

Compact Ejectors



Compact Ejectors SCPi / SMPi

Suction rate from 75 l/min to 185 l/min



Suitability for Industry-Specific Applications



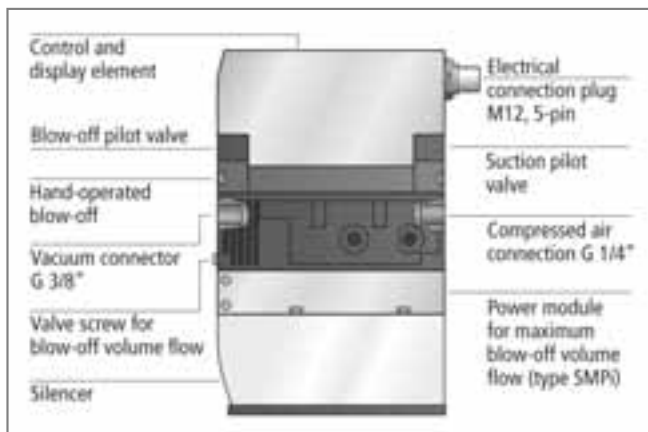
Compact ejectors SCPi / SMPi

Applications

- Handling of air-tight as well as porous workpieces
- Vacuum supply and vacuum monitoring in automated systems
- For use in sheet metal processing, the automotive industry, with packaging machines, and in various robotic applications
- Pick-and-place applications with very short cycle times (fast gripping and release realized by means of the power blow-off function)

Design

- Main body made of high-strength plastic
- User display with seven segments, operating keyboard and luminous display that indicates system status
- Electrical connection via standard M12 plug, optional with potential separation of sensor and actor power supply
- Integrated pneumatic valves for NO, NC or pulse switch functions
- Power blow-off piston for type SMPi provides extremely high blow-off capacity for reduced cycle times
- Adjusting screw to adjust the blow-off capacity
- Pneumatic connections (G3/8" and G1/4") with protective filters



System design compact ejectors SCPi / SMPi



Centralized vacuum generation by means of compact ejectors SMPi

Our Highlights...

- IO-Link function with remote parameterisation
- Clearly structured user display with setting buttons
- Integrated air-saving function
- Compact disk design
- Weight-optimized housing
- Suction function as pulse version is available

Your Benefits...

- > Connection to bus systems and fast data synchronisation
- > Easy to enter and read vacuum parameters
- > Reduced energy costs
- > Minimal space requirements
- > Minimal stress during high accelerations
- > No undesired air consumption in case the machine is stopped



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Designation Code Compact Ejectors SCPi / SMPi

Abbreviated designation	Nozzle size	Idle position suction valve	System monitoring	Connection electrical
Example SMPi 15 NO VD M12-5:	15	NO	VD	M12-5
SCPi without power blow off	15 = 1.5 mm	IMP bistable, switched with pulse	RD air saving function with digital vacuum switch	M12-5 M12, 5-pole
SMPi with power blow off	20 = 2.0 mm	NC normally closed	VD digital vacuum switch	
	25 = 2.5 mm	NO normally open		

Ordering Data Compact Ejectors SCPi / SMPi

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

Available accessories: connection cable, compressed air connection plate, ejector blanking plate, quick change connection, ejector tester

Compact Ejectors SCPi / SMPi

SCPi 15...		SCPi 20...		SCPi 25...	
Type	Part Number	Type	Part Number	Type	Part Number
SCPi 15 NO VD M12-5	10.02.02.03342	SCPi 20 NO VD M12-5	10.02.02.03354	SCPi 25 NO VD M12-5	10.02.02.03366
SCPi 15 NC VD M12-5	10.02.02.03343	SCPi 20 NC VD M12-5	10.02.02.03355	SCPi 25 NC VD M12-5	10.02.02.03367
SCPi 15 IMP VD M12-5	10.02.02.03344	SCPi 20 IMP VD M12-5	10.02.02.03356	SCPi 25 IMP VD M12-5	10.02.02.03368
SCPi 15 NO RD M12-5	10.02.02.03345	SCPi 20 NO RD M12-5	10.02.02.03357	SCPi 25 NO RD M12-5	10.02.02.03369
SCPi 15 NC RD M12-5	10.02.02.03346	SCPi 20 NC RD M12-5	10.02.02.03358	SCPi 25 NC RD M12-5	10.02.02.03370
SCPi 15 IMP RD M12-5	10.02.02.03347	SCPi 20 IMP RD M12-5	10.02.02.03359	SCPi 25 IMP RD M12-5	10.02.02.03371

SMPi 15...		SMPi 20...		SMPi 25...	
Type	Part Number	Type	Part Number	Type	Part Number
SMPi 15 NO VD M12-5	10.02.02.03336	SMPi 20 NO VD M12-5	10.02.02.03348	SMPi 25 NO VD M12-5	10.02.02.03360
SMPi 15 NC VD M12-5	10.02.02.03337	SMPi 20 NC VD M12-5	10.02.02.03349	SMPi 25 NC VD M12-5	10.02.02.03361
SMPi 15 IMP VD M12-5	10.02.02.03338	SMPi 20 IMP VD M12-5	10.02.02.03350	SMPi 25 IMP VD M12-5	10.02.02.03362
SMPi 15 NO RD M12-5	10.02.02.03339	SMPi 20 NO RD M12-5	10.02.02.03351	SMPi 25 NO RD M12-5	10.02.02.03363
SMPi 15 NC RD M12-5	10.02.02.03340	SMPi 20 NC RD M12-5	10.02.02.03352	SMPi 25 NC RD M12-5	10.02.02.03364
SMPi 15 IMP RD M12-5	10.02.02.03341	SMPi 20 IMP RD M12-5	10.02.02.03353	SMPi 25 IMP RD M12-5	10.02.02.03365

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Ordering Data Accessories Compact Ejectors SCPi / SMPi

Accessories	Part Number	Weight [kg]
Connecting cable M12, 5-pole	21.04.05.00080	0,240
Connection distributor 3xM12, 4-pole	10.02.02.03372	0,170
Connection distributor 2xM12, 4-pole	10.02.02.03490	0,100
Compressed air connection plate GP 2	10.02.02.00917	0,375
Compressed air connection plate GP 3	10.02.02.00918	0,481
Compressed air connection plate GP 4	10.02.02.00919	0,595
Compressed air connection plate GP 5	10.02.02.00920	0,700
Compressed air connection plate GP 6	10.02.02.00921	0,807
Ejector blanking plate*	10.02.02.00728	0,017
Quick Change connection**	10.02.02.03463	0,163
Ejector tester EJEK-TEST SMPi/SCPi	10.02.02.03588	0,755

*Plate for covering unused connections when using compressed air connection plates

**For additional quick-mounting function (tool-free change of ejectors). When using with compressed air connection plates, order 1x per ejector.

Technical Data Compact Ejectors SCPi / SMPi

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]
SMPi 15...	1.5	85	75	4.5	115	7.2	200
SMPi 20...	2.0	85	135	8.1	180	10.8	200
SMPi 25...	2.5	85	185	11.1	290	17.4	200
SCPi 15...	1.5	85	75	4.5	115	7.2	200
SCPi 20...	2.0	85	140	8.4	180	11.7	200
SCPi 25...	2.5	85	195	11.7	290	17.4	200

!The supply voltage is 24V DC

*At optimal operating pressure

**For max. length 2 m

Type	Noise level free [dB]	Noise level workp. gripped [dB]	Operating pressure [bar]	Recomm. int. hose diameter compr. air [mm]**	Recomm. int. hose diameter vacuum [mm]**	Weight [kg]	Operating temperature [°C]
SMPi 15...	75	74	4...7 bar	6	6	0.56	0...50
SMPi 20...	75	70	4...7 bar	6	8	0.56	0...50
SMPi 25...	78	77	4...7 bar	8	9	0.56	0...50
SCPi 15...	75	70	4...7 bar	6	6	0.56	0...50
SCPi 20...	75	65	4...7 bar	6	8	0.56	0...50
SCPi 25...	78	75	4...7 bar	8	9	0.56	0...50

!The supply voltage is 24V DC

*At optimal operating pressure

**For max. length 2 m

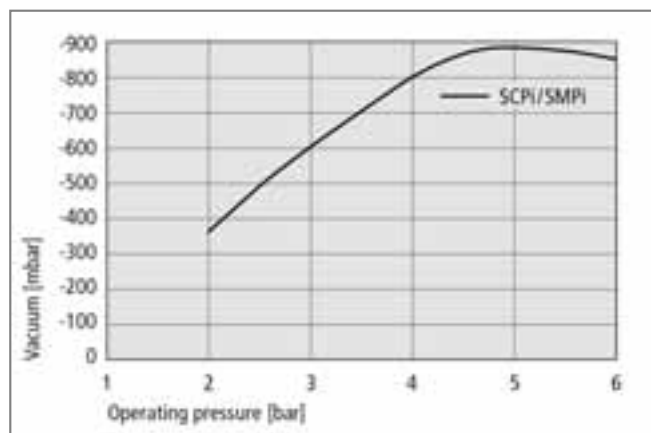
Compact Ejectors



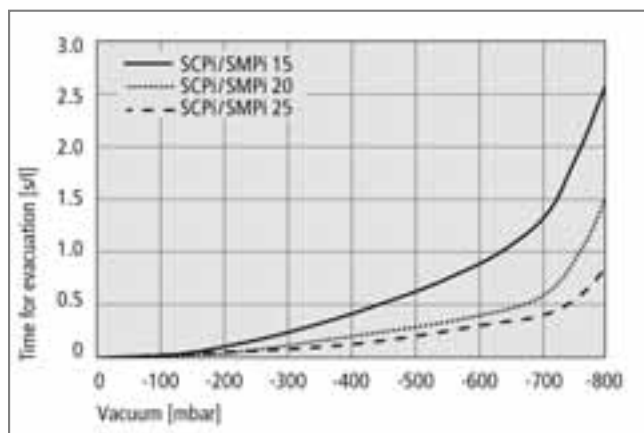
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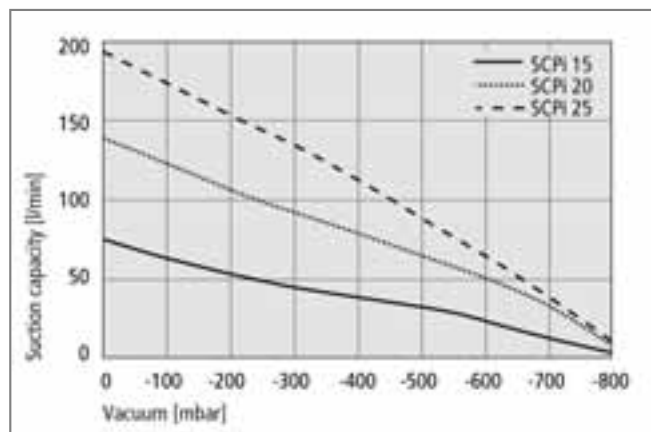
Performance Data Compact Ejectors SCPi / SMPi



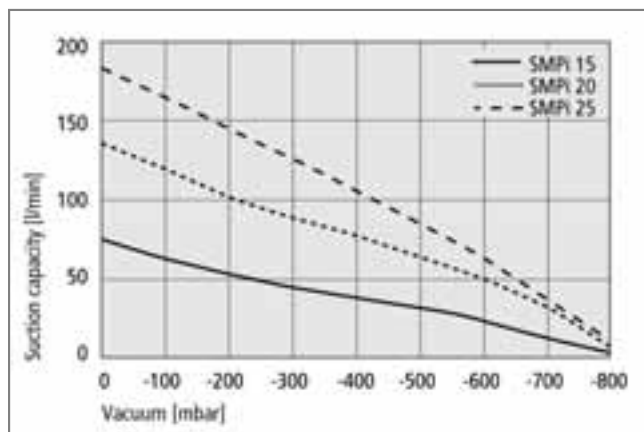
Achievable vacuum at various operating pressures



Evacuation times for various vacuum ranges



Suction capacity SCPi... at various degrees of evacuation



Suction capacity SMPi... 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
SCPi 15	75.0	70.3	65.4	55.2	46.3	38.3	31.2	23.9	13.5	3.4
SCPi 20	139.0	131.3	123.1	106.8	92.5	79.3	65.2	51.9	32.1	8.5
SCPi 25	195.0	188.2	176.8	153.6	133.6	112.0	89.3	67.4	39.7	11.7
SMPi 15	75.0	70.3	65.4	55.2	46.3	38.3	31.2	23.9	13.5	3.4
SMPi 20	135.0	127.5	119.5	103.7	89.8	77.0	63.3	50.4	31.1	8.2
SMPi 25	185.0	178.6	167.8	145.8	126.7	106.2	84.7	64.0	37.6	11.1

Evacuation Time in s/l for Various Vacuum Ranges

Type	Degree of evacuation in mbar								
	-50	-100	-200	-300	-400	-500	-600	-700	-800
SCPi/SMPi 15	0.03	0.07	0.16	0.27	0.42	0.63	0.91	1.37	2.60
SCPi/SMPi 20	0.02	0.04	0.08	0.14	0.22	0.31	0.44	0.66	1.54
SCPi/SMPi 25	0.01	0.02	0.05	0.09	0.14	0.20	0.28	0.42	0.86

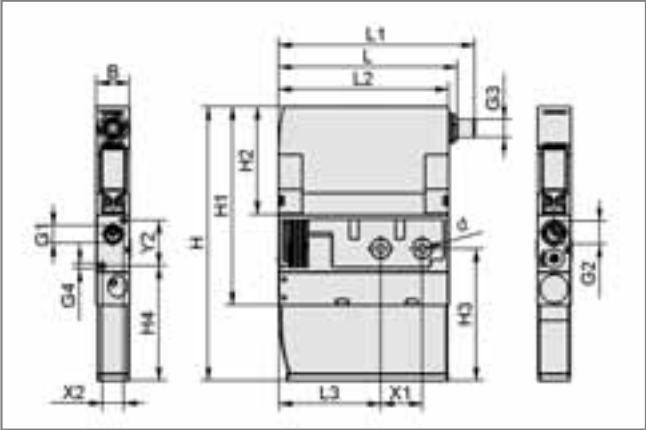
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Design Data Compact Ejectors SCPi / SMPi



SCPi.../SMPi...

Type	Dimensions in mm																	
	B	d	G1	G2	G3	G4	H	H1	H2	H3	H4	L	L1	L2	L3	X1	X2	Y2
SMPi 15...	22	6.6	G1/4"-F	G3/8"-F	M12x1-M	M4-F	181.5	131.5	71.5	87.5	76	118.5	129.7	112.5	67.5	27.5	14	30
SMPi 20...	22	6.6	G1/4"-F	G3/8"-F	M12x1-M	M4-F	181.5	131.5	71.5	87.5	76	118.5	129.7	112.5	67.5	27.5	14	30
SMPi 25...	22	6.6	G1/4"-F	G3/8"-F	M12x1-M	M4-F	181.5	131.5	71.5	87.5	76	118.5	129.7	112.5	67.5	27.5	14	30
SCPi 15...	22	6.6	G1/4"-F	G3/8"-F	M12x1-M	M4-F	181.5	131.5	71.5	87.5	76	118.5	129.7	112.5	67.5	27.5	14	30
SCPi 20...	22	6.6	G1/4"-F	G3/8"-F	M12x1-M	M4-F	181.5	131.5	71.5	87.5	76	118.5	129.7	112.5	67.5	27.5	14	30
SCPi 25...	22	6.6	G1/4"-F	G3/8"-F	M12x1-M	M4-F	181.5	131.5	71.5	87.5	76	118.5	129.7	112.5	67.5	27.5	14	30

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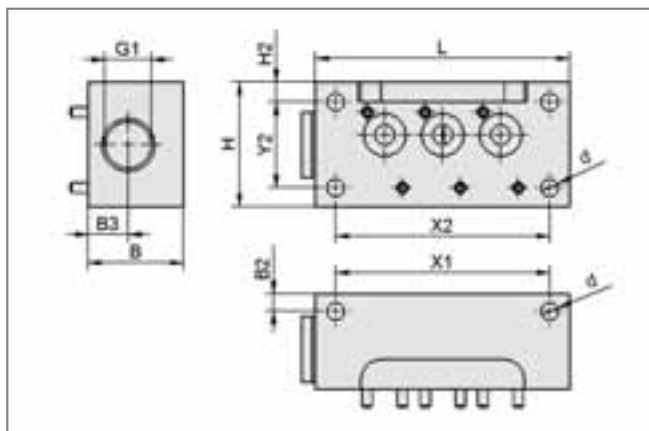


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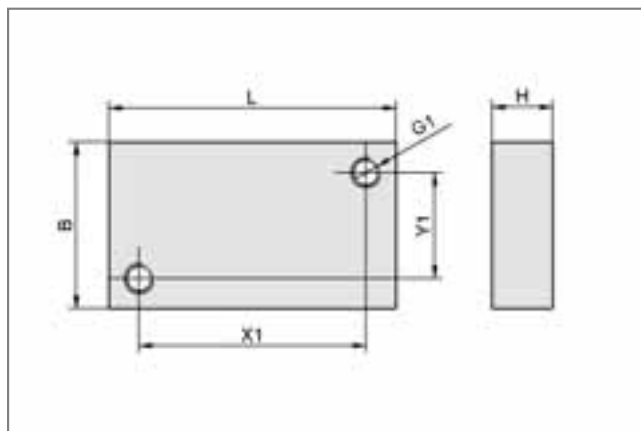
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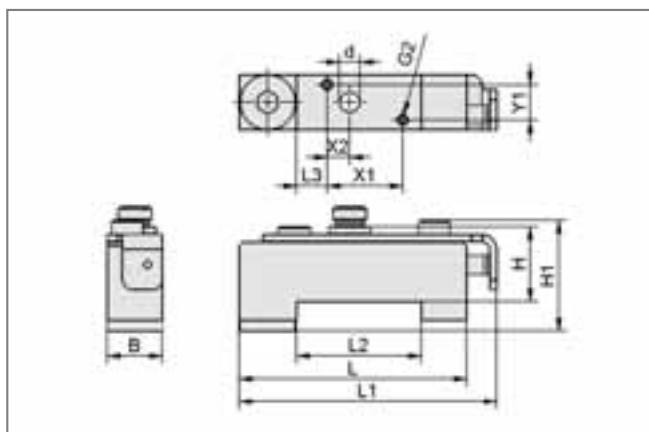
Design Data Accessories Compact Ejectors SCPi / SMPi



Compressed air connection plate GP...



Ejector blanking plate EJEK-PL...



Quick Change Connection ADP-Q1...

Type	Dimensions in mm																	Number of outputs
	B	B2	B3	d	G1	G2	H	H1	H2	X1	X2	Y1	Y2	L	L1	L2	L3	
GP 2 SMP(i)15..30/SCP(i)15..30	38	7	16	7	G1/2"-F	-	49.5	-	8	62	62	-	34	78.0	-	-	-	2
GP 3 SMP(i)15..25/SCP(i)15..25	38	7	16	7	G1/2"-F	-	49.5	-	8	85	85	-	34	101.0	-	-	-	3
GP 4 SMP(i)15..20/SCP(i)15..20	38	7	16	7	G1/2"-F	-	49.5	-	8	108	108	-	34	124.0	-	-	-	4
GP 5 SMP(i)15/SCP(i)15	38	7	16	7	G1/2"-F	-	49.5	-	8	131	131	-	34	147.0	-	-	-	5
GP 6 SMP(i)15/SCP(i)15	38	7	16	7	G1/2"-F	-	49.5	-	8	154	154	-	34	170.0	-	-	-	6
EJEK-PL SMP(i)15..30/SCP(i)20..30	22	-	-	-	M4-F	-	8.0	-	-	30	-	14	-	38.0	-	-	-	-
ADP-Q1 90.5x22x29.7 SMPi/SCPi	22	-	-	8	-	M5-F	29.7	43.9	-	30	9	14	-	90.5	102.5	49.6	12.1	1

ARA

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