

SPJ Series

Bellows Suction Cup

AIRBEST



PACKAGING



PLASTIC

RoHS

Features

- ◇ 1.5 bellows
- ◇ Soft and tapered lips
- ◇ Mark free plug optional
- ◇ Available in various sizes

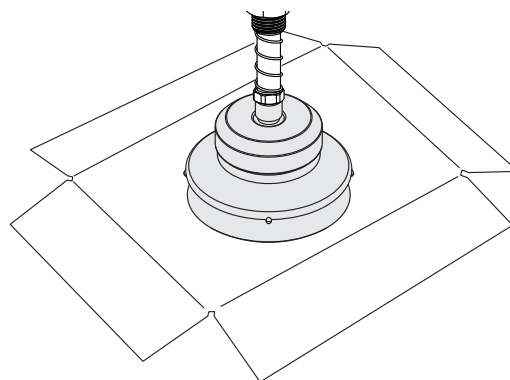
Advantages

- ◇ Compensate the height difference and good buffer when have contact with workpieces
- ◇ Good sealing for handling of workpieces with uneven surface
- ◇ Available in various sizes



Applications

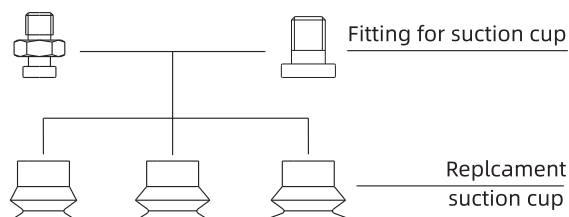
- ◇ Handling workpieces with uneven surface such as cartons, paper board and sheet, workpieces with curved surface
- ◇ Handling fragile workpieces such as electronic components and injection molding parts
- ◇ Suction cup with mark free plug is suitable for handling sensitive electronic material or display screen. It is suitable for occasions with high requirements for mark on adsorption surface



Structure

- ◇ 1.5 bellows, long compressed stroke
- ◇ Suction cups with diameter less than 50mm adopt split structure for easy replacement
- ◇ One-piece structure for suction cup with diameter 60mm-80mm

In the same series, replacement suction cup and fitting can be combined as required



SPJ Series

Bellows Suction Cup

AIRBEST

Suction Cup

How to order

SPJ 15 N - M5M - PK

① ② ③ ④ ⑤

① Series	② Diameter	③ Material & Hardness	④ Connection thread	⑤ Plug
SPJ	4 - ϕ 4mm	30 - ϕ 30mm	N - NBR	55 Nil - Suction cup only
	6 - ϕ 6mm	35 - ϕ 35mm	WS - White silicone	50 M3M - M3×0.5 male thread
	8 - ϕ 8mm	40 - ϕ 40mm	CN - Conductive NBR	55 M5M - M5×0.8 male thread
	10 - ϕ 10mm	50 - ϕ 50mm	CS - Conductive silicone	55 M8M - M8×1.25 male thread
	15 - ϕ 15mm	60 - ϕ 60mm	HP - Mark free rubber	55 M10F - M10×1.25 female thread
	20 - ϕ 20mm	70 - ϕ 70mm		
	25 - ϕ 25mm	80 - ϕ 80mm		

◇ Note: HP material is not for all sizes. Please contact AIRBEST if need

Selection

Model	Connection thread M - Male thread	Model	Connection thread M - Male thread
SPJ4□	SPJ4□-M3M	SPJ30□	SPJ30□-PK
SPJ6□	SPJ6□-M5M	SPJ35□	SPJ35□-PK
SPJ8□	SPJ8□-M5M	SPJ40□	SPJ40□-PK
SPJ10□	SPJ10□-M5M	SPJ50□	SPJ50□-PK
SPJ15□	SPJ15□-M5M	SPJ60□	-
SPJ20□	SPJ20□-M5M	SPJ70□	-
SPJ25□	SPJ25□-M5M	SPJ80□	-

Technical parameters

Model	Pull-out force N	Inner volume cm ³	Min. Curve radius of workpiece mm	Weight g	Recommended hose dia. mm	MPQ pcs
SPJ4	0.6	<0.1	4	0.1	4	10
SPJ6	1.2	<0.1	6	0.2	4	10
SPJ8	2.2	<0.1	8	0.3	4	10
SPJ10	3.5	0.2	12	0.8	4	10
SPJ15	8	0.5	20	1.0	6	10
SPJ20	15	1.1	27	1.8	6	5
SPJ25	24	2.2	40	3.0	6	5
SPJ30	32	3	55	5.3	6	5
SPJ35	43	4.5	65	8.0	6	5
SPJ40	60	6	80	10.5	6	1
SPJ50	92	11.7	95	21.0	8	1
SPJ60	127	20	125	35.6	8	1
SPJ70	173	30	150	52.5	8	1
SPJ80	226	40	140	63.0	8	1

◇ Note: Testing vacuum level -60kPa, workpiece with smooth and clean surface. The data of pull-out force as above are figured out without considering safety factor. The data may be different according to different workpiece surfaces. Recommend the length of vacuum hose to be as short as possible, max 2m.

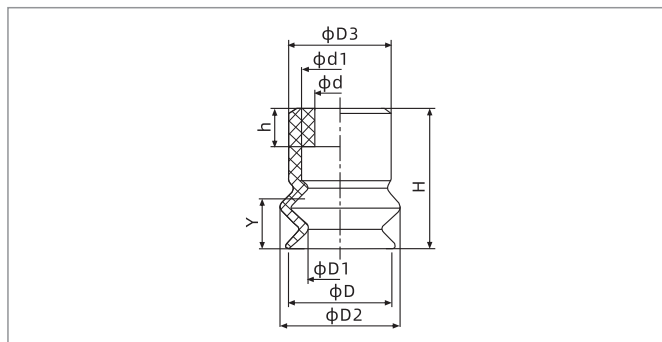
SZ
SP3
SUF
SAN
SAO
SOFA
STP
SFT
SFA
SBL
SBLP
SBS
SFP
SBP
SXP
SGP
SBOF
STC
SFF
SOB
SOF
SOG
SFM
SOM
SBF
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SFK
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SNP

SPJ Series

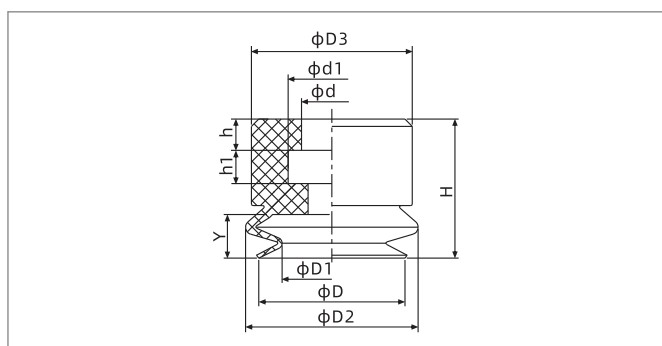
Bellows Suction Cup

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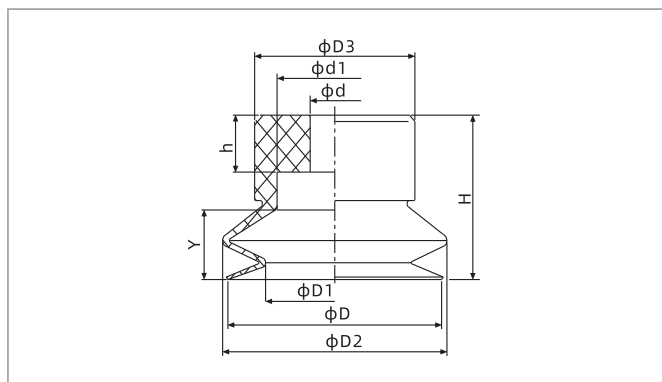
Dimensions(mm) - Suction cup only



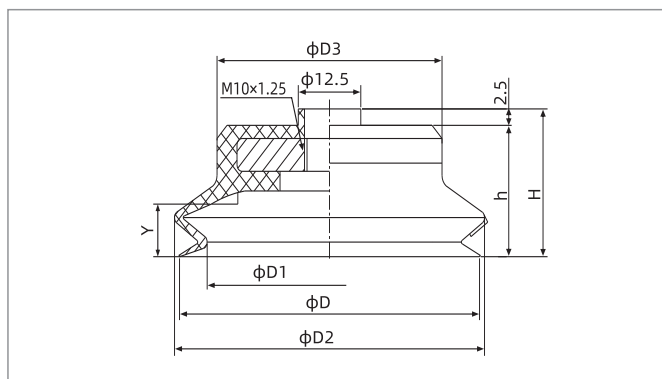
SPJ4-8



SPJ10-15



SPJ20-50



SPJ60-80

Model/Size	D	H	D1	D2	D3	d	h	d1	y
SPJ4□	4	5.5	2.5	4.6	4	2	1.5	3	2.3
SPJ6□	6	9	3.3	7.8	7.5	4	2	6	4.2
SPJ8□	8	9	5.3	9.8	8	4	2	6	4

Model/Size	D	H	D1	D2	D3	d	h	d1	h1	y
SPJ10□	10	9.5	6.8	11.8	11	4	2	6	2	3
SPJ15□	15	11	9.7	15.8	12	4	2	6	2	3.3

Model/Size	D	H	D1	D2	D3	d	h	d1	y
SPJ20□	20	13	13	21	15	4.6	4.5	10.8	5.5
SPJ25□	25	15.5	14.5	26	17.5	4.6	4.5	10.8	6.5
SPJ30□	30	18	16	31	20	5.8	7	10.8	7
SPJ35□	35	18	20.5	36	25	5.8	7	10.8	7
SPJ40□	40	18	25	40	30	5.8	7	10.8	7.2
SPJ50□	50	20	32	53	40	7.8	7	19.8	9

Model/Size	D	H	h	D1	D2	D3	y
SPJ60□-M10F	60	22.5	20	45	62	45	8
SPJ70□-M10F	70	23.5	21	52	74	55	9.5
SPJ80□-M10F	80	23.5	21	61	82	68	9.5

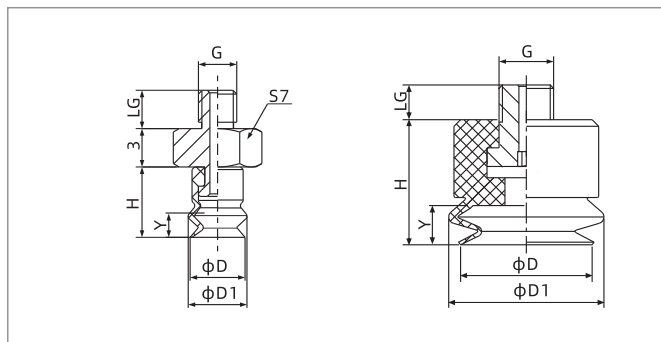
SPJ Series

Bellows Suction Cup

AIRBEST

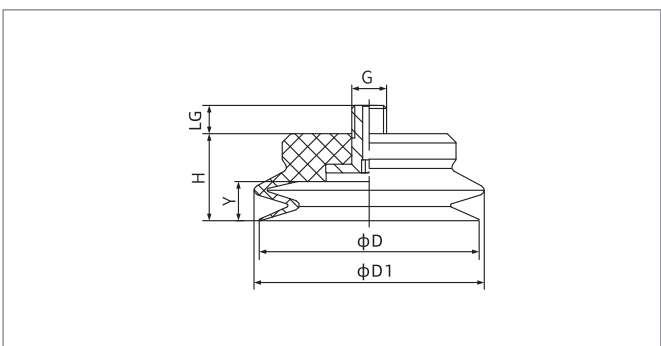
Suction Cup

Dimensions(mm)



SPJ4

SPJ6-15



SPJ20-50

Model/Size	D	H	D1	G	LG	Y
SPJ4□-M3M	4	5.5	4.6	M3×0.5	3.5	2.3
SPJ6□-M5M	6	9	7.8	M5×0.8	4.5	4.2
SPJ8□-M5M	8	9	9.8	M5×0.8	4.5	4
SPJ10□-M5M	10	9.5	11.8	M5×0.8	4.5	3
SPJ15□-M5M	15	11	15.8	M5×0.8	4.5	3.3

Model/Size	D	H	D1	G	LG	Y
SPJ20□-M5M	20	13	21	M5×0.8	5	5.5
SPJ25□-M5M	25	15.5	26	M5×0.8	5	6.5
SPJ30□-M5M	30	18	31	M5×0.8	5	7
SPJ35□-M5M	35	18	36	M5×0.8	5	7
SPJ40□-M5M	40	18	40	M5×0.8	5	7.2
SPJ50□-M8M	50	20	53	M8×1.25	6.5	9

◇ Note: The dimensional tolerance conforms to GBT 3672.1-2002-1 M3 rubber product dimensional tolerance standard

Mounting parts

Item	Model M - Male thread	Applicable suction cup
Fitting for suction cup	PJS-M3M-ST1	SPJ4
	PJS-M5M-ST2	SPJ6, 8, 10, 15
	PJS-M5M-ST3	SPJ20, 25
	PJS-M5M-ST4	SPJ30, 35, 40
	PJS-M8M-ST6	SPJ50

SZ
SP3
SUF
SAN
SAO
SOFA
STP
SFT
SFA
SBL
SBLP
SBS
SFP
SBP
SXP
SGP
SBOF
STC
SFF
SOB
SOF
SOG
SFM
SOM
SBF
SDM
SFU
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SHT
SDL
SFG
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SNP

SPJ Series

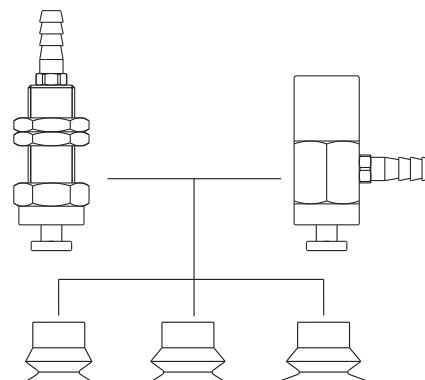
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Suction Cup with Locking Fitting

Structure

- ◇ Consisting of replacement suction cup and locking fitting
- ◇ Plug-in fitting for suction cups
- ◇ Vertical vacuum port, pagoda fitting or one-touch fitting for connection, male thread for mounting
- ◇ Lateral vacuum port, pagoda fitting for connection, female thread for mounting

In the same series, replacement suction cup and locking fitting can be combined as required



How to order

SPJ10N - L B6 - M4F

① ② ③ ④

① Series	② Vacuum port direction	③ Vacuum port connection	④ Mounting thread
SPJ10N	Nil - Vertical	B6 - Pagoda fitting $\phi 6$ hose	M4F - M4x0.7 female thread
	L - Lateral	R1 - Rc1/8 female thread	M6F - M6x1 female thread
			M8F - M8x1.25 female thread
			M8M - M8x1 male thread
			M10M - M10x1 male thread
			M16M - M16x1.5 male thread

◇ Please refer to page 302 for suction cup selection

Selection

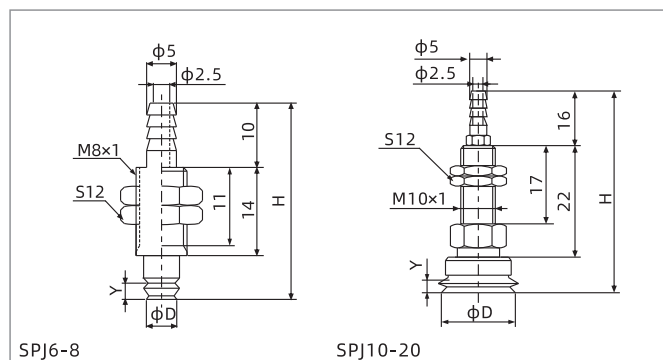
Model	Vacuum port direction Vertical-Pagoda fitting	Lateral-Pagoda fitting
SPJ6□	SPJ6□-B6-M8M	SPJ6□-LB6-M4F
SPJ8□	SPJ8□-B6-M8M	SPJ8□-LB6-M4F
SPJ10□	SPJ10□-B6-M8M	SPJ10□-LB6-M4F
SPJ15□	SPJ15□-B6-M8M	SPJ15□-LB6-M4F
SPJ20□	SPJ20□-B6-M8M	SPJ20□-LB6-M4F
SPJ25□	SPJ25□-B6-M10M	SPJ25□-LB6-M6F
SPJ30□	SPJ30□-B6-M10M	SPJ30□-LB6-M6F
SPJ35□	SPJ35□-B6-M10M	SPJ35□-LB6-M6F
SPJ40□	SPJ40□-B6-M10M	SPJ40□-LB6-M6F
SPJ50□	SPJ50□-B6-M10M	SPJ50□-LB6-M6F
SPJ60□	SPJ60□-R1-M16M	SPJ60□-LR1-M8F
SPJ70□	SPJ70□-R1-M16M	SPJ70□-LR1-M8F
SPJ80□	SPJ80□-R1-M16M	SPJ80□-LR1-M8F

SPJ Series

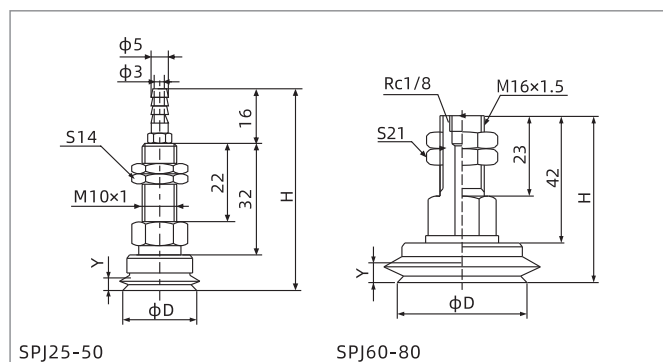
Suction Cup with Locking Fitting

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Dimensions(mm)

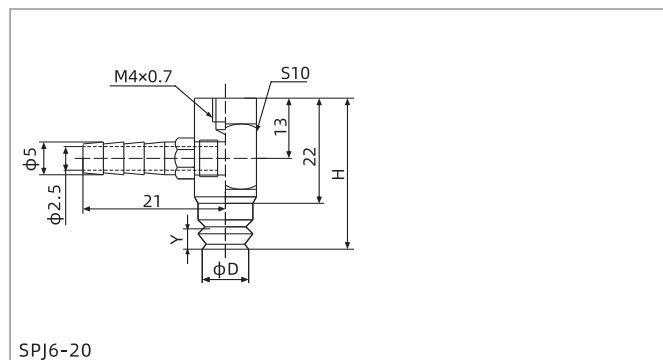


Vertical-Pagoda fitting

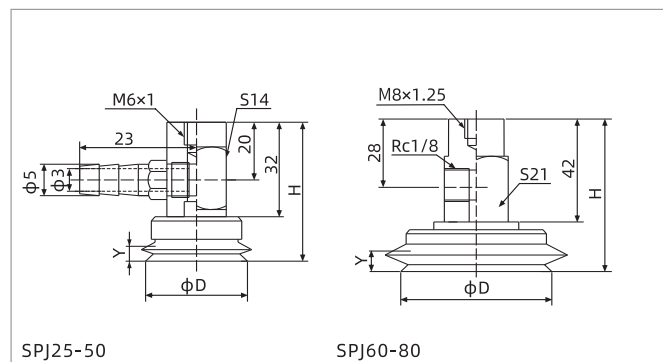


Vertical-Pagoda fitting

Vertical-Female thread connection



Lateral-Pagoda fitting



Lateral-Pagoda fitting

Lateral-Female thread connection

Model/Size	D	H	Y
SPJ6□-B6-M8M	6	33	4.2
SPJ8□-B6-M8M	8	33	4
SPJ10□-B6-M8M	10	47.5	3
SPJ15□-B6-M8M	15	49	3.3
SPJ20□-B6-M8M	20	51	5.5

Model/Size	D	H	Y
SPJ25□-B6-M10M	25	63.5	6.5
SPJ30□-B6-M10M	30	66	7
SPJ35□-B6-M10M	35	66	7
SPJ40□-B6-M10M	40	66	7.2
SPJ50□-B6-M10M	50	68	9
SPJ60□-R1-M16M	60	62	8
SPJ70□-R1-M16M	70	63	9.5
SPJ80□-R1-M16M	80	63	9.5

Model/Size	D	H	Y
SPJ6□-LB6-M4F	6	31	4.2
SPJ8□-LB6-M4F	8	31	4
SPJ10□-LB6-M4F	10	31.5	3
SPJ15□-LB6-M4F	15	33	3.3
SPJ20□-LB6-M4F	20	35	5.5

Model/Size	D	H	Y
SPJ25□-LB6-M6F	25	47.5	6.5
SPJ30□-LB6-M6F	30	50	7
SPJ35□-LB6-M6F	35	50	7
SPJ40□-LB6-M6F	40	50	7.2
SPJ50□-LB6-M6F	50	52	9
SPJ60□-LR1-M8F	60	62	8
SPJ70□-LR1-M8F	70	63	9.5
SPJ80□-LR1-M8F	80	63	9.5

Suction Cup

SZ

SP3

SUF

SAN

SAO

SOFA

STP

SFT

SFA

SBL

SBLP

SBS

SFP

SBP

SXP

SGP

SBOF

STC

SFF

SOB

SOF

SOG

SFM

SOM

SBF

SDM

SFU

SFK

SHT

SDL

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SPA

SPF

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SOP

SNP

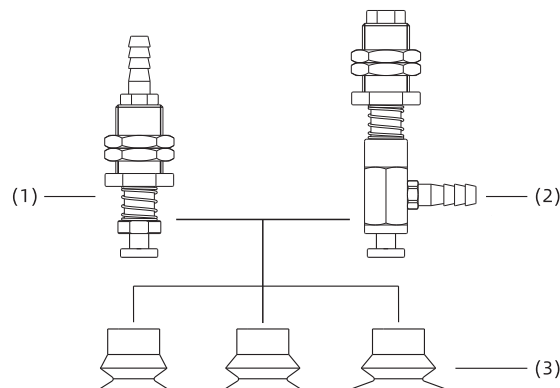
SPJ Series

Suction Cup with Level Compensator

Structure

- ◇ Consisting of replacement suction cup(3) and level compensator
- ◇ Plug-in fitting for suction cup
- ◇ Vertical vacuum port(1), male thread for mounting
- ◇ Lateral vacuum port(2), male thread for mounting

In the same series, replacement suction cup and level compensator can be combined as required



How to order

SPJ10N - F E 10 LB6 - M11

① ② ③ ④ ⑤ ⑥

① Model	② Level compensator type	③ Buffer type	④ Buffer stroke	⑤ Vacuum port connection	⑥ Mounting thread
SPJ10N	F - PSPF Series	E - External spring	3 10 4 15 6 30	B6 - Vertical, Pagoda fitting $\phi 6$ hose LB6 - Lateral, Pagoda fitting $\phi 6$ hose LR1 - Lateral, Rc1/8 Female thread	M9 - M9x1 M11 - M11x1 M14 - M14x1 M16 - M16x1.5

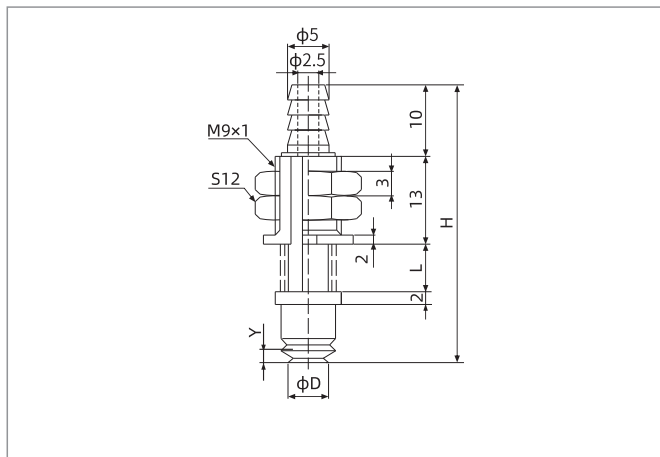
Selection

Model	Vacuum port direction Vertical-Pagoda fitting		Lateral-Pagoda fitting	
SPJ6□	SPJ6□-FE3B6-M9	SPJ6□-FE10B6-M9	SPJ6□-FE3LB6-M9	SPJ6□-FE10LB6-M9
SPJ8□	SPJ8□-FE3B6-M9	SPJ8□-FE10B6-M9	SPJ8□-FE3LB6-M9	SPJ8□-FE10LB6-M9
SPJ10□	SPJ10□-FE4B6-M11	SPJ10□-FE10B6-M11	SPJ10□-FE4LB6-M11	SPJ10□-FE10LB6-M11
SPJ15□	SPJ15□-FE4B6-M11	SPJ15□-FE10B6-M11	SPJ15□-FE4LB6-M11	SPJ15□-FE10LB6-M11
SPJ20□	SPJ20□-FE4B6-M11	SPJ20□-FE10B6-M11	SPJ20□-FE4LB6-M11	SPJ20□-FE10LB6-M11
SPJ25□	SPJ25□-FE6B6-M14	SPJ25□-FE15B6-M14	SPJ25□-FE6LB6-M14	SPJ25□-FE15LB6-M14
SPJ30□	SPJ30□-FE6B6-M14	SPJ30□-FE15B6-M14	SPJ30□-FE6LB6-M14	SPJ30□-FE15LB6-M14
SPJ35□	SPJ35□-FE6B6-M14	SPJ35□-FE15B6-M14	SPJ35□-FE6LB6-M14	SPJ35□-FE15LB6-M14
SPJ40□	SPJ40□-FE6B6-M14	SPJ40□-FE15B6-M14	SPJ40□-FE6LB6-M14	SPJ40□-FE15LB6-M14
SPJ50□	SPJ50□-FE6B6-M14	SPJ50□-FE15B6-M14	SPJ50□-FE6LB6-M14	SPJ50□-FE15LB6-M14
SPJ60□	-		SPJ60□-FE10LR1-M16	SPJ60□-FE30LB6-M16
SPJ70□	-		SPJ70□-FE10LR1-M16	SPJ70□-FE30LB6-M16
SPJ80□	-		SPJ80□-FE10LR1-M16	SPJ80□-FE30LB6-M16

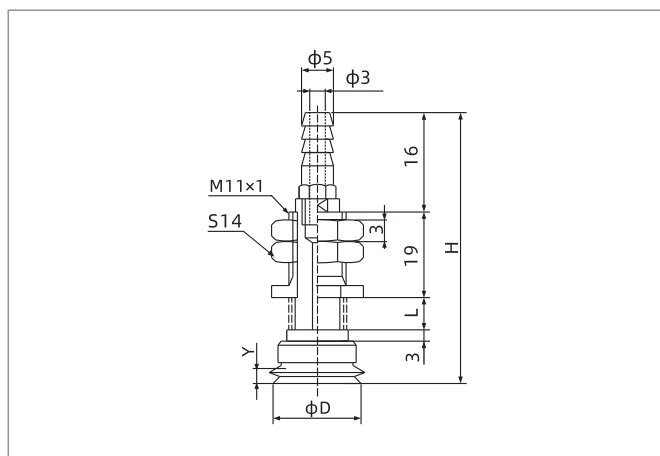
SPJ Series

Suction Cup with Level Compensator

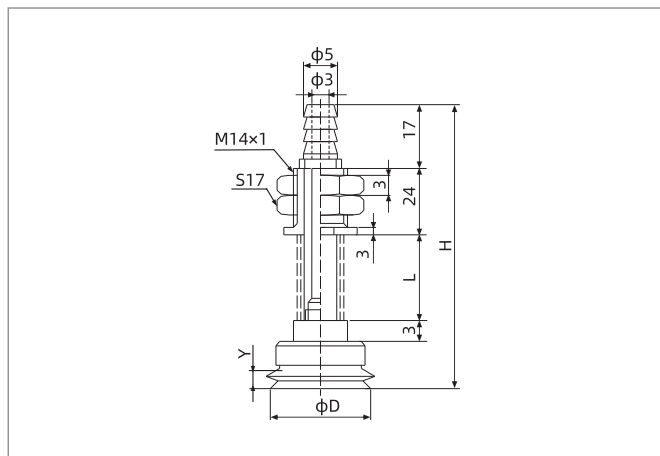
Dimensions(mm)



SPJ6-8 Vertical-Pagoda fitting



SPJ10-20 Vertical-Pagoda fitting



SPJ25-50 Vertical-Pagoda fitting

Model/Size	D	H	L	Y	Buffer stroke
SPJ6□-FE3B6-M9	6	40	6	4.2	3
SPJ6□-FE10B6-M9	6	54	20	4.2	10
SPJ8□-FE3B6-M9	8	40	6	4	3
SPJ8□-FE10B6-M9	8	54	20	4	10

Model/Size	D	H	L	Y	Buffer stroke
SPJ10□-FE4B6-M11	10	55.5	8	3	4
SPJ10□-FE10B6-M11	10	67.5	20	3	10
SPJ15□-FE4B6-M11	15	57	8	3.3	4
SPJ15□-FE10B6-M11	15	69	20	3.3	10
SPJ20□-FE4B6-M11	20	59	8	5.5	4
SPJ20□-FE10B6-M11	20	71	20	5.5	10

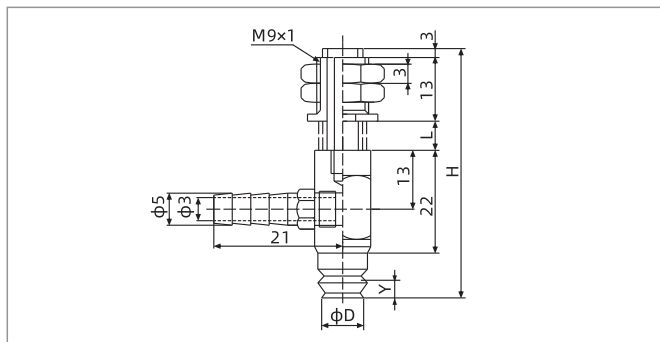
Model/Size	D	H	L	Y	Buffer stroke
SPJ25□-FE6B6-M14	25	72.5	13	6.5	6
SPJ25□-FE15B6-M14	25	89.5	30	6.5	15
SPJ30□-FE6B6-M14	30	75	13	7	6
SPJ30□-FE15B6-M14	30	92	30	7	15
SPJ35□-FE6B6-M14	35	75	13	7	6
SPJ35□-FE15B6-M14	35	92	30	7	15
SPJ40□-FE6B6-M14	40	75	13	7.2	6
SPJ40□-FE15B6-M14	40	92	30	7.2	15
SPJ50□-FE6B6-M14	50	77	13	9	6
SPJ50□-FE15B6-M14	50	94	30	9	15

SZ
SP3
SUF
SAN
SAO
SOFA
STP
SFT
SFA
SBL
SBLP
SBS
SFP
SBP
SXP
SGP
SBOF
STC
SFF
SOB
SOF
SOG
SFM
SOM
SBF
SDM
SFU
SFK
SHT
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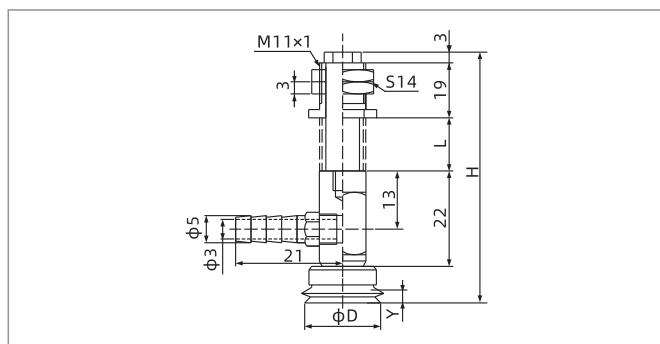
SPJ Series

Suction Cup with Level Compensator

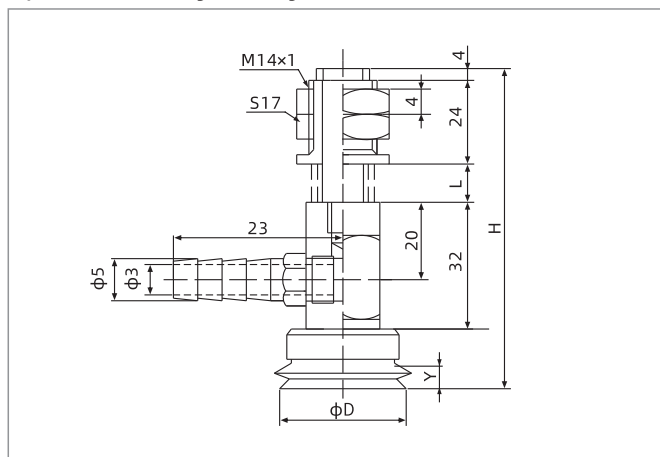
Dimensions(mm)



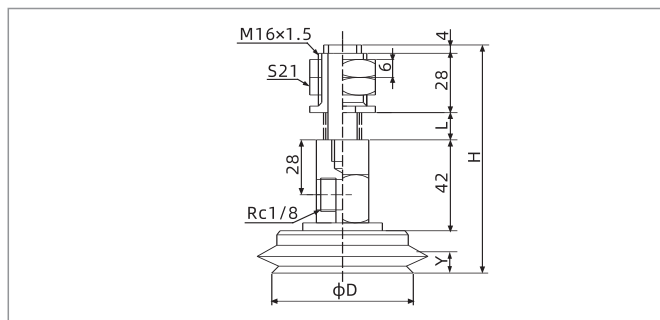
SPJ6-8 Lateral-Pagoda fitting



SPJ10-20 Lateral-Pagoda fitting



SPJ25-50 Lateral-Pagoda fitting



SPJ60-80 Lateral-Female thread connection

Model/Size	D	H	L	Y	Buffer stroke
SPJ6□-FE3LB6-M9	6	53	6	4.2	3
SPJ6□-FE10LB6-M9	6	67	20	4.2	10
SPJ8□-FE3LB6-M9	8	53	6	4	3
SPJ8□-FE10LB6-M9	8	67	20	4	10

Model/Size	D	H	L	Y	Buffer stroke
SPJ10□-FE4LB6-M11	10	61.5	8	3	4
SPJ10□-FE10LB6-M11	10	73.5	20	3	10
SPJ15□-FE4LB6-M11	15	63	8	3.3	4
SPJ15□-FE10LB6-M11	15	75	20	3.3	10
SPJ20□-FE4LB6-M11	20	65	8	5.5	4
SPJ20□-FE10LB6-M11	20	77	20	5.5	10

Model/Size	D	H	L	Y	Buffer stroke
SPJ25□-FE6LB6-M14	25	88.5	13	6.5	6
SPJ25□-FE15LB6-M14	25	105.5	30	6.5	15
SPJ30□-FE6LB6-M14	30	91	13	7	6
SPJ30□-FE15LB6-M14	30	108	30	7	15
SPJ35□-FE6LB6-M14	35	91	13	7	6
SPJ35□-FE15LB6-M14	35	108	30	7	15
SPJ40□-FE6LB6-M14	40	91	13	7.2	6
SPJ40□-FE15LB6-M14	40	108	30	7.2	15
SPJ50□-FE6LB6-M14	50	93	13	9	6
SPJ50□-FE15LB6-M14	50	110	30	9	15

Model/size	D	H	L	Y	Buffer stroke
SPJ60□-FE10LR1-M16	10	61.5	8	8	10
SPJ60□-FE30LR1-M16	10	73.5	20	8	30
SPJ70□-FE10LR1-M16	15	63	8	9.5	10
SPJ70□-FE30LR1-M16	15	75	20	9.5	30
SPJ80□-FE10LR1-M16	20	65	8	9.5	10
SPJ80□-FE30LR1-M16	20	77	20	9.5	30