 24 Volt Coil** **\$66.80**
- 95004 110 Volt Coil** **\$66.80**
- 95005 220 Volt Coil** **\$66.80**
- Each coil fits #95001 — order one, matched to the control circuit voltage



- 93585 2.5" Bottom Mount Gauge** **\$30.32**
- 0-2000 psi / 140 bar
 - 1/4" MNPT, glycerin filled

ELECTRIC DRAIN VALVE (EDV)

At every pump OFF cycle the EDV opens, instantly depressurizing the high-pressure line — closing every nozzle and draining about 1/4 gallon. Order the coil voltage that matches the Pump Station control circuit.

- 95002.DIN 4 Spade DIN Plug Connector** **\$15.50**



- For use with #95001



PUMP STATION • SECTION 07

PUMP STATION PARTS & SUPPLIES

Replacement parts and supplies for the FanMist Pump Station — part 2 of 3.

PUMP STATION PARTS & SUPPLIES

PART #	DESCRIPTION	PRICE	NOTES
--------	-------------	-------	-------

93521 Unloader Valve (Pressure Regulator)

\$92.55

The **Unloader Valve** is a combined pressure regulator and bypass valve mounted on the high-pressure outlet of the pump. It has two main functions:

- With external bypass
- With 3/8" MNPT ports
- Brass

- Maintains the set working pressure (factory-set at 1000 psi and adjustable as needed).
- When demand drops, it opens a bypass path that returns excess water to the pump inlet.

Heat Build-Up Risk in Bypass

Continuous high bypass above 75% for prolonged periods causes water temperature to rise until the thermal relief valve opens and releases water to the drain. The thermal relief valve is a standard safety feature that opens at 145°F / 63°C, protecting the pump seals, valves, and packing from overheating damage.



93656 High-Pressure Safety Switch (HPS)

\$70.95

High-Pressure Safety Feature – Installed on the pressure regulator. Activates automatically to terminate pump operation when:

- Black = 550 Activation psi
- Rating of 250V - 15 A
- 4" x 4" x 3"

1. Pressure drops suddenly.
 2. Upon startup, pressure fails to reach 550 psi within 25 seconds.
- On activation, the red **FAULT** light illuminates, the pump shuts off, and a manual restart is required.



93368 Water Inlet Low-Pressure Solenoid Valve (Granzow)

\$148.55

The **Inlet Water Solenoid Valve (Granzow)** is the PLC's "smart faucet" for the low-pressure inlet side of the high-pressure pump. It works as an automated on/off switch – normally closed (NC).

3/8" FNPT with 120V coil
used for 93368 (Granzow)

93024 Replacement 110V coil

\$28.88

- Part #93024 — 110V coil used for 93368 (Granzow)
- Part #93025 — 220V coil used for 93596 (Granzow)
- Part #93451 — 110V coil used for 93368 (AGB)
- Part #93452 — 220V coil used for 93596 (AGB)

93596 Water Inlet Low-Pressure Solenoid Valve (Granzow)

\$148.55

The Granzow valve has replaced the AGB valve under the same part numbers (93368 / 93596). Coils for existing AGB valves remain available.

3/8" FNPT with 230V coil
used for 93596 (Granzow)

93025 Replacement 220V coil

\$28.88

The main water supply can be on all the time while the valve automatically starts and stops water flow to the pump coordinated by the PLC for when the high-pressure pump needs it.

93451 Replacement 110V coil

\$27.78

used for 93368 (AGB)

93452 Replacement 220V coil

\$27.78

used for 93596 (AGB)

*If you ever see the pump not filling or getting water (red **FAULT** light), check that the inlet solenoid is clicking open when the system is commanded to run (you can hear/feel it).*



93369 Diaphragm for 93368 & 93596 (black discontinued; green upgrade now supplied)

\$52.29

Valve Body & Diaphragm Check – The internal rubber diaphragm controls water flow. If the valve allows water to flow when OFF or restricts flow when ON: The diaphragm is likely torn, out of position or scaled. *Replace the diaphragm if the valve body is in good condition; if the body is scaled or damaged, replace the complete valve (93368 / 93596).*

Shown: the center brass should appear recessed when viewed from the top





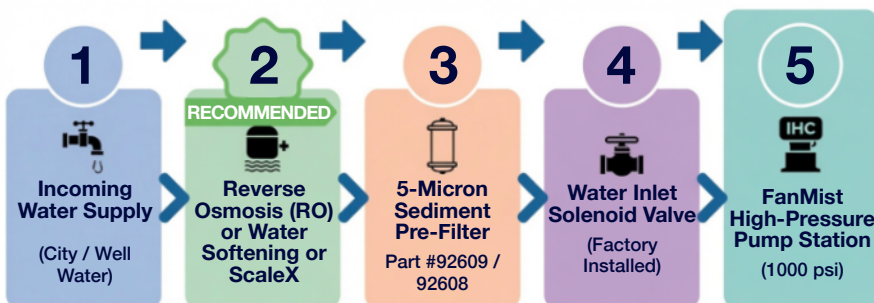
PUMP STATION • SECTION 07

PUMP STATION PARTS & SUPPLIES

Replacement parts and supplies for the FanMist Pump Station — part 3 of 3.

</

FANMIST WATER TREATMENT FLOW PATH – FROM WATER SOURCE TO THE FANMIST PUMP STATION



Incoming water supply for all humidity control systems requires two forms of water treatment:

- 1. Filtration of suspended solids** — the supplied 92609 housing with 92608 5-micron cartridge (standard on all FanMist systems).
- 2. Treatment of dissolved minerals** (calcium, magnesium, iron):
 - A. Reverse Osmosis** (recommended) removes dissolved minerals, preventing both scale and mineral dust;
 - B. Water Softening or ScaleX** controls calcium scale.



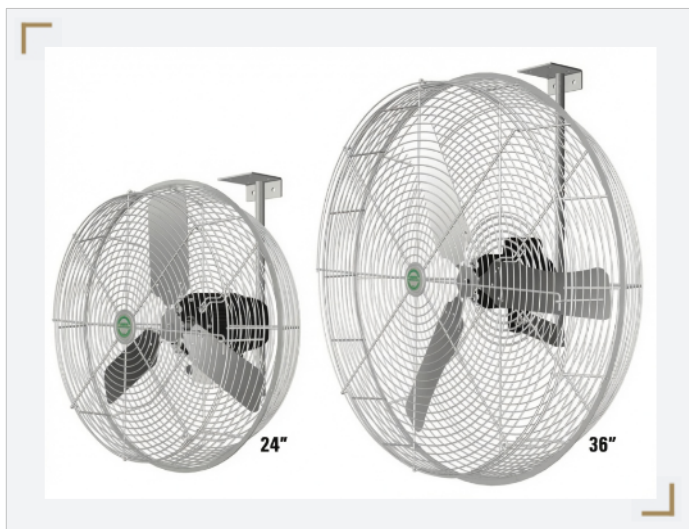
AIR MOVEMENT • SECTION 08

HIGH-VELOCITY INDUSTRIAL BASKET FANS

High-velocity fans for accelerated evaporation of high-pressure water atomizing systems in large space applications.

HIGH-VELOCITY 1/2 HP INDUSTRIAL BASKET FANS

PART #	DESCRIPTION	PRICE
VBS24	24" Dia. – 115/230V – 4.8/2.4A – 1 Ph 5300 CFM	\$402.34
VBS24-110	24" Dia. – 115/230V – 4.8/2.4A – 1 Ph 5300 CFM (with 110V cord)	\$441.58
VBS243A	24" Dia. – 230/460V – 2.6/1.3A – 3 Ph 4250 CFM (no cord available)	\$677.59
VBS36A	36" Dia. – 115/230V – 6.2/3.1A – 1 Ph 10,050 CFM	\$490.72
VBS36A-C115	36" Dia. – 115/230V – 6.2/3.1A – 1 Ph 10,050 CFM (with 115V cord)	\$543.66
VBS36A-C230	36" Dia. – 115/230V – 6.2/3.1A – 1 Ph 10,050 CFM (with 230V cord)	\$556.19
VBS36CF	36" Dia. – 208-230/460V – 2.6/1.31A – 3 Ph 10,000 CFM (no cord available)	\$529.67
VRSBR2-HDG	Galvanized Ceiling Bracket (Hot Dipped) 24" length for 24" dia. fans	\$39.17
VRSBR3-HDG	Galvanized Ceiling Bracket (Hot Dipped) 30" length for 36" dia. fans	\$41.82



SPECIFICATIONS

- 10,000 CFM Moisture plume dimension: 4' dia. x 22' length
- Fans located 10-15' from floor level – mounted ceiling, column or wall bracketed
- Fans recommended hardwired with ON/OFF switch
- Hinged Open-Front Guard — swings open for quick access
- Shipped fully assembled with bracket, boxed – white powder-coated fan finish
- 36" Fan Weight 63 lbs – 2-week lead time – 2-year warranty

EVAPORATION RATE

The evaporation rate of 1000-psi atomized water within the fan's 10,000 CFM air velocity plume is governed by the Loading Ratio (**total CFM per 1 lb/hr_w**), the effective evaporation rate of the mist beyond atomization alone.

Optimal Evaporation

Loading Ratio greater than 75 CFM per 1 lb/hr_w

36" Fan @ 10,000 CFM
Nozzles @ 7.94 lbs/hr_w
27" Mist Ring @ 111.2 lbs/hr_w
ER = 90 CFM : 1 lb/hr_w

24" Fan @ 5,300 CFM
Nozzles @ 7.94 lbs/hr_w
18" Mist Ring @ 63.5 lbs/hr_w
ER = 83 CFM : 1 lb/hr_w



MOISTURE DISTRIBUTION • SECTION 09

MIST-RINGS

3/8" Stainless Steel Mist-Ring & Ball Valve Assembly (BVA), sized to each fan and mounted to the fan face with zip ties — part 1 of 2.

MIST-RING (MR) / BARE • MIST-RING INCLUDING BALL VALVE ASSEMBLY

PART #	DESCRIPTION	PRICE
93704	12" Diameter MR (Bare) – 4 nozzle ports	\$124.07
MR12-4	12" Diameter MR w/ Ball Valve Assembly – 4 nozzle ports	\$201.13
93706	15" Diameter MR (Bare) – 6 nozzle ports	\$209.95
MR15-6	15" Diameter MR w/ Ball Valve Assembly – 6 nozzle ports	\$287.01
93718	18" Diameter MR (Bare) – 8 nozzle ports	\$219.49
MR18-8	18" Diameter MR w/ Ball Valve Assembly – 8 nozzle ports	\$296.55
93712	24" Diameter MR (Bare) – 12 nozzle ports	\$276.74
MR24-12	24" Diameter MR w/ Ball Valve Assembly – 12 nozzle ports	\$353.80
93711	27" Diameter MR (Bare) – 14 nozzle ports	\$305.37
MR27-14	27" Diameter MR w/ Ball Valve Assembly – 14 nozzle ports	\$382.43

BALL VALVE ASSEMBLY

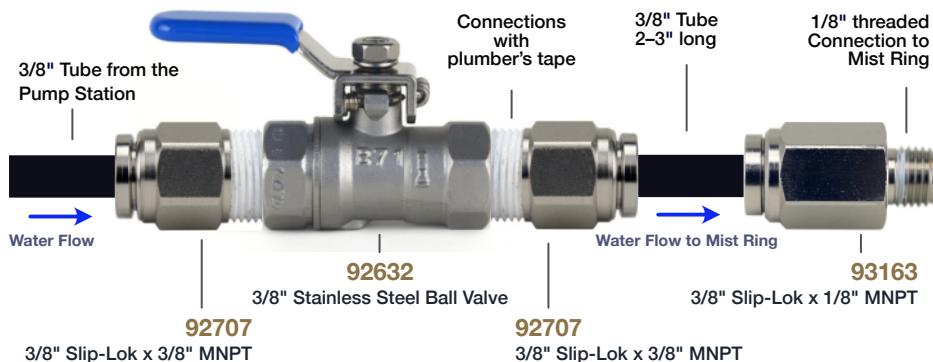
PART #	DESCRIPTION	PRICE
92707	3/8" Slip-Lok x 3/8" MNPT adapter two required per mist-ring	\$26.28/2ea
92632	3/8" Stainless Steel Ball Valve 3/8" threaded ports	\$27.75
93163	3/8" Slip-Lok x 1/8" MNPT adapter	\$23.03



SPECIFICATIONS • INSTALLATION

- 3/8" OD 304 Stainless Steel tube with precision arc-welded nozzle ports (10/24 female thread receiving 10/24 male-threaded nozzles — install nozzles finger-tight only).
- Mist rings are sized for each fan diameter size.
- Allow 2–3 weeks for delivery.
- Installation: center mist rings on the fan's front guard and secure with 4–5 four-inch zip ties. Flush rings to remove any debris from installation.

BALL VALVE ASSEMBLY (BVA) – FLOW PATH & ASSEMBLY DETAIL



Ball Valve Assembly (BVA)

The BVA connects the 3/8" drop-down tube from the pump station to the mist ring on the fan face. Part #93163 is the final connection to the mist ring.

The drop-down line connects to part #92707. Leave enough tubing to form a 180° loop back to the BVA for a straight in-line connection to the mist ring.

Assemble the BVA per the site diagram using spare tubing cut to typically 2–3" sections.

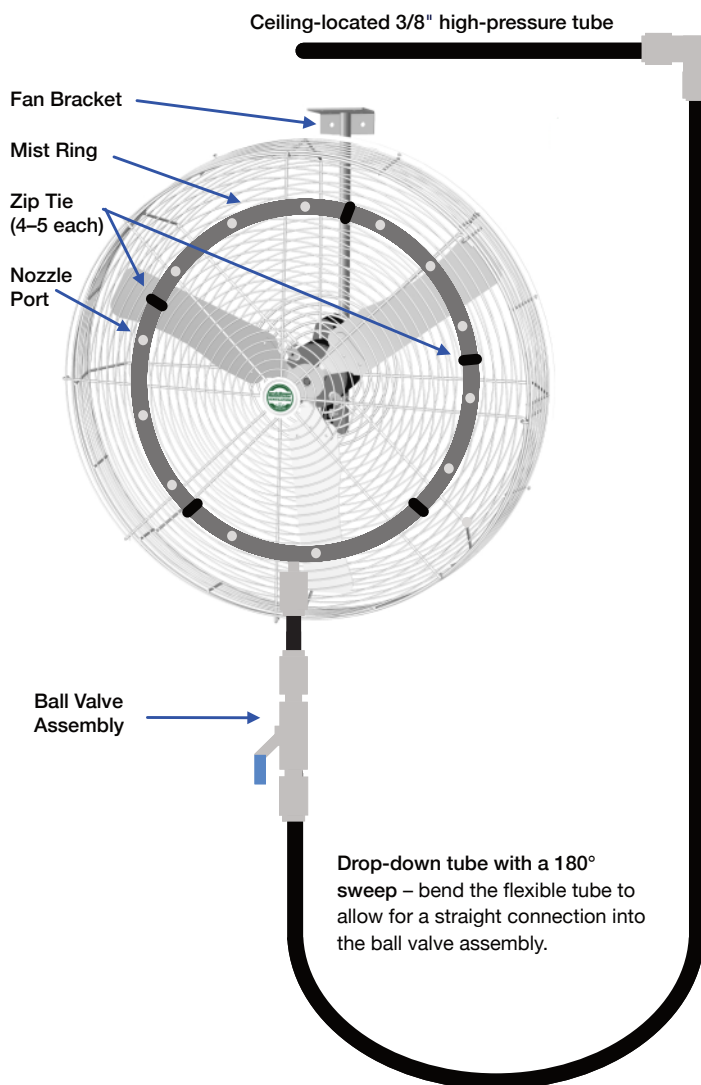


MOISTURE DISTRIBUTION • SECTION 09

DROP-DOWN LINE

The drop-down line (also called drop-down tube) is the short vertical section of 3/8" high-pressure nylon tubing that runs from the ceiling-mounted main high-pressure supply line down to the Ball Valve Assembly that feeds 1000 psi water to the mist ring on each 24" & 36" fan — part 2 of 2.

DROP-DOWN LINE TO THE FAN BALL VALVE ASSEMBLY – PATH FROM CEILING 3/8" SUPPLY LINE TO THE FAN



DROP-DOWN LINE INSTALLATION

- Install drop-down lines to each fan as part of the overall high-pressure tubing run (after the main 1/2" lines from the pump transition to 3/8" lines).
- The 3/8" drop-down tube for each fan begins at the ceiling-mounted 3/8" Slip-Lok Tee.
- Leave enough tubing length to form a flexible 180° sweep (bend) that enters the Ball Valve Assembly in a straight connection.
- On the last fan in the run, don't use a tee; instead, bend the ceiling tube into a 90° sweep to start the drop-down line to the ball valve assembly connection.
- Secure the drop-down lines with zip ties:
 - 14-24" zip ties to attach them to plant columns or fixtures.
 - 4" zip ties to secure the mist ring and the lower end of the drop-down to the fan.

SLIP-LOK CONNECTIONS

Push the tubing fully in, then pull back to lock. Prepare cut ends carefully — file or sand lightly — so the internal O-ring seal is not damaged.



VERITIES • SECTION 10

FANMIST FIRST PRINCIPLES

Fundamental physical truths that form the foundation for industrial-scale humidity control solutions.

THE THREE ESSENTIAL BUILDING DATA INPUTS FOR LOAD CALCULATIONS (TOTAL MOISTURE TO ADD)

- 1. Dimensions of area(s) to be humidified:** Length × Width × Ceiling Height = total cubic feet (ft³) of indoor plant air space.
- 2. Air exchange rate:** “the governing value” for load formulas: the rate of air volume turnover during winter operations, based on:
 - A. Cubic feet per minute (CFM)** — whichever is greater – total process exhaust-air CFM or total makeup-air CFM — **OR** —
 - B. Air exchanges per hour (ACH)** by building construction: tight, well-sealed 1.0 ACH • average 1.5 ACH • loose construction, multiple exposed walls, or frequent shipping-door traffic 2.0 ACH
- 3. Target indoor conditions:** desired RH (%) at the average indoor air temperature during winter operations (e.g. 40% RH @ 70°F).

THE CORE FORMULA FOR LOAD CALCULATIONS

Governing CFM is the greater of A or B, where B converts as CFM = (ACH × building ft³) ÷ 60

$$\text{TOTAL NET LOAD (lbs/hr)} = \frac{(\text{Net grains/ft}^3 \text{ difference}) \times (\text{Governing CFM} \times 60)}{7,000 \text{ grains}} \times 1.15 \text{ (15\% Safety Margin)}$$

HIGH-VELOCITY AIR + 1000-PSI ATOMIZATION = ACCELERATED EVAPORATION

Accelerated evaporation combines fan air velocity (CFM) with high-pressure (1000-psi) water atomization — rapidly converting fine droplets to vapor within a controlled air plume. The design principle: keep the fan output ratio above **75 CFM : 1 lb/hr**, maximizing moisture loading into a 4 ft diameter × 22 ft long plume for complete evaporation. Performance rests on seven interdependent elements:

- | | | | |
|--|---|--|--|
| 1
Extremely fine droplet size — very high surface-area-to-volume ratio for rapid phase change. | 2
High air movement & mixing — keeps droplets suspended and supplies unsaturated air. | 3
Strong vapor-pressure gradient — moving air drives fast evaporation. | 4
Temperature influence — warmer ceiling air holds more moisture. |
| 5
Rapid diffusion & equalization — vapor migrates quickly through the air space. | 6
Precise design & placement — fan, mist ring and nozzles and pointed into obstacle-free air. | 7
Continuous dilution of near-saturated air — prevents localized saturation. | Together: the greatest possible load fully evaporated inside the plume — <i>without fallout</i> |

HUMIDITY EQUALIZES THROUGHOUT ALL PLANT AIR SPACE BY THREE PHYSICAL LAWS

Dalton's Law & the Ideal Gas Law
(Gibbs–Dalton)
Water vapor exerts independent partial pressure and behaves nearly as an ideal gas.



Fick's Laws
Vapor migrates from high to low concentration along the vapor-pressure gradient until equilibrium.



The Clausius–Clapeyron Equation
Saturation vapor pressure rises exponentially with temperature (≈7% per °C / 4% per °F).