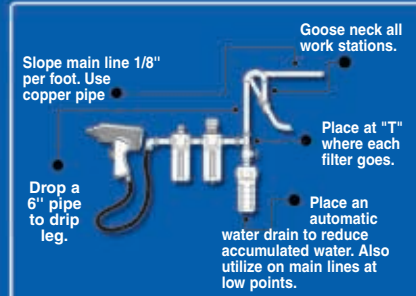


COMPRESSED AIR SYSTEM DESIGN LAYOUT

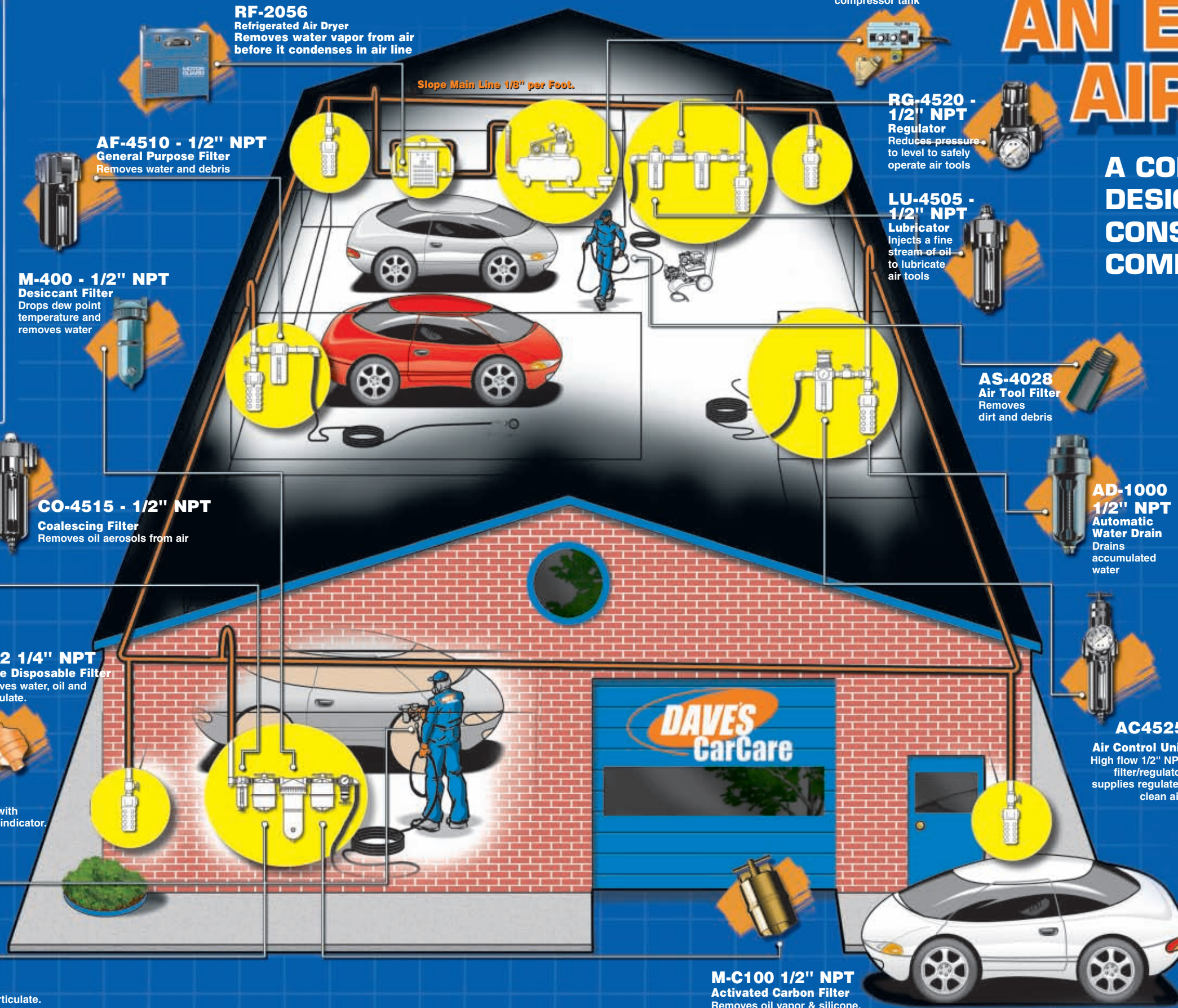
BUILDING AN EFFICIENT AIR SYSTEM



5 Important Steps To An Air System Setup

1. Main line filter and regulator should be placed at least 20 feet from the compressor. The air will cool down, allowing much of the water vapor to condense naturally for removal by filtration.
2. Main piping should slope down from point of origin by 1/8" per foot. Any water in the line will flow down to the lowest point for draining.
3. All line drops (work stations) should be taken from the top of the main line. This prevents water from flowing into branch lines.
4. Copper pipe is recommended when building an air system.
5. Follow illustration above when building a work station drop.

Compressed air powered equipment and machinery are critical elements in the productivity, efficiency and economy of today's industry and quality air is the essential element. Water and dirt cause more problems in compressed air lines than anything else. High speed pneumatic production lines operate efficiently because of air dryers and filters that remove moisture and impurities from the air which results in eliminating downtime. Regulators and lubricators can be added to control and lubricate downstream equipment. A good air system is the key to saving time, money, and to operating at maximum efficiency.



RF-2056
Refrigerated Air Dryer
Removes water vapor from air before it condenses in air line

RF-2011
Automatic Drain
Automatically drains compressor tank

AF-4510 - 1/2" NPT
General Purpose Filter
Removes water and debris

RG-4520 - 1/2" NPT
Regulator
Reduces pressure to level to safely operate air tools

M-400 - 1/2" NPT
Desiccant Filter
Drops dew point temperature and removes water

LU-4505 - 1/2" NPT
Lubricator
Injects a fine stream of oil to lubricate air tools

AS-4028
Air Tool Filter
Removes dirt and debris

CO-4515 - 1/2" NPT
Coalescing Filter
Removes oil aerosols from air

AD-1000
1/2" NPT Automatic Water Drain
Drains accumulated water

D-12 1/4" NPT
In-line Disposable Filter
Removes water, oil and particulate.

AC4525
Air Control Unit
High flow 1/2" NPT filter/regulator supplies regulated clean air.

DD-1008
In-line Desiccant Filter with exclusive color-change indicator.

M-60 1/2" NPT
M-30 1/4" NPT
Submicronic Filter
Removes water, oil and particulate.

M-C100 1/2" NPT
Activated Carbon Filter
Removes oil vapor & silicone.

A COMPREHENSIVE DESIGN GUIDE FOR THE CONSTRUCTION OF COMPRESSED AIR SYSTEMS

From tank drains, water traps and dryers to high-efficient point-of-use filters, **MOTOR GUARD Air Management Products** provide the protection needed to prolong tool life and ensure the best performance from all air tools and spray equipment.

MOTOR GUARD CORPORATION
580 Carnegie Street
Manteca, CA 95337
Phone (800) 227-2822
Fax (800) 237-7581
www.motorguard.com








SHOP AIR COMPONENTS / DRYERS

	MODEL	DESCRIPTION	PURPOSE	SPECIFICATIONS
	RF-2055	Refrigerated Dryer	Removes moisture from compressor discharge by lowering temperature. An efficient and economical way of providing dry air throughout the shop.	Nominal Airflow: 20 CFM Comp. Rating: 5 HP Inlet Temp.: 100F Voltage: 115/220V 1Ø
	RF-2056	Refrigerated Dryer	For High Inlet temperature air applications (160 Degree F), please reference our "Three in One" series:	Nominal Airflow: 35 CFM Comp. Rating: 7.5 HP Inlet Temp.: 100F Voltage: 115/220V 1Ø
	RF-2057	Refrigerated Dryer	Specify voltage required.	Nominal Airflow: 50 CFM Comp. Rating: 15 HP Inlet Temp.: 100F Voltage: 115/220V 1Ø
				Nominal Airflow: 100 CFM Comp. Rating: 25 HP Inlet Temp.: 100 F Voltage: 220/460V 1Ø/3Ø
RF-2058	Refrigerated Dryer			
	RF-2011	Automatic Tank Drain	Electronic control automatically drains tanks at specified interval. Extends tanks life and lowers operating costs.	Pipe Size: 1/4NPT Max. Pressure: 200 PSI Temp. Range: 35-165F Voltage: 115V 1Ø
	M-800	Shop Air Management System	A water, particulate, oil filter and regulator sized to handle the whole shop. For compressors up to 30 HP.	Pipe Size: 3/4NPT Nominal Airflow: 120 CFM Filtration Rating: .01 Micron Max. Pressure: 250 PSI Max. Temp.: 150F
	M-810	Shop Air System Particulate Filter	A water trap and particulate filter designed to handle the whole shop. Sight glass and automatic drain.	Pipe Size: 3/4NPT Nominal Airflow: 230 CFM Filtration Rating: 40 Micron Max. Pressure: 250 PSI Max. Temp.: 175F
	M-820	Shop Air System Oil Coalescing Filter	A high-efficiency oil removing filter to handle the whole shop. Pop-up element change indicator.	Pipe Size: 3/4NPT Nominal Airflow: 120 CFM Filtration Rating: .01 Micron Max. Pressure: 250 PSI Max. Temp.: 150F
	M-830	Shop Air System Diaphragm Regulator	Set line pressure for the whole shop. A high-capacity true diaphragm regulator with high visibility gauge.	Pipe Size: 3/4NPT Nominal Airflow: 250 CFM Outlet Range: 2-125 PSI Max. Pressure: 250 PSI Temp. Range: 40-120F
	M-900	Econo-dry Desiccant Dryer System	Economical 2-stage system includes a sub-micronic filter and desiccant dryer.	Pipe Size: 1/2NPT Nominal Airflow: 30 CFM Filtration Rating: .01 Micron Max. Pressure: 125 PSI Max. Temp.: 120F
	M-1000	System Supreme Desiccant Dryer System	Supplies clean, ultra-dry, oil free air to the booth. A particulate filter, oil coalescer, desiccant dryer and regulator.	Pipe Size: 1/2NPT Nominal Airflow: 30 CFM Filtration Rating: .01 Micron Max. Pressure: 125 PSI Max. Temp.: 120F
	DS-1000	Desiccant Dryer System	4-stage system removes particulate, water, oil and delivers ultra-dry, regulated air to the booth.	Pipe Size: 1/2NPT Nominal Airflow: 20 CFM Filtration Rating: .01 Micron Max. Pressure: 125 PSI Max. Temp.: 120F
	M-4095-Q	Replacement Desiccant	Silica gel desiccant beads with color change indicator. Beads go from blue to pink when changing is needed. Low dust.	1 Quart
M-4095G	1 Gallon			
M-4097	25 Pounds			

SPRAY BOOTH

DESICCANT

POINT-OF-USE COMPONENTS

	MODEL	DESCRIPTION	PURPOSE	SPECIFICATIONS
	M-30	Sub-Micronic Compressed Air Filter	M-30/M-60 - The ultimate final filter. Removes moisture, particulate and oil aerosols to less than .01 microns in size. Protects refinishing equipment, air tools and plasma cutting equipment. Easily replaceable element.	Pipe Size: 1/4NPT Nominal Airflow: 45 CFM Filtration Rating: .01 Micron Max. Pressure: 125 PSI Max. Temp.: 175F
	M-60	Sub-Micronic Compressed Air Filter		Pipe Size: 1/2NPT Nominal Airflow: 100 CFM Filtration Rating: .01 Micron Max. Pressure: 125 PSI Max. Temp.: 175F
	M-C100	Activated Carbon Filter	M-C100 - Removes vaporous contaminants from compressed air including hydrocarbon oils, silicone, volatile organic compounds and desiccant dust. Ensures defect free finishing with all of today's premium and water-borne refinishing systems.	Pipe Size: 1/2NPT Nominal Airflow: 100 CFM Removal Rating: < .01 ppm Max. Pressure: 125 PSI Temp. Range: 32 - 175 F
	LU-4505	Lubricator	Injects a fine stream of oil into air supply to lubricate air tools.	Pipe Size: 1/2NPT Nominal Airflow: 142 CFM Bowl Size: 5 oz. Max. Pressure: 250 PSI Temp. Range: 40-120F
	AF-4510	Water and Particulate Filter	General-purpose filter removes moisture, particulate and oil aerosols. Sight glass and manual drain included.	Pipe Size: 1/2NPT Nominal Airflow: 100 CFM Filtration Rating: 40 Micron Max. Pressure: 250 PSI Temp. Range: 40-160F
	CO-4515	Oil Coalescing Filter	Removes oil aerosols from compressed air stream to .01 microns in size.	Pipe Size: 1/2NPT Nominal Airflow: 50 CFM Filtration Rating: .01 Micron Max. Pressure: 250 PSI Temp. Range: 40-160F
	M-400	Desiccant Dryer	Delivers extremely dry air, dew point to -40F, to critical processes. 2 Qt. Desiccant charge is easily replaced.	Pipe Size: 1/2NPT Nominal Airflow: 30 CFM Filtration Rating: 40 Micron Max. Pressure: 250 PSI Max. Temp.: 120F
	AD-1000	Automatic Water Drain	Installs at the bottom of air line drops to collect and drain condensed moisture.	Pipe Size: 1/2NPT Bowl Size: 6 oz. Max. Pressure: 250 PSI Max. Temp.: 160F
	RG-4520	Diaphragm Regulator with Gauge	A true diaphragm, relieving type regulator for precise control of air pressure near the workstation.	Pipe Size: 1/2NPT Nominal Airflow: 100 CFM Outlet Range: 0-125 PSI Max. Pressure: 300 PSI Temp. Range: 40-120F
	AC-4525	Air Control Unit	Integral design combines an efficient water and particulate filter with a high-flow diaphragm regulator into a compact unit. Pressure gauge is included.	Pipe Size: 1/2NPT Nominal Airflow: 100 CFM Filtration Rating: 40 Micron Max. Pressure: 150 PSI Temp. Range: 40-125F
	AC-4535	Air Control Unit		Pipe Size: 1/2NPT Nominal Airflow: 100 CFM Filtration Rating: 5 Micron Max. Pressure: 150 PSI Temp. Range: 40-125F
	D-12	Disposable Spray Gun Filter	Attaches directly to the spray gun and provides a lightweight sub-micronic filter to remove oil, water and particulate.	Pipe Size: 1/4NPT Nominal Airflow: 30 CFM Filtration Rating: .01 Micron Max. Pressure: 100 PSI Max. Temp.: 120F
	DD-1008	Mini Desiccant Dryer	Lightweight disposable desiccant dryer attaches directly to tool. Color change indicator signals replacement.	Pipe Size: 1/4NPT Nominal Airflow: 20 CFM Filtration Rating: 5 Micron Max. Pressure: 125 PSI Max. Temp.: 130F
	AS-4028	Air Tool Filter	Protects valuable high-speed air tools by removing particulates right at the inlet. Extremely light-weight.	Pipe Size: 1/4NPT Nominal Airflow: 25 CFM Filtration Rating: 40 Micron Max. Pressure: 100 PSI Max. Temp.: 200F
	RG-4049	Mini Regulator/Gauge	A true diaphragm, precision regulator that weighs ounces. Attaches directly to tool or spray gun for ultimate control.	Pipe Size: 1/4NPT Nominal Airflow: 25 CFM Outlet Range: 0-125 PSI Max. Pressure: 250 PSI Temp. Range: 40-120F

TOOL MOUNT COMPONENTS