

Compact ejectors

Compact ejectors SMP



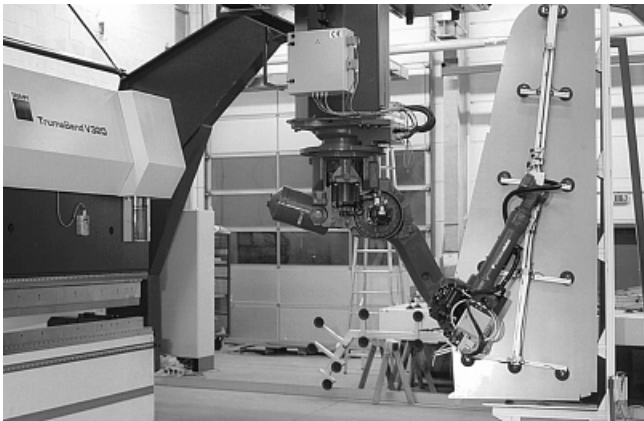
Compact ejectors SMP

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 advantages...

- > 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



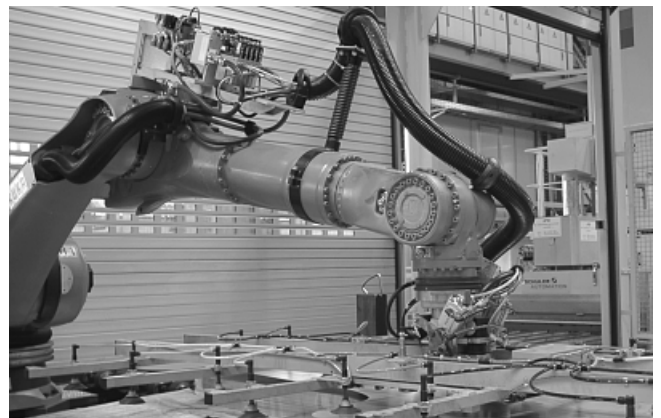
Vacuum generator on a vacuum spider for handling metal sheets

Applications

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



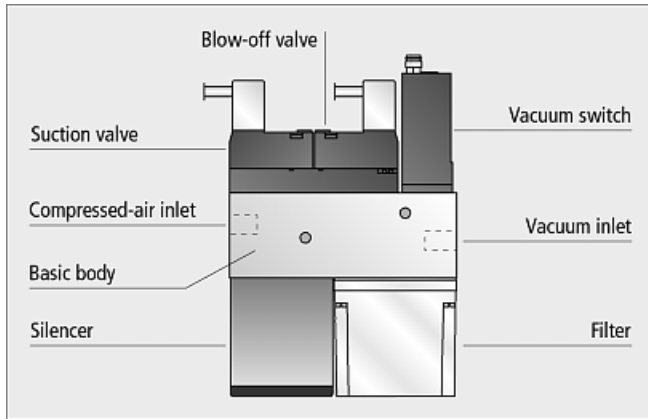
Vacuum generator on a robot arm, consisting of five compact ejectors SMP



Vacuum generator on a vacuum spider for handling metal sheets, consisting of five compact ejectors SMP

Compact ejectors

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System design compact ejector SMP

Construction

- 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



Suitability for branch-specific applications

Designation code Compact ejectors SMP

Short designation	Nozzle size in mm*10	Idle position, suction valve	Blow-off and safety valve	System monitoring
Example: SMP	15	NO	AS	VD
SMP	15...1.5 mm 20...2.0 mm 25...2.5 mm 30...3.0 mm	NO... normally open NC... normally closed	AS... blow-off valve and safety non-return valve	-..... without vacuum switch VE... electronic vacuum switch VD... digital vacuum switch RE... automatic air-saving with electronic vacuum switch RD... automatic air-saving with digital vacuum switch

Ordering data Compact ejectors SMP

SMP 15 Type	Article No.	SMP 20 Type	Article No.	SMP 25 Type	Article No.	SMP 30 Type	Article No.
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

Compact ejectors SMP



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]*	Air consumption blow off [l/min]
SMP 15	1,5	85	65	3,9	117	7,0	220
SMP 20	2,0	85	116	7,0	190	11,4	220
SMP 25	2,5	85	161	9,7	310	18,6	220
SMP 30	3,0	85	200	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(A)]	Noise level free [db(A)]	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	6	12	485	0...45

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

*At optimal operating pressure

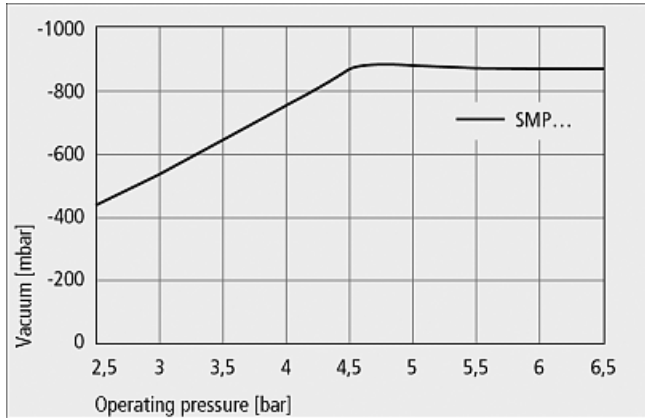
**For max. length 2 m

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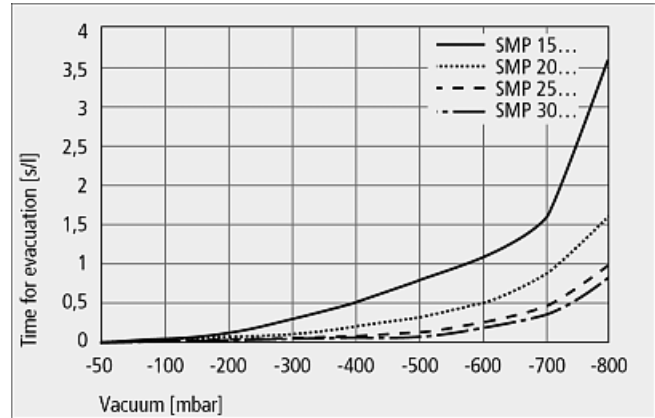
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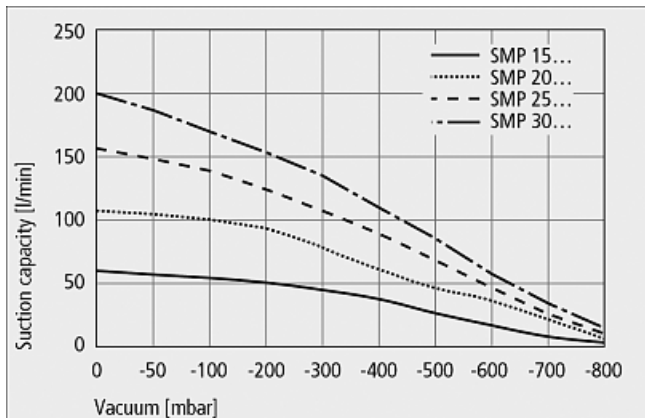
Performance data Compact ejectors SMP



Achievable vacuum at various operating pressures



Evacuation times for various vacuum ranges



Suction capacity at various degrees of evacuation

Vacuum generators
5

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

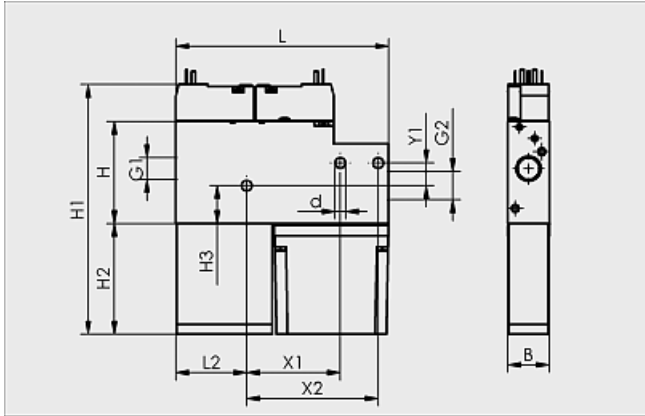
Type	Degree of evacuation in mbar									
	-50	-100	-200	-300	-400	-500	-600	-700	-800	
SMP 15...	0.048	0.088	0.184	0.311	0.480	0.744	1.120	1.692	3.606	
SMP 20...	0.026	0.047	0.095	0.159	0.239	0.349	0.499	0.807	1.652	
SMP 25...	0.015	0.027	0.055	0.089	0.135	0.198	0.288	0.486	0.960	
SMP 30...	0.012	0.021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

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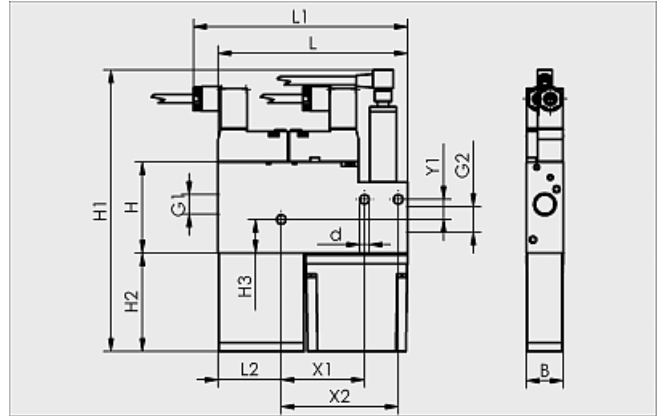
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Design data Compact ejectors SMP



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