

ATC foam vacuum gripping system

ATC foam gripper

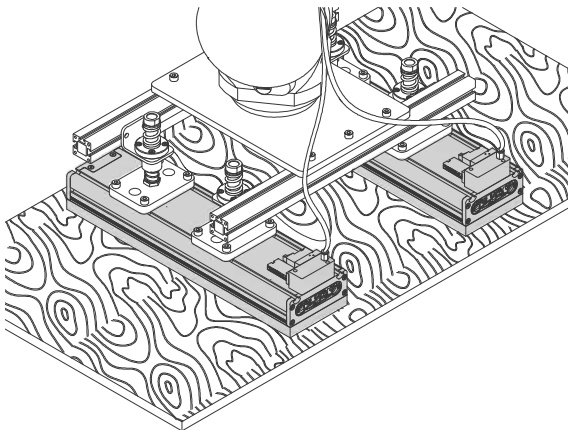
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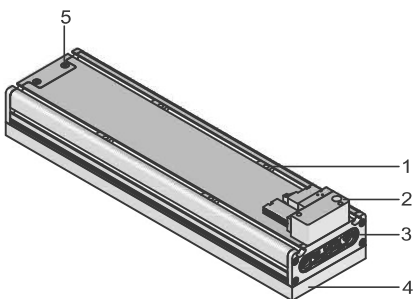
General-purpose



Application of ATC...3R18/5R18 foam gripper



System design of ATC...3R18/5R18 foam gripper



Introduction

- ◆ Suitable for applications with compressed air supplied on-site
- ◆ Light, high-strength casing made of quality aluminum alloy
- ◆ Options offered for internal check valve and throttle valve structure
- ◆ T-slot installation (with M8×1.25 sliders)
- ◆ 130 mm wide, foam suction surface

Application

- ◆ Mainly used for packaging, e.g. smart warehousing, smart logistics, piling and unpling, etc.
- ◆ The gripper with check valve can be used to suction irregular workpieces with leakage to a certain degree and in non-uniform size

Structure

- ◆ (1) M8 slider in the T-slot
- ◆ (2) Compressed air inlet
- ◆ (3) Exhaust port
- ◆ (4) Foam suction surface
- ◆ (5) Vacuum detection port

Vacuum gripping system

ATC
-3R18/5R18

ATD
-3R18/5R18

ATC
-B40/B20

ATD
-B40/B20

ATC
-MX39/MX55

ATD
-MX39/MX55

ATE

ATF

ATS

ATK

MPT

MPM

ATX

ABX

MSG

MSC

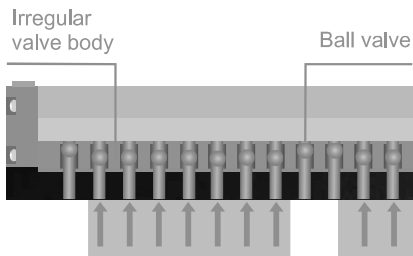
MATD

ATC foam vacuum gripping system

ATC foam gripper

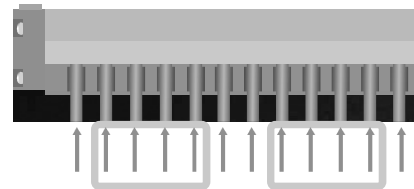
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SVK check valve technology



- A mechanical check valve is mounted to the profiled aluminum plate. When the suction holes in the foam do not cover the workpiece, the check valve will automatically close to ensure the vacuum degree of the system
- The air leakage preExhaust portion function enables higher handling efficiency and suction force
- The irregular valve with a larger diameter to allow larger flow to pass through can be used for quick gripping and releasing and can meet the demand for handling workpieces with uneven surfaces

SW throttle valve technology



- The internal throttle minimizes the vacuum leakage in the suction area not covering the workpiece
- Applicable to tipping over and quick handling
- Options offered for throttle valve diameter

Model selection guide

Application Feature	SVK	SW
Smooth and highly airtight workpiece surfaces (such as metal sheets, glass, painted wood, etc.)	✓	✓
Breathable workpieces (such as cardboards, bags, bare wood, etc.)	✓	
Uneven workpiece surfaces	✓	
Small workpiece suction area, low coverage of suction holes of the gripper (e.g. tubes, profiled materials)	✓	
Minimized operating cycle (faster blowing and releasing)	✓	
Optimized energy efficiency	✓	
Tipping-over operation angle > 45°		✓

Application Feature	SVK	SW
Minimized disturbance caused by mismatch between tube diameter and external vacuum generator	✓	
Easy installation, quick connection	✓	
Minimized system cost (the input cost involves the vacuum generating unit, hose and controller)	✓	
Minimized operating cost (due to the electric vacuum generator used), especially in the event of more grippers required	✓	
Highly breathable workpieces handled	✓	

Application Feature	Sponge	Rubber cup
Rigid workpieces such as plates, metal sheets, profiled materials and pallets	✓	✓
Flexible workpieces such as cartons, bags, packages and pallets	✓	✓
Long thin workpieces and plates	✓	
Rough workpiece surfaces with patterns	✓	
Palletized small workpiece handling, e.g. canned food (opened/closed), tins	✓	

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ATC...3R18/5R18 foam gripper purchase guide

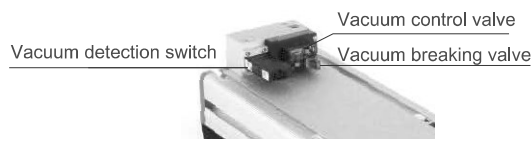
ATC - FN - SVK 258 3R18 20 F

① ② ③ ④ ⑤ ⑥ ⑦

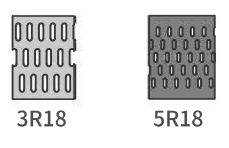
Vacuum gripping system

- ATC -3R18/5R18
- ATD -3R18/5R18
- ATC -B40/B20
- ATD -B40/B20
- ATC -MX39/MX55
- ATD -MX39/MX55
- ATE
- ATF
- ATS
- ATK
- MPT
- MPM
- ATX
- ABX
- MSG
- MSC
- MATD

① Product series	② Controller	③ Valve technology	④ Length	
ATC	Null - No control valve	SVK - Check valve	258mm	618mm
	FN - With control valve, NPN switch	SW - Throttle valve	278mm	816mm
	FP - With control valve, PNP switch		294mm	978mm
			420mm	1212mm
			508mm	1410mm



⑤ Number of suction hole rows		⑥ Foam thickness	⑦ Foam type
3R18 -3 rows of holes (suction hole interval: 18mm)		10 - 10mm	Null - No foam filter
5R18 -5 rows of holes (suction hole interval: 18mm)		20 - 20mm	F - With foam filter
		Customizable thickness	H - No filter and traceless foam
			FH - With filter and traceless foam



ATC...3R18/5R18 foam sealing part purchase guide

M-PL 258 3R18 20 F

① ② ③ ④ ⑤

① Product series	② Foam size		③ Number of suction hole rows	④ Foam thickness	⑤ Foam type
M-PL	258mm	618mm	3R18 -3 rows of holes (suction hole interval: 18mm)	10 - 10mm	Null - No foam filter
	278mm	816mm	5R18 -5 rows of holes (suction hole interval: 18mm)	20 - 20mm	F - With foam filter
	294mm	978mm			H - No filter and traceless foam
	420mm	1212mm		Customizable thickness	FH - With filter and traceless foam
	508mm	1410mm			

ATC foam vacuum gripping system

ATC foam gripper

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Technical parameters of ATC...3R18 foam gripper

Model	Number of suction holes	Air consumption l/min	Maximum vacuum degree %	Suction force N	Weight kg
ATC-□-SVK 258 3R18	39	180	70	410	2.2
ATC-□-SVK 278 3R18	42	180	70	440	2.4
ATC-□-SVK 294 3R18	45	180	70	470	2.6
ATC-□-SVK 420 3R18	66	180	70	700	3.1
ATC-□-SVK 508 3R18	81	180	70	860	3.5
ATC-□-SVK 618 3R18	99	270	70	1050	3.9
ATC-□-SVK 816 3R18	132	360	70	1400	5.5
ATC-□-SVK 978 3R18	159	360	70	1680	6.1
ATC-□-SVK 1212 3R18	198	540	70	2100	7.1
ATC-□-SVK 1410 3R18	231	630	70	2450	7.9
ATC-□-SW 258 3R18	39	180	70	330	2.1
ATC-□-SW 278 3R18	42	180	70	350	2.3
ATC-□-SW 294 3R18	45	180	70	380	2.5
ATC-□-SW 420 3R18	66	180	70	560	3.0
ATC-□-SW 508 3R18	81	180	70	680	3.4
ATC-□-SW 618 3R18	99	270	70	840	3.8
ATC-□-SW 816 3R18	132	360	70	1120	5.4
ATC-□-SW 978 3R18	159	360	70	1350	6.0
ATC-□-SW 1212 3R18	198	540	70	1680	7.0
ATC-□-SW 1410 3R18	231	630	70	1960	7.8

Technical parameters of ATC...5R18 foam gripper

Model	Number of suction holes	Air consumption l/min	Maximum vacuum degree %	Suction force N	Weight kg
ATC-□-SVK 258 5R18	65	180	70	310	2.2
ATC-□-SVK 278 5R18	70	180	70	340	2.4
ATC-□-SVK 294 5R18	75	180	70	360	2.6
ATC-□-SVK 420 5R18	110	180	70	530	3.1
ATC-□-SVK 508 5R18	135	270	70	650	3.5
ATC-□-SVK 618 5R18	165	360	70	800	3.9
ATC-□-SVK 816 5R18	220	450	70	1070	5.5
ATC-□-SVK 978 5R18	265	540	70	1290	6.0
ATC-□-SVK 1212 5R18	330	720	70	1600	7.1
ATC-□-SVK 1410 5R18	385	720	70	1870	7.9
ATC-□-SW 258 5R18	65	180	70	250	2.1
ATC-□-SW 278 5R18	70	180	70	270	2.3
ATC-□-SW 294 5R18	75	180	70	290	2.5
ATC-□-SW 420 5R18	110	180	70	420	3.0
ATC-□-SW 508 5R18	135	270	70	520	3.4
ATC-□-SW 618 5R18	165	360	70	640	3.8
ATC-□-SW 816 5R18	220	450	70	850	5.4
ATC-□-SW 978 5R18	265	540	70	1030	5.9
ATC-□-SW 1212 5R18	330	720	70	1280	7.0
ATC-□-SW 1410 5R18	385	720	70	1500	7.8

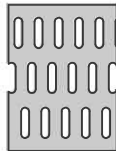
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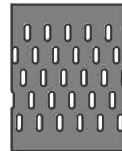
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✂ Design parameters of ATC...3R18/5R18 foam gripper

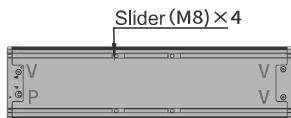
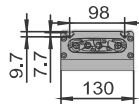
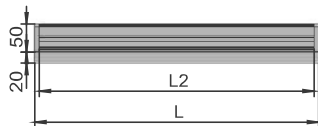
3R18



5R18



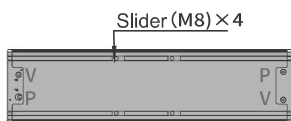
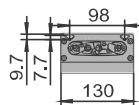
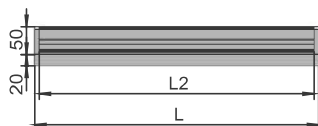
ATC... 3R18/5R18 (258 to 978)



P: Compressed air inlet (G1/4)
V: Vacuum port (G1/8)

Model	Size (mm)	
	L	L2
ATC-SVK/SW 258 3R18/5R18	258	242
ATC-SVK/SW 278 3R18/5R18	278	262
ATC-SVK/SW 294 3R18/5R18	294	278
ATC-SVK/SW 420 3R18/5R18	420	404
ATC-SVK/SW 508 3R18/5R18	508	492
ATC-SVK/SW 618 3R18/5R18	618	602
ATC-SVK/SW 816 3R18	816	800
ATC-SVK/SW 978 3R18	978	962

ATC...3R18/5R18 (816 to 1410)



P: Compressed air inlet (G1/4)
V: Vacuum port (G1/8)

Model	Size (mm)	
	L	L2
ATC-SVK/SW 816 5R18	816	800
ATC-SVK/SW 978 5R18	978	962
ATC-SVK/SW 1212 3R18/5R18	1212	1196
ATC-SVK/SW 1410 3R18/5R18	1410	1394

Vacuum gripping system

ATC
-3R18/5R18

ATD
-3R18/5R18

ATC
-B40/B20

ATD
-B40/B20

ATC
-MX39/MX55

ATD
-MX39/MX55

ATE

ATF

ATS

ATK

MPT

MPM

ATX

ABX

MSG

MSC

MATD

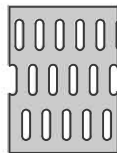
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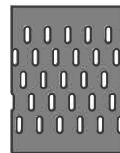
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✂ Design parameters of ATC-FN/FP...3R18/5R18 foam gripper

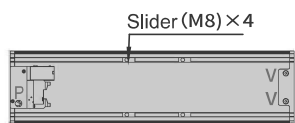
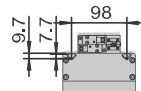
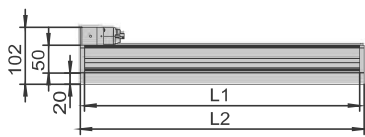
3R18



5R18



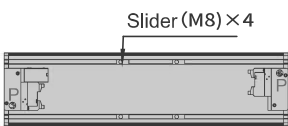
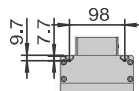
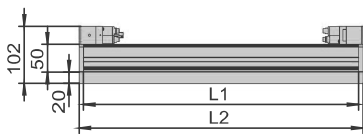
ATC-FN/FP ...3R18/5R18 (258 to 978)



P: Compressed air inlet (G1/4)
V: Vacuum port (G1/8)

Model	Size (mm)	
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ATC-□-SVK/SW 278 3R18/5R18	278	262
ATC-□-SVK/SW 294 3R18/5R18	294	278
ATC-□-SVK/SW 420 3R18/5R18	420	404
ATC-□-SVK/SW 508 3R18/5R18	508	492
ATC-□-SVK/SW 618 3R18/5R18	618	602
ATC-□-SVK/SW 816 3R18	816	800
ATC-□-SVK/SW 978 3R18	978	962

ATC-FN/FP ...3R18/5R18 (816 to 1410)



P: Compressed air inlet (G1/4)
V: Vacuum port (G1/8)

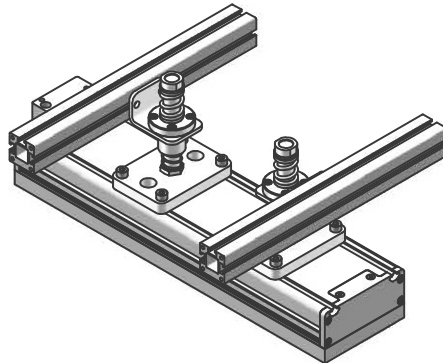
Model	Size (mm)	
	L	L2
ATC-□-SVK/SW 816 5R18	816	800
ATC-□-SVK/SW 978 5R18	978	962
ATC-□-SVK/SW 1212 3R18/5R18	1212	1196
ATC-□-SVK/SW 1410 3R18/5R18	1410	1394

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ATC foam gripper

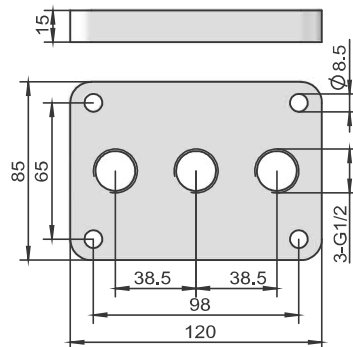
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 ATC...3R18/5R18 foam gripper installation illustration



 Design parameters of FLAN-PL 120X85X15-C mounting plate

FLAN-PL 120X85X15-C



 Models of ATC...3R18/5R18 foam gripper fittings

Fitting Name	Product Model
Mounting plate	FLAN-PL 120X85X15-C

Vacuum gripping system

- ATC -3R18/5R18
- ATD -3R18/5R18
- ATC -B40/B20
- ATD -B40/B20
- ATC -MX39/MX55
- ATD -MX39/MX55
- ATE
- ATF
- ATS
- ATK
- MPT
- MPM
- ATX
- ABX
- MSG
- MSC
- MATD