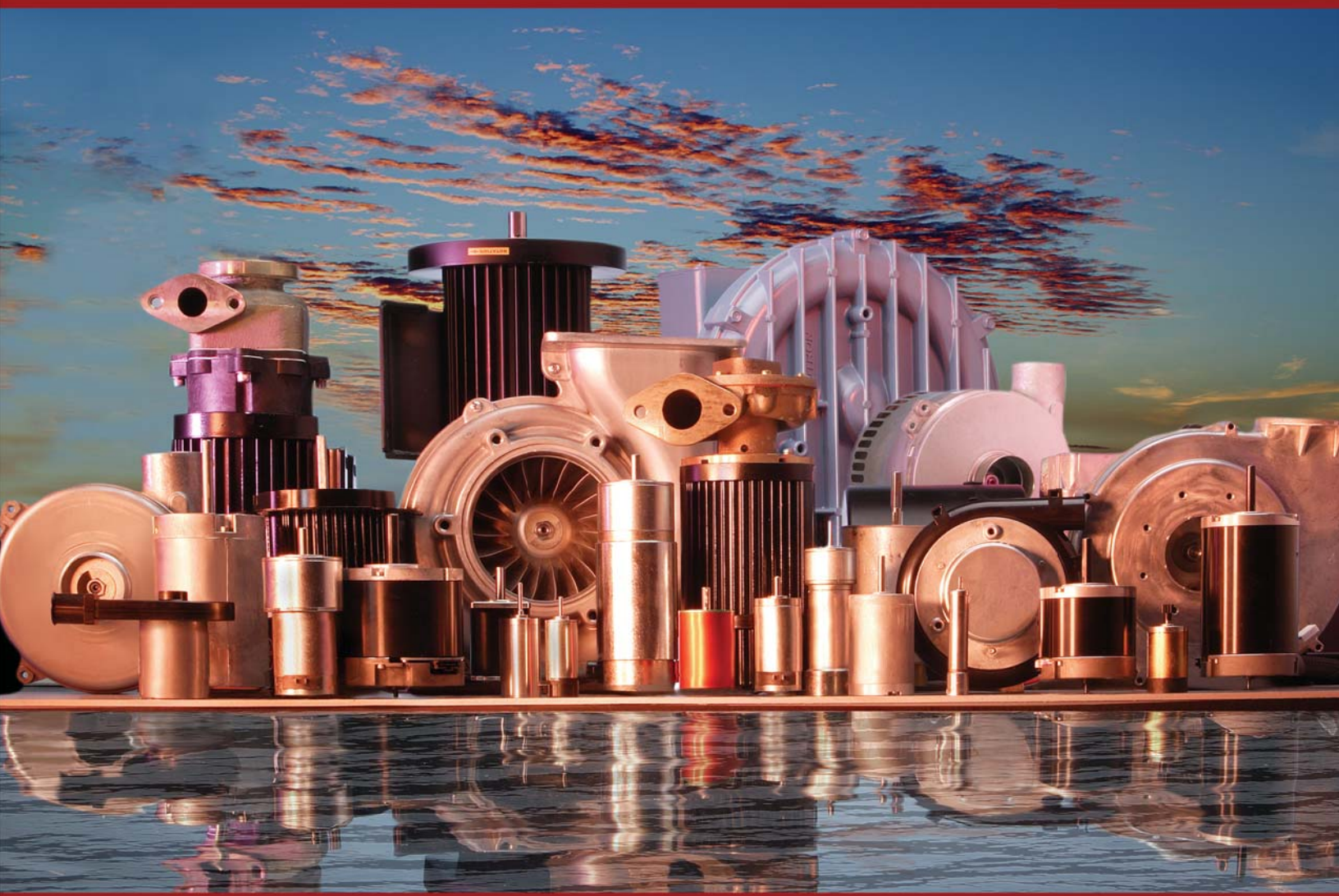


AMETEK[®]
PRECISION MOTION CONTROL
DYNAMIC FLUID SOLUTIONS

ROTRON[®] REGENERATIVE BLOWERS

PRODUCT APPLICATION AND SOURCEBOOK



WELCOME TO SOLUTION CITY[®]

BLOWER FEATURES AND BENEFITS

DR (DOMESTIC REGENERATIVE)

Our Industrial DR regenerative blowers include:

- Rugged cast aluminum housing, cover, impeller and muffler tower
- Removable cast iron flanges bolted to a stamped metal manifold
- TEFC motors on single-ended models, ODP motors on all double-ended models
- Carbon steel shaft and zinc plated hardware
- Permanently sealed motor bearings for 20,000-25,000 hours life

EN (ENVIRONMENTAL REGENERATIVE)

Our explosion-proof EN blowers are designed the same as the DR blowers, except added features include:

- Heavy duty cast aluminum manifold
- Our spark resistant housing, cover, impeller, muffler tower and manifold are vacuum impregnated
- TEFLON® lip seal in a stainless steel case standard for leakage containment to 25 cc/min or less
- Explosion-proof motors standard and available in a variety of world voltages
- All metal-to-metal surfaces are sealed with RTV sealant

CP (CHEMICAL PROCESSING REGENERATIVE)

Our chemical processing/specialty gas blowers are designed the same as DR/EN blowers, except added features may include:

- Chem-Tough surface conversion corrosion resistant treatment for all castings
- TEFLON® lip seal in a stainless steel case standard for leakage containment to 25 cc/min or less
- Chemical duty motors with 303 stainless steel motor shafts
- Stainless steel hardware throughout
- Nickel plated flanges and muffler retainers
- Double faced carbon seals standard for leakage containment to 0.5 cc/min or less

_RD (REMOTE DRIVE REGENERATIVE)

Our industrial _RD blowers are motor-less models built with DR/EN/CP/SL/MF features and include:

- Rugged cast-iron arbor and bearing suspension system
- Designed with oversized shaft to withstand heavy-duty side loads
- Precision balanced impellers for low vibration operation
- High speed versions built with heat-treated impellers available

ES (ENGINEERED SPECIALTY REGENERATIVE)

- Built custom to your specifications
- You design it, we build it

SE (MINISPIRAL REGENERATIVE)

Our instrument grade and variable flow SE regenerative blowers include:

- AC versions available in a variety of world voltages
- Three (3) DC versions available for maximum flow variability
- Glass filled molded phenolic case and impeller
- 30,000 hour bearing life
- Lightweight construction at 1.9 lbs
- Fits in the palm of your hand at 4.2" diameter x 1.8"
- Quiet to NC-47 (office equipment specifications)

SL (SPIRAL)

Our instrument grade SL blowers include:

- Rugged die cast aluminum housing, end bells and impellers
- Stamped metal aluminum covers
- Motor internal to the blower parts for extremely compact envelope dimensions
- Muffler material encased inside the housing for maximum noise reduction
- Low amp draw with highly efficient motor
- Permanently sealed bearings for 20,000-25,000 hours life
- Hermetically sealed models designed for glove box

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NINE MAJOR BLOWER APPLICATION AREAS

Your own imagination and knowledge are probably the best source of in-plant and on-site applications for ROTRON regenerative blowers. This guide will help to pinpoint and stimulate your consideration of the many alternative sources we provide to replace costly and maintenance intensive suction and pressure units and systems. The nine major application groups are listed and a cross reference of the most common applications by industry will help you identify both identical and similar applications in your industrial operations.

POLLUTION CONTROL

Air Sampling	4
Air Stream Release Monitoring	4
Fire Prevention Air Sampling	4
Flue Gas Sampling	4

AGRICULTURE

Methane Gas Recovery	6
Chemical Processing	6
Vent Header Off-Gassing	6

AQUACULTURE

Aquarium Fish Farm	9
Hatchery	9
Pond Aeration	9

AQUEOUS PRECISION CLEANING

Automotive Parts Drying	8
Semiconductor Board Drying	8

ENVIRONMENTAL

Gasoline Vapor Recovery	6
Lagoon Gas Recovery	6
Landfill Gas Recovery	6
Radon Gas Collection	6
Soil Vapor Extraction	6

FOOD PROCESSING

Batter Blow-Off	8
Bottle and Can Drying	8
Label Drying	8
Salt, Spice and Flour Blow-Off	8

FOUNDRY

Combustion Air Boost	4
Lost Foam Off-Gassing	5
Sand Reclamation	7
Groundwater Sparging	9

INSTRUMENTATION

Engine/Motor Cooling	5
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Film Development System Cooling	5
Lamp Bank Cooling	5
Small Enclosure Cooling	5
Glove Box Pressurizing	4
Incubator Air Circulation	4
Weather Measurement Sampling	4

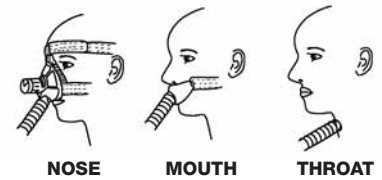
MANUFACTURING

Concrete Fluid Bed Aeration	9
Electroplating Tank Agitation	9
Conveyor Belt Blow-Off	8
Electroplating Fume Guiding	8
Electroplating Parts Drying	8
Electroplating Solution Blow-Back	8
Flat or Irregular Metal Parts Drying	8
Wire Drying	8
Chip, Dust and Particle Removal	7
Liquid & Solvent Removal	7
Paper, Plastic Film and Textile Removal	7
Cabinet Fume Venting	6
Environmental Test Chamber Venting	6
Laser Smoke Removal	6
Weld Smoke Removal	6

Combustion Air Boost	4
Natural Gas Boost	4
Oil Demisting	4
PARP Respiration	1
Bag Filling Equipment	3
Cutting Tables	3
Packaging Equipment	3
Vacuum Manipulators	3
Corrugated and Paperboard Boxes	3
Flexible Packaging	3
Rigid Packaging	3
Beverage Containers	3

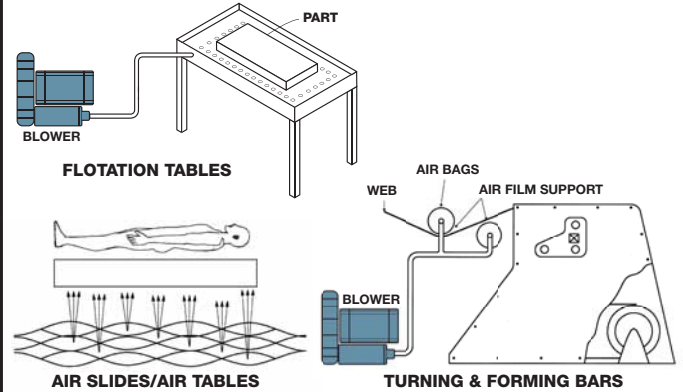
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AIR-ASSISTED BREATHING



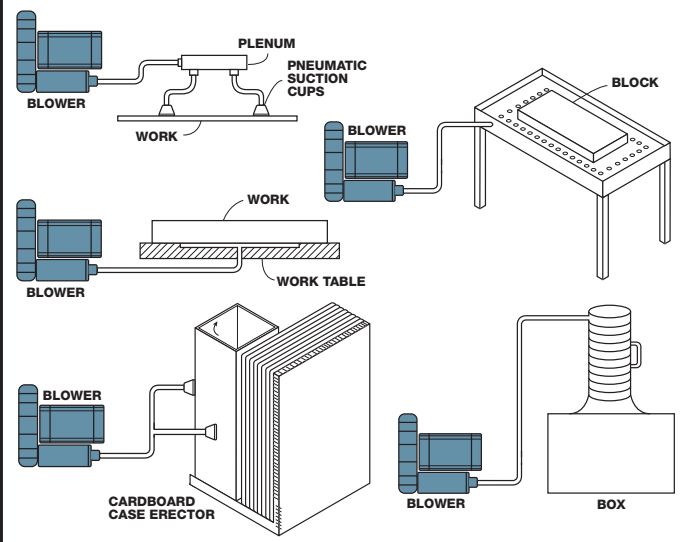
2

AIR-ASSISTED INFLATION OR SUPPORT



3

AIR-ASSISTED VACUUM PICK-UP OR HOLD-DOWN



Cosmetic and Toiletry Containers	3
Blister Packs	3
Pharmaceutical Packaging	3
Food Packaging	3
Sterile Medical Device Packaging	3
Labels	3
Pressure Sensitive Tape	3

MATERIALS HANDLING

Fluidized Beds	9
Air Slides	7, 2

Blast Cleaning	7
Dilute Phase Conveying	7
Pneumatic Tube	7
Air Tables	2
Carbon Black Car Unloading	2

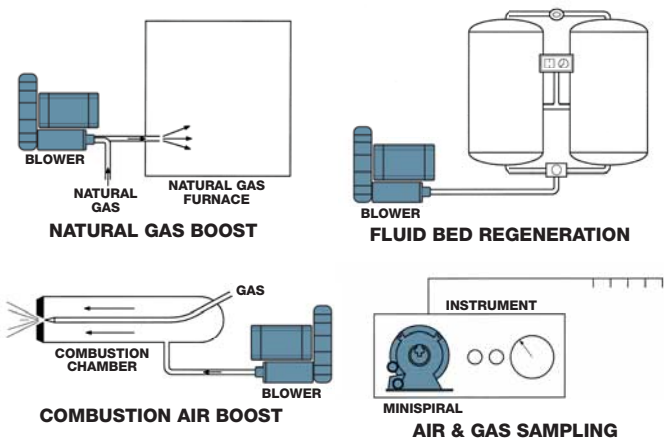
MINING

PARP Respiration	1
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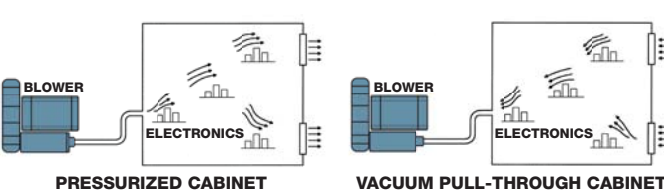
PACKAGING

Bag Filling	7
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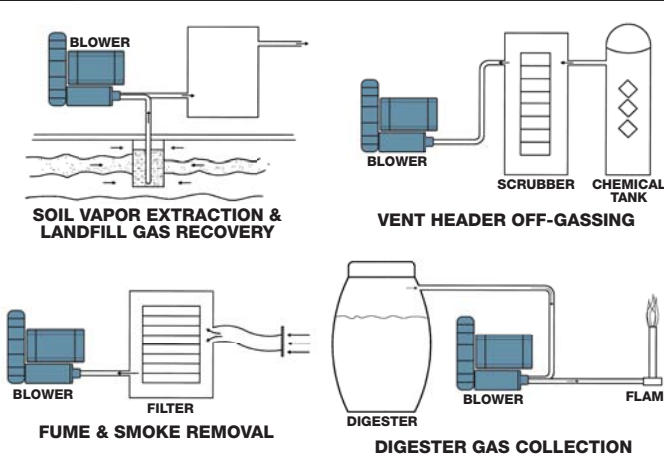
4 AIR & GAS SAMPLING, BOOSTING OR CIRCULATING



5 ELECTRONIC COOLING



6 GAS, VAPOR & FUME RECOVERY, VENTING & TREATMENT



PAPER OR PLASTICS HANDLING

Desiccant Dryer Bed Regeneration	4
Cutting Tables	3
Diaper Making Equipment	3
Printing Presses	3

PAPER PROCESSING

Flotation Tables	2
Forming Bar	2
Sheet Fluttering	2
Turn Bars	2

PHARMACEUTICAL

Sterilization Gas (ETO) Technology	6
Clean Room Air Circulation	4
Oxygen Generator	4

RECREATION

Commercial SPA Aeration	9
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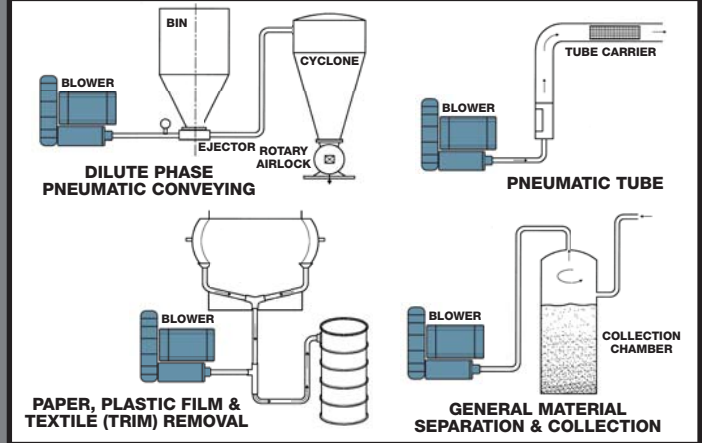
REFINERIES

Centrifuge Venting	6
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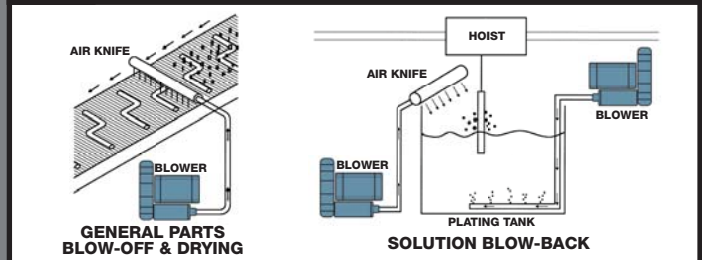
TEXTILE

Garment Flotation Tables	2
Garment Cutting Tables	3

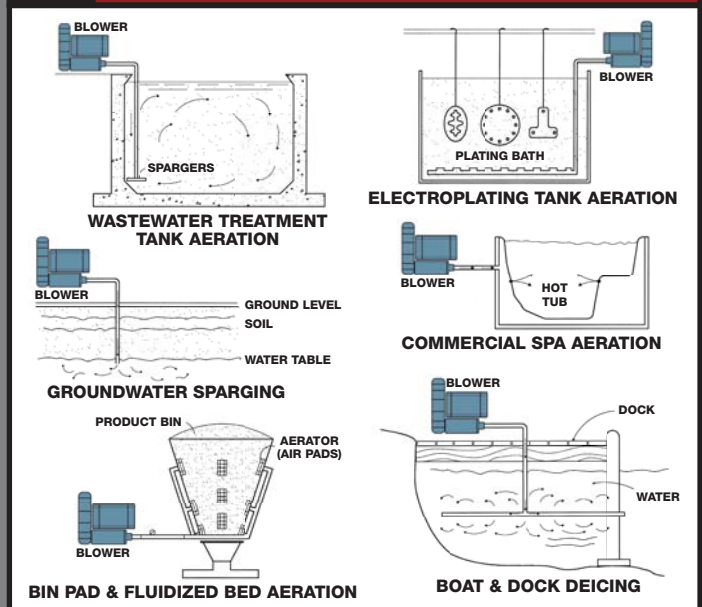
7 SOLID MATERIAL TRANSPORTING, SEPARATION & COLLECTION



8 PARTS BLOW-OFF & DRYING



9 SOLUTION & MEDIA AGITATION & AERATION



Yarn Guiding and Tensioning	3
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Yarn Aspiration	3
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WATER MANAGEMENT

Boat Deicing	9
Dock Deicing	9
Dam Face Deicing	9

WATER POLLUTION CONTROL

UV Tube Agitation	9
Wastewater Filter Backwash	9
Wastewater Treatment Tank Aeration	9
Digester Gas Collection	6
Pollution Containment	2
Waterway Management	2

THE ROTRON REGENERATIVE PRINCIPLE

The impeller blades passing the inlet port draw air or other gases into the blower. The impeller blades then, by centrifugal action, accelerate the air outward and forward. Here the “regenerative” principle takes effect as the air is turned back by the annular shaped housing to the base of the following blades, where it is again hurled outward. Each “regeneration” imparts more pressure to the air. When the air reaches the stripper section at the outlet (the stripper is the part of the blower located between the inlet and the outlet in which the annulus is reduced in size to fit closely to the sides and tips of the impeller blades), the air is “stripped” from the impeller and diverted out of the blower. The pressures

or vacuums generated by each spinning, non-contacting, oil-free impeller are equal to those obtained by many larger multi-stage or positive displacement blowers.

Pressure or vacuum gauges should be located in the delivery line, oriented as shown. Assure that the gauge is approximately three pipe diameters from the blower delivery flange and that the relief valve is located at the same spacing from the gauge. 90° elbows should be located at least five pipe diameters from the blower delivery flange. Elbows, taps, tees, valves, or other restrictions to air flow should not be located between the blower delivery flange and accessories described above.

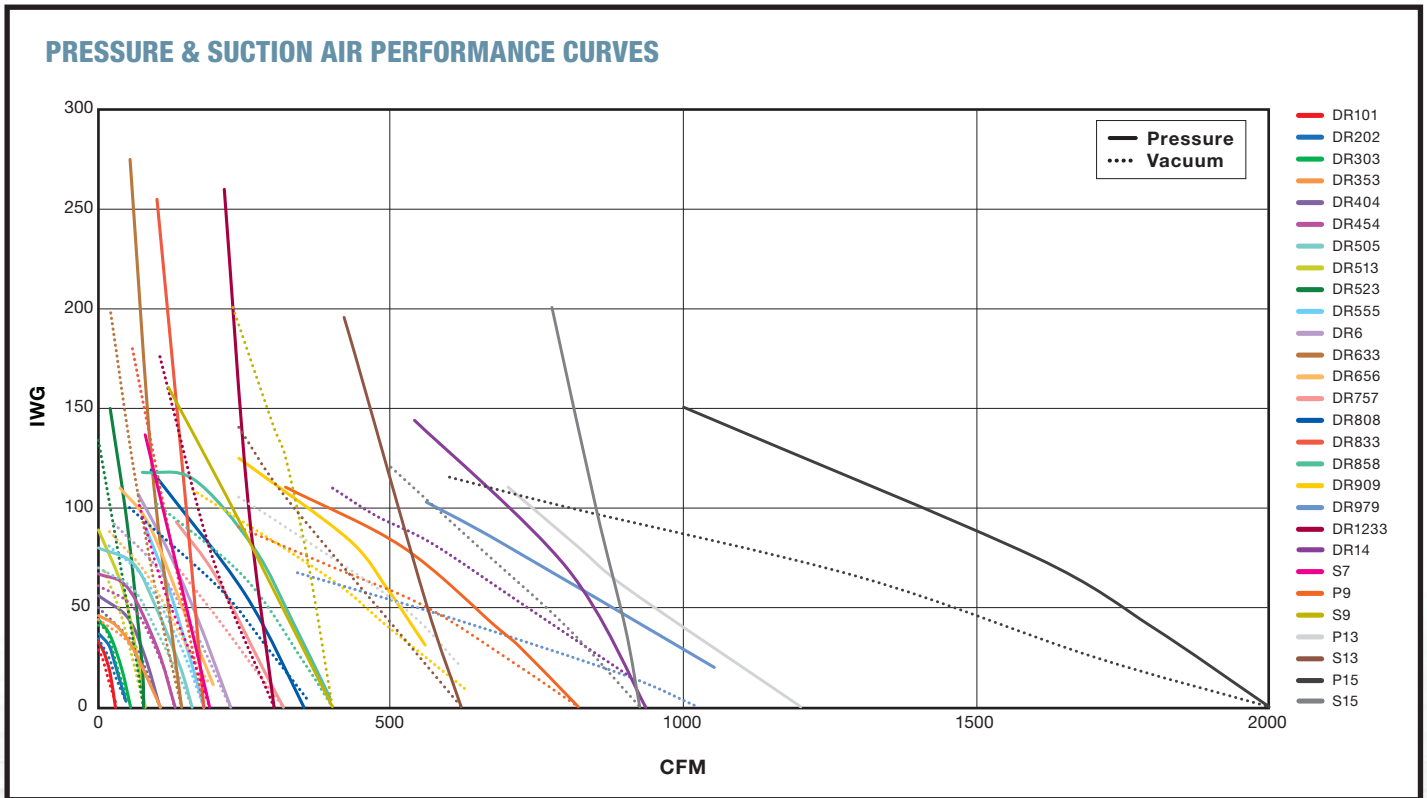


Figure 1

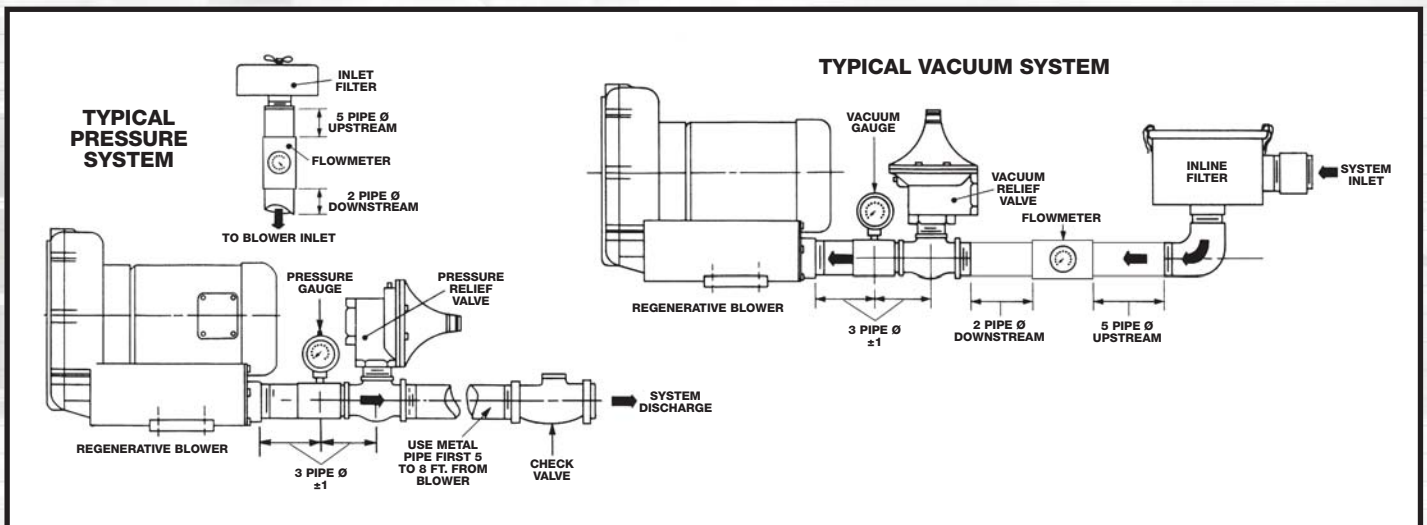


Figure 2

AMETEK, Inc.

AMETEK is a global leader in electronic instruments and electromechanical devices with colleagues at numerous manufacturing, sales and service locations in the United States and in many other countries around the world.

AMETEK Precision Motion Control/Dynamic Fluid Solutions

AMETEK Precision Motion Control/Dynamic Fluid Solutions is a world leader in motors, blowers and pumps for mass transit, medical, business machine and computer applications. It also is a leader in regenerative blowers for pressure and vacuum applications used by broad range of industries.

Dynamic Fluid Solutions supports its customers globally from its manufacturing facilities in North Carolina, Ohio, Italy and China. Our brushless DC motors, blowers, controllers, pumps, and fans are ideally suited for a wide range of applications, including medical instruments, robotics, pumps, compressors, office equipment, fans, machine tools, tape drives, or any other precise rotary motion/air delivery applications.

Dynamic Fluid Solutions' product line of regenerative blowers for pressure and vacuum applications services the process, industrial, environmental, waste, and wastewater industrial industry. Typical applications areas include solution agitation and aeration, pneumatic conveying, part hold-down and pick-up, part blow-off, gas and fume extraction, and process gas handling.

Dynamic Fluid Solutions supplies the solution for unique performance, mounting, environmental and agency requirements.

Your Choice Our Commitment™



100 East Erie Street, Kent, OH 44240 U.S.A.
Tel: +1 330 673 3452 • info@ametekdfs.com • Europe: +49 7703 930 909
www.ametekdfs.com