

Suction Cups for Handling Sheet Metal



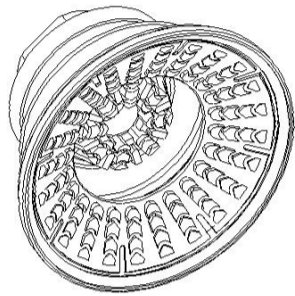
Bellows Suction Cups MAB

Suction area (ϕ)30mm to100mm

Bellows Suction Cups MAB (1.5Folds)



System design Bellows Suction Cups MAB (1.5Folds)C



Introduction and application

- ◆ For quick handling of metal sheets (short cycle times)
- ◆ Handling of thin sheets and aluminum sheets without deformation
- ◆ Handling of pre-shaped metal sheet parts, since bellows shape permits optimum adaptation
- ◆ For used in handling systems for press lines in the automotive industry
- ◆ Special groove on the bottom of the cup prevents the oily metal sheets from slipping and permits precise positioning in punching presses etc

Design

- ◆ Robust and wear-resistant suction cup SAB with 1.5 folds, made of NBR, special groove and inner support
- ◆ Suction cup vulcanized to the connection nipple (very high strength)
- ◆ Suction cups available with various connection types

Ordering Guide Bellows Suction Cups MAB

Item no.	Suction area ϕ [mm]	Material and Shore hardness	Connection thread
MAB	30 to 100	NBR-45 NBR-60	G1/4-AG G1/4-IG G3/8-IG M10-AG M14x1.5-AG RA Rectangular adapter

Note:MAB AG=external threadX(M)EIG=internal thread A(F)

Ordering Data Bellows Suction Cups MAB

Type	Connection					Rectangular adapter
	G1/4"-M	G1/4"-F	G3/8"-F	M10x1.5-M	M14x1.5-M	
MAB 30 NBR-60	90.02.03.00283	90.02.03.00291	90.02.03.00299	90.02.03.00307	90.02.03.00315	90.02.03.00510
MAB 40 NBR-60	90.02.03.00284	90.02.03.00292	90.02.03.00300	90.02.03.00308	90.02.03.00316	90.02.03.00511
MAB 50 NBR-60	90.02.03.00285	90.02.03.00293	90.02.03.00301	90.02.03.00309	90.02.03.00317	90.02.03.00512
MAB 60 NBR-60	90.02.03.00286	90.02.03.00294	90.02.03.00302	90.02.03.00310	90.02.03.00318	90.02.03.00513
MAB 80 NBR-60	90.02.03.00287	90.02.03.00295	90.02.03.00303	90.02.03.00311	90.02.03.00319	90.02.03.00514
MAB 100 NBR-60	90.02.03.00288	90.02.03.00296	90.02.03.00304	90.02.03.00312	90.02.03.00320	90.02.03.00515

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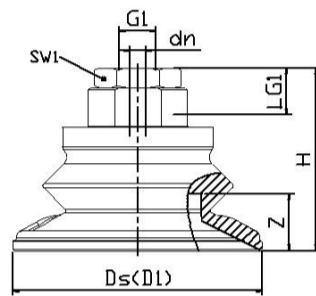
Suction area (ϕ)30mm to 100mm

Technical Data Bellows Suction Cups MAB

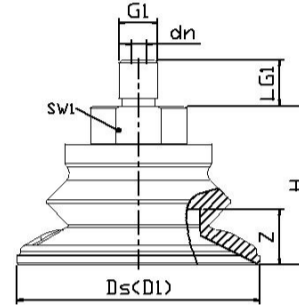
Type	Suction Force [N]	Pull-off force [N]	Lateral force [N]	Lateral force oily surface [N]	Volume [cm ³]	Workpiece radius min [mm] (Convex)#	Recom. internal hose diameter d[mm]
MAB 30 NBR-60	22	33	30	13	5.9	40	4
MAB 40 NBR-60	38	59	36	33	7.0	40	4
MAB 50 NBR-60	53	87	55	52	11.5	50	4
MAB 60 NBR-60	82	130	82	77	24.0	65	6
MAB 80 NBR-60	135	221	145	140	56.5	75	6
MAB 100 NBR-60	190	357	220	214	92.5	90	6

Design Data Bellows Suction Cups MAB

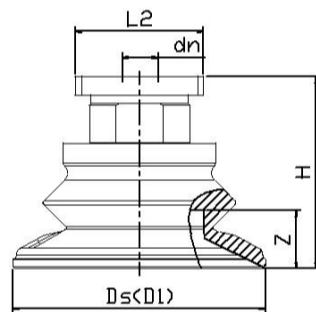
MAB 30 to 100 IG



MAB 30 to 100 AG



MAB 30 to 100 RA (Rectangular adapter)



Suction Cups for Handling Sheet Metal **TC-Grip**

Bellows Suction Cups MAB

Suction area (ϕ)30mm to100mm

Design Data Bellows Suction Cups MAB

Type	Dimensions [mm]									
	d1	dn	Ds	G1	H	LG1	L2	SW1	Z(Stroke)	
MAB 30 NBR-60 G1/4-AG	34	4.0	32	G1/4"-M	28.0	10.0	-	17	9.0	
MAB 30 NBR-60 G1/4-IG	34	4.0	32	G1/4"-F	28.0	12.0	-	17	9.0	
MAB 30 NBR-60 G3/8-IG	34	4.0	32	G3/8"-F	44.0	9.5	-	22	9.0	
MAB 30 NBR-60 M10x1.5-AG	34	4.0	32	M10x1.5-M	28.0	12.0	-	17	9.0	
MAB 30 NBR-60 M14x1.5-AG	34	4.0	32	M14x1.5-M	28.0	12.0	-	17	9.0	
MAB 30 NBR-60 RA	34	4.0	32	-	31.2	-	32	-	9.0	
MAB 40 NBR-60 G1/4-AG	45	4.0	42	G1/4"-M	29.0	10.0	-	17	10.0	
MAB 40 NBR-60 G1/4-IG	45	4.0	42	G1/4"-F	29.0	12.0	-	17	10.0	
MAB 40 NBR-60 G3/8-IG	45	4.0	42	G3/8"-F	44.0	9.5	-	22	10.0	
MAB 40 NBR-60 M10x1.5-AG	45	4.0	42	M10x1.5-M	29.0	12.0	-	17	10.0	
MAB 40 NBR-60 M14x1.5-AG	45	4.0	42	M14x1.5-M	29.0	12.0	-	17	10.0	
MAB 40 NBR-60 RA	45	4.0	42	-	31.2	-	32	-	10.0	
MAB 50 NBR-60 G1/4-AG	56	6.0	52	G1/4"-M	37.0	10.0	-	22	11.5	
MAB 50 NBR-60 G1/4-IG	56	6.0	52	G1/4"-F	42.0	20.0	-	22	11.5	
MAB 50 NBR-60 G3/8-IG	56	6.0	52	G3/8"-F	37.0	15.0	-	22	11.5	
MAB 50 NBR-60 M10x1.5-AG	56	4.0	52	M10x1.5-M	37.0	12.0	-	22	11.5	
MAB 50 NBR-60 M14x1.5-AG	56	6.0	52	M14x1.5-M	37.0	12.0	-	22	11.5	
MAB 50 NBR-60 RA	56	6.0	52	-	36.5	-	32	-	11.5	
MAB 60 NBR-60 G1/4-AG	67	6.0	63	G1/4"-M	41.5	10.0	-	22	14.5	
MAB 60 NBR-60 G1/4-IG	67	6.0	63	G1/4"-F	46.5	20.0	-	22	14.5	
MAB 60 NBR-60 G3/8-IG	67	6.0	63	G3/8"-F	41.5	15.0	-	22	14.5	
MAB 60 NBR-60 M10x1.5-AG	67	4.0	63	M10x1.5-M	41.5	12.0	-	22	14.5	
MAB 60 NBR-60 M14x1.5-AG	67	6.0	63	M14x1.5-M	41.5	12.0	-	22	14.5	
MAB 60 NBR-60 RA	67	6.0	63	-	41.0	-	32	-	14.5	
MAB 80 NBR-60 G1/4-AG	89	6.0	83	G1/4"-M	50.0	10.0	-	22	22.0	
MAB 80 NBR-60 G1/4-IG	89	6.0	83	G1/4"-F	55.0	20.0	-	22	22.0	
MAB 80 NBR-60 G3/8-IG	89	6.0	83	G3/8"-F	50.0	15.0	-	22	22.0	
MAB 80 NBR-60 M10x1.5-AG	89	4.0	83	M10x1.5-M	50.0	12.0	-	22	22.0	
MAB 80 NBR-60 M14x1.5-AG	89	6.0	83	M14x1.5-M	50.0	12.0	-	22	22.0	
MAB 80 NBR-60 RA	89	6.0	83	-	49.5	-	32	-	22.0	
MAB 100 NBR-60 G1/4-AG	110	6.0	103	G1/4"-M	57.0	10.0	-	22	26.0	
MAB 100 NBR-60 G1/4-IG	110	6.0	103	G1/4"-F	62.0	20.0	-	22	26.0	
MAB 100 NBR-60 G3/8-IG	110	6.0	103	G3/8"-F	57.0	15.0	-	22	26.0	
MAB 100 NBR-60 M10x1.5-AG	110	4.0	103	M10x1.5-M	57.0	12.0	-	22	26.0	
MAB 100 NBR-60 M14x1.5-AG	110	6.0	103	M14x1.5-M	57.0	12.0	-	22	26.0	
MAB 100 NBR-60 RA	110	6.0	103	-	56.5	-	32	-	26.0	