

FRN54

Area Nozzle – for Larger Surface Cleaning

The rotary nozzle for surfaces with an effective width of up to 220 mm.

The FRN54 usually moves over the surface of the material or **the parts to be cleaned pass** under the permanently installed nozzle. This means that larger areas can be cleaned with compressed air in one go - more **sustainable** and less expensive than wet cleaning.

The rotating air nozzle creates a **pulsating and turbulent** air flow and optimizes the whirling up and detachment of the particles from the surface.

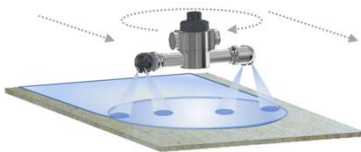
The previously patented automatic speed control guarantees a constant and pressure-independent speed, which ensures **process reliability** in automated operation.

Area Nozzle
FRN54

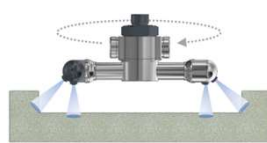


Applications

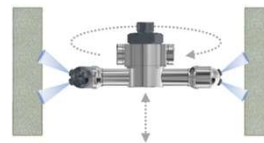
Cleaning larger object surfaces



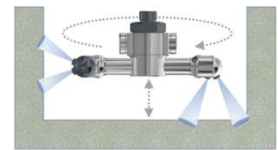
Cleaning grooves and crevices



Cleaning of inner walls and pipes

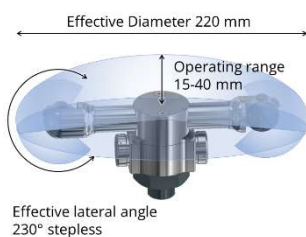


Cleaning of larger blind holes and threads



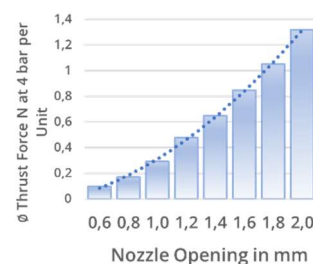
Special Properties

To optimally adapt the nozzle to the cleaning problem, the design of the FRN54 offers several advantages.



Angle adjustment of the nozzle units

The nozzle holders can reach the **cleaning points** independently of each other up to a total angle of 230°.



Size of the nozzle opening

To increase the **thrust force**, the openings of the nozzle units can be selected from 0.6 to 2.0 mm.



Length of the nozzle arms

To optimally cover the **effective area**, the nozzle arms can be supplied in different effective widths (75,80,90,100,110,120,130,140,150,160, 170,180,190, max. 200mm).

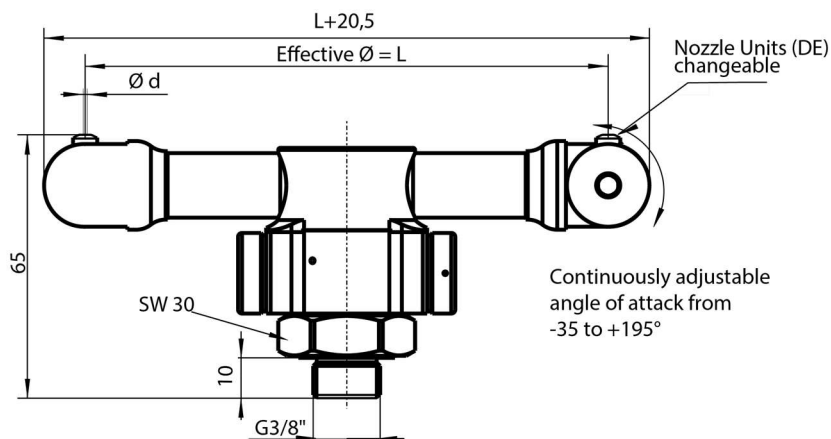


Number of nozzle units per nozzle holder

In order to increase the **effective area**, nozzle holders with one, two or three nozzle units can be selected and retrofitted.

FRN54 Area Nozzle - Datasheet

Dimensions



Variants/Order Info

FRN54-	Base article code
EX-FRN54-	Variant for explosive areas Ex II 2G/D c II B T6
-L-	Arm Length L= 75,80,90,100,110, 120,130,140,150,160,170,180,190 , max. 200mm
-x.x-	Nozzle units (DE) with opening diameters x.x in mm (0.6, 0.8, 1.0, 1.2, 1.4, 1.6, 1.8, 2.0)
-Y	Nozzle Holder Y: S= Single (1DE), Z=Twin (2), D=Triplet (3)
-G	Optional connection thread G: ¼

Technical Specification

Operating range	15 - 50 mm, optimal 15-25 mm	
Effective diameter	Nozzle units on axial position: max L+ 30 mm @10mm, L+45 mm @25 mm, L+75 mm @50mm Nozzle units on axial position: eff. diameter L + 40mm; max. 240 mm	
Nozzle numbers	Single-holder:2 x 1=2, twin-holder:2 x 2=4, triplet-holder:2 x 3=6; all over angle of 195°	
Operating pressure	4 - 10 bar, recommended: 5 - 8 bar	
Compressed air requirement	oil-free, filtered: filter fineness < 20 m, at least class 2 ISO 8573-1:2010	
Connection	G3/8" with SW30	
Rotational speed	750 1/min +/- 8%	
Sound pressure	75 db(A)	
Lifetime of bearings	>10 years	
Weight	255g for FRN54-75, then each add. 25mm effective diameter plus 5g	
Material	Nozzle body:	Aluminium
	Nozzle Unitse:	Stainless steel
	Axle:	galvanised brass
Environment	0 - 60°C and < 80% rH (no dew)	

Lieferumfang

- FRN54 rotary nozzle with selected effective diameter (arm length)
- Nozzle units with diameter of your choice mounted in selected nozzle holders
- Sealing ring 3/8" compressed air connection
- Mounting Instructions

Air Consumption

Air Consumption in l/min

mm	@5 bar		@8 bar	
	-S Hold	-Z Hold	-S Hold	-Z Hold
0.6	69	111	110	161
0.8	85	141	136	207
1.0	133	214	188	328
1.2	173	307	258	463
1.4	209	375	317	577
1.6	264	491	403	753
1.8	335	604	491	924
2.0	419	764	625	1134

(more values on request)

Spare Parts

000 001 013-d	Nozzle unit with opening d=diameter 0.6-2.0 mm
000 102 013	Seal ring nozzle bearing
900 001 001	deep groove ball bearing
900 001 002	Locking ring

Accessories

899 001 035	Nozzle unit mounting tool
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