

# PTO Shaft & Hydraulic Driven Underdeck Systems

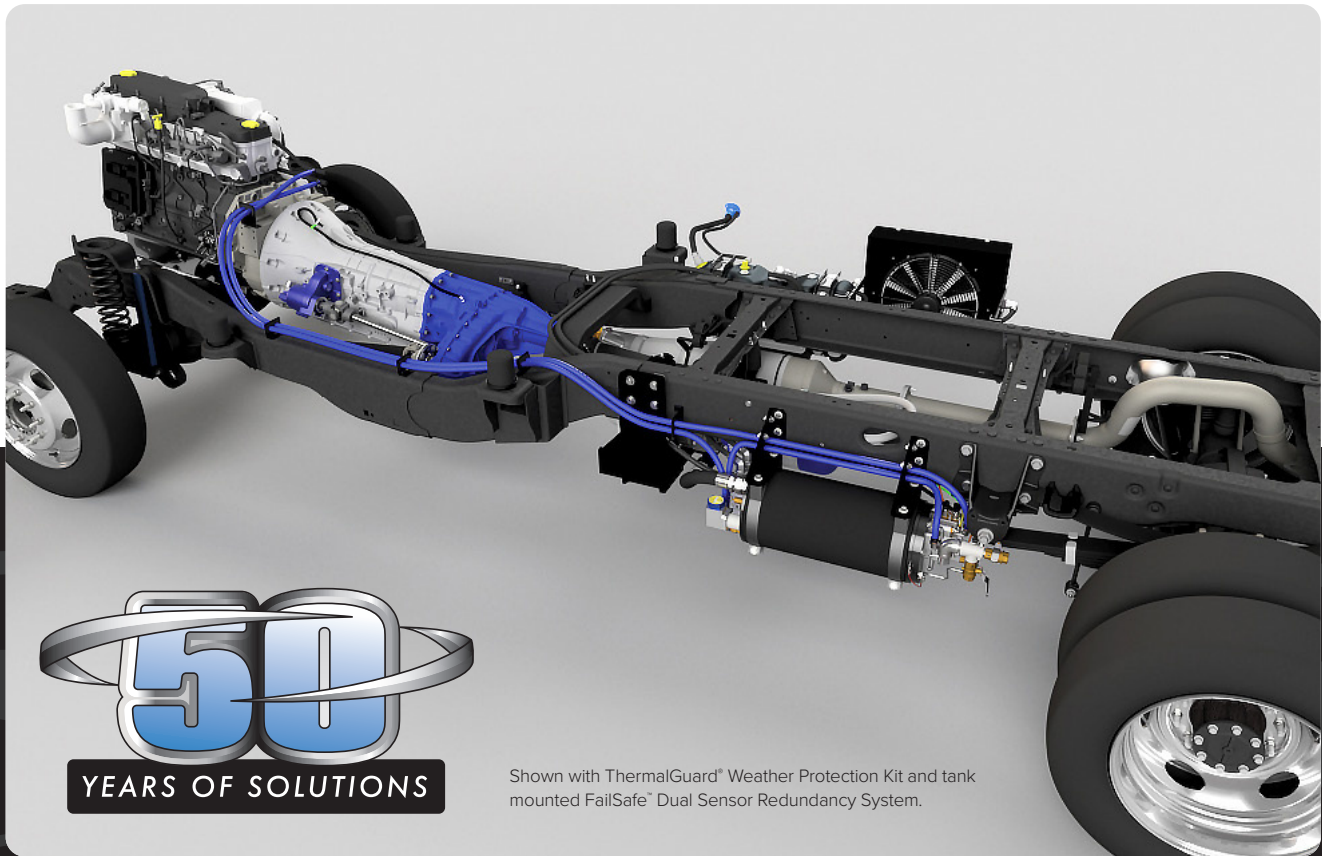


UDSM • UDHD • GENAIR<sup>®</sup> • XCITE<sup>®</sup> • V2<sup>™</sup> • V3<sup>™</sup> • Vanair<sup>®</sup> Exclusive Underdeck Innovations

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# The Biggest Advancement in PTO Underdeck Systems in 50 Years!

The industry demanded higher dependability, greater durability, and lower life cycle cost. And we responded.

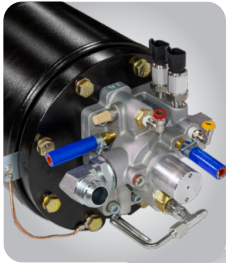


Shown with ThermalGuard® Weather Protection Kit and tank mounted FailSafe™ Dual Sensor Redundancy System.

In 1972, Vanair® developed the world's first vehicle-mounted, PTO driven rotary screw air compressors, establishing the industry, and meeting the demand for better mobile workplace productivity. For 50 years, we've built on our tradition of listening to customers with the new PTO Underdeck Technology. The unprecedented innovations we've engineered into our systems answer your demand for improved reliability, increased uptime, and reduced life cycle cost.



Available exclusively on Vanair®, these innovative standard features include:



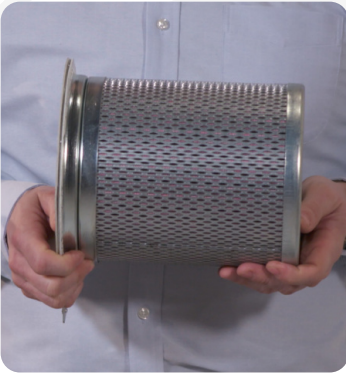
Optional Remote Mount  
NEMA box

## **Fai!Safe**™

PATENT PENDING

### Dual Sensor Redundancy System

- Dual Sensor Redundancy provides backup in case critical sensors fail. Seamlessly switching to backup sensors should primary sensor fail, without any interruption of the system's operation - Tank-mounted Failsafe™, now standard on most systems
- Will allow the system to continue to work even with a bad sensor, until the unit can be scheduled for maintenance
- Virtually eliminates downtime, for increased uptime
- Also available with an optional remote mount weatherproof NEMA box



## **UltraLife**®

### 6000 Hour Air/Oil Separator Element

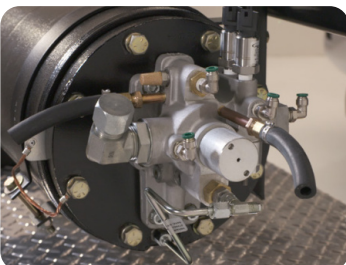
- Innovative design offers the lowest cost of ownership in the industry
- 6000-hour air/oil separator life
- Six times more life than the nearest competitor's spin-on, coalescer element
- 15 times more life than any underhood design; coalescer will last longer than the lifecycle of the vehicle
- Assured anti-static grounding system
- Over a 10-year period, this feature saves upwards of \$2,000 per truck in routine maintenance costs



## **XERO** ▶

### RAPID BLOW DOWN TANK

- Near instant blow down time for immediate compressor disengagement/reengagement, while simultaneously allowing for complete out-of-level operation
- Reduces frustration of waiting for system to be reactivated
- Eliminates oil carry-over since there is virtually no blow down time
- Provides up to 15% angle of operation from side-to-side, or front-to-back
- Designed with built-in thermal valve, temperature thermistor, pressure relief valve, single and dual pressure regulators, and oil filter assembly
- Integrates the components and manifold into the tank for faster installation plus more dependable and efficient performance with less maintenance
- JIC and O-Ring fittings for connecting points reduce leak points by over 60%
- Assured anti-static grounding system





# V-TEC II

## Vanair Total Electronic Control

The newly designed V-TEC® II Control System provides clear, informative, and intuitive operation, as it automatically controls all the new features. Other advantages include:

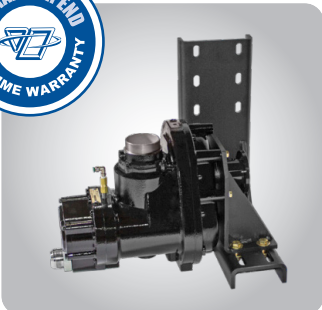
- Infinitely variable speed control to reduce fuel, noise, and wear and tear on the engine
- Reliable harnesses and simplified wiring
- All harnesses are designed and tested in accordance with IPC/WHMA-A- 620C standard
- Utilizes Deutsch waterproof connectors for ALL connections
- Easy plug and play for faster installs and straightforward diagnostics
- Unique Torque Management for a soft, smooth engagement of the PTO, protecting the system and driveline
- Onboard diagnostics and prescribed maintenance intervals with automated reminders for the operator
- USB updatable and rugged IP67 rated weatherproof display with low light and bright light viewability
- No third-party programming required
- Can also control either a second PTO, the generator, hydraulic-power, or any combination of these three optional underdeck equipment solutions



## The New Brushless Fan Compressor Oil Cooler Package with Thermal Protection



- New impact resistant PC-ABS polymer enclosure for optimal air flow and efficiency
- Certified IP68 weatherproof Solid-state brushless fan with integral thermal protection
- Designed for continuous operation in 125°F ambient temperatures
- Industry leading 40,000 hour design life



## Sullair® Air End

The Sullair® Air End is manufactured in the U.S.A. and is recognized throughout the world as the most durable rotary screw air compressor on the market. In addition to its unmatched dependability, our air end offers:

- 110,000-hour design life
- Lowest input speeds on the market - Lowest input speed = lowest engine RPM
- Over 18 standard gear ratios available for greater efficiency, lower horsepower requirements, and noise reduction
- 100% duty cycle
- Integrated inlet control valve



## Optional features:



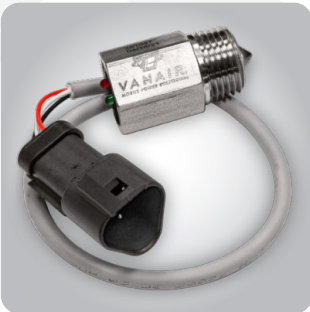
# ThermalGuard®

Weather Protection Kit

OPTIONAL

## Patented ThermalGuard® Weather Protection Kit

- Uses the vehicle's warm engine coolant to preheat the compressor oil and regulators to prevent oil-starvation
- Prevents regulator freeze-ups during cold weather conditions
- Aids in the elimination of moisture (great for warm weather environments too)
- Arrive on the job site without thick, cold oil or frozen regulators to compromise the compressor operation
- No moving parts or problematic electrical connections
- Always, automatically protecting the system without any operator involvement (no switches to manage)



## Optical Oil Level Sensor

OPTIONAL

- Increased reliability readings over other types of oil sensor technology
- No moving parts
- Fully protected in a stainless-steel encased sensor housing
- Providing a reading at system start-up
- Built-in protection should the operator forget to check the system oil



# WHY PTO?

Provides significant air and generator power when the job is bigger • Half the price of a tow-behind  
Extra bed space • Increased maneuverability  
Tier 4F Compliant • Less maintenance  
Freed up hitch • Reduced weight



Utilizing the vehicles own engine for power, Vanair® underdeck rotary screw compressor systems provide you with the exceptional power your crew needs to get the job done where and when they need it. Using a single PTO opening and mounted seamlessly out of sight, under the vehicle, these systems provide up to 300 CFM\* of impressive air power, AC power or hydraulics, or any combination of all three.



# WHAT KIND OF POWER DO YOU NEED?

  
Generator  
Option

  
Air Option

  
SAE B Pump  
Pad\* Option



Shown: Standard/Ram\*

<b>UDSM ▶ UDHD ▶</b> AIR ONLY	PTO Shaft Driven	Air (CFM) - 60, 85, 125, 160, 185, 200, 300 or 425	Air (PSI) - 100-250		
	Hydraulic Driven	Air (CFM) - 60, 85, 125, 160, or 185	Air (PSI) - 100-150		
<b>XCITE ▶</b> GENERATOR ONLY	PTO Shaft Driven	Output (kW) - 6.8, 10, 16.9, 20 or 25	Voltage - 120 or 120/240		
	Hydraulic Driven	Output (kW) - 4, 7.5, 8.5, 10, 12 or 15	Voltage - 120 or 120/240		
<b>GENAIR ▶</b> AIR & GENERATOR	PTO Shaft Driven	Air (CFM) - 125, 160 or 185	Air (PSI) - 100-150	Output (kW) - 6.6 or 9.6	Voltage - 120 or 120/240
<b>V2 ▶</b> AIR & HYDRAULIC	PTO Shaft Driven	Air (CFM) - 125, 160 or 185	Air (PSI) - 100-150	SAE B Pump Pad* 77 ft. lbs.	
<b>V3 ▶</b> AIR, GENERATOR & HYDRAULIC	PTO Shaft Driven	Air (CFM) - 125, 160 or 185	Air (PSI) - 100-150	Output (kW) - 6.6 or 9.6	Voltage - 120 or 120/240
				SAE B Pump Pad* 77 ft. lbs.	

\*Pump Sold Separately

# Complete Underdeck Kits

Each Vanair® underdeck kit is specific to the make and model of your vehicle. All kits for trucks contain the following items plus the power unit, such as an air compressor or generator that you select.

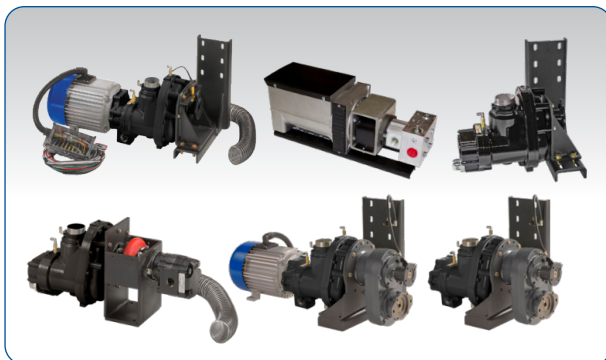
## All Kits Contain (except Xcite® generators)

- Power unit
- Advanced manifold with UltraLife® 6000-hour coalescer
- Tank-mounted Failsafe™
- New impact resistant PC-ABS polymer enclosure for optimal air flow and efficiency
- V-TEC® II display and compressor control system
- Vanguard rotary screw compressor oil
- Hosing
- Valving



**FailSafe™**  
Dual Sensor Redundancy System  
Remote Mount NEMA box

## + Power Units (standard with FailSafe™, Ultralife®, XERO® Tank and VTEC®II)



## + Optional Features



**ThermalGuard™**  
Weather Protection Kit



Optical Oil Level Sensor

## Additional Options/Accessories



**Filter Lubricator Regulator (FLR)**  
Controls pressure and adds lubricant to the compressed air system.



**Airline De-Icer**  
Durable dispensing unit to help prevent airlines from freezing.



**Tool Lubricator**  
Device to lubricate the air tool assembly.



**Moisture Separator**  
A filter to remove harmful oil/water condensate, pipe scale, dirt and rust from your compressed air system.



**Aftercooler with Bracket**  
Heat exchanger for cooling the discharge from an air compressor. Removes moisture captured in the compressed air.



**Hose Reel with Hose**  
Retractable, spring-loaded steel hose reel with hose, rated for maximum compressor output.



# UDSM

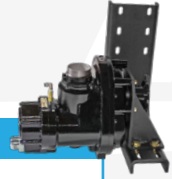
PTO AIR COMPRESSORS

## PTO SHAFT DRIVEN AIR COMPRESSOR



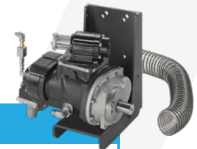
AIR COMPRESSOR								
Capacity (CFM)	60	85	125	160	185	200	200	300
Air (PSI)	100-150	100-150	100-150	100-150	100-150	100-150	200	250
Compressor Input (RPM)	1030	1460	1330	1675	1920	2075	2075	2475
Oil Capacity (Gal.) Initial Fill	2.5	2.5	2.5	2.5	2.5	2.5	2.5	10

Dry Weight (Lbs.): 328 (60-85 CFM), 407 (125-200 CFM)



AIR COMPRESSOR				
Capacity (CFM)	125	160	185	200
Air (PSI)	100-150	100-150	100-150	100-150
Compressor Input (RPM)	1730	1675	1920	2075
Oil Capacity (Gal.) Initial Fill	2.5	2.5	2.5	2.5

Dry Weight (Lbs.): 407 (125-200 CFM)



AIR COMPRESSOR				
Capacity (CFM)	100	125	160	185
Air (PSI)	100-150	100-150	100-150	100-150
Compressor Input (RPM)	1595	1625	2085	2415
Oil Capacity (Gal.) Initial Fill	2.5	2.5	2.5	2.5

Dry Weight (Lbs.): 358 - 399

# UDHD

HYDRAULIC DRIVEN AIR COMPRESSORS

## HYDRAULIC DRIVEN AIR COMPRESSOR



AIR COMPRESSOR					
Capacity (CFM)	60	85	125	160	185
Air (PSI)	100-150	100-150	100-150	100-150	100-150
Hydraulic Flow (GPM)	17.0	23.5	27.6-29.2	36.8-38.3	42.2-44.2
Hydraulic Pressure (PSI)	2300-2800	2300-2700	2100-2620	2200-2700	2400-2830
Oil Capacity (Gal.) Initial Fill	2.5	2.5	2.5	2.5	2.5

Dry Weight (Lbs.): 428 (60-85 CFM), 453 (125-160 CFM), 453-491 (185 CFM)

# GENAIR

## PTO SHAFT DRIVEN AIR COMPRESSOR & GENERATOR



AIR COMPRESSOR			
Capacity (CFM)	125	160	185
Air (PSI)	100-150	100-150	100-150
Compressor Input (RPM)	1535	1880	2160
Oil Capacity (Gal.) Initial Fill	2.5	2.5	2.5

Dry Weight (Lbs.): 513 - 554

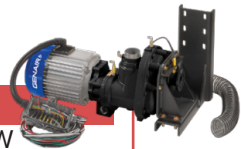
GENERATOR (TEFC)			
Output (continuous)	6.6 kW	OR	9.6 kW
Voltage	120 or 120/240	120 or 120/240	
Phase	Single Phase	Single Phase	
Speed	3600 RPM	3600 RPM	
Protection Degree	IP54	IP54	
Type	Brushless AVR	Brushless AVR	



AIR COMPRESSOR		
Capacity (CFM)	125	160
Air (PSI)	100-150	100-150
Compressor Input (RPM)	1900	2330
Oil Capacity (Gal.) Initial Fill	2.5	2.5

Dry Weight (Lbs.): 513 - 554

GENERATOR (TEFC)		
Output (continuous)	6.6 kW OR	9.6 kW
Voltage	120 or 120/240	120 or 120/240
Phase	Single Phase	Single Phase
Speed	3600 RPM	3600 RPM
Protection Degree	IP54	IP54
Type	Brushless AVR	Brushless AVR



AIR COMPRESSOR			
Capacity (CFM)	125	160	185
Air (PSI)	100-150	100-150	100-150
Compressor Input (RPM)	1660	2085	2415
Oil Capacity (Gal.) Initial Fill	2.5	2.5	2.5

Dry Weight (Lbs.): 449 - 510

GENERATOR (TEFC)		
Output (continuous)	6.6 kW OR	9.6 kW
Voltage	120 or 120/240	120 or 120/240
Phase	Single Phase	Single Phase
Speed	3600 RPM	3600 RPM
Protection Degree	IP54	IP54
Type	Brushless AVR	Brushless AVR



### PTO SHAFT DRIVEN GENERATOR



GENERATOR					
kW	6.8	10	16.9	20	25
Voltage	120 or 120/240	120 or 120/240	120 or 120/240	120 or 120/240	120 or 120/240
Phase	Single	Single	Single	Single	Single
AMPs	54/27	84/42	140/70	166/83	208/104
Speed (RPM)	1800	1800	1800	1800	1800
Weight (Lbs.)	80	123	270	295	339

Dimensions (In.): 17L x 11.5W x 12H (6.8 kW - 10kW), x 24L x 12W x 12H (16.9 kW), 25L x 12W x 12H (20 kW - 25 kW)  
Consult Vanair® for additional kW options.



### HYDRAULIC DRIVEN GENERATOR

4 kW, 7.5 kW and 8.5 kW available for Ford® models.

GENERATOR						
kW	4	7.5	8.5	10	12	15
Voltage	120 or 120/240	120 or 120/240	120 or 120/240	120 or 120/240	120 or 120/240	120 or 120/240
Phase	Single	Single	Single	Single	Single	Single
AMPs	33/16	62/31	72/36	84/42	105/52.5	126/63
Hydraulic Flow (GPM)	8.5	14.5	16	19	20	24
Pressure (PSI)	1800	1800	1800	2000	2000	2000
Weight (Lbs.)	78	105	114	121	129	141

Dimensions (In.): 23L x 8W x 10H (4 kW), 28L x 8W x 10H (7.5 kW - 10 kW), 29L x 11W x 11H x (12 kW - 15 kW)  
Consult Vanair® for additional kW options.



### PTO SHAFT DRIVEN AIR COMPRESSOR & SAE B PUMP PAD

MULTI-DRIVE SYSTEM™



AIR COMPRESSOR			
Capacity (CFM)	125	160	185
Air (PSI)	100-150	100-150	100-150
Compressor Input (RPM)	1330	1675	1920
Oil Capacity (Gal.) Initial Fill	2.5	2.5	2.5

Dry Weight (Lbs.): 473- 514

SAE B PUMP PAD (pump sold separately)  
Limited to 77 Ft. Lbs.







AIR COMPRESSOR			
Capacity (CFM)	125	160	185
Air (PSI)	100-150	100-150	100-150
Compressor Input (RPM)	1730	1675	1920
Oil Capacity (Gal.) Initial Fill	2.5	2.5	2.5

Dry Weight (Lbs.): 473 - 514

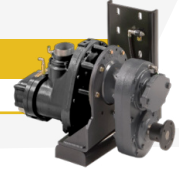
SAE B PUMP PAD (pump sold separately)  
Limited to 77 Ft. Lbs.



AIR COMPRESSOR			
Capacity (CFM)	125	160	175
Air (PSI)	100-150	100-150	100-150
Compressor Input (RPM)	1730	2175	2495
Oil Capacity (Gal.) Initial Fill	2.5	2.5	2.5

Dry Weight (Lbs.): 473 - 514

SAE B PUMP PAD (pump sold separately)  
Limited to 77 Ft. Lbs.



**PTO SHAFT DRIVEN AIR COMPRESSOR, GENERATOR & SAE B PUMP PAD**



AIR COMPRESSOR			
Capacity (CFM)	125	160	185
Air (PSI)	100-150	100-150	100-150
Compressor Input (RPM)	1535	1880	2160
Oil Capacity (Gal.) Initial Fill	2.5	2.5	2.5

SAE B PUMP PAD (pump sold separately)  
Limited to 77 Ft. Lbs.

Dry Weight (Lbs.): 595 - 636

GENERATOR (TEFC)			
Output (continuous)	6.6 kW	OR	9.6 kW
Voltage	120 or 120/240		120 or 120/240
Phase	Single Phase		Single Phase
Speed	3600 RPM		3600 RPM
Protection Degree	IP54		IP54
Type	Brushless AVR		Brushless AVR



AIR COMPRESSOR		
Capacity (CFM)	125	160
Air (PSI)	100-150	100-150
Compressor Input (RPM)	1900	2330
Oil Capacity (Gal.) Initial Fill	2.5	2.5

SAE B PUMP PAD (pump sold separately)  
Limited to 77 Ft. Lbs.

Dry Weight (Lbs.): 595 - 636

GENERATOR (TEFC)			
Output (continuous)	6.6 kW	OR	9.6 kW
Voltage	120 or 120/240		120 or 120/240
Phase	Single Phase		Single Phase
Speed	3600 RPM		3600 RPM
Protection Degree	IP54		IP54
Type	Brushless AVR		Brushless AVR



AIR COMPRESSOR			
Capacity (CFM)	125	160	175
Air (PSI)	100-150	100-150	100-150
Compressor Input (RPM)	1900	2325	2500
Oil Capacity (Gal.) Initial Fill	2.5	2.5	2.5

SAE B PUMP PAD (pump sold separately)  
Limited to 77 Ft. Lbs.

Dry Weight (Lbs.): 595 - 636

GENERATOR (TEFC)			
Output (continuous)	6.6 kW	OR	9.6 kW
Voltage	120 or 120/240		120 or 120/240
Phase	Single Phase		Single Phase
Speed	3600 RPM		3600 RPM
Protection Degree	IP54		IP54
Type	Brushless AVR		Brushless AVR





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