

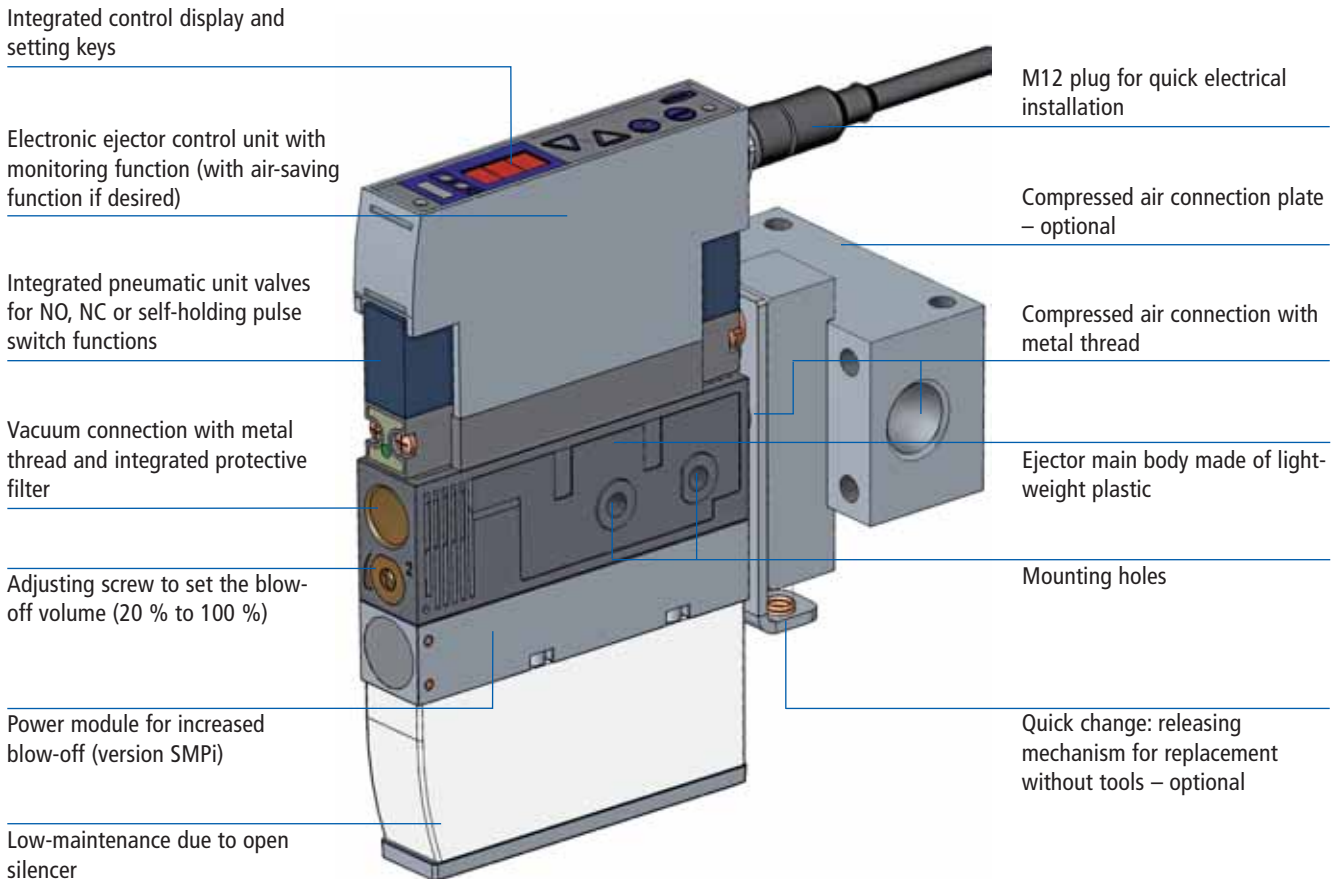
# Compact ejectors

Compact ejectors SCPi/SMPi



**The new-generation SCPi/SMPi compact ejectors:  
Future-oriented technology, energy-efficient operation, and maximum performance**

## Design and function of the ejector



## Integrated IO-link technology

Forward-looking IO-link technology makes communication possible with higher-level controls and bus systems on the field plane. This expands the possibilities beyond what can be achieved with the standard I/O mode with digital inputs and outputs. For example, it is possible to carry out remote parameterisation and diagnosis as well as process controls for sensors and actuators. For the user this means faster start-up, faster conversions, more process transparency and safety as well as the possibility of preventative maintenance for the reduction of downtime. All IO-link components can also be run in standard I/O mode. It is possible to switch to IO-link at any time. IO-link technology is integrated into all SMPi/SCPi compact ejectors.



Function of the IO-link	Benefit
Remote parameterisation	Quick installation and maintenance
Process monitoring	Early detection of faults
Parameter storage	Simple device replacement
Compatibility	Suitable for use in existing systems
Standard connect	Less wiring needed

# Compact ejectors

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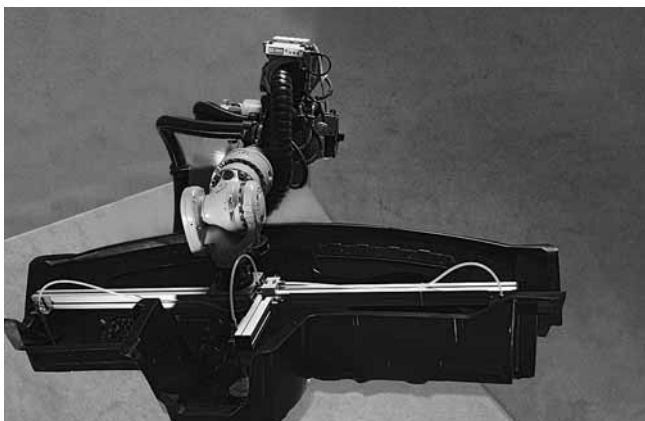
Compact ejectors SCPi / SMPi

## Our highlights...

- IO link function with remote parameterisation
- Clearly structured user display with setting buttons
- High suction and blow-off capacity
- Integrated air-saving function
- Suction function as pulse variant is available
- Compact disk design
- Standardised connections
- Weight-optimised housing
- Open silencer

## Your advantages...

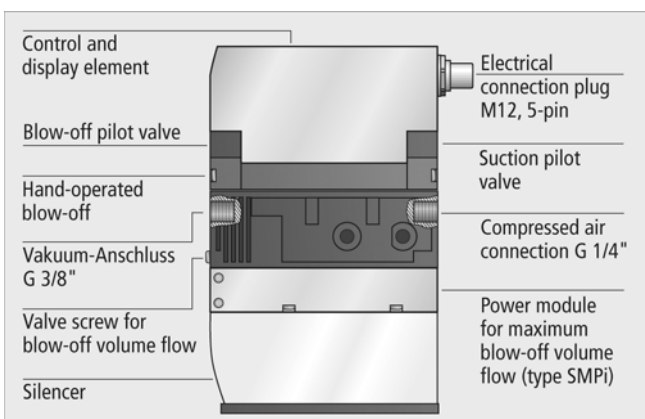
- > Connection to bus systems and fast data synchronisation
- > Easy to enter and read vacuum parameters
- > Short cycle times can be implemented
- > Minimises energy costs
- > No undesired air consumption when the machine is stopped
- > Minimal space requirements
- > Easy to install
- > Minimal stress during high accelerations
- > Low maintenance



Vacuum generation for gripper spiders for handling plastic

## Applications

- Handling of suction-tight and porous work pieces
- Preparation and monitoring of the vacuum in automated systems
- For use in sheet metal processing, the automotive industry, with packaging machines, and in various robotic applications to minimise cycle times
- Pick-and-place applications with the shortest of cycle times (quick picking up and lowering via power function)



System design compact ejector SCPi / SMPi

## Construction

- Base element made of high-strength plastic
- User display with 7-segment display and operating keyboard
- Electronic ejector control with monitoring functions
- Electrical connection via standard M12 plug, optional electrical isolation
- Integrated pneumatic valves for NO, NC or pulse switch functions
- Power blow-off pistons for type SMPi provides extremely high blow-off output and reduces release times
- Pneumatic connections (3/8" and 1/4") with protective screens
- Adjusting screw to reduce blow-off volume
- Luminous display indicates system status

# Compact ejectors

Compact ejectors SCPi / SMPi



Suitability for branch-specific applications

## Designation code Compact ejectors SCPi / SMPi

Short designation	Nozzle size in mm*10	Idle position, suction valve	System monitoring	Electrical connection
Example: SMPi	15	NO	VD	M12-5
SCPi...without powerful blow-off SMPi...with powerful blow-off	15...1.5 mm 20...2.0 mm 25...2.5 mm	NO... normally open NC... normally closed IMP... bistable, switched with pulse	VD... digital vacuum switch RD... integrated air-saving function with digital vacuum switch	M12-5... M12,5-pole

## Ordering data Compact ejectors SCPi / SMPi

SCPi 15...		SCPi 20...		SCPi 25...	
Type	Article No.	Type	Article No.	Type	Article No.
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	Article No.	Type	Article No.	Type	Article No.
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

## Ordering data accessories Compact ejectors SCPi / SMPi

Accessories	Article No.	Weight [kg]
Connecting cable M12, 8-pole with potential isolation	21.04.05.00079	0,280
Connecting cable M12, 5-pole	21.04.05.00080	0,240
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

\*Dummy plate for covering unused connections when using compressed air connection plates

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

# Compact ejectors

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## Technical data Compact ejectors SCPi / SMPi

Type	Nozzle-Ø [mm]	Degree of evacuation [%]	Max. suction rate [l/min]	Max. suction rate [m³/h]	Air consump. d. evac. [l/min]*	Air consump. d. evac. [m³/h]*	Air consumpt. blow off [l/min]
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
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

!The supply voltage is 24V DC

\*At optimal operating pressure

\*\*For max. length 2 m

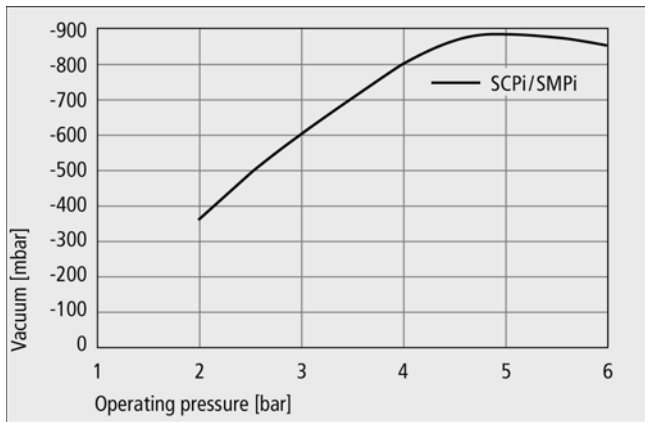
Type	Noise level free [db(A)]	Operating pressure [bar]	Recom. int. hose diameter compr. air [mm]**	Recom. int. hose diameter vacuum [mm]**	Weight [kg]	Operating temperature [°C]
SCPi 15...	75	4...7 bar	6	6	0,56	-10...60
SCPi 20...	75	4...7 bar	6	8	0,56	-10...60
SCPi 25...	78	4...7 bar	8	9	0,56	-10...60
SMPi 15...	75	4...7 bar	6	6	0,56	-10...60
SMPi 20...	75	4...7 bar	6	8	0,56	-10...60
SMPi 25...	78	4...7 bar	8	9	0,56	-10...60

!The supply voltage is 24V DC

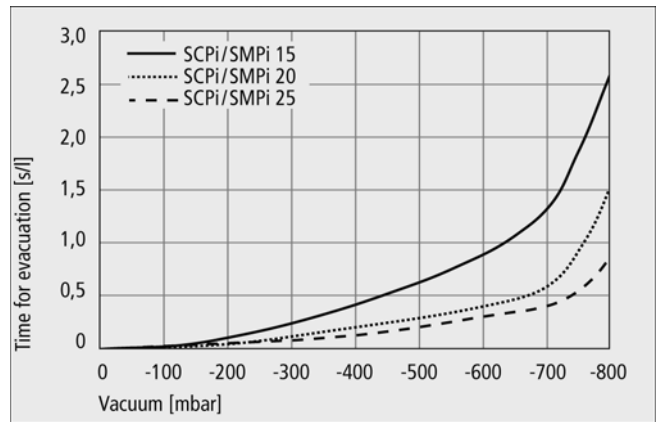
\*At optimal operating pressure

\*\*For max. length 2 m

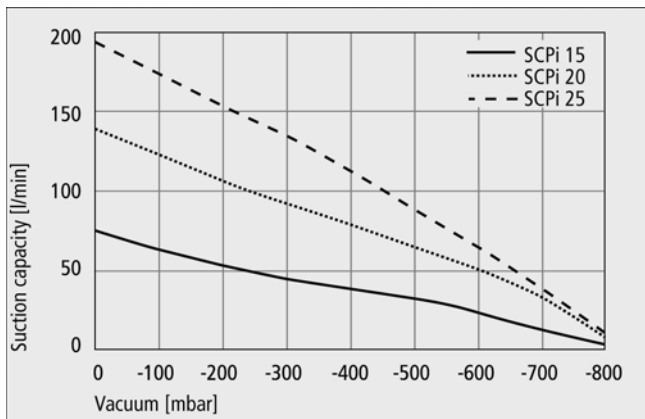
## Performance data Compact ejectors SCPi / SMPi



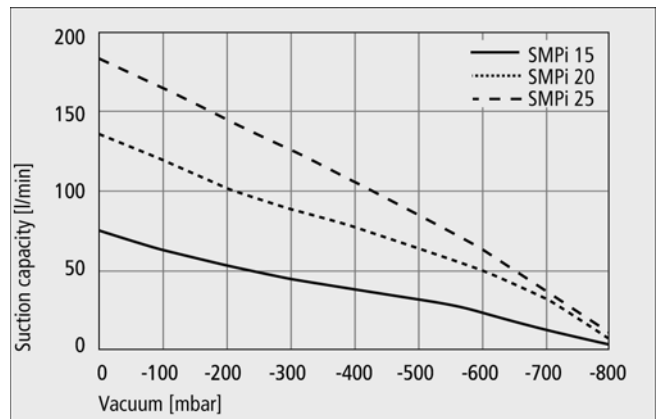
Achievable vacuum at various operating pressures



Evacuation times for various vacuum ranges



Suction capacity SCPi... at various degrees of evacuation



Suction capacity SMPi... at various degrees of evacuation

# Compact ejectors

Compact ejectors SCPi / SMPi



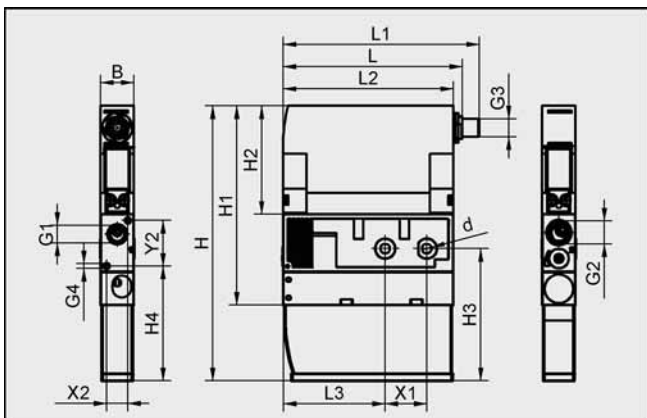
## ↓ F Suction capacity in l/min at various degrees of evacuation

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

## ↓ F Evacuation time in s/l for various vacuum ranges

Tipo	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	

## X Y Design data Compact ejectors SCPi / SMPi



SCPi.../SMPi...

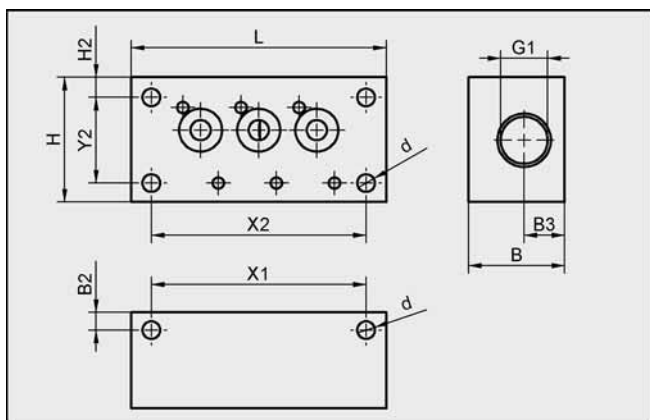
Type	Dimensions in mm																	
	B	d	G1	G2	G3	G4	H	H1	H2	H3	H4	L	L1	L2	L3	X1	X2	Y2
SCPi 15...	22	6,6	G1/4"-F	G3/8"-F	M12x1-M	M4-F	181,5	131,5	71,5	87,5	76	118,5	129,7	112,5	67,5	27,5	14	30
SCPi 20...	22	6,6	G1/4"-F	G3/8"-F	M12x1-M	M4-F	181,5	131,5	71,5	87,5	76	118,5	129,7	112,5	67,5	27,5	14	30
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
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

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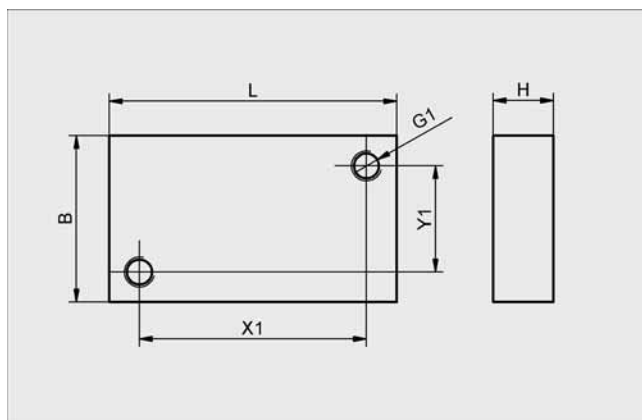
Compact ejectors SCPi / SMPi



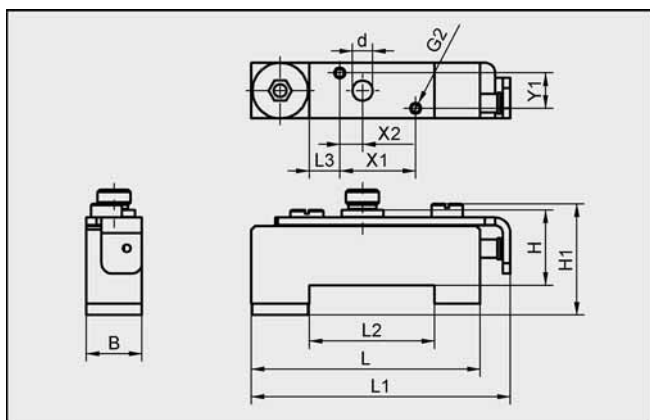
## Design data accessories Compact ejectors SCPi / SMPi



Compressed-air connection plate GP...



Ejector blanking plate EJEK-PL...



Quick Change Connection ADP-Q1...

Type	Dimensions in mm																Number of out-puts	
	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