

## Cleaning unit RLD

for cylindrical dust cartridges up to Ø 328 mm

### 1. Overview

The Filtration Group rotating air nozzle RLD is an extremely effective cleaning system for cylindrical air cartridges with a diameter of 328 mm.

The cleaning wing protruding into the cartridge ensures even and gentle cleaning over the entire length of the cartridge. During the cleaning process, the cartridge is separated from the air flow by means of a baffle plate, which in particular greatly facilitates the detachment of the filter cake and the transport of the filter material into the dust bucket. Compared to pressure surge cleaning, with this system the cleaning effect is not achieved by a short, violent impulse, but by a highly effective vibration of the individual folds of the cartridge. A cleaning pressure of 3 to 4 bar is sufficient for this task, which results in high efficiency of the energy used and economical operation.

Depending on the application, the RLD cleaning unit is available in the standard version aluminum/galvanized steel or the special stainless steel version and can be used in all FG cylindrical cartridges (Ø 328 mm) in various lengths.

### Characteristics

- High effectiveness
- Even cleaning over the entire length of the cartridge
- Raw and clean gas side versions
- Low noise level
- Optimized compressed air consumption
- Gentle cleaning of the cartridges and thus extended filter service life
- Low cleaning pressure
- Suitable for high differential pressure loads
- Worldwide sales

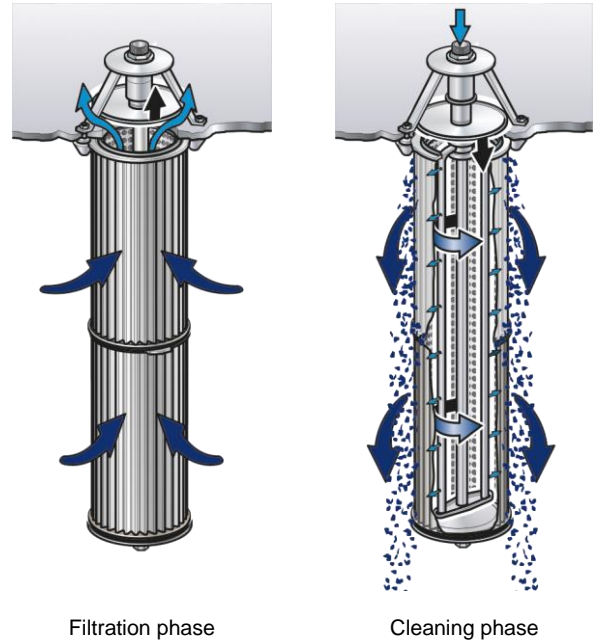


## 2. Function

During the filtration phase, the baffle plate attached to the clean gas side is pushed upwards by the flow. At the same time, the dust particles carried along in the dirt gas are deposited on the cartridge surface and a filter cake is formed.

The baffle plate is pressed down by the cleaning impulse and the dirt gas no longer flows through the cartridge. At the same time, the rotary vane of the rotating air nozzle is set in rotation by the compressed air jets emerging from the nozzle bores at an angle. The fine jets of compressed air hit the inner surface over the entire length of the cartridge and, through their rotation, set the individual folds in vibration. This process lasts approx. 1 to 2 s per pulse, whereby each fold is stimulated to vibrate several times and the filter cake is effectively detached.

The RLD is available in four different sizes for cleaning cartridges with lengths of 300, 600, 1000 and 1200 mm.



## 3. Technical specifications

### Standard design

Material: Aluminum, galvanized steel, polyester seal

Storage: ball-bearing

Operating temperature: -20 ° C to 100 ° C

### Special design

Material: Aluminum, stainless steel 1.4301, silicone seal

Storage: Plain bearing with PTFE bush

Operating temperature: -40 ° C to 200 ° C

Differential pressure via filter plate: Max. 30 mbar

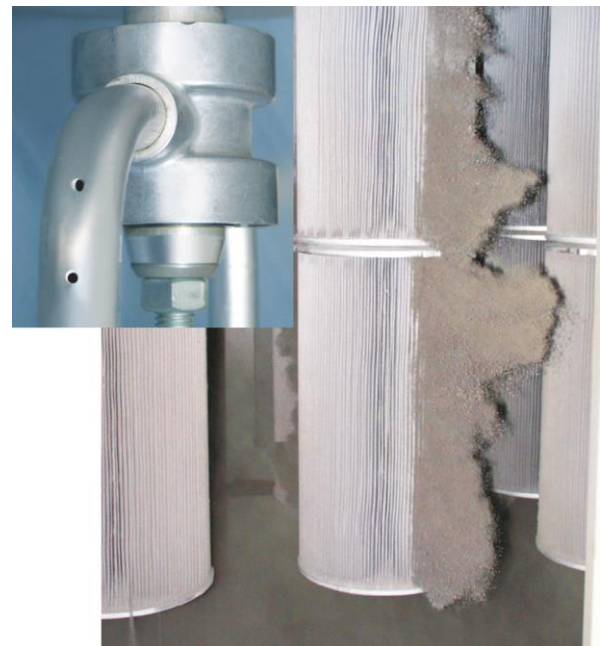
### Cleaning

Medium: Oil-, dust- and condensate-free compressed air

Compressed air connection: G<sup>3</sup>/<sub>4</sub> outside

Air pressure: 3 to 4 bar

Pulse duration: 1.5 s



Cleaning using a rotating air nozzle

### Compressed air consumption

#### Conditions:

Compressed air connection to the pressure vessel: ½ "

Pressure reducer: Festo LR-D-DI-MAXI ½ "

Cleaning pressure: 4 bar

Nozzle type	Tank size [Liter]	Pulse duration [Second]	Compressed air consumption approx. [Liter]
RLD 1200	22.4	1.5	150
RLD 600			140

#### 4. Type code

Type code for cleaning units				
Type of cleaning				
MJD	Multi-jet nozzle for conical and cylindrical cartridges			
RLD	Rotating air nozzle for cylindrical cartridges			
RLK	Rotating air nozzle for conical cartridges			
Cartridge diameter				
-12	120 mm			
-16	160 mm			
-32	328 mm			
Cartridge length and type of installation				
00	Independent of length, installation for example via round thread or bayonet			
03	300 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock			
06	600 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock			
08	800 mm, installation MJD via tie rod or RLK via Quick-Lock			
10	1000 mm, installation MJD/RLD via tie rod or RLK via Quick-Lock			
12	1200 mm, installation MJD/RLD via rod or RLK via Quick-Lock			
Installation side of cartridge				
REIN	Installation on clean gas side			
ROH	Installation on dirt gas side			
Versions				
A1	Nozzle aluminum, otherwise galvanized or coated steel, RLD/RLK with ball bearing			
V1	Nozzle aluminum, otherwise stainless steel, RLD with slide bearing			
V2	Stainless steel, RLD with plain bearings			
OS	Only RLD/RLK without baffle plate with ball bearing, nozzle aluminum, otherwise steel coated			
MJD	-16	00	REIN	A1 Order example

#### 5. Order numbers

Order number	Cleaning unit	Length [mm]	Cartridge installation	Version
78331878	RLD-32 03 ROH A1 VP	300	dirt gas side	Standard
72485527	RLD-32 03 ROH V2 VP		dirt gas side	Special
78296741	RLD-32 03 REIN A1 VP	600	clean gas side	Standard
78331852	RLD-32 06 ROH A1 VP		dirt gas side	Standard
79339219	RLD-32 06 ROH V2 VP		dirt gas side	Special
78296758	RLD-32 06 REIN A1 VP		clean gas side	Standard
79388828	RLD-32 06 REIN V2 VP		clean gas side	Special
78390106	RLD-32 10 ROH A1 VP	1000	dirt gas side	Standard
79790064	RLD-32 10 ROH V2 VP		dirt gas side	Special
79340480	RLD-32 10 REIN A1 VP	1200	clean gas side	Standard
78331696	RLD-32 12 ROH A1 VP		dirt gas side	Standard

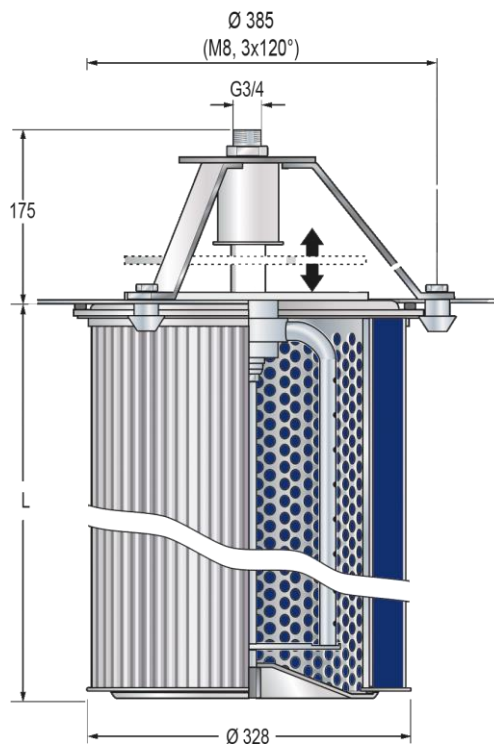
## 6. Installation

The rotating air nozzle can be obtained for both the raw and the clean gas side of built-in cartridges. The delivery consists of two packages for both possible types of installation, separated into a rotating wing with axis and tripod holder with baffle plate, bearing and compressed air connection. After assembling the individual parts according to assembly instructions 70389911, the complete RLD can be integrated into the filter system on the clean gas side. For the installation of cartridges attached to the dirt gas side, the bore size  $\varnothing 210$  mm in the filter plate must be checked and if nec-

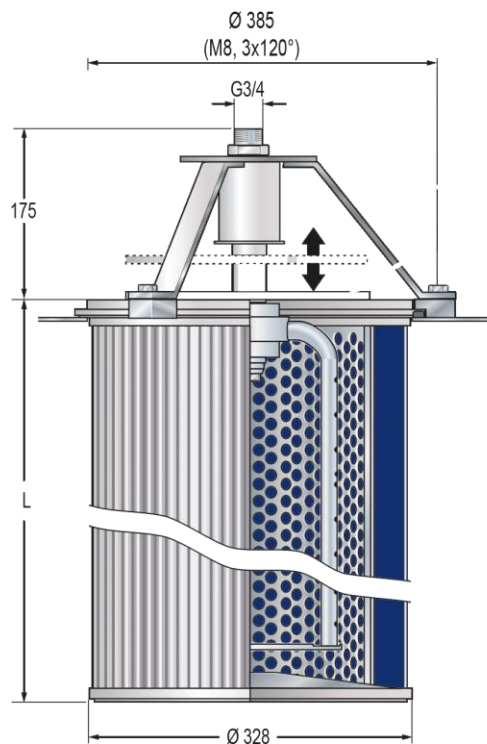
essary secure.

Cartridges for installation on the clean gas side require a head plate passage of  $\varnothing 330$  mm.

We recommend a separate membrane valve connected to the buffer tank for each cleaning unit. For the best possible cleaning result, the connection between the valve and the RLD connection should be at least  $\frac{3}{4}$ " in diameter. The control of the diaphragm valves can take place as a function of time and/or differential pressure.



Installation on the dirt gas side



Installation on the clean gas side