

Vacuum Dehydration Units

MINI WATER VAC & MAXI WATER VAC

The RMF Vacuum Dehydration Units are designated oil purification units which can be applied directly to various types of machine reservoirs. The units dehydrate and clean most types of oil such as lubricating, hydraulic, transformer and switch oils by removing particles, gasses, and water. The purified oil satisfies the most stringent quality requirements, such as stated in the ISO 4406.

Simple operation

The Vacuum Dehydration Units neither remove nor alter oil additives. The water removal process is based on pure vacuum evaporation inside a vacuum chamber at a maximum temperature of 60 °C. Solid particle removal is achieved through a well proven RMF Systems micro filter.

The dehydration units do not require continuous attention whilst operating. Once the dehydration units are connected properly and commissioned, oil purification is a semi-automatic process. The

desired oil temperature can be selected on a thermostat which is included in the integrated heater element of the dehydration units.

Oil supply and removal from the vacuum chamber is a full automatic process which is controlled by a PLC. Overflow of the waste container or tank is protected through a float switch which will shut down the dehydration unit once the maximum level is reached. The only manual action is the emptying of the pre-condenser and waste water container (depending on model).



MINI Water VAC

Water, gas and particle removal

The Vacuum Dehydration Units remove liquid, gas and solid contamination, which are corrosive and contribute to the reduction of machine life. Water, gas and solid particle contamination greatly increase maintenance costs and contribute to unwanted break downs or total machine failures. The Mini Water Vac and Maxi Water Vac offer protection against malfunctions, break downs and total failures. The dehydration units also protect the environment by reducing oil consumption and oil disposal along with its inherent costs and problems.

Benefits

- 1 Efficiently removes water, gas and particulates
- 2 Minimizes corrosion in systems
- 3 Significantly prolongs service life of fluid and system
- 4 Reduces downtime and maintenance costs
- 5 Reduces cost of ownership

MAXI WATER VAC



Steel Industry

Paper Industry

Marine industry (dredgers/thrusters)

Machine tool industry

Mining industry

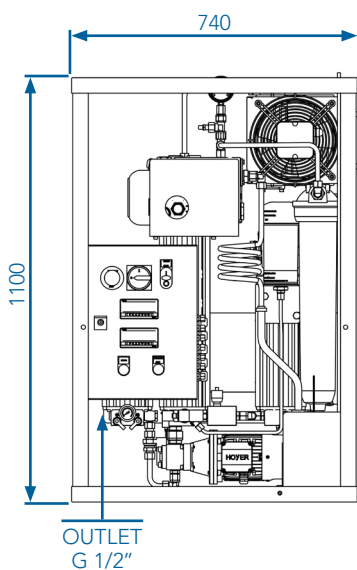
Tunneling machines



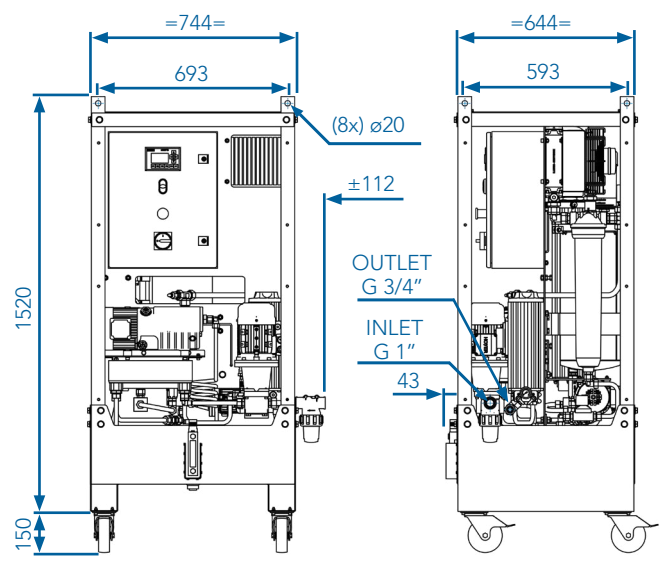
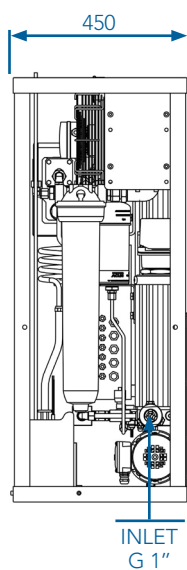
Vacuum Dehydration Units

TECHNICAL SPECIFICATIONS & DIMENSIONS

OVERALL UNIT	MWW	MXWW
Power supply	3 phase	3 phase
Voltage / frequency	230/400 VAC 50 Hz 255/460 VAC 60 Hz	230/400 VAC 50 Hz 255/460 VAC 60 Hz
Total power	2,7 kW	5,4 kW
Dimension inlet	Connection 1" BSP female , minimum hose diameter 3/4", maximum hose length 5 meter	Connection 3/4" BSP female, minimum hose diameter 3/4" maximum hose length 5 meter
Dimension outlet	Connection 1/2" BSP female, minimum hose diameter 1/2", maximum hose length 5 meter	Connection 3/4" BSP female, minimum hose diameter 1/2" maximum hose length 5 meter
Max. back pressure		1 bar
Max. inlet pressure		1 bar
Max. suction height		2 meter
Water discharge	Manual (pre-condenser)	Semi-automatic (pre-condenser)
Weight	130 kg	275 kg
Dimensions H x W x D (mm)	1100 x 740 x 450	1600 x 750 x 650
HEATED UNIT SECTION		
Installed power	2,0 kW	4,0 kW
Overheat protection	Yes	
VACUUM SECTION		
Installed power	0,37 kW	0,75 kW
Absolute end pressure	- 0,02 bar	-0,02 bar
Volume of lube oil	250 cc	450 cc
Desiccant breather	ACL96R	
PUMP SECTION		
Installed power	0,18 kW	0,18 kW & 0,37 kW
Pump volume	1,6 cc	5,8 cc, 8,0 cc
FILTER SECTION		
Filtration	1 or 3 micron	
Filtration material	Glass fibre	



MINI Water VAC



MAXI Water VAC

Ordering Code

VACUUM DEHYDRATION UNITS

YOUR VACUUM DEHYDRATION UNIT ORDERING CODE

TABLE 1	TABLE 2	TABLE 3	TABLE 4	TABLE 5	TABLE 6	TABLE 7	TABLE 8	TABLE 9	TABLE 10	TABLE 11
	1A	30		B	0			0		

TABLE 1 - BASIC CONFIGURATION	CODE
Mini Water Vac	MWV
Maxi Water Vac	MXWV

TABLE 2 - OLU HOUSING CONFIGURATION	CODE
Single housing (single length)	1A

TABLE 3 - LENGTH ELEMENT	CODE
L = 300 mm (standard)	30

TABLE 4 - FILTER MATERIAL	CODE
Glass fiber, 1 micron, $\mu 1 \geq 1000$ (standard)	G1
Glass fiber, 3 micron, $\mu 3 \geq 1000$	G3

TABLE 5 - SEAL MATERIAL	CODE
Buna-N (standard)	B

TABLE 6 - POWER SUPPLY OPTIONS	CODE
230/400 VAC 50 Hz / 3 phase 255/460 VAC 60 Hz / 3 phase	0

TABLE 7 - PUMP OPTIONS	CODE
Mini Water Vac pump	60
Maxi Water Vac pump	70

TABLE 8 - HEATING ELEMENT	CODE
Mini Water Vac heater	0
Maxi Water Vac heater	1
No heater	2

TABLE 9 - EXTRA FUNCTIONS	CODE
No extra functions	0
Moisture Content Sensor	1

TABLE 10 - OPTIONS	CODE
No options	0
Mobile (wheels, only suitable for Maxi Water Vac)	M
Side panels (only suitable for Maxi Water Vac)	P
Mobile with side panels (only suitable for Maxi Water Vac)	MP

TABLE 11 - PREFILTER	CODE
No prefilter	0
Pre-Filter 100 mesh	1

► Filters Spare parts (For Vacuum Dehydration Unit)

SPARE PART DESCRIPTION	NOS.	FILTER MATERIAL	ARTICLE NUMBER
FILTER ELEMENT			
30G10V	1	Glass fiber, 10 micron, β_4 (c) > 1000	9434272
AIR BREATHERS			
KL96R	1	On indication max. after 0,5 year	9317582

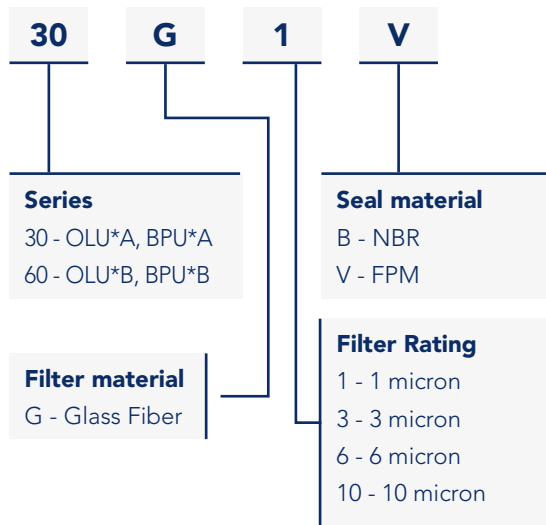


30G & 60G series

TECHNICAL DATASHEET

PRODUCT DETAILS	30G**	60G**
Filter Media	Inorganic microfibre	
Seals	NBR / FPM (see ordering code)	
Working temperature	- 25 °C - +110 °C	
Fluid compatibility	H, HL, HLP, HVLP, HEES, HFC, HFD (for other fluids, please contact RMF Systems)	
Max. working pressure	4,5 bar (Δp)	
Collapse pressure	10 bar (Δp)	
MATERIALS		
Caps	Nylon	
Internal core	Tinned steel	

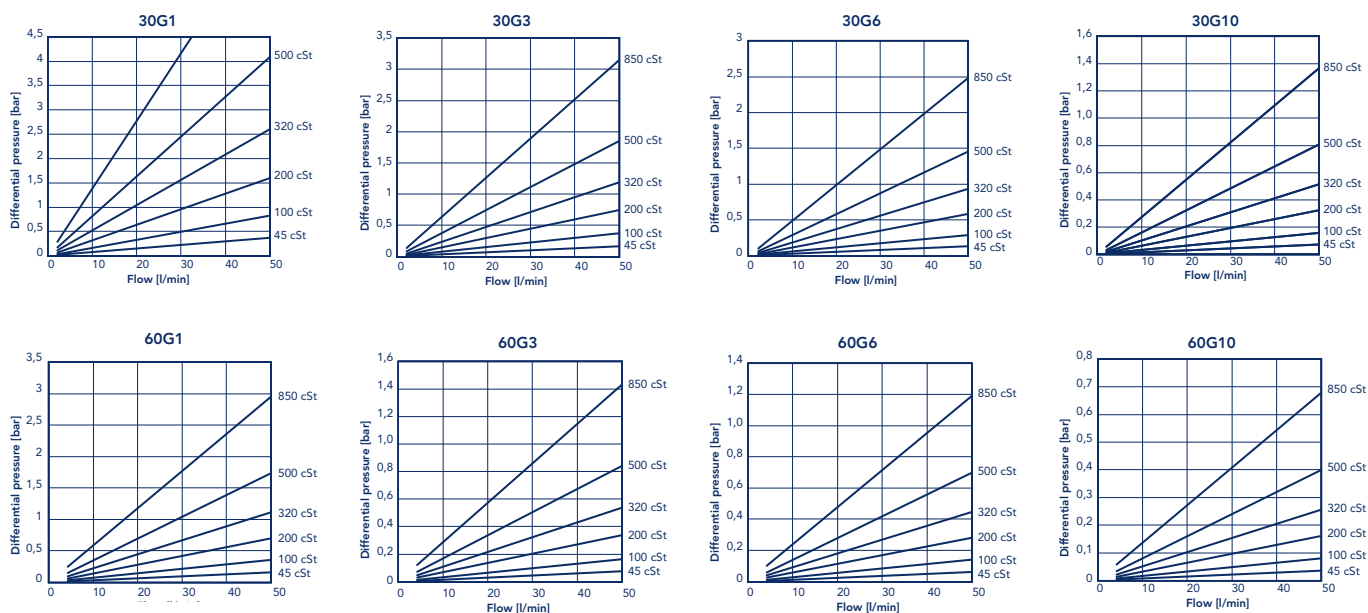
ORDERING CODE



FILTRATION EFFICIENCY	
G1	$\beta_4(c) > 1000$
G3	$\beta_5(c) > 1000$
G6	$\beta_7(c) > 1000$
G10	$\beta_{10}(c) > 1000$

QUALITY ASSURANCE	
ISO 3968	Δp test
ISO 16889	Multi Pass test

PRESURE DROP VS FLOW CHART



KL Series Breathers

The KL series desiccant breathers are well suited for vibration and harsh environments, while also providing serviceability and high dirt holding capacity.



ORDERING CODES:

BOX 1

BOX 2

BOX 3

KL		Drying Agent [Box 2]		Check Valves [Box 3]	
Code	Description	Code	Description	Code	Description
93	300 cc	R	ZR Gel	V	With Check Valves
96	600 cc			-	Without Check Valves
121	1000 cc				
122	2000 cc				

MATERIALS & COMPONENTS:

- **Filter Media:** Glass Fiber
- **Hydrophilic Media:** ZR Gel
- **All Other Components:** Copolyester, Buna-N, Stainless steel

CHEMICAL COMPATIBILITY:

Compatible with all mineral oils, most synthetic oils and diesel fuels (Contact Des-Case technical support for chemical compatibility inquiries)

PERFORMANCE SPECIFICATIONS:

Product Code	93 Series	96 Series	121 Series	122 Series
Temperature Range	-40°F to 194°F (-40°C to 90°C)			
Filter Efficiency	3 µm absolute (β ₃ ≥ 200)			
Adsorption Material	ZR Gel 3-6 mm			
ZR Gel Volume	300 cc	600 cc	1000 cc	2000 cc
Amount of Desiccant	.5 lbs (230 g)	1 lbs (460 g)	1.7 lbs (770 g)	3.4 lbs (1540 g)
Water Adsorption Capacity (Maximum Water Retention)	2.8 fl. oz (86 ml)	5.5 fl. oz (172 ml)	9.3 fl. oz (288 ml)	17.6 fl. oz (576 ml)
Color Indication	Red to Yellow			
Check Valve Cracking Pressure (For order codes ending in "V")	.15 psi (.01 bar)			
²Application Sizing Recommendations				
Max. Airflow at ΔP 1 psi [.07 bar] without Check Valves	24.7 cfm (700 l/min)	24.7 cfm (700 l/min)	53.0 cfm (1500 l/min)	53.0 cfm (1500 l/min)
Max. Airflow at ΔP 1 psi [.07 bar] with Check Valves	10.6 cfm (300 l/min)	10.6 cfm (300 l/min)	14.1 cfm (400 l/min)	14.1 cfm (400 l/min)

¹NOTE: Small variations in the manufacturing process can be common and will be within the allowable engineering tolerances.

²NOTE: This is intended as a general guideline for sizing only; other considerations, such as: humidity level, frequency of air flow, ambient temperatures, and chemical compatibility are very important in sizing a breather properly. Larger applications and special circumstances typically require the most thorough analysis. Please contact Des-Case for assistance in sizing a breather.

Typical Applications:

- Mobile & off-road equipment
- Hydraulics
- Nautical applications
- Truck differentials

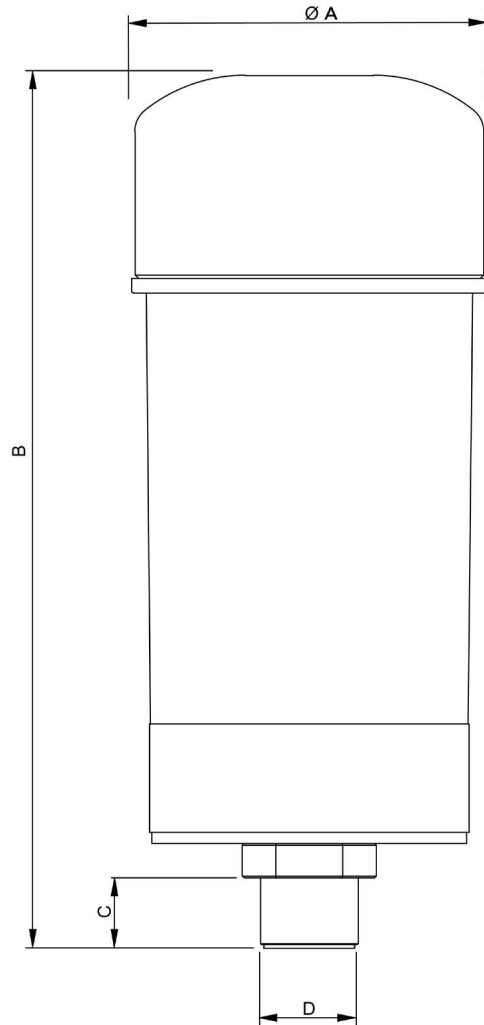
Typical Industries:

- Wind Energy
- Storage
- Pulp & Paper
- Mining
- Aviation
- Petrochemical



DIMENSIONS:

	A	B	C
Series	Inch / mm	Inch / mm	Inch / mm
93	3.9 / 98	7.1 / 180	0.6 / 16
96	3.9 / 98	9.4 / 240	0.7 / 17
121	5.1 / 130	11 / 280	1 / 25
122	5.1 / 130	15.4 / 391	1 / 25
Thread Size (D)			
KL 93 & 96	¾" BSP male		
KL 121 & 122	1 ¼" BSP male		



SPARE PARTS:

Product Spare Parts	93 Series	96 Series	121 Series	122 Series
KL Spin-On	KL90 (9331034)		KL120 (9317903)	
ZR Gel	300 cc / RF-300 (9331156)	600 cc / RF-600 (9331155)	1000 cc / RF-1000 (9331157)	2000 cc / RF-2000 (9331158)
Spare Kit*	RK-93 (9318115)	RK-96 (9318116)	RK-121 (9318117)	RK-122 (9318118)

*The spare kit contains 1x KL Spin-On, 1x ZR Gel refill, 2x foam filters, 1x bottom seal stickers, 1x adapter plug.