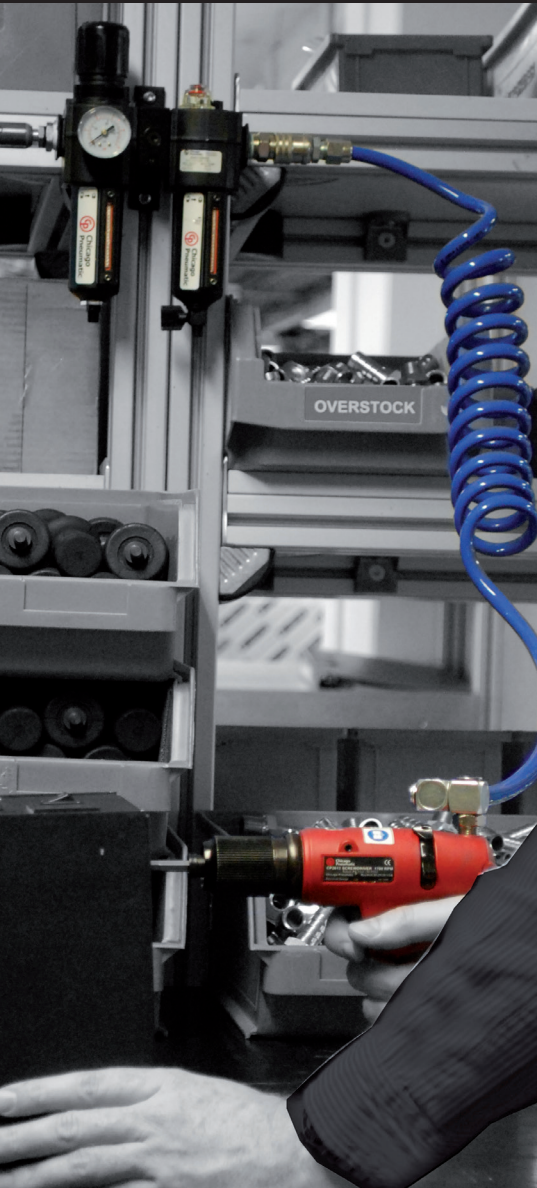


# AIR LINE NETWORK

Filter Regulator Lubricator **GUIDE**

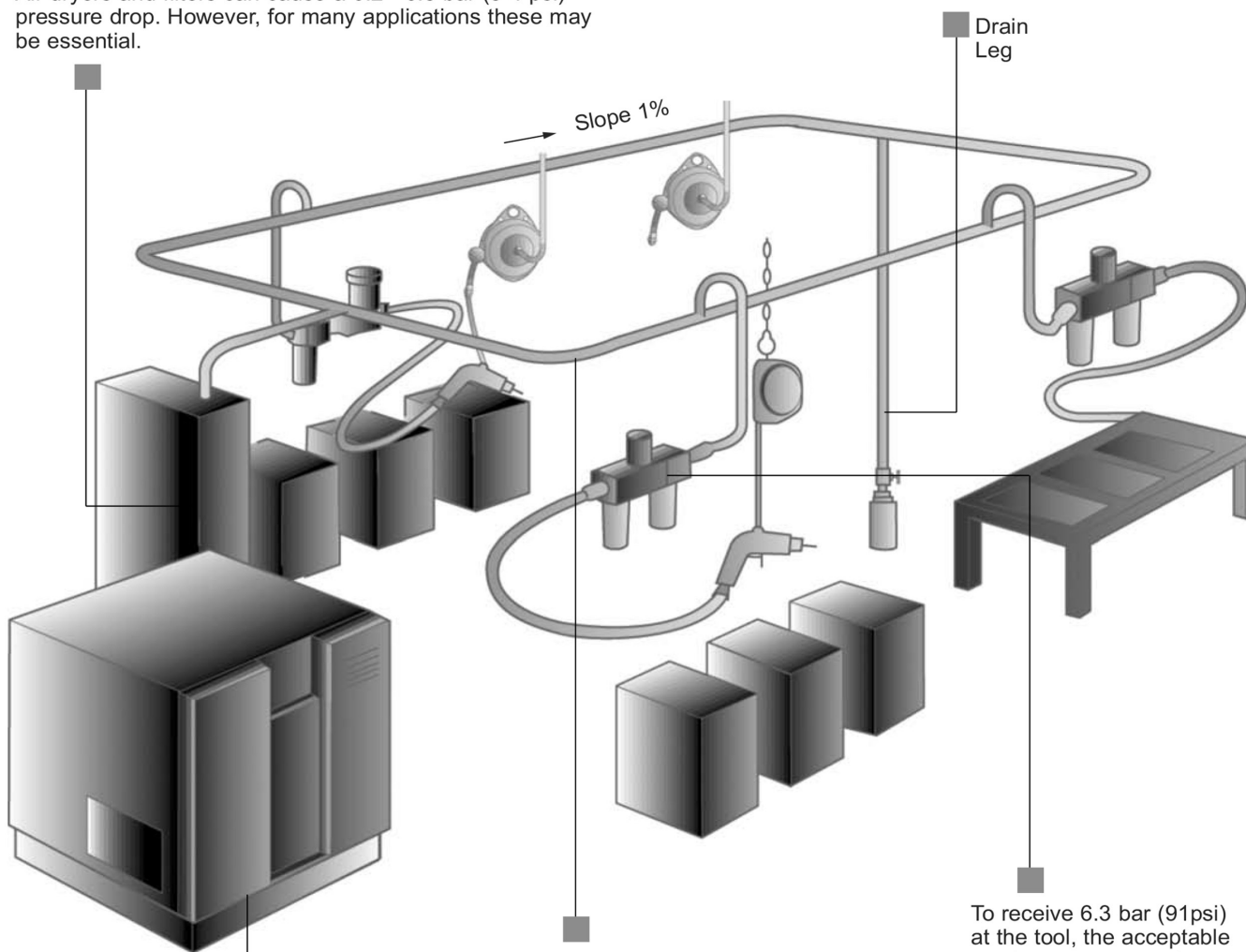


# AIR LINE NETWORK

Chicago Pneumatic Air Preparation Units and Air Line accessories are designed to help you get maximum performance from your tools. They ensure minimal pressure drop and thus minimum energy loss in the air distribution system, benefiting the environment and cutting operating costs.

The lifetime of your tools will be extended by using air preparation units which can also lower repair costs and decrease downtime. A correct air installation guarantees productivity and return on investment..

Air dryers and filters can cause a 0.2 - 0.3 bar (3-4 psi) pressure drop. However, for many applications these may be essential.



A carefully designed network virtually eliminates pressure drop. We recommend a Ring Main layout which has a slope away from the input of 1%.

To receive 6.3 bar (91psi) at the tool, the acceptable maximum pressure drop from airline accessories is 0.6 bar (9 psi). A combination of high performance components and careful engineering will achieve this.

A normal compressor can deliver up to 7.5 bar (109 psi) air line pressure, depending on start and stop settings.



# FILTERS, REGULATORS, LUBRICATORS

Why should you use a filter, regulator and lubricator ?

The use of a filter, regulator and lubricator (in that order) for pretool air preparation is strongly recommended by Chicago Pneumatic. Proper air preparation will result in improved tool performance and increased tool life. The units should be mounted as close to the tool as possible, preferably right where the tool hose is connected to the system. To realize their full value, these units should be checked on a regular assigned basis by maintenance workers or the operators themselves.

## AIR FILTER

Filter separates impurities such as solid particles.

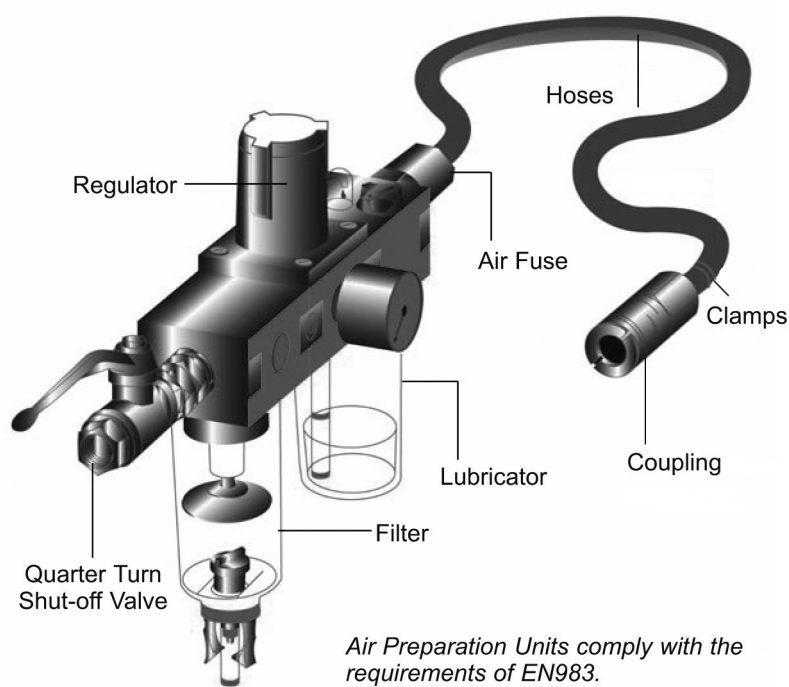
Not using filters in combination with air tools leads to shorter service life, higher maintenance costs and lower efficiency. Old air systems with cool dryers, for instance, generate a lot of rust and running tools without installing a filter could damage the tool in less than a week.

Chicago Pneumatic filters separate up to 98% of the water when operating within their working range. All three types (Small, Medium and Big) are very low pressure drop.

## REGULATOR

The regulator ensures that the pre-set working pressure remains constant - regardless of pressure variations in the intake air and minor variations in the airflow rate. For example, a pressure of 1 bar higher than necessary results in a 16% increase in air consumption.

Spring controlled regulators are quick acting and therefore should be used with all types of air tools.



*Air Preparation Units comply with the requirements of EN983.*

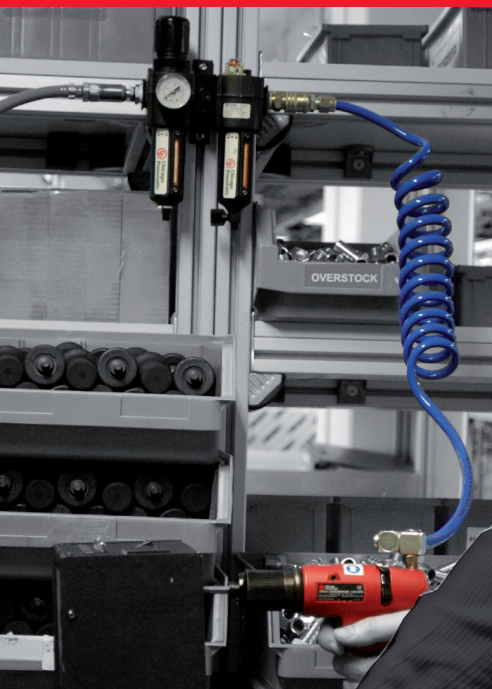
TOOL PRESSURE	AIR CONSUMPTION
91 psi (6 bar)	100 %
101 psi (7 bar)	110 %
116 psi (8 bar)	125 %

## LUBRICATORS

If lubricators are not used, tool motor vanes will need to be changed more often. The life of the vanes may decrease to as little as 1/10th of the normal working time. The oil fog lubricator is the most common type of lubricator, it supplies a mist of oil to the air hose.

DIFFERENT TYPES OF FRL	PORT SIZE IN.	AIR FLOWS AT 6 BARS L/S CFM (L/S)
Small units	1/4	Up to 19 (9)
	3/8	Up to 29.7 (14)
Medium units	1/2	Up to 78.4 (37)
Big units	1	Up to 175.9 (83)

# AIR PREPARATION UNITS

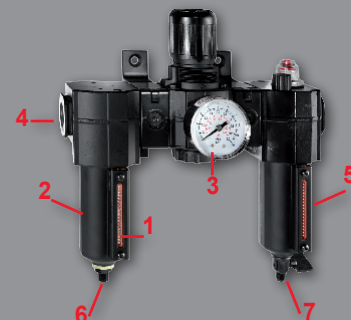


Max air flow  $\Delta$  14.5 PSI (1 bar)

## FEATURES AND BENEFITS

- High air flow capacity: up to 220 cfm (104 l/s) to cover most of the pneumatic tool needs. Available in kits: 1/4", 1/2", 3/4", BSP or NPT, 2 or 3 stages units or individual units. Durable design including quick release bayonet metal bowls for rough working environments.

- (1) Liquid level indicator on the bowls for improved reading.
- (2) Filter with 5 $\mu$ m element pre-installed to optimize the air cleaning and with automatic drain valve.
- (3) Supplied with metal pressure gauge 0-10 bar (0-145 PSI) with metric and imperial scales.
- (4) 145 – 245 PSI (10-17 bar) inlet / outlet max. pressure.
- (5) Micro fog lubricator to optimize the air/oil ratio
- (6) Automatic drain valve
- (7) Manual drain



FILTER-REGULATOR LUBRICATOR WITH PRESSURE GAUGE (0-150 PSI - 0-10 BAR)	THREAD	MAX. AIR FLOW		MAX. PRESSURE	OIL CAPACITY		PART NUMBER	
	in.	cfm	l/s	Inlet (psi/bar)	oz	ml	NPT	BSP
2 STAGE	1/4 G	24	11	150/10	3.4	100	894 016 8515	894 016 8478
2 STAGE	1/2 G	110	50	246/17	6.8	201	894 016 8517	894 016 8480
2 STAGE	3/4 G	220	100	246/17	6.8	201	894 016 8519	894 016 8483
3 STAGE	1/4 G	24	11	150/10	3.4	100	894 016 8516	894 016 8479
3 STAGE	1/2 G	110	50	246/17	6.8	201	894 016 8518	894 016 8481
3 STAGE	3/4 G	220	100	246/17	6.8	201	894 016 8520	894 016 8484

Included with the units: Filter 5 $\mu$ m, Pressure gauge 0-150 psi - 0-10 bar, Microfog lubricator, Automatic drain valve



FILTER UNIT	THREAD	PART NUMBER	
	in.	NPT	BSP
1 STAGE	1/4 G	894 016 9091	894 016 9090
1 STAGE	1/2 G	894 016 9099	894 016 9098
1 STAGE	3/4 G	894 016 9107	894 016 9106



LUBRICATOR UNIT	THREAD	PART NUMBER	
	in.	NPT	BSP
1 STAGE	1/4 G	894 016 9095	894 016 9094
1 STAGE	1/2 G	894 016 9103	894 016 9102
1 STAGE	3/4 G	894 016 9111	894 016 9110



REGULATOR UNIT	THREAD	PART NUMBER	
	in.	NPT	BSP
1 STAGE	1/4 G	894 016 9093	894 016 9092
1 STAGE	1/2 G	894 016 9101	894 016 9100
1 STAGE	3/4 G	894 016 9109	894 016 9108



FILTER-REGULATOR	THREAD	PART NUMBER	
	in.	NPT	BSP
1 STAGE	1/4 G	894 016 9097	894 016 9096
1 STAGE	1/2 G	894 016 9105	894 016 9104
1 STAGE	3/4 G	894 016 9113	894 016 9112



PRESSURE GAUGE	SIZE		$\varnothing$	MAX PRESSURE	PART NO.
	in.	mm			
1/8" - 0-10	1/8"G	1.57	40	150 PSI (10bar)	894 016 9178
1/8" - 0-10	1/8"NTP	1.57	40	150 PSI (10bar)	894 016 9179
1/8" - 0-10	1/8"G	1.97	50	150 PSI (10bar)	894 016 9180
1/8" - 0-10	1/8"NTP	1.97	50	150 PSI (10bar)	894 016 9181



SPRAY PAINT UNIT	PART NUMBER
Filter 0.01 $\mu$ m	894 017 0472



FRL PORTABLE STAND	PART NUMBER
FRL PORTABLE STAND FOR 1/2" metric	615 812 0450



## Over 110 years of experience

Since 1901 the Chicago Pneumatic (CP) name has represented reliability and attention to customer needs, with construction, maintenance and production tools and compressors designed for specific industrial applications. Today, CP has a global reach, with local distributors around the world.

Our people start every single day with a passion to research, develop, manufacture and deliver new products that are meant to meet your needs not only today, but tomorrow as well.

To learn more about our extensive range of tools, construction equipment, industrial and portable compressors, accessories and workshop equipment, please visit [www.cp.com](http://www.cp.com).

**Easily find the tools you need  
to get the job done!**



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