

Bellows suction pads (round)



Bellows suction pads FSGA (1.5 folds) from Ø110 mm



Bellows suction pads FSGA 110/150

Our highlights...

- Wide range of available diameters
- Soft, tapered sealing lip
- Optimized shape with 1.5 folds
- Very stiff top fold
- Supports on the bottom

Your advantages...

- > For handling large, heavy workpieces which are easily damaged
- > Very good adaptation to curved workpiece surfaces
- > High suction force and optimum damping effect during placement on workpiece
- > Good resistance to horizontal forces at high acceleration values
- > No permanent deformation of thin-walled workpieces

Applications

- Handling of cardboard, sheet metal and wood
- Handling of workpieces with uneven surfaces (corrugations permit optimal adaptation to concave and convex surfaces)

Construction

- Robust and hard-wearing suction pad FSGA with single sealing lip, consisting of suction pad FGA with 1.5 folds and connection plate
- Connection plate screwed to suction pad FGA. Suction pad FGA can be replaced separately when worn
- Suction pads are delivered assembled



Suitability for branch-specific applications

Designation code Bellows suction pads FSGA (1.5 folds) from Ø110 mm

Short designation	Diameter in mm	Material and shore hardness	Connection thread
Example: FSGA	110	NBR-70	G1/2-IG
FSGA...with connection nipple	110	NBR-70	G1/2-IG (IG = female)
FSGA...without connection nipple	150	SI-55	

Ordering data Bellows suction pads FSGA (1.5 folds) from Ø110 mm

Type	Suction pad material * / hardness in Shore A	Silicone SI 55±5ShA
FSGA 110 G1/2-IG	Perbunan NBR 70±5ShA 10.01.06.00118	10.01.06.00119
FSGA 150 G1/2-IG	10.01.06.00120	10.01.06.00121

*See Section 2, "Basic Principles of Suction-Pad Materials" for further details of materials

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Vacuum suction pads
2

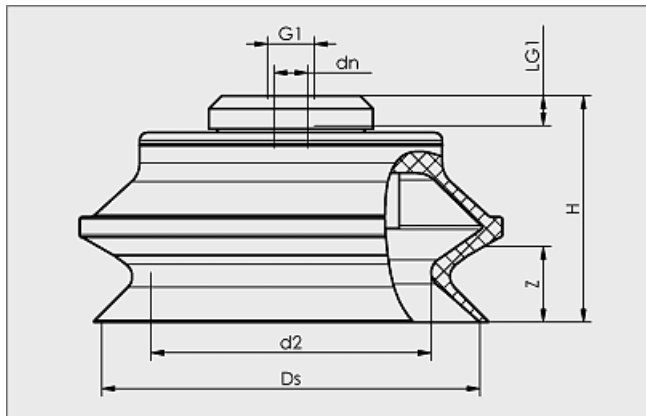
Ordering data spare parts suction pads and suction pad nipples

Type	Perbunan NBR 70±5ShA	Silicone SI 55±5ShA	Type	Suction-pad connection nipple	
FGA 110	10.01.06.00114	10.01.06.00115	FSGA 110 G1/2-IG	SA-NIP N010 G1/2-IG	10.01.01.00796
FGA 150	10.01.06.00116	10.01.06.00117	FSGA 150 G1/2-IG	SA-NIP N010 G1/2-IG	10.01.01.00796

Technical data Bellows suction pads FSGA (1.5 folds) from Ø110 mm

Type	Suction force [N]*	Pull-off force [N]	Volume [cm³]	Min. curve radius [mm] (convex)	Recom. internal hose diameter d [mm]	Nipple family
FSGA 110 G1/2-IG	280	570	330	85	12	N 010
FSGA 150 G1/2-IG	570	1000	800	250	12	N 010

*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



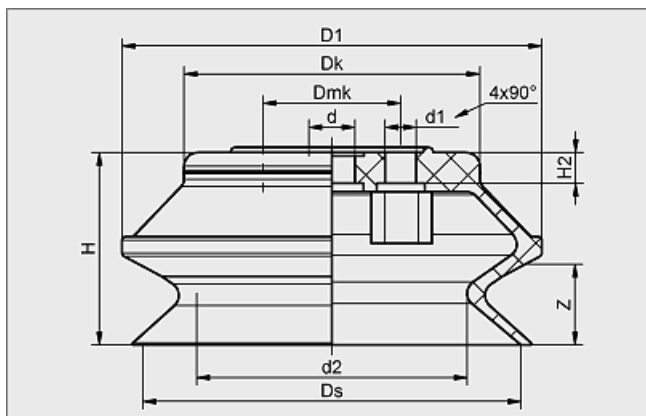
FSGA 110 to 150

Des. data Bell. suct. pads FSGA (1.5 folds) Ø 110 mm

Type	Dimensions in mm*			
	d2	dn	Ds	G1
FSGA 110 G1/2-IG	80	13,5	111	G1/2"-F
FSGA 150 G1/2-IG	111	13,5	150	G1/2"-F

Type	Dimensions in mm*		
	H	LG1	Z (Stroke)
FSGA 110 G1/2-IG	69,5	13	29,0
FSGA 150 G1/2-IG	89,5	13	37,5

*Acceptable dimensional tolerances for rubber parts concerning to M3 - DIN 7715



FGA 110 to 150

Des. dat. Bell. suct. pads FGA (1.5 folds) Ø 110 mm

Type	Dimensions in mm*				
	d	d1	d2	D1	D mk
FGA 110	13,5	7	80	123	40
FGA 150	13,5	7	111	168	40

Type	Dimensions in mm*				
	Dk	Ds	H	H2	Z (Stroke)
FGA 110	86	111	55	8	29,0
FGA 150	120	150	74	6	37,5

*Acceptable dimensional tolerances for rubber parts concerning to M3 - DIN 7715