VACUUM RECOVERY SYSTEM

ABVR Series

AIRBLAST

AIRBLAST ABVR series vacuum recovery system is designed to recover spent dry recyclable abrasives from a blasting area into a silo for subsequent return to the blast cleaning equipment or, in the case of expendable abrasives, for disposal into a waste hopper.

After depositing the abrasive into the silo, the vacuum flow containing air and dust continues on to the suction unit, where the dust particles in this stream are removed by high performance filter cartridges prior to exhausting air to atmosphere.

The VRS is of strong construction with sturdy maintenance access doors and contains the filter section fitted with safety relief valve and automatically sequenced reverse pulse-jet filter cleaning system, motor compartment housing an electric drive motor and a vacuum pump complete with exhaust silencer. This unit is also fitted with an electric control panel.

The VRS is designed to meet present and proposed environmental. Dust emission (max. 5 mg pr. m☐ air).

A feature of AIRBLAST ABVR series vacuum recovery system is the capability to vacuum clean any residual dust and abrasive particles from the blast cleaned surfaces to meet the high specifications laid down in National and International Standards of surface preparation.

Method of operation

The dehumidifier operates with two air streams. A larger air stream to be dehumidified and a smaller air stream to exhaust the moisture out of the desiccant rotor.

Two fans inside the dehumidifier create air streams which travel through the desiccant rotor in opposite directions.

The larger air volume, the process air, passes through the slowly rotating silica gel rotor. Silica gel is a hygroscopic material adsorbing water vapour direct from the air. When passing through the rotor the humidity of the air is reduced, whilst the moisture content of the rotor material increases. On exiting the rotor the dried air is introduced into the area, or the process to be dehumidified. The adsorption process works in temperatures from -30 ºC to +40 ºC. The smaller air volume, the reactivation air, absorbs the moisture from the silica gel rotor. Part of this reactivation air enters a purge sector of the rotor, thus cooling down the rotor material and simultaneously increasing the reactivation air temperature. The remainder of the reactivation air by-passes the rotor and is then mixed with the air from the purge sector. This pre-heated air is further increased in temperature by a heater to a temperature of approximately +120 ºC. As the reactivation air passes through the rotor, in an opposite direction to the dry air, it will decrease the moisture content of the rotor material. The reactivation air will leave the dehumidifier as warm, wet air, which is then exhausted out from the building.

TECHNICAL SPECIFICATIONS	
	Model 3000
Dehumidification capacity (+20°C, 60%RH)	13,3 kg/h
Dry air flow (at 200 Pa available ext. pressure)	3000 m3/h
Wet air flow (at 160 Pa available ext. pressure)	550 m3/h
Power supply (3x400 V, 50 Hz)	22 kW
Max noise level	70,4 dB(A)
Dimensions (LxWxH)	1122 x 805 x 1020 mm

Airblast B.V. • **The Art of Powerful Cleaning...**
P.O. Box 1075 • 1700 BB Heerhugowaard • The Netherlands
Tel.: +31 72 5718002 • Fax: +31 72 5714340
Email: info@airblast.com • Web: www.airblast.com