

Compact Ejectors



Compact Ejectors SMP

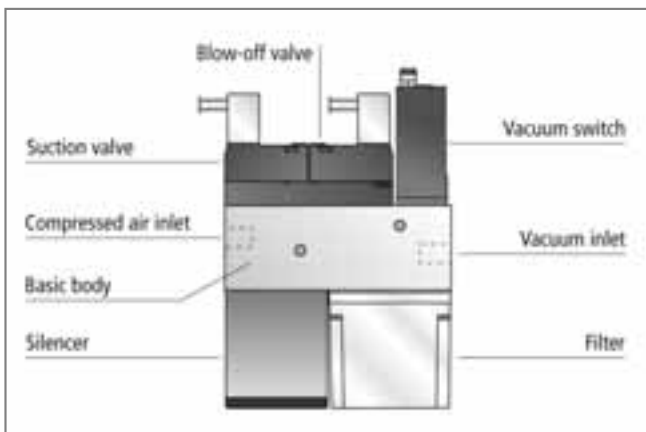
Suction rate from 65 l/min to 200 l/min



Suitability for Industry-Specific Applications



Compact ejectors SMP



System design compact ejectors SMP



Central vacuum generation by compact ejectors SMP

Applications

- Compact ejector for handling of non-porous workpieces
- For use in the handling of sheet metal, in the automobile industry, in packing machines and in industrial robot technology
- Pick-and-place applications with very short cycle times (very fast release of workpieces thanks to the power function)

Design

- Compact ejector SMP, consisting of an anodized aluminum body, filter, silencer, two control valves (grip/blow-off) and non-return valve
- Power function for reduction of the blow-off time by about 50%
- Optionally available as NO or NC version
- Optional vacuum monitoring with electronic (VE) or digital (VD) vacuum switch
- Optional air-saving function (RE or RD)
- Suitable for mounting on block mounting plate GP
- Suitable for filtered, oil-free compressed air (4-6 bar)
- Compact ejectors with air-saving function, including cables

Our Highlights...

- High suction and blow-off capacity thanks to the power function
- Wide range of models with various performance figures
- Automatic air-saving function (option)
- Versatile modular system
- Digital vacuum monitoring (option)

Your Benefits...

- > Minimum cycle times due to extremely fast gripping and release of the workpieces
- > Versions with optimum power ratings for all tasks
- > Economical use in continuous operation
- > Flexible adaptation to customer requirements
- > Easy adjustment with settings shown on an LED display



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Designation Code Compact Ejectors SMP

Abbreviated designation	Nozzle size	Idle position suction valve	Blow off- and safety non-return valve	System monitoring
Example SMP 15 NO AS RE:				
SMP	15	NO	AS	RE
SMP	15 = 1.5 mm 20 = 2.0 mm 25 = 2.5 mm 30 = 3.0 mm	NC normally closed NO normally open	AS blow off valve with safety non-return valve	RD air saving function with digital vacuum switch RE air saving function with electronic vacuum switch VD digital vacuum switch VE electronic vacuum switch

Ordering Data Compact Ejectors SMP

Compact ejector SMP is delivered as a ready to connect product (without connection cable).

Available spare parts: silencer, filter

Available accessories: connection cable, connection plug

Compact Ejectors SMP

SMP 15		SMP 20		SMP 25		SMP 30	
Type	Part Number	Type	Part Number	Type	Part Number	Type	Part Number
SMP 15 NO AS	10.02.02.00561	SMP 20 NO AS	10.02.02.00571	SMP 25 NO AS	10.02.02.00581	SMP 30 NO AS	10.02.02.00591
SMP 15 NC AS	10.02.02.00562	SMP 20 NC AS	10.02.02.00572	SMP 25 NC AS	10.02.02.00582	SMP 30 NC AS	10.02.02.00592
SMP 15 NO AS VE	10.02.02.00565	SMP 20 NO AS VE	10.02.02.00575	SMP 25 NO AS VE	10.02.02.00585	SMP 30 NO AS VE	10.02.02.00595
SMP 15 NC AS VE	10.02.02.00566	SMP 20 NC AS VE	10.02.02.00576	SMP 25 NC AS VE	10.02.02.00586	SMP 30 NC AS VE	10.02.02.00596
SMP 15 NO AS VD	10.02.02.00567	SMP 20 NO AS VD	10.02.02.00577	SMP 25 NO AS VD	10.02.02.00587	SMP 30 NO AS VD	10.02.02.00597
SMP 15 NC AS VD	10.02.02.00568	SMP 20 NC AS VD	10.02.02.00578	SMP 25 NC AS VD	10.02.02.00588	SMP 30 NC AS VD	10.02.02.00598
SMP 15 NO AS RE	10.02.02.00569	SMP 20 NO AS RE	10.02.02.00579	SMP 25 NO AS RE	10.02.02.00589	SMP 30 NO AS RE	10.02.02.00599
SMP 15 NO AS RD	10.02.02.00570	SMP 20 NO AS RD	10.02.02.00580	SMP 25 NO AS RD	10.02.02.00590	SMP 30 NO AS RD	10.02.02.00600
SMP 15 NC AS RE	10.02.02.00772	SMP 20 NC AS RE	10.02.02.00774	SMP 25 NC AS RE	10.02.02.00776	SMP 30 NC AS RE	10.02.02.00778
SMP 15 NC AS RD	10.02.02.00773	SMP 20 NC AS RD	10.02.02.00775	SMP 25 NC AS RD	10.02.02.00777	SMP 30 NC AS RD	10.02.02.00779

Compact Ejectors SMP

Suction rate from 65 l/min to 200 l/min

Ordering Data Spare Parts and Accessories Compact Ejectors SMP

Type	Connection plug for solenoid valves* with cable (5 m, PVC)	Connection plug for solenoid valves* with cable (10 m, PUR)	Connection plug for solenoid valves* without cable	Connection cable for vacuum switch (5 m, straight, PUR)	Connection cable for vacuum switch (5 m, 90°, PUR)	Replacement silencer	Replacement filter element
SMP 15 NO/NC AS	21.04.06.00084	21.04.06.00118	21.04.06.00085	-	-	10.02.02.00651	10.02.02.00654
SMP 15 NO/NC AS V...	21.04.06.00084	21.04.06.00118	21.04.06.00085	10.06.02.00031	10.06.02.00032	10.02.02.00651	10.02.02.00654
SMP 15 NO/NC AS R...	-	-	-	-	-	10.02.02.00651	10.02.02.00654
SMP 20 NO/NC AS	21.04.06.00084	21.04.06.00118	21.04.06.00085	-	-	10.02.02.00651	10.02.02.00654
SMP 20 NO/NC AS V...	21.04.06.00084	21.04.06.00118	21.04.06.00085	10.06.02.00031	10.06.02.00032	10.02.02.00651	10.02.02.00654
SMP 20 NO/NC AS R...	-	-	-	-	-	10.02.02.00651	10.02.02.00654
SMP 25 NO/NC AS	21.04.06.00084	21.04.06.00118	21.04.06.00085	-	-	10.02.02.00652	10.02.02.00654
SMP 25 NO/NC AS V...	21.04.06.00084	21.04.06.00118	21.04.06.00085	10.06.02.00031	10.06.02.00032	10.02.02.00652	10.02.02.00654
SMP 25 NO/NC AS R...	-	-	-	-	-	10.02.02.00652	10.02.02.00654
SMP 30 NO/NC AS	21.04.06.00084	21.04.06.00118	21.04.06.00085	-	-	10.02.02.00652	10.02.02.00654
SMP 30 NO/NC AS V...	21.04.06.00084	21.04.06.00118	21.04.06.00085	10.06.02.00031	10.06.02.00032	10.02.02.00652	10.02.02.00654
SMP 30 NO/NC AS R...	-	-	-	-	-	10.02.02.00652	10.02.02.00654

*Order 2 x per ejector. In the case of regulated compact ejectors, the cable set is included with the ejector

Technical Data Compact Ejectors SMP

Type	Nozzle-Ø [mm]	Degree of evacuation [%]	Max. suction rate [l/min]	Max. suction rate [m³/h]	Air consumpt. during evac. [l/min]*	Air consumpt. during evac. [m³/h]*	Max. air consumption blow off [l/min]
SMP 15	1.5	85	65.0	3.9	117	7.0	220
SMP 20	2.0	85	116.0	7.0	190	11.4	220
SMP 25	2.5	85	161.0	9.7	310	18.6	220
SMP 30	3.0	85	200.0	12.0	420	25.2	220

!The supply voltage for vacuum switches and solenoid valves is 24V DC

*At optimal operating pressure

**For max. length 2 m

Type	Noise level workp. gripped [dB]	Noise level free [dB]	Operating pressure [bar]	Recomm. int. hose diameter compr. air [mm]**	Recomm. int. hose diameter vacuum [mm]**	Weight [g]	Operating temperature [°C]
SMP 15	74	74	5...6	4	6	465	0...45
SMP 20	76	78	5...6	4	9	465	0...45
SMP 25	72	82	5...6	6	9	485	0...45
SMP 30	82	82	5...6	9	11	485	0...45

!The supply voltage for vacuum switches and solenoid valves is 24V DC

*At optimal operating pressure

**For max. length 2 m

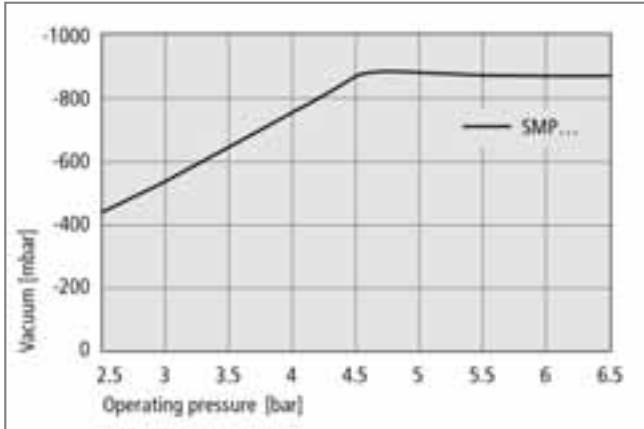
Compact Ejectors



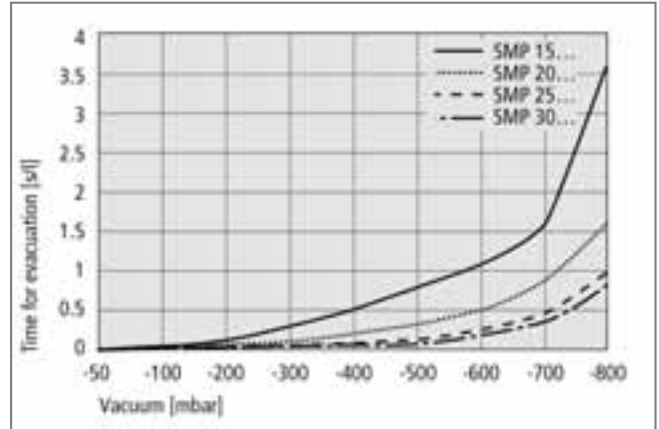
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Suction rate from 65 l/min to 200 l/min

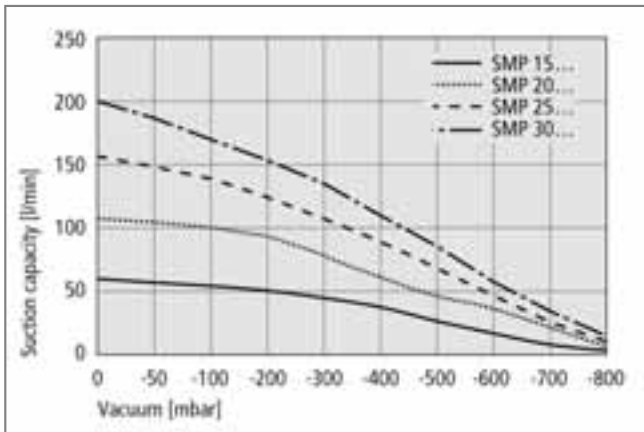
Performance Data Compact Ejectors SMP



Achievable vacuum at various operating pressures



Evacuation times for various vacuum ranges



Suction capacity at various degrees of evacuation

Suction Capacity in l/min at Various Degrees of Evacuation

Type	Degree of evacuation in mbar									
	0	-50	-100	-200	-300	-400	-500	-600	-700	-800
SMP 15...	65	62	58	50	41	32	21	16	9	4
SMP 20...	116	108	101	90	78	63	48	36	18	5
SMP 25...	161	149	136	123	107	86	66	49	25	7
SMP 30...	200	184	168	153	132	107	82	61	31	9

Evacuation Time in s/l for Various Vacuum Ranges

Type	Degree of evacuation in mbar									
	-50	-100	-200	-300	-400	-500	-600	-700	-800	
SMP 15...	0.048	0.088	0.184	0.311	0.480	0.744	1.120	1.692	3.606	
SMP 20...	0.026	0.047	0.095	0.159	0.239	0.349	0.499	0.807	1.652	
SMP 25...	0.015	0.027	0.055	0.089	0.135	0.198	0.288	0.486	0.960	
SMP 30...	0.012	0.021	0.044	0.071	0.108	0.160	0.232	0.392	0.810	

Compact Ejectors

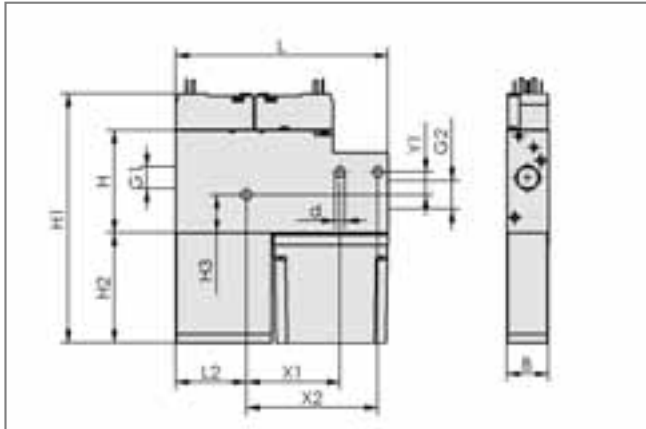


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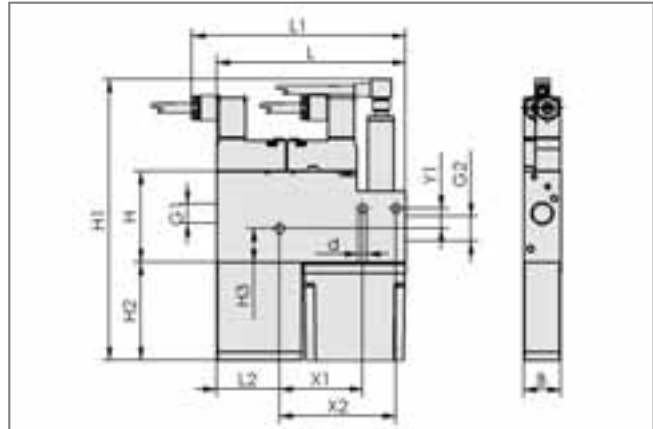
Suction rate from 65 l/min to 200 l/min



Design Data Compact Ejectors SMP



SMP 15 to 30 NC/NO AS



SMP 15 to 30 NC/NO AS V.../ R...

Type	Dimensions in mm													
	B	d	G1	G2	H	H1	H2	H3	L	L1	L2	X1	X2	Y1
SMP 15 NC/NO AS	22	5.5	G1/4"-F	G3/8"-F	54	132.5	58.5	20.1	112.5	-	37.5	49.5	69.5	12
SMP 20 NC/NO AS	22	5.5	G1/4"-F	G3/8"-F	54	132.5	58.5	20.1	112.5	-	37.5	49.5	69.5	12
SMP 25 NC/NO AS	22	5.5	G1/4"-F	G3/8"-F	54	147.5	73.5	20.1	112.5	-	37.5	49.5	69.5	12
SMP 30 NC/NO AS	22	5.5	G1/4"-F	G3/8"-F	54	147.5	73.5	20.1	112.5	-	37.5	49.5	69.5	12
SMP 15 NC/NO AS VD/RD	22	5.5	G1/4"-F	G3/8"-F	54	181.5	58.5	20.1	112.5	129	37.5	49.5	69.5	12
SMP 20 NC/NO AS VD/RD	22	5.5	G1/4"-F	G3/8"-F	54	181.5	58.5	20.1	112.5	129	37.5	49.5	69.5	12
SMP 25 NC/NO AS VD/RD	22	5.5	G1/4"-F	G3/8"-F	54	196.5	73.5	20.1	112.5	129	37.5	49.5	69.5	12
SMP 30 NC/NO AS VD/RD	22	5.5	G1/4"-F	G3/8"-F	54	196.5	73.5	20.1	112.5	129	37.5	49.5	69.5	12
SMP 15 NC/NO AS VE/RE	22	5.5	G1/4"-F	G3/8"-F	54	167.0	58.5	20.1	112.5	129	37.5	49.5	69.5	12
SMP 20 NC/NO AS VE/RE	22	5.5	G1/4"-F	G3/8"-F	54	167.0	58.5	20.1	112.5	129	37.5	49.5	69.5	12
SMP 25 NC/NO AS VE/RE	22	5.5	G1/4"-F	G3/8"-F	54	182.0	73.5	20.1	112.5	129	37.5	49.5	69.5	12
SMP 30 NC/NO AS VE/RE	22	5.5	G1/4"-F	G3/8"-F	54	182.0	73.5	20.1	112.5	129	37.5	49.5	69.5	12

- Schmalz - The Company
- Vacuum Knowledge
- Vacuum Suction Pads
- Special Grippers
- Mounting Elements
- Vacuum Generators**
- Valve Technology
- Switches and Monitoring
- Filters and Connections
- Vacuum Gripping Systems
- Services
- Contact
- Index of Products

Compact Ejectors



SMP-Compressed Air Distributors GP



Suitability for Industry-Specific Applications



SMP-compressed air distributors GP

Applications

- Compressed air distributor for mounting of compact ejectors in blocks with a single compressed air inlet

Design

- Baseplate made of anodized aluminum for mounting of several compact ejectors
- Central compressed-air inlet can be extended at any time
- Connections not needed for ejectors can be sealed with blanking plates
- Delivered complete with gaskets and installation material

Our Highlights...

- Baseplate for the construction of blocks of compact ejectors
- Central compressed-air inlet

Your Benefits...

- > Space-saving construction of ejector blocks
- > Low installation costs

Ordering Data SMP-Compressed Air Distributors GP

Type	Type*	Part Number
Compressed air connection plate	GP 2 SMP(i)15..30/SCP(i)15..30	10.02.02.00917
Compressed air connection plate	GP 3 SMP(i)15..25/SCP(i)15..25	10.02.02.00918
Compressed air connection plate	GP 4 SMP(i)15..20/SCP(i)15..20	10.02.02.00919
Compressed air connection plate	GP 5 SMP(i)15/SCP(i)15	10.02.02.00920
Compressed air connection plate	GP 6 SMP(i)15/SCP(i)15	10.02.02.00921
Ejector blanking plate	EJEK-PL SMP(i)15..30/SCP(i)20..30	10.02.02.00728
Ejector blanking plate	EJEK-PL SCP 10..15	10.02.02.00729

*EJEK-PL = Plate for covering unused connections

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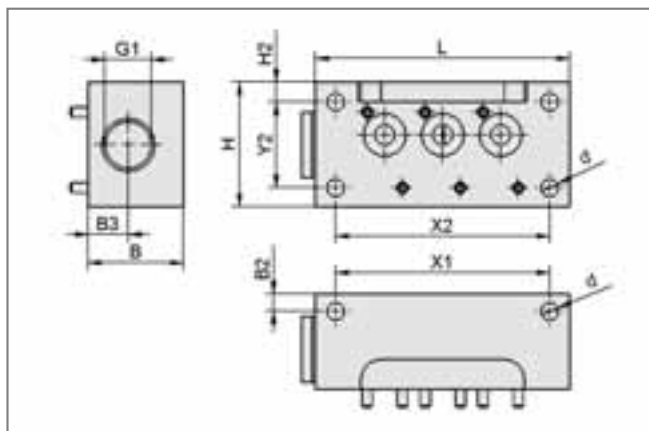
Compact Ejectors



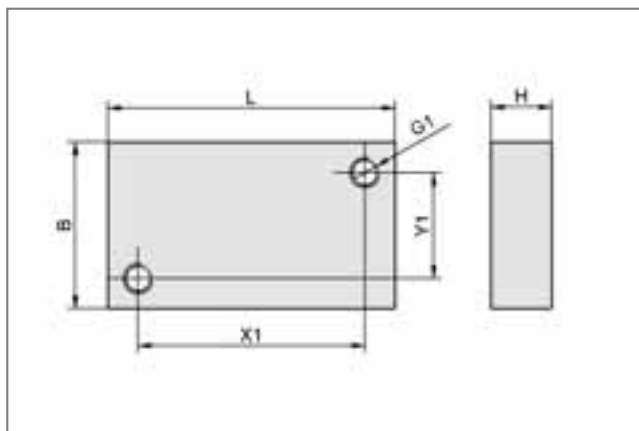
SMP-Compressed Air Distributors GP



Design Data SMP-Compressed Air Distributors GP



Compressed air manifold GP SMP15..30/SCP



Ejector blanking plate EJEK-PL ...

Type	Dimensions in mm												Number of outputs	Weight [g]
	B	B2	d	G1	H	H2	L	X1	X2	Y1	Y2			
GP 2 SMP(i)15..30/SCP(i)15..30	38	7	7	G1/2"-F	49.5	8	78	62	62	-	34	2	375	
GP 3 SMP(i)15..25/SCP(i)15..25	38	7	7	G1/2"-F	49.5	8	101	85	85	-	34	3	481	
GP 4 SMP(i)15..20/SCP(i)15..20	38	7	7	G1/2"-F	49.5	8	124	108	108	-	34	4	595	
GP 5 SMP(i)15/SCP(i)15	38	7	7	G1/2"-F	49.5	8	147	131	131	-	34	5	700	
GP 6 SMP(i)15/SCP(i)15	38	7	7	G1/2"-F	49.5	8	170	154	154	-	34	6	807	
EJEK-PL SMP(i)15..30/SCP(i)20..30	22	-	-	M4-F	8.0	-	38	30	-	14	-	-	17	
EJEK-PL SCP 10..15	20	-	-	-	6.0	7	26	20	20	-	34	-	9	

