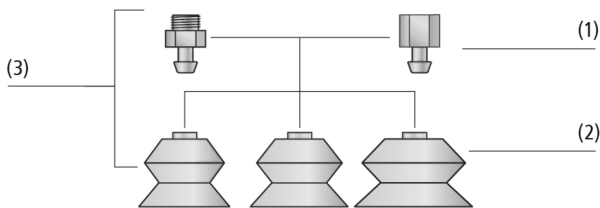


## Bellows Suction Cups FSG VU1 (2.5 Folds)

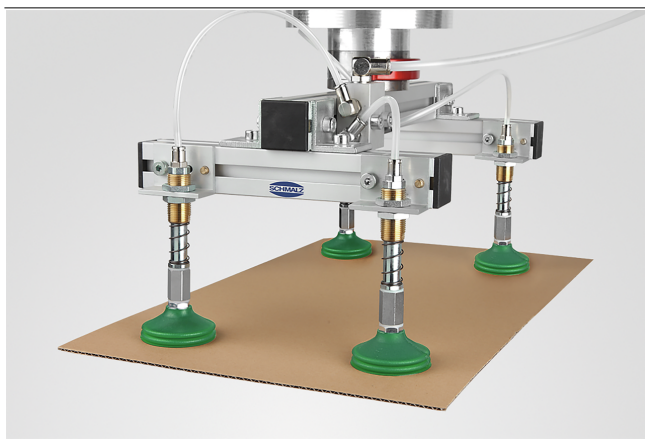
Suction area (Ø) from 30 mm to 85 mm



Bellows Suction Cups FSG VU1 (2.5 Folds)



System Design Bellows Suction Cups FSG VU1 (2.5 Folds)



Bellows suction cups FSG VU1 being used for handling corrugated cardboard

### Suitability for Industry Specific Applications

#### Applications

- Round bellows suction cup with 2.5 folds for use in multi-shift operations with very short cycle times
- Handling of workpieces with very abrasive surfaces
- Suction cup with special slot: for handling oily metal sheets (better resistance to lateral forces due to discharge of oil)
- Suction cup without special slot: for handling cardboard, wood and similar materials

#### Design

- Robust and wear-resistant suction cup FSG (3) with single sealing lip, consisting of suction cup FG (2) made of Vulkollan VU1 with 2.5 folds 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
- 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

## Bellows Suction Cups FSG VU1 (2.5 Folds)

Suction area (Ø) from 30 mm to 85 mm

### Designation Code Bellows Suction Cups FSG VU1 (2.5 Folds)

<b>FSG</b>	–	<b>60</b>	–	<b>VU1-72</b>	–	<b>G1/4-AG</b>	–	<b>ON</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>

#### 1 – Abbreviated designation

Code	Version
FSG	2.5 folds

#### 2 – Suction area

Code	Diameter in mm
30...85	ø 30 to 85

#### 3 – Material

Code	Material
VU1-72	VU1-72

#### 4 – Connection

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

#### 5 – Product addition

Code	Type
ON	Oil groove

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

- Suction cup of type FG VU1 – elastomer part, available in various diameters
- Connection nipple of type SA-NIP – available with various threads

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

### Ordering Data Bellows Suction Cups FSG VU1 (2.5 Folds)

Type*				Vacuum connection:	
				G1/4"-F	G1/4"-M
FSG	30	VU1-72	-	10.01.06.00166	10.01.06.00200
FSG	60	VU1-72	-	10.01.06.00236	10.01.06.00238
FSG	60	VU1-72	ON	10.01.06.00171	10.01.06.00201
FSG	85	VU1-72	-	10.01.06.00237	10.01.06.00239
FSG	85	VU1-72	ON	10.01.06.00167	10.01.06.00202

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

### Ordering Data Spare Parts Bellows Suction Cups FSG VU1 (2.5 Folds)

Type	Spare Parts				Part no.
FSG 30 VU1-72	-	Bellows suction cup (round)	FG 30 VU1-72 N013	10.01.06.00173	
FSG 60 VU1-72	-	Bellows suction cup (round)	FG 60 VU1-72 N014	10.01.06.00174	
FSG 60 VU1-72	ON	Bellows suction cup (round)	FG 60 VU1-72 N014 ON	10.01.06.00208	
FSG 85 VU1-72	-	Bellows suction cup (round)	FG 85 VU1-72 N015	10.01.06.00175	
FSG 85 VU1-72	ON	Bellows suction cup (round)	FG 85 VU1-72 N015 ON	10.01.06.00209	

Type	Spare Parts			Part no.
FSG 30 VU1-72 G1/4-AG	Suction cup connection nipple	SA-NIP N013 G1/4-AG DN350	10.01.06.00183	
FSG 30 VU1-72 G1/4-IG	Suction cup connection nipple	SA-NIP N013 G1/4-IG DN350	10.01.06.00180	
FSG 60 VU1-72 G1/4-AG	Suction cup connection nipple	SA-NIP N014 G1/4-AG DN600	10.01.06.00184	
FSG 60 VU1-72 G1/4-IG	Suction cup connection nipple	SA-NIP N014 G1/4-IG DN600	10.01.06.00181	
FSG 85 VU1-72 G1/4-AG	Suction cup connection nipple	SA-NIP N015 G1/4-AG DN600	10.01.06.00185	
FSG 85 VU1-72 G1/4-IG	Suction cup connection nipple	SA-NIP N015 G1/4-IG DN600	10.01.06.00182	

## Bellows Suction Cups FSG VU1 (2.5 Folds)

Suction area (Ø) from 30 mm to 85 mm

### Technical Data Bellows Suction Cups FSG VU1 (2.5 Folds)

Type			Suction force (-600 mbar) [N]*	Pull-off force [N]	Volume [cm <sup>3</sup> ]	Workpiece radius min. (convex) [mm]	Hose diameter (recom.) d [mm]**	Nipple family
FSG	30	-	13.5	32	8.5	25	6	N 013
FSG	60	-	61.0	100	61.0	50	6	N 014
FSG	60	ON	61.0	100	66.8	50	6	N 014
FSG	85	-	120.0	250	201.3	60	6	N 015
FSG	85	ON	120.0	250	201.6	60	6	N 015

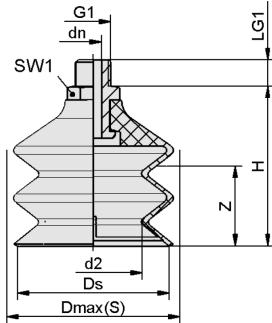
\*The specified suction forces are theoretical values at a vacuum of -0.6 bar and with a smooth, dry workpiece surface - they do not include a safety factor

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

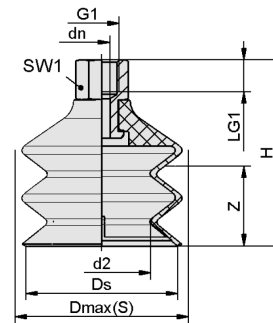
# Bellows Suction Cups FSG VU1 (2.5 Folds)

Suction area ( $\emptyset$ ) from 30 mm to 85 mm

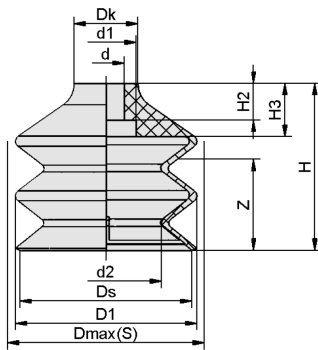
Design Data Bellows Suction Cups FSG VU1 (2.5 Folds)



FSG VU1 AG



FSG VU1 IG



FG VU1

## Bellows Suction Cups FSG VU1 (2.5 Folds)

Suction area (Ø) from 30 mm to 85 mm

### Design Data Bellows Suction Cups FSG VU1 (2.5 Folds)

Type*	d2 [mm]	dn [mm]	Dmax(S) [mm]**	Ds [mm]	G1	H [mm]	LG1 [mm]	SW1 [mm]	Z (Stroke) [mm]
FSG 30 VU1-72 G1/4-AG	15	3.5	31.5	29.0	G1/4"-M	45.0	10	17	15
FSG 30 VU1-72 G1/4-IG	15	3.5	31.5	29.0	G1/4"-F	55.0	12	17	15
FSG 60 VU1-72 G1/4-AG	36	6.0	62.5	59.0	G1/4"-M	60.0	10	17	30
FSG 60 VU1-72 G1/4-IG	36	6.0	62.5	59.0	G1/4"-F	70.0	12	17	30
FSG 60 VU1-72 G1/4-AG ON	36	6.0	62.5	59.0	G1/4"-M	60.0	10	17	30
FSG 60 VU1-72 G1/4-IG ON	36	6.0	62.5	59.0	G1/4"-F	70.0	12	17	30
FSG 85 VU1-72 G1/4-AG	51	6.0	90.0	80.2	G1/4"-M	90.0	10	22	38
FSG 85 VU1-72 G1/4-IG	51	6.0	90.0	80.2	G1/4"-F	100.0	12	22	38
FSG 85 VU1-72 G1/4-AG ON	51	6.0	90.0	80.2	G1/4"-M	90.0	10	22	38
FSG 85 VU1-72 G1/4-IG ON	51	6.0	90.0	80.2	G1/4"-F	100.0	12	22	38

\*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]	d2 [mm]	D1 [mm]	Dk [mm]	Dmax(S) [mm]**	Ds [mm]	H [mm]	H2 [mm]	H3 [mm]	Z (Stroke) [mm]	
FG	30	8	15	15	30	18	31.5	29.0	40	12	16	15.0
FG	60	12	20	36	60	21	62.5	59.0	55	12	18	30.0
FG	85	12	25	51	85	25	90.0	80.2	85	20	27	45.5

\*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