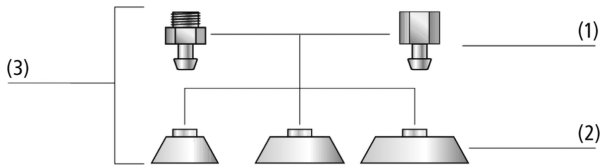


# Flat Suction Cups PFYN VU1

Suction area (Ø) from 15 mm to 95 mm



Flat Suction Cups PFYN VU1



System design Flat Suction Cups PFYN VU1



Flat suction cups PFYN VU1 being used for handling large sheet metal parts

## Suitability for industry specific applications

### Application

- Round flat suction cup for applications in multi-shift operations with very shortcycle times
- Handling of oily metal sheets (automobile production), cardboard and sheets of wood
- Handling of extremely abrasive workpieces such as rough cardboard sheets

### Design

- Robust, wear-resistant suction cup PFYN (3) with single sealing lip, consisting of suction cup PFG (2), made of Vulkollan VU1, and connection nipple (1)
- Suction cup connected positively to nipple; no turning even when handling heavy loads
- With each nipple family, the replacement cups and nipples can be combined as desired

### Product highlights

- Highly tear resistant material Vulkollan VU1 withstands enormous stress
- Insensitive to oils thanks to good chemical resistance
- Temperature resistant from low (- 40 °C) to higher temperatures (+ 80 °C, short-term up to + 100 °C)
- Minimal abrasion (approx. 10 - 12 mm<sup>3</sup> according to DIN 53516) allows up to 20 times longer service life than standard NBR
- Support surfaces on the bottom prevent permanent deformation of thin-walled workpieces

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## Designation code Flat Suction Cups PFYN VU1

<b>PFYN</b>	-	<b>80</b>	-	<b>VU1-72</b>	-	<b>G1/4-IG</b>
1		2		3		4

### 1 – Abbreviated designation

Code	Version
PFYN	Flat

### 2 – Suction area

Code	Diameter in mm
15...95	ø 15 to 95

### 3 – Material

Code	Material
VU1-72	VU1-72

### 4 – Connection

Code	Connection
G1/8-AG	G1/8-AG (AG = male (M))
G1/8-IG	G1/8-IG (IG = female (F))
G1/4-AG	G1/4-AG
G1/4-IG	G1/4-IG

Suction cup PFYN VU1 (elastomer part + connection nipple) is delivered assembled. The assembly consists of:

- Suction cup of type PFG VU 1 – elastomer part, available in various diameters
- Connection nipple of type SA-NIP – available with various threads

Available spare parts: suction cup PFG VU1, connection nipple SA-NIP

## Ordering data Flat Suction Cups PFYN VU1

Type*			Vacuum connection:			
			G1/8-AG	G1/8-IG	G1/4-AG	G1/4-IG
PFYN	15	VU1-72	10.01.01.00556	10.01.01.00557	-	-
PFYN	30	VU1-72	10.01.01.00550	10.01.01.00558	-	-
PFYN	50	VU1-72	-	-	10.01.01.00521	10.01.01.00547
PFYN	60	VU1-72	-	-	10.01.01.00608	10.01.01.00609
PFYN	80	VU1-72	-	-	10.01.01.00522	10.01.01.00524
PFYN	95	VU1-72	-	-	10.01.01.00523	10.01.01.00525

\*Additional material specifications at beginning of the section "Vacuum Suction Cups"

# Flat Suction Cups PFYN VU1

Suction area (Ø) from 15 mm to 95 mm

## Ordering data Spare parts Flat Suction Cups PFYN VU1

Type*	Spare parts			Part no.
PFYN	15	Flat suction cup (round)	PFG 15 VU1-72 N005	10.01.01.00555
PFYN	30	Flat suction cup (round)	PFG 30 VU1-72 N007	10.01.01.00549
PFYN	50	Flat suction cup (round)	PFG 50 VU1-72 N011	10.01.01.00424
PFYN	60	Flat suction cup (round)	PFG 60 VU1-72 N011	10.01.01.00606
PFYN	80	Flat suction cup (round)	PFG 80 VU1-72 N012	10.01.01.00426
PFYN	95	Flat suction cup (round)	PFG 95 VU1-72 N012	10.01.01.00430

\*Additional material specifications at beginning of the section "Vacuum Suction Cups"

Type	Spare parts			Part no.
PFYN 15 VU1-72 G1/8-AG	Suction cup connection nipple	SA-NIP N005 G1/8-AG DN200	10.01.01.03529	
PFYN 15 VU1-72 G1/8-IG	Suction cup connection nipple	SA-NIP N005 G1/8-IG DN200	10.01.01.03521	
PFYN 30 VU1-72 G1/8-AG	Suction cup connection nipple	SA-NIP N007 G1/8-AG DN240	10.01.01.03531	
PFYN 30 VU1-72 G1/8-IG	Suction cup connection nipple	SA-NIP N007 G1/8-IG DN350	10.01.01.03523	
PFYN 50 VU1-72 G1/4-AG	Suction cup connection nipple	SA-NIP N011 G1/4-AG DN350	10.01.01.10663	
PFYN 50 VU1-72 G1/4-IG	Suction cup connection nipple	SA-NIP N011 G1/4-IG DN350	10.01.01.00412	
PFYN 60 VU1-72 G1/4-AG	Suction cup connection nipple	SA-NIP N011 G1/4-AG DN350	10.01.01.10663	
PFYN 60 VU1-72 G1/4-IG	Suction cup connection nipple	SA-NIP N011 G1/4-IG DN350	10.01.01.00412	
PFYN 80 VU1-72 G1/4-AG	Suction cup connection nipple	SA-NIP N012 G1/4-AG DN500	10.01.01.10664	
PFYN 80 VU1-72 G1/4-IG	Suction cup connection nipple	SA-NIP N011 G1/4-IG DN350	10.01.01.00412	
PFYN 95 VU1-72 G1/4-AG	Suction cup connection nipple	SA-NIP N012 G1/4-AG DN500	10.01.01.10664	
PFYN 95 VU1-72 G1/4-IG	Suction cup connection nipple	SA-NIP N012 G1/4-IG DN600	10.01.01.00528	

## Technical data Flat Suction Cups PFYN VU1

Type			Suction force (-600 mbar) [N]*	Volume [cm <sup>3</sup> ]	Workpiece radius min. (convex) [mm]	Hose inner diameter (recom.) d [mm]**	Nipple family
PFYN	15	VU1-72	8.5	0.5	13	4	N 005
PFYN	30	VU1-72	32.0	1.7	30	4	N 007
PFYN	50	VU1-72	95.0	6.0	75	6	N 011
PFYN	60	VU1-72	130.0	15.0	75	6	N 011
PFYN	80	VU1-72	260.0	30.0	100	6	N 012
PFYN	95	VU1-72	350.0	42.0	140	6	N 012

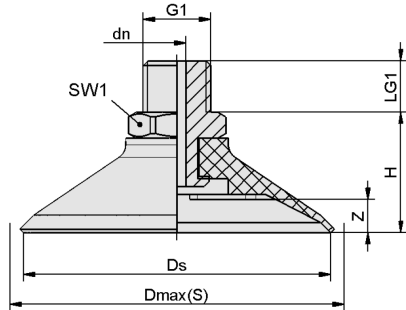
\*The specified suction forces are theoretical values at a vacuum of -0.6 bar and with a smooth, dry workpiece surface - they do not include a safety factor

\*\*The recommended hose diameter is based on a hose length of approx. 2 m

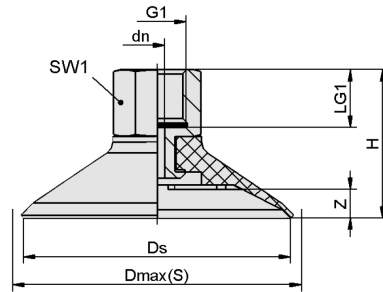
# Flat Suction Cups PFYN VU1

Suction area ( $\emptyset$ ) from 15 mm to 95 mm

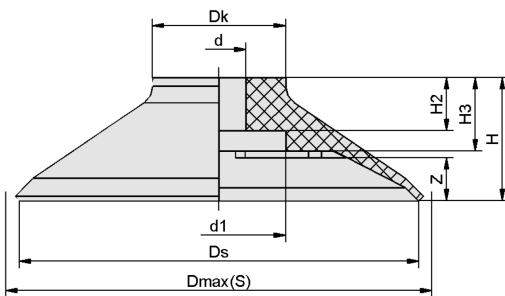
Design data Flat Suction Cups PFYN VU1



PFYN VU1 AG



PFYN VU1 IG



PFG VU1

# Flat Suction Cups PFYN VU1

Suction area (Ø) from 15 mm to 95 mm

## Design data Flat Suction Cups PFYN VU1

Type*	dn [mm]	Dmax(S) [mm]**	Ds [mm]	G1	H [mm]	LG1 [mm]	SW1 [mm]	Z (Stroke) [mm]
PFYN 15 VU1-72 G1/8-AG	2.0	17.5	14.5	G1/8"-M	14.5	8	14	1.5
PFYN 15 VU1-72 G1/8-IG	2.0	17.5	14.5	G1/8"-F	25.5	9	14	1.5
PFYN 30 VU1-72 G1/8-AG	2.0	31.5	30.0	G1/8"-M	18.0	8	14	3.0
PFYN 30 VU1-72 G1/8-IG	2.0	31.5	30.0	G1/8"-F	29.0	9	14	3.0
PFYN 50 VU1-72 G1/4-AG	3.5	53.0	50.0	G1/4"-M	22.0	10	17	4.5
PFYN 50 VU1-72 G1/4-IG	3.5	53.0	50.0	G1/4"-F	32.0	12	17	4.5
PFYN 60 VU1-72 G1/4-AG	3.5	67.0	60.0	G1/4"-M	23.5	10	17	6.0
PFYN 60 VU1-72 G1/4-IG	3.5	67.0	60.0	G1/4"-F	33.5	12	17	6.0
PFYN 80 VU1-72 G1/4-AG	6.0	86.0	80.0	G1/4"-M	30.0	10	22	6.0
PFYN 80 VU1-72 G1/4-IG	6.0	86.0	80.0	G1/4"-F	40.0	12	22	6.0
PFYN 95 VU1-72 G1/4-AG	5.0	101.0	95.0	G1/4"-M	30.0	10	22	6.0
PFYN 95 VU1-72 G1/4-IG	6.0	101.0	95.0	G1/4"-F	40.0	12	22	6.0

\*Acceptable dimensional tolerances for rubber parts concerning to DIN ISO 3302-1 E3

\*\*External dimension of the suction cup when it is pressed against the workpiece by the vacuum

Type*	d [mm]	d1 [mm]	Dk [mm]	Dmax(S) [mm]**	Ds [mm]	H [mm]	H2 [mm]	H3 [mm]	Z (Stroke) [mm]
PFG 15 VU1-72 N005	4.5	8.5	11.5	17.0	14.5	9.5	2.5	4.5	1.5
PFG 30 VU1-72 N007	6.0	11.0	16.0	31.5	29.0	13.0	7.0	7.0	3.0
PFG 50 VU1-72 N011	8.0	13.0	18.0	53.0	49.0	17.0	8.0	11.0	4.5
PFG 60 VU1-72 N011	8.0	20.0	20.0	67.0	60.0	18.5	8.0	11.0	6.5
PFG 80 VU1-72 N012	12.0	25.0	52.3	86.0	80.0	25.0	12.0	17.5	6.0
PFG 95 VU1-72 N012	12.0	25.0	31.0	101.0	95.0	25.0	12.0	16.5	6.0

\*Acceptable dimensional tolerances for rubber parts concerning to DIN ISO 3302-1 E3

\*\*External dimension of the suction cup when it is pressed against the workpiece by the vacuum