



PENNINGTON
& ASSOCIATES

Compressed air systems can accumulate as much as 30 gal of water a day! Use the chart below to estimate your system's output. Then check out our complete line of mechanical and electronic drains on the following pages to help you get rid of it.

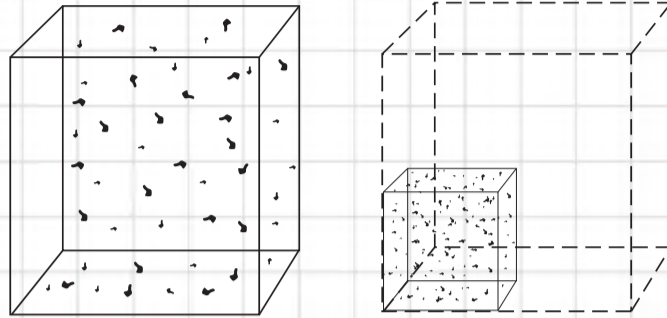
Water Chart

Basics of Compressed Air

At 100 psig, an air compressor compresses eight cubic feet of air into one cubic foot.

The water vapor, dust, dirt and odors in the air cause the following problems in compressed air systems:

- Paint defects or fish eye
- Rust and pipe scale
- Damages machinery
- Creates air line freezes
- Shortens air tool or equipment life
- Reduces air flow



When compressed to 100 psig, the air becomes 1/8 its previous size. The volume of air has changed, but the amount of water, vapor, dust, dirt and odors has not changed but just become more concentrated.

Water Factor Chart

Follow the steps below to determine the gallons of water accumulated by a compressed air system per 8 hours of use:

- 1 Determine the ambient temperature (outside temperature surrounding the dryer) and relative humidity.
- 2 Locate ambient temperature in first column of water factor chart.
- 3 Follow the row over to percent of humidity. This indicates the number of gallons accumulated by your air compressor in an 8-hour period.

EXAMPLE

25 HP air compressor delivers 100 scfm.

Ambient Temperature = 100° F

Relative Humidity = 60%

Water factor chart number is 31.2

Compressed air system accumulates 31.2 gallons of water per 8 hours of use.

Gallons of Water Per 8 Hours @ 100 SCFM

Ambient Air Temperature	20% Humidity	30% Humidity	40% Humidity	50% Humidity	60% Humidity	70% Humidity	80% Humidity	90% Humidity	100% Humidity
120°F	18.6	27.9	37.2	46.5	55.8	65.1	74.4	83.7	93.0
110°F	14.1	21.0	27.9	35.1	42.0	48.9	55.8	63.0	69.9
100°F	10.5	15.6	20.7	26.1	31.2	36.6	41.7	46.8	52.2
90°F	7.8	11.4	15.3	19.2	23.1	26.7	30.6	34.5	38.4
80°F	5.7	8.4	11.1	13.8	16.8	19.5	22.2	24.9	27.9
70°F	3.9	6.0	7.8	9.9	12.0	13.8	15.9	18.0	19.8
60°F	2.7	4.2	5.7	6.9	8.4	9.9	11.1	12.6	14.1
50°F	2.1	3.0	3.9	4.8	6.0	6.9	7.8	8.7	9.9
40°F	1.2	2.1	2.7	3.3	3.9	4.8	5.4	6.0	6.6
30°F	.9	1.2	1.8	2.1	2.7	3.0	3.6	3.9	4.5
20°F	.6	.9	1.2	1.5	1.7	1.9	2.1	2.4	2.7

AUTOMATIC ELECTRONIC DRAINS

Part no.	NPT	List price (\$)	1-24	25-49	50
5702S	1/4	241.80	Arrow Pneumatic discounts apply		
5704S	1/2	308.30			
5802 (EAD-25)	1/4	120.00	64.80	56.40	51.60
5803 (EAD-33)	3/8	125.00	67.50	58.75	53.75
5804 (EAD-50)	1/2				

These timer-controlled drains are available in 115 or 230VAC, and offer true installation simplicity at the lowest possible cost. Use of a strainer is recommended to prevent clogging (see page 23). 5700 series includes Y-strainers and have Buna-N seals. Viton seals standard on others. Max. system pressure: 5700 series - 200 psi; 5800 series - 230 psi.



5702S



5802

OPTIMUM

Part no.	NPT	List price (\$)	1-24	25-49	50
OPT-25	1/4	130.00	70.20	61.10	55.90
OPT-33	3/8				
OPT-50	1/2				

The Optimum consists of an electronic timer coupled to a solenoid valve. Available for 24VDC/AC, 115VAC, or 230VAC operation, as well as stainless steel and high pressure models. Suitable for all compressed air system components (aftercoolers, dryers, filters, pressure vessels and piping), regardless of their size or capacity. Max. system pressure: 230 psi.



SMART GUARD

Part no.	NPT	List price (\$)	1-24	25-49	50
3623-U3	1/2	425.00	229.50	199.75	182.75

A compact electronically-operated level-sensed condensate drain that offers a zero air-loss solution during the condensate discharge cycle. It can be installed in all compressed air systems with flows up to 3500 cfm. The design features new LED indication of condensate level, a robust, industrial housing, alarm function, and a 2/2 way direct-acting valve assembly. Max. operating pressure: 230 psi. Model shown is 115VAC, normally open alarm mode; call for other voltage, mode, and DC versions.



Private labeling (company name, logo, phone number) is available on some timer drain models. Please call for pricing.

All dimensions & pipe sizes are in inches

SMART GUARD MINI

Part no.	NPT	List price (\$)	1-24	25-49	50
3622	1/2	250.00	135.00	117.50	107.50

Efficient condensate removal in an extremely small and lightweight package. Perfect for systems with flows up to 350 cfm. Includes a test button, LED indicator light, an externally mounted valve, and removable electronic module and top cover, allowing the drain to be easily disassembled without disconnecting pipe work. Integrated mesh strainer to protect valve. An internal sensor automatically detects potential blockages and will pulsate the valve in attempt to clear them. Max. operating pressure: 230 psi. Model shown is 115VAC; call for DC and other voltage versions.



SMART GUARD HP

Part no.	NPT	List price (\$)	1-24	25-49	50
3623-H1	1/2	1350.00	729.00	634.50	580.50

Features a remote alarm contact, test button, LED indicator lights, and an optional heater for cold weather applications. Robust 2/2-way capacitive level sensor operates a direct acting valve to discharge condensate without losing valuable compressed air. Includes six foot power cord and a removable electronic module and top cover, allowing disassembly without disconnecting pipe work. Max. pressure: 725 psi. Max. flow: 3500 CFM. Model shown is 115VAC, normally open alarm mode; call for other voltage, mode, and DC versions.



TEC-44 motorized ball valve series

Part no.	NPT	List price (\$)	1-24	25-49	50
TEC-44-1/2	1/2	403.00	217.62	189.41	173.29
TEC-44-3/4	3/4	480.00	259.20	225.60	206.40
TEC-44-1	1	510.00	275.40	239.70	219.30

The TEC-44 incorporates a micro processor which ensures that all those heavily contaminated systems get drained on time, every time. For heavy duty applications. Units for AC operation shown; DC units available.



TEC-11 drain for filter series

Part no.	NPT	List price (\$)	1-24	25-49	50
TEC-11-18	1/8	130.00	70.20	61.10	55.90
TEC-11-14	1/4				

The TEC-11 is designed to drain condensate from all compressed air filters, regardless of filter capacity. The in-line design allows for fast efficient installation. A range of fast-fit adapters, which can be matched to any model/brand or type of filter, is available.



MECHANICAL (NON-ELECTRIC) DRAINS

SMART GUARD POD-TD

Part no.	NPT	List price (\$)	1-24	25-49	50
3805	1/2	307.00	165.78	144.29	132.01

Designed specifically for applications where electricity is difficult to provide, this drain provides effective condensate removal yet requires no electrical power. Good for systems with flows up to 3500 cfm. A newly developed 3/2-way level controlled valve principle operates a direct cylinder valve, discharging the condensate automatically from your system. There is no unnecessary compressed air lost during this process. Pressure range: 44-230 psi.



MAG-11

Part no.	NPT	List price (\$)	1-24	25-49	50+
MAG-11	1/2 in - 1/8 out	210.00	113.40	98.70	90.30

The MAG-11 is designed to remove condensate from compressed air filters. A float in the unit's reservoir rises as the condensate collects, and once the 8 oz capacity is reached the valve opens. When the condensate finishes draining, an internal magnet closes the valve. It is therefore ideally suited to applications where power is not available. No timers to set or plug in. Operation is automatic and without waste of valuable compressed air. Max. system pressure: 230 psi.



Mini MAG

Part no.	NPT	List price (\$)	1-24	25-49	50+
Mini MAG	1/2 in - 1/8 out	150.00	81.00	70.50	64.50

A compact version of the MAG-11 for tight installations. Max. system pressure: 230 psi.



Next Generation Trap

Part no.	List price (\$)	1-24	25-49	50+
EH38-0LAAA	259.00	139.86	121.73	111.37

Ideal for compressor applications up to 25HP (100 SCFM). Avoids blockage common to small passages in other designs, and eliminates the need for timer drains. Auto adjusts to required flow without any type of manual input. Max. system pressure: 200 psi, min. operating pressure: 40 psi, Max flow @ 100 psi: 0.2 gpm, Temp. range: 34°-170°F, Wt.:7lbs, Inlet/outlet connections: 3/8NPT, Height: 7.2 in.



CDI/DRAIN-ALL Condensate Traps

Part no.	Model	List price (\$)
DH50-0LAAA	Condensate Handler	838.00
LH50-0LAAA	WaterHog	327.00
PH50-0LAAA	Pressure Handler	1040.00
RH50-0LAAA	Rust Handler	870.00



Drain-All's extensive line of patented "zero-loss" condensate traps contribute energy-saving, performance-improving functionality to many compressed air and compressed gas system applications. Drain-All's Condensate Handler has become an industry standard for purging water from compressed air systems in a highly efficient and energy-saving way, and the same patented design has been modified to accommodate a variety of non-standard applications including high and low-pressure environments, high temperatures, and high concentrations of rust or other solids.