



V & HV Series Rotary Vane Air Compressors



industry revolves around ©hydrovane



The Unique Rotary Air Compressor Alternative



- Wears in...not out
- Direct Drive
- Slow Speed
- Small Footprint
- Quiet

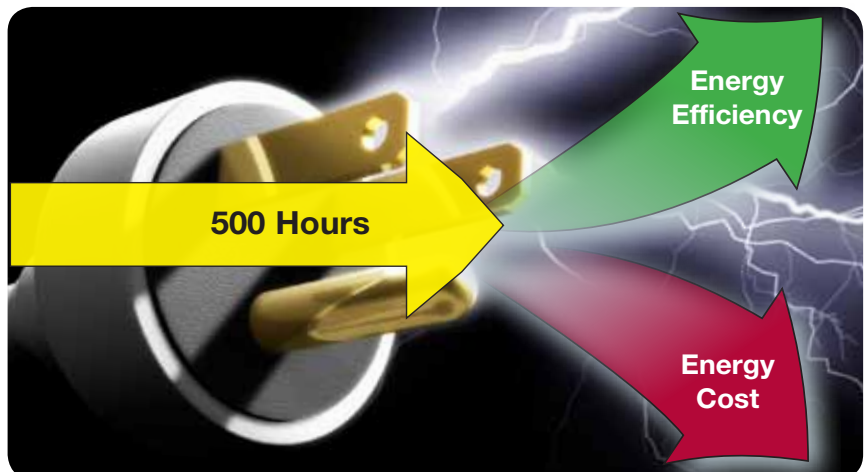
When considering the purchase of an air compressor there are three determining factors: application, operating requirements, and budget. Reciprocating compressors have traditionally been the ideal compressor choice for intermittent duty applications such as service vehicles, tire shops, and general automotive repair. Rotary compressors are the optimal compressor choice for continuous duty requirements such as auto body, paint, and plant air.

Rotary compressors are typically available in two styles, rotary screw or rotary vane. Rotary screw compressors are often the most commonly applied rotary compressor. Depending on the manufacturer's philosophy, rotary screw compressors vary in footprint, rotor speed, motor speed, and drive method.

Rotary vane compressors are the unique alternative to rotary screw compressors. All **hydrovane** rotary vane compressors are direct drive and operate at slow rotational speeds. **hydrovane** compressors are typically quieter, smaller, and have less moving parts than a rotary screw. For fluctuating demand applications, **hydrovane** compressors are also available with regulated speed drives, which greatly reduce energy costs.

hydrovane has proven to be the compressor of choice in many of the most difficult environments and applications. From the frigid temperatures of the Swiss Alps to the extreme temperature swings and harsh conditions of the transit industry, **hydrovane** continues to prove itself time and time again.

hydrovane compressors are known to wear in over time.....not wear out. The vanes (or blades) of **hydrovane** seat into the rotor stator over time. This allows the **hydrovane** to operate at up to 5% higher efficiency than when new.



***Up to 5% Higher Efficiency Over Time**

The Versatility of hydrovane:

hydrovane compressors have proven to be the most dependable rotary compressor in many of the most rigorous environments. **hydrovane** engineering can develop a custom package to fit almost any application.

- Snowmaking – below zero operation
- Transit Packages – trains, street cars, trams, electric busses
- Cement Batching – dirty and dusty environments
- Shipboard / Yachts – corrosive environments
- Smelting – high temperatures
- Sweet Gas – city/pipeline gas
- Sour Gas Applications
 - Oil fields
 - Coal fields
 - Landfill/digester
 - Sewage



The Adaptability of hydrovane:

hydrovane engineering has the capability to adapt a hydrovane compressor or custom-built package to many unique compressed air applications.

- Hydraulic Drive
- Food Grade
- High Ambient Temperature
- Low Ambient Temperature
- Engine Driven
- DC Motors (24 to 600v)
- Remote Filtration
- Additional In-line Filtration.

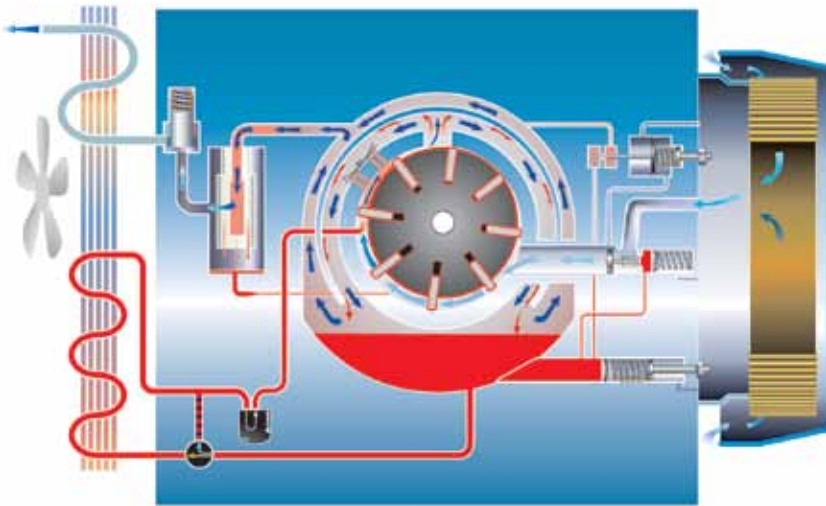
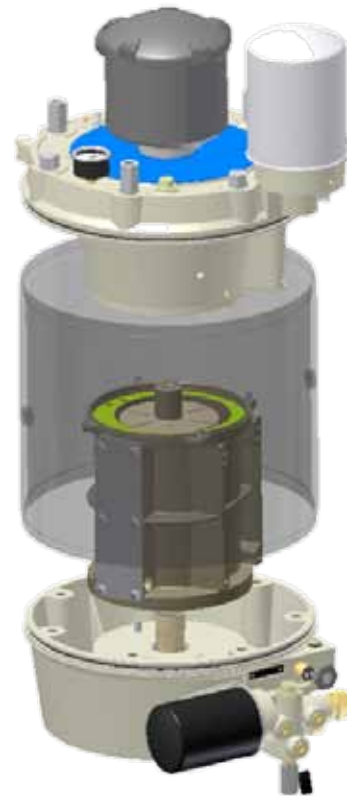


hydrovane—the intelligent compressor choice for any application.



The hydrovane Principle

- The compressor is driven by an electric motor. It operates at a very low speed ensuring long component life and reliability.
- The rotor is the only part that is continually moving, reducing potential component malfunction to a minimum.
- The rotor is designed with slots that fit the sliding vanes. The vanes ride on a film of oil and move smoothly in and out of the slots.
- The rotor is positioned off-center within the stator. The rotor is directly driven by the electric motor and rotates within the stator.



- During rotation, centrifugal force extends the vanes from their slots to form individual compression cells.
- As the cells move around the stator, the trapped air is compressed and then expelled from the stator. The oil is then separated from the compressed air.
- Cool, clean, compressed air is then piped to a receiver or directly to equipment in some applications.
- For applications with fluctuating air demand, regulated speed control is available to reduce energy consumption.



The hydrovane Advantage

Rotary Vane Technology:

- Provides consistent supply of high quality, pulse free air
- Less moving parts
- Designed to handle difficult environments.

Direct Drive: No gears and no belts mean less components to maintain, fail, or replace, and no power loss through belts or gears.

Wears in....not out: Over time, the vanes of **hydrovane** seat into the rotor stator, tightening clearance volumes, and ultimately reducing power consumption by as much as 5%. This further improves specific power performance resulting in energy cost savings.

Slow Speed: Male rotor speeds in a rotary screw compressor may be as high as 8000 RPM. All **hydrovane** fixed speed models operate at a slow 1760RPM. **hydrovane** regulated speed models operate from 870 to 2200RPM. Slow speed operation results in low noise, low stress, and long life.

REVS: Reduced Energy Venting System (HV04 – HV45) rapidly vents internal pressure minimizing offload power to 25% as well as providing low starting current.

Bushings instead of bearings: Bearings are commonly found in rotary compressors and in time need replaced. **hydrovane** uses bushings instead of bearings insuring long life and reduced maintenance costs.

Small Footprint: The entire range of **hydrovane** products provide the smallest footprint of any rotary compressor line. All **hydrovane** enclosed products fit through a standard 36" door providing the most versatile range of compressors in the market.

Ease of Maintenance: Common replacement items such as - Air/Oil Separator, Air Filter, and Oil Filter, are all "Spin-off / Spin-On" allowing quick 15 minute maintenance.



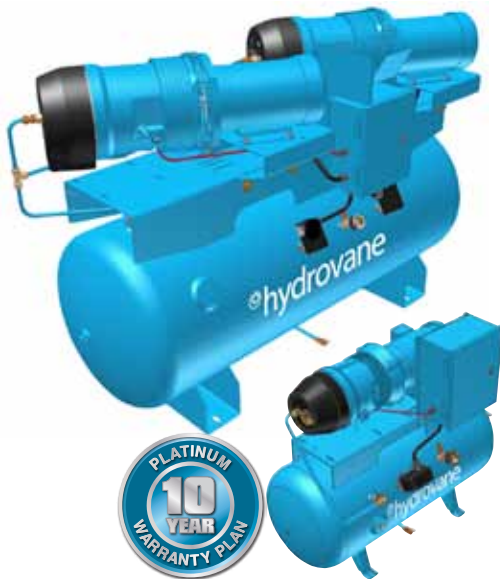
Low Noise: With noise levels from 65 – 75dBA, all **hydrovane** compressors can be located at the point of use.

Regulated Speed: all Vertical Series **hydrovane** models 10 – 60hp can be supplied as regulated speed compressors to further reduce energy costs and carbon footprint.

Platinum 10 Year Warranty:

Up to a 10 year warranty is available on all standard **hydrovane** air compressors. **hydrovane** is an investment that can be trusted for long-life and trouble-free operation.





V Series: Horizontal Unenclosed

From 2hp – 10hp, the V Series is redefining the future of air compressors in this range. All V Series compressors are direct drive, simple to install, easy to maintain, and provide the robust reliability of any packaged **hydrovane** compressor. V Series units are available as tripod mount or as a simplex or duplex tank configured system.

- Direct Drive
- Slow Speed: 1760RPM
- TEFC Electric Motor
- Low Noise
- Vertical and Horizontal Tank Options
- NEMA 1 Electrical Enclosure
- Less than 3ppm Oil Carryover
- V02 – V04: 100 or 150 PSIG
- V05 – V07: 150 PSIG
- Standard 2 Year Warranty
- Platinum 10 Year Warranty Available

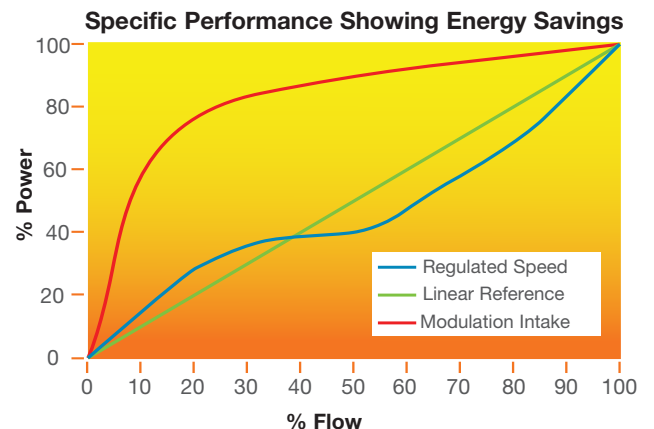


HV Series: Housed Vertical

From 5 – 60hp, the HV Series is the heart of the **hydrovane** compressor line. No other rotary compressor provides the flexibility and reliability of the HV Series.

- Direct Drive
- Slow Speed 1760RPM
- IP55 Electric Motor (TEFC)
- Low Noise
- Small Footprint
- Less than 3ppm Oil Carryover
- IP21 Electrical Enclosure
- Moisture Separator (Ships Loose)
- Advanced Electronic Controller
- Reduced Energy Venting System (REVS)
- HV04 – HV07: 100 or 150 PSIG
- HV11 – HV45: 115 std. or 150 PSIG
- Standard 2 Year Warranty
- Platinum 10 Year Warranty Available

	hydrovane	Rotary Screw	Rotary Screw	Rotary Screw
Model	HV22	Competitor A	Competitor B	Competitor C
hp	30	30	30	30
Pressure	150	150	150	150
kw/100 CFM	21.5	25.1	22.8	24.5
Drive	Direct	Belt	Belt	Direct
Airend RPM	1760	3682	1800	3600
Motor RPM	1760	3550	1800	3600
Standard Motor	IP54 (TEFC)	ODP	TEFC	ODP
Footprint (ft ²)	6.4	10.0	13.3	12.9



HV RS Series: Regulated Speed

Most air installations operate between 40% and 75% of full load capacity. A savings of 50% or more in energy costs can be achieved by supplying only the compressed air needed to meet the air demand. From 10hp – 60hp, the HV RS Series include all of the features of the fixed speed **hydrovane**, yet designed to consume the least amount of electricity to meet the air demand.

- Direct Drive
- Slow Speed: 870 – 2200RPM
- Low Noise
- Small Footprint
- Built-in EMC Filter
- Line Reactor (Choke) Standard
- Inverter Drive for Efficient VSD Operation
- IP55 Electric Motor (TEFC)
- IP21 Electrical Enclosure
- Moisture Separator (Ships Loose)
- Advanced Electronic Controller
- Reduced Energy Venting System (REVS)
- Less than 3ppm Oil Carryover
- Standard Air and Oil Cooler
- 87 – 150 PSIG
- Standard 2 Year Warranty
- Platinum 10 Year Warranty Available



HV Series: hypac

From 5 – 10hp, Hypac **hydrovane** compressors are pre-packaged on a tank or on a tank with a dryer for a complete hassle free, easy to install system.

- 5 – 10hp (Fixed Speed)
- 10hp RS (Regulated Speed)
- 80 Gallon Receiver
- 100 or 150 PSIG
- Refrigerated Air Dryer Installed
- Standard 2 Year Warranty
- Platinum 10 Year Warranty Available
- hypac with Dryer Includes Moisture Separator and B Grade Filter

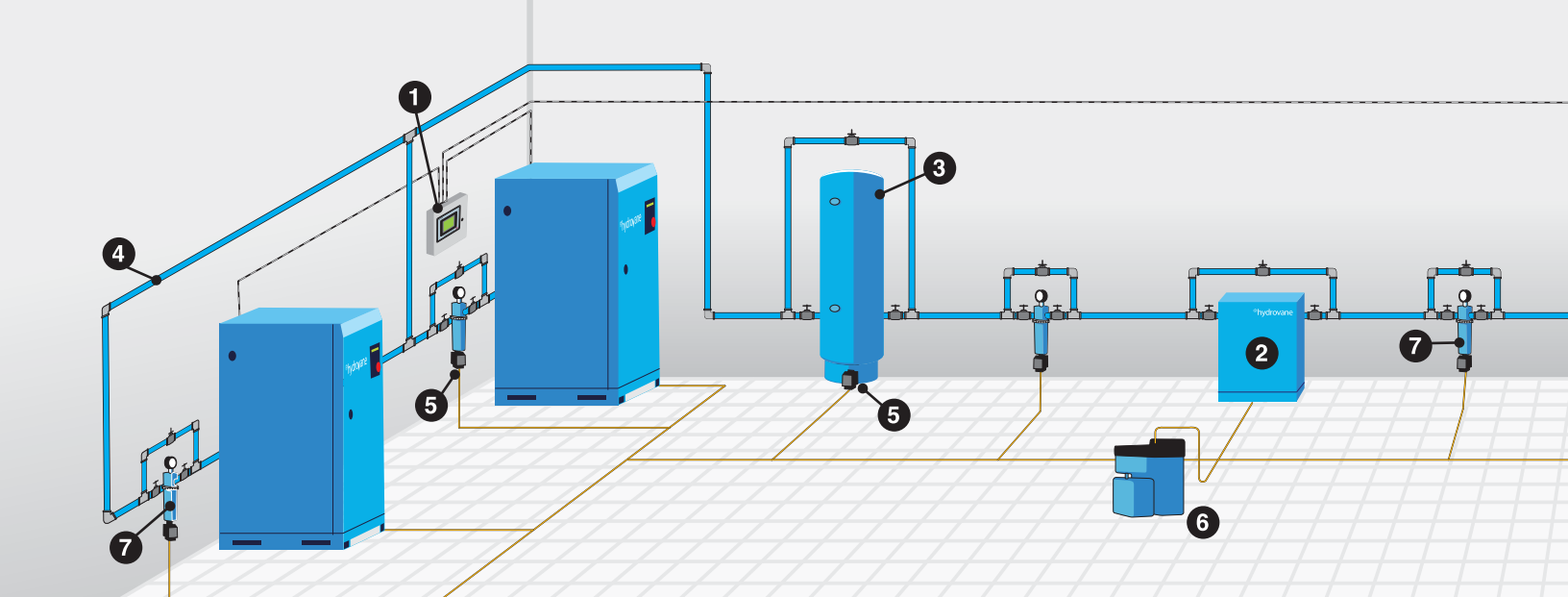


S1 Controller

A quality compressor is equipped with a controller that is easy to use, easy to navigate, and provides all information about compressor status visually and in detail with a press of a button. The **hydrovane** S1 controller display is constantly illuminated providing pressure and temperature at all times. The controller is capable of sequencing with more than one compressor and can be set-up for remote start.

- Constant Display of Pressure and Temperature
- Auto/Manual Selection
- Max/Min Pressure Settings
- Remote Start Capable
- Auto Stop Run On Time
- Low Pressure Restart (30PSIG)
- Oil Temp Warning/Trip
- High Pressure Warning/Trip
- Service Due
- Error Log
- Sequencing





Compressed Air System Diagram

1 Sequencers and System Controllers

Sequencers operate by bringing machines on and off line based on demand in the compressed air system. A sequencer will also rotate operation from compressor to compressor. System controllers may add data logging capabilities, remote monitoring, and logic to optimize the compressed air system.

2 Air Dryers

Air dryers are used to improve the quality of air in the system. The quality of air required is typically dependent on the downstream processes and equipment.

Refrigerated air dryers remove moisture from the system by cooling the compressed air. Condensate forms as the air is cooled and the moisture is removed from the system. Refrigerated air dryers can produce pressure dew points (PDP) as low as 35°F.

Desiccant air dryers remove moisture from the air via the absorption process. Typically, a media is used to absorb moisture in compressed air. Desiccant air dryers can produce PDP's as low as -100°F.

3 Storage

Compressed air system storage is important to the overall performance of the compressed air system. Storage should take into account normal operating conditions and any large demand events. Air audits are a critical tool for the proper sizing of your system storage.

4 Piping

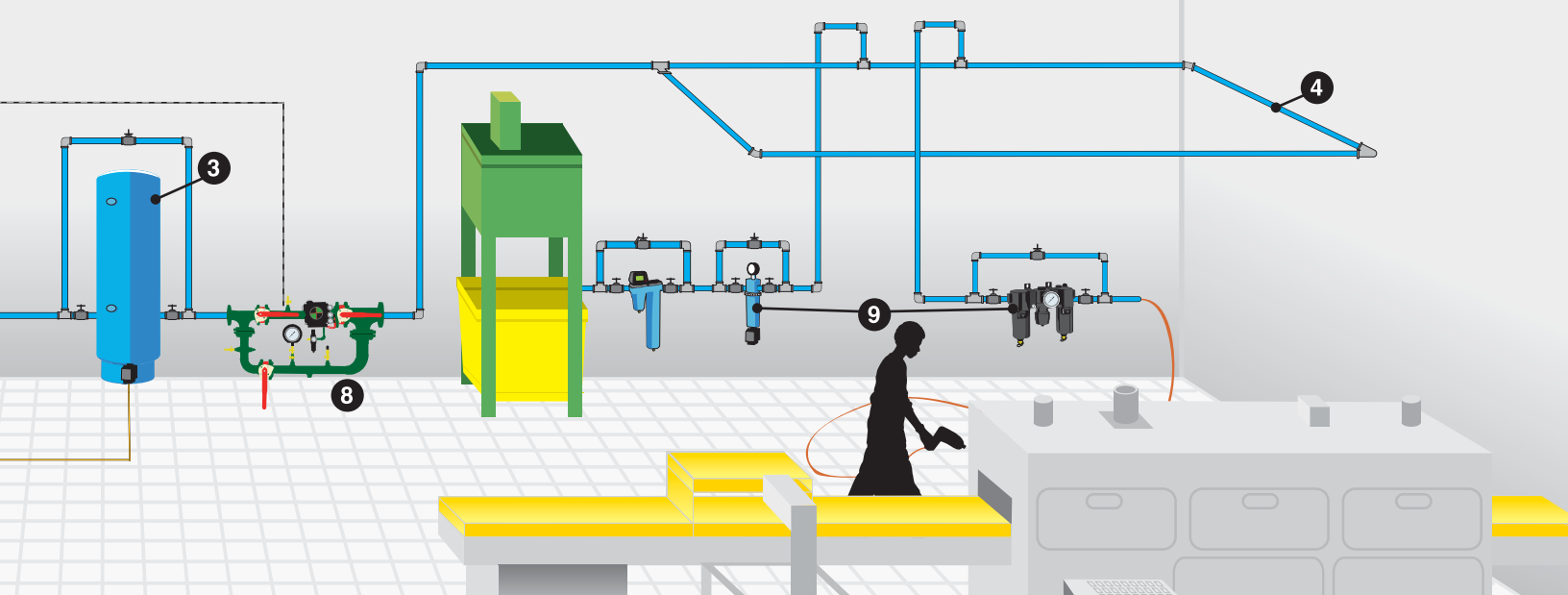
Properly sized, designed, and installed piping is critical to system performance. Piping should be designed for minimum pressure drop at maximum flow conditions. Consideration should be given for piping materials, fittings, valves, regulators, and other piping system components.

5 Drains

Drains are used to remove liquids from filters, dryers, receivers, piping, and compressors. Liquid removal is important to system performance as well as downstream equipment and processes.

Hydrovane Ancillary Equipment Sizing For CA Distribution Channel

			4	3	7 Filters and Separators			
Compressor	Pressure	Capacity	Quick Lock Tubing	Receiver Wet and/ or Dry	Water Separator	Grade B - Separator/Filter	Grade C - General Purpose	Grade D - Dry Particulate
V01	100	6.3	0.5"	30 gal	VAF20A	VAF20B	VAF20C	VAF20D
V04/HV04	100	19.5/20	0.75"	80 gal	VAF20A	VAF20B	VAF20C	VAF20D
V01	150	4.5	0.5"	30 gal	VAF20A	VAF20B	VAF20C	VAF20D
V04/HV04	150	16/17.4	0.75"	80 gal	VAF20A	VAF20B	VAF20C	VAF20D
V05/HV05	150	22	0.75"	80 gal	VAF35A	VAF35B	VAF35C	VAF35D
V07/HV07	150	29	0.75"	80 gal	VAF35A	VAF35B	VAF35C	VAF35D
HV11	100	46	1.00"	80 gal	VAF60A	VAF60B	VAF60C	VAF60D
HV15	100	61	1.00"	120 gal	VAF60A	VAF60B	VAF60C	VAF60D
HV18	100	90	1.25"	120 gal	VAF100A	VAF100B	VAF100C	VAF100D
HV22	100	101	1.25"	240 gal	VAF100A	VAF100B	VAF100C	VAF100D
HV30	100	143	1.50"	240 gal	VAF170A	VAF170B	VAF170C	VAF170D
HV37	100	176	1.50"	240 gal	VAF250A	VAF250B	VAF250C	VAF250D
HV45	100	199	1.50"	400 gal	VAF250A	VAF250B	VAF250C	VAF250D



6 Condensate Management

All air contains water vapor. One by-product of the compression process is condensation. Often the water from a compressed air system will contain oil and other contaminants. The condensate management system will aid in separating the water from the other contaminants so water may be discharged down the drain while the contaminants are dealt with appropriately. Contact factory for details.

7 Filtration and Separation

Filters are used to improve the quality of compressed air in your system. Filters are used to remove solid particulate, liquid (both water and oil), aerosols, and vapors. Sizing and design of filters are important to system performance and longevity of downstream equipment and processes.

8 Flow Control

Flow control valves provide physical separation of the supply and demand portions of the system. Distribution pressure is

held tightly at target, regardless of compressor control band, thus eliminating excess waste in leakage and artificial demand. The flow control also manages the release of potential energy in receivers to enhance system stability.

Remote Monitoring

Remote monitoring is a wireless solution that upgrades the air compressor to an intelligent asset providing system performance data. Remote monitoring is offered as either a single unit or a system based solution.

9 Point of use equipment

Point-of-use solutions are available for special processes and downstream equipment that have unique requirements. These include compressors, dryers, filters, drains, regulators, and lubricators.

7 Filters and Separators			2 Dryers*			5 Drains	
Grade E - High Efficiency Oil Removal	Grade F Max Efficiency Oil Removal	Mist Eliminator	Refrigerated	Single Tower Desiccant	Wall Mount Desiccant	Dual Tower Heatless Desiccant	Electronic No Air Loss Drain
VAF20E	VAF20F		VNC10	VTS10	VDWM7		VMD / VED / VDX
VAF20E	VAF20F		VNC25	VTS 20	VDWM20		VMD / VED / VDX
VAF20E	VAF20F		VNC10	VTS10	VDWM7		VMD / VED / VDX
VAF20E	VAF20F		VNC25	VTS20	VDWM20		VMD / VED / VDX
VAF35E	VAF35F		VNC25	VTS30	VDWM25		VMD / VED / VDX
VAF35E	VAF35F		CNC35	VTS30	VDWM30		VMD / VED / VDX
VAF60E	VAF60F		VNC50		VDWM50	VDH40	VMD / VED / VDX
VAF60E	VAF60F	VME125	VNC75			VDH60	VMD / VED / VDX
VAF100E	VAF100F	VME125	VNC100			VDH90	VMD / VED / VDX
VAF100E	VAF100F	VME125	VNC125			VDH115	VMD / VED / VDX
VAF170E	VAF170F	VME250	VNC150			VDH165	VMD / VED / VDX
VAF250E	VAF250F	VME250	VNC200			VDH260	VMD / VED / VDX
VAF250E	VAF250F	VME250	VNC200			VDH260	VMD / VED / VDX



V Series: Simplex

hp	kW	Model	Voltage/Phase	Mounting Config.	Tank Style	Tank Cap. (Gal.)	CFM 100 PSIG	CFM 150 PSIG	Noise Level (dBA)	Air Outlet NPT	Oil Cap. (Gal)	Weight (lbs.)	L (in.)	W (in.)	H (in.)	Starter	After cooler
2	1	V01PUTS	115/208-230 1Ph 208-230/460 3Ph	Tripod	N/A	N/A	6.3	4.5	65	3/8"	0.5	130	30	11	18	Yes	No
		V01PURHS-3	115/208-230 1Ph 208-230/460 3Ph	Tank	Horz.	30	6.3	4.5	65	3/8"	0.5	240	41	19	34	Yes	No
5	4	V04PUTAS	208-230 1Ph 208-230/460 3Ph	Tripod	N/A	N/A	19.5	16.0	72	1/2"	0.5	315	42	24	24	Yes	Yes
		V04PURVS-8	208-230 1Ph 208-230/460 3Ph	Tank	Vert.	80	19.5	16.0	72	1/2"	0.5	570	36	26	66	Yes	No
		V04PURHS-8	208-230 1Ph 208-230/460 3Ph	Tank	Horz.	80	19.5	16.0	72	1/2"	0.5	425	65	22	40	Yes	No
7.5	5.5	V05PURVS-8	208-230 1Ph 208-230/460 3Ph	Tank	Vert.	80	-	22.0	72	1/2"	1.15	695	39	26	69	Yes	No
		V05PURHS-8	208-230 1Ph 208-230/460 3Ph	Tank	Horz.	80	-	22.0	72	1/2"	1.15	550	66	22	43	Yes	No
10	7.5	V07PURHS-8	208-230/460	Tank	Vert..	80	-	28.9	72	3/4"	1.15	670	66	22	43	Yes	No



V Series: Duplex

hp	kW	Model	Voltage/Phase	Mounting Config.	Tank Style	Tank Cap. (Gal.)	CFM 100 PSIG	CFM 150 PSIG	Noise Level (dBA)	Air Outlet NPT	Oil Cap. (Gal)	Weight (lbs.)	L (in.)	W (in.)	H (in.)	Starter	After cooler
5	4	V04PDRHS-12	208-230 1Ph 208-230/460 3Ph	Tank	Horiz.	120	39.0	32.0	75	1/2"	1	845	72	27	48	Yes	No
7.5	5.5	V05PDRHS-12	208-230 1Ph 208-230/460 3Ph	Tank	Horiz.	120	-	44.0	76	1/2"	1	1210	76	27	50	Yes	No
10	7.5	V07PDRHS-12	208-230/460	Tank	Horiz.	120	-	57.8	77	3/4"	1	1325	76	27	50	Yes	No



HV Series

hp	kW	Model	Voltage/Phase	CFM 100 PSIG	CFM 115 PSIG	CFM 150 PSIG	Noise Level (dBA)	Air Outlet NPT	Oil Cap. (Gal)	Weight (lbs.)	L (in.)	W (in.)	H (in.)	Starter	After cooler
5	4	HV04	208-230 1Ph 200-230/460/575 3Ph	20.0	-	17.4	66	3/4"	1	399	27	21	41	Yes	Yes
7.5	5	HV05	208-230 1Ph 200-230/460/575 3Ph	30.5	-	21.5	66	3/4"	1	410	27	21	41	Yes	Yes
10	7	HV07	200-230/460/575	36.6	-	29.4	67	3/4"	1	434	27	21	41	Yes	Yes
15	11	HV11	200-230/460/575	-	52.4	45.9	69	3/4"	1.85	847	32.5	27.6	60	Yes	Yes
20	15	HV15	200-230/460/575	-	67.3	60.6	70	3/4"	1.85	875	32.5	27.6	60	Yes	Yes
25	18	HV18	200-230/460/575	-	100.4	89.4	71	1"	2	1060	32.5	27.6	60	Yes	Yes
30	22	HV22	200-230/460/575	-	112.7	101.3	72	1"	2	1090	32.5	27.6	60	Yes	Yes
40	30	HV30	200-230/460/575	-	155.7	143.2	73	1.5"	6	1889	43	35	63	Yes	Yes
50	37	HV37	200-230/460/575	-	201.8	175.9	73	1.5"	6	2008	43	35	63	Yes	Yes
60	45	HV45	200-230/460/575	-	226.6	198.5	73	1.5"	6	2072	43	35	63	Yes	Yes



HV RS Series

hp	kW	Model	Voltage/Phase	CFM 90 PSIG	CFM 115 PSIG	CFM 150 PSIG	Noise Level (dBA)	Air Outlet NPT	Oil Cap. (Gal)	Weight (lbs.)	L (in.)	W (in.)	H (in.)	Starter	After cooler
10	7	HV07RS	460 3Ph	42.9	37.1	34.8	67	3/4"	1	449	27	19	41	Yes	Yes
15	11	HV11RS	200-230 or 460 3Ph	61.6	52.9	48.5	69	3/4"	1.5	866	32.5	28	60	Yes	Yes
20	15	HV15RS	200-230 or 460 3Ph	80.8	71.6	60.7	70	3/4"	1.5	895	32.5	28	60	Yes	Yes
25	18	HV18RS	200-230 or 460 3Ph	103.1	94.9	86.5	71	1"	2	1118	32.5	28	60	Yes	Yes
30	22	HV22RS	200-230 or 460 3Ph	120.2	109.5	100.2	72	1"	2	1146	32.5	28	60	Yes	Yes
40	30	HV30RS	460 3Ph	188.5	170.5	152.8	73	1.5"	6	2004	43	35	63	Yes	Yes
50	37	HV37RS	460 3Ph	217.8	202.1	183.1	73	1.5"	6	2151	43	35	63	Yes	Yes
60	45	HV45RS	460 3Ph	263.7	243.5	223.7	73	1.5"	6	2187	43	35	63	Yes	Yes

RS Configuration 87-150PSIG



HV Series: hypac (Mounted on 80 Gallon Receiver)

hp	kW	Model	Voltage/Phase	Mounting Config.	Tank Style	Tank Cap. (Gal.)	CFM 100 PSIG	CFM 150 PSIG	Noise Level (dBA)	Air Outlet NPT	Oil Cap. (Gal)	Weight (lbs.)	L (in.)	W (in.)	H (in.)	Starter	After cooler
5	4	HV04	208-230 1Ph 200-230/460 3Ph	Tank	Horiz.	80	20.0	17.4	66	3/4"	1	829	68	18.8	64.2	Yes	Yes
7.5	5	HV05	208-230 1Ph 200-230/460 3Ph	Tank	Horiz.	80	30.5	21.5	66	3/4"	1	829	68	18.8	64.2	Yes	Yes
10	7	HV07	200-230/460	Tank	Horiz.	80	36.6	29.4	67	3/4"	1	852	68	18.8	64.2	Yes	Yes
10	7	HV07RS	460 3Ph	Tank	Horiz.	80	37.1 @ 115 PSIG	34.8	67	3/4"	1	858	68	18.8	64.2	Yes	Yes



HV Series: hypac (Mounted on 80 Gallon Receiver with Dryer & B Grade Filter)

hp	kW	Model	Voltage/Phase	Mounting Config.	Tank Style	Tank Cap. (Gal.)	CFM 100 PSIG	CFM 150 PSIG	Noise Level (dBA)	Air Outlet NPT	Oil Cap. (Gal)	Weight (lbs.)	L (in.)	W (in.)	H (in.)	Starter	After cooler
5	4	HV04	208-230 1Ph 200-230/460 3Ph	Tank	Horiz.	80	20.0	17.4	66	3/4"	1	900	68	18.8	64.2	Yes	Yes
7.5	5	HV05	208-230 1Ph 200-230/460 3Ph	Tank	Horiz.	80	30.5	21.5	66	3/4"	1	902	68	18.8	64.2	Yes	Yes
10	7	HV07	200-230/460	Tank	Horiz.	80	36.6	29.4	67	3/4"	1	953	68	18.8	64.2	Yes	Yes
10	7	HV07RS	460 3Ph	Tank	Horiz.	80	37.1 @ 115 PSIG	34.8	67	3/4"	1	959	68	18.8	64.2	Yes	Yes

Aftermarket Parts & Lubricants

Protect the investment in hydrovane

Regular maintenance and service of hydrovane products is critical to the performance and longevity of the equipment. Only **hydrovane** can provide the assurance that the investment will provide a lifetime of productivity.

Reliability

Only **hydrovane** can provide aftermarket parts and services that are engineered for use in hydrovane products. The parts and lubricant have been tested under rigorous conditions at the factory to the highest quality standards.

Performance

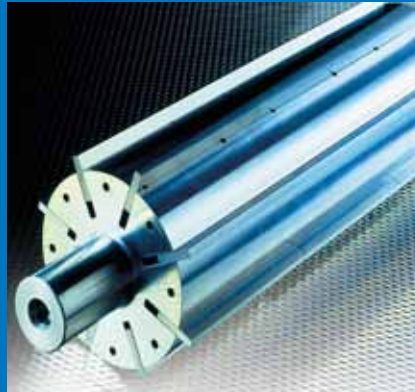
Only hydrovane can provide aftermarket parts designed specifically for the **hydrovane** product. Use of OEM parts ensures that the investment in **hydrovane** will continue to perform year in and year out with the same reliability and efficiency.

Ease of Doing Business

Only **hydrovane** can provide the peace of mind of turning to one supplier and one source for all aftermarket needs. **hydrovane** has the support network in place to handle all customer service, service, and technical support needs.

Value

Only **hydrovane** can provide the high quality aftermarket parts and services for the life of the investment in **hydrovane**. Proper care of the hydrovane product is vital to the equipment's performance and efficiency. Lean on a trusted source — **hydrovane**.



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