

# INDUSTRIAL DRY SCREW VACUUM PUMPS

212DRY-412DRY

**STOKES<sup>®</sup>**  
VACUUM

[stokesvacuum.com](http://stokesvacuum.com)

For over 100 years, Stokes vacuum pumps have offered time-tested, proven performance with experienced service and technical support you can rely on. For harsh general industrial applications, the Stokes Microvac 212J and 412J piston pumps remain a perennial favorite among our customers, particularly for metallurgical applications. Apart from our renowned expertise in the metallurgy industry, these pumps services a wide range of applications including heat treatment, automotive, PET processing, pharmaceuticals, and general applications.

**We now introduce the Stokes 212DRY and 412DRY dry screw vacuum pumps.**

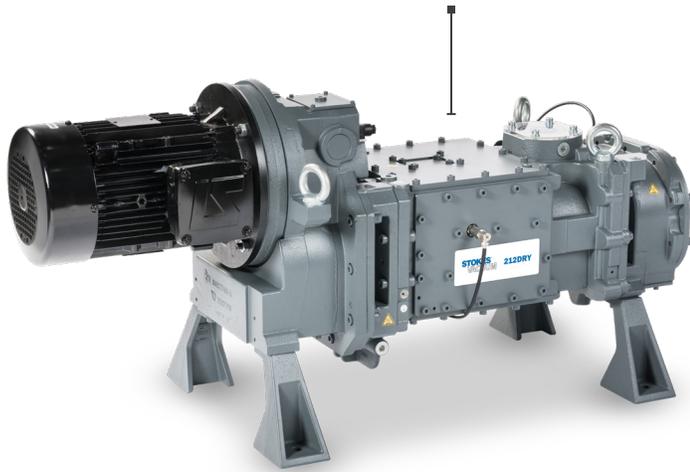
### Reliable dry screw vacuum technology

Dry Vacuum pumps are environmentally friendly and low on emissions. Dry vacuum pumps, over the course of time, avoid degradation of vacuum performance due to water vapor, high humidity, or process contamination. Since dry screw vacuum pumps do not use any fluid to create a vacuum this greatly reduces the possibility of particulate contamination.

### Robust performance for harsh applications

The pumps feature innovative variable pitch tapered screws that have proven performance in heat treatment and metallurgical applications, with a uniform internal temperature profile across the screws. More resistant to condensable vapors, dust and particulates Stokes DRY series of pumps offer repeatable and predictable vacuum pumping performance over time with high pumping speeds and quick pump-down times.

Stokes 212DRY



Stokes 412DRY



### Innovative and robust pump design



Direct mount motor options



Wide range of standard accessories available



Compact design and low footprint



Low power consumption



Simple thermal protection



Simple, robust seal purge system

# THE RELIABLE DRY SCREW VACUUM ALTERNATIVE FOR HEAT TREATMENT AND METALLURGY

The Stokes 212DRY-414DRY dry screw vacuum pumps offer the familiar reliable operation and performance, just as Stokes 212J and 412J pumps you have grown to rely on. With the Stokes DRY series you can improve your process operations, increase uptime and reduce maintenance at a minimal cost.



## Reliable vacuum performance

Increased process yield with optimal repeatable pumping performance and no vacuum performance degradation.



## Improved working environment

Quiet operation, clean environment with no oil leaks and a low vibration and noise work environment. Additionally, you save valuable floor space normally used to store oil.



## Reduced furnace downtime

The Stokes DRY pumps require only a yearly oil change intervention, significantly increasing the runtime for your furnace.



## Lower maintenance and oil costs

You save on recurring costs for the oil mist filter and element. Reduce your dependency and costs of maintenance engineers.



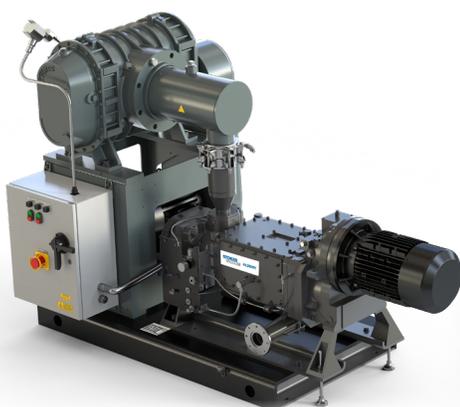
## Ease of replacement

We offer retrofit kits to integrate easily into your existing Stokes installation, designed to improve your process and facilitate a stress-free transition to dry technology at a minimal cost.



## Increase furnace productivity

More loads per year under reliable performance.



*New simple plug and play field retrofit kits for existing installations*



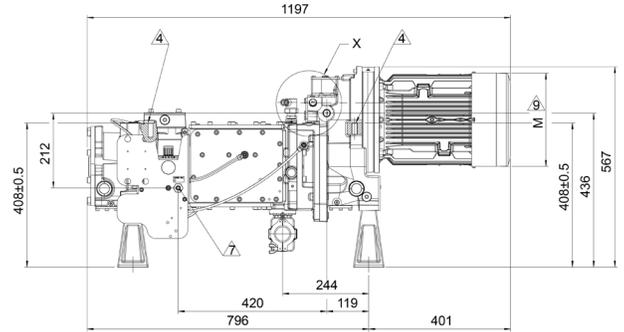
*Simple direct mount alternative also available*

## Technical Specifications

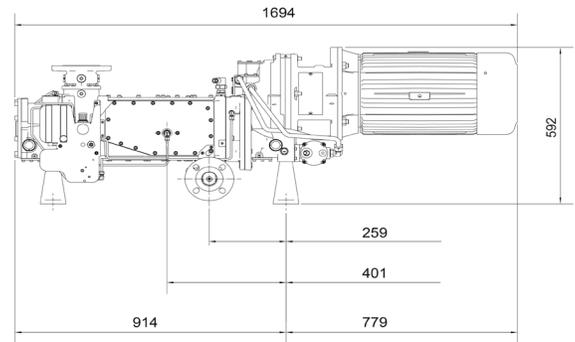
	Units	212DRY	412DRY
Peak pumping speed	cfm	>165	>271
Ultimate pressure	torr	<0.007	0.007
@ ultimate pressure	hp	6	6
@ peak pumping load	hp	11	15
Inlet connection		ISO63	
Exhaust connection		NW40	ISO 63
Connection		G1/4" female thread	
Flow	Gal/min <sup>-1</sup>	<1.05	<2.1
Supply pressure (max)	psig	100	
DP across pump (min)	psig	2.9	
Temperature	°F	41-95	
Primary cooling circuit volume (Glycol water mixture volume in case of variant with indirect cooling)	gal	1.6	NA
Connection		G1/4" female threads	
Pressure	psig	58-145	
SSP flow	lmin <sup>-1</sup>	<12	
Gas ballast flow*	lmin <sup>-1</sup>	0-50	
Noise	dB(A)	<71	
Operating temperature	°F	41-104	
Exhaust back pressure (max)**	psia	17.4	
System IP rating		IP54	
Lubrication (as supplied)		Extend 110	

## Technical Drawings

212DRY



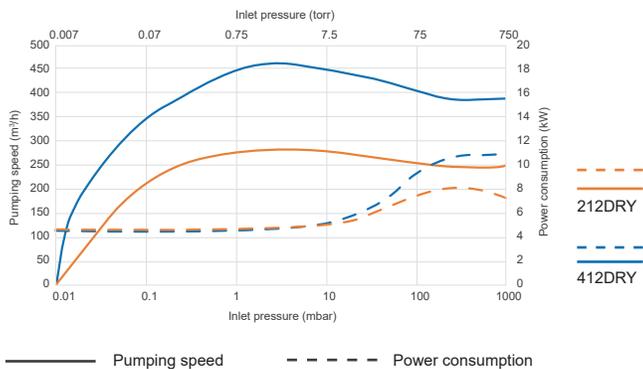
412DRY



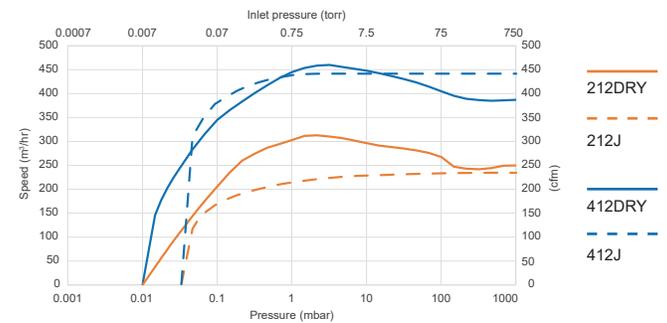
## Ordering Information

Part number	Description
A41830947	212DRY DC US 60Hz
A41840947	412DRY DC US 60Hz

## Performance curves



## Stokes DRY vs Piston performance comparison



### Service solutions

We offer a full complement of vacuum pump services, including commissioning, genuine spare parts and oil, remanufacturing, service exchange, field services, and managed maintenance.

**Contact our Field Service Coordinators today!**

Call us on 978-753-3787 or email us on [fieldserviceUS@edwardsvacuum.com](mailto:fieldserviceUS@edwardsvacuum.com)

