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Suction cup holder ESH



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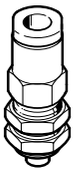
Characteristics

At a glance

- With or without height compensator
- 6 holder sizes
- 8 holder types
- 3 different types of vacuum connections: push-in connector, barbed fitting, threaded connection

Retainer version

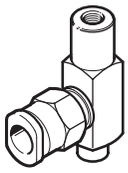
[HA] Male thread, 2 nuts, connection on top



- Vacuum connection on top
- Mounting with lock nut
- Without height compensation

Vacuum port:
- Push-in connector QS
- Barbed fitting connector PK
- Threaded connection G

[HB] Female thread, connection on the side



- Vacuum connection on the side
- Mounting via female thread
- Without height compensation

Vacuum port:
- Push-in connector QS
- Barbed fitting connector PK
- Threaded connection G

[HC] Male thread, 2 nuts, connection on top, height compensation



- Vacuum connection on top
- Mounting with lock nut
- With height compensation

Vacuum port:
- Push-in connector QS
- Barbed fitting connector PK
- Threaded connection G

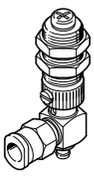
[HCL] Male thread, 2 nuts, connection on top, long height compensation



- Vacuum connection on top
- Mounting with lock nut
- With long height compensator

Vacuum port:
- Push-in connector QS
- Barbed fitting connector PK
- Threaded connection G

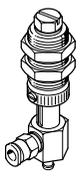
[HD] Male thread, 2 nuts, connection on the side, height compensation



- Vacuum connection on the side
- Mounting with lock nut
- With height compensation

Vacuum port:
- Push-in connector QS
- Barbed fitting connector PK
- Threaded connection G

[HDL] Male thread, 2 nuts, connection on the side, long height compensation



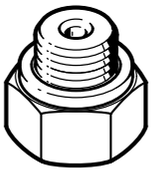
- Vacuum connection on the side
- Mounting with lock nut
- With long height compensator

Vacuum port:
- Push-in connector QS
- Barbed fitting connector PK
- Threaded connection G

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Characteristics

[HE]	Male screw-in thread, connection on top



- Vacuum connection on top
- Mounting via threaded connection for direct screw-in
- Without height compensation

Vacuum port:
- Threaded connection M3 and M5
- Threaded connection G1/8 and G1/4

[HF]	Male screw-in thread, connection on top, height compensation



- Vacuum connection on top
- Mounting via threaded connection for direct screw-in
- With height compensation

Vacuum port:
- Threaded connection M10x1 and M14x1

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Type code

001	Series	
ESH	Suction cup complete holder	

002	Retainer version	
HA	Male thread, 2 nuts, connection on top	
HB	Female thread, connection on the side	
HC	Male thread, 2 nuts, connection on top, height compensation	
HCL	Male thread, 2 nuts, connection on top, long height compensation	
HD	Male thread, 2 nuts, connection on the side, height compensation	
HDL	Male thread, 2 nuts, connection on the side, long height compensation	
HE	Male screw-in thread, connection on top	
HF	Male screw-in thread, connection on top, height compensation	

003	Suction cup connection	
1	Push-in connector 3 mm	
2	Push-in connector 4 mm	
3	M4	
4	M6	
5	M10	
6	M20x2	

004	Vacuum connection	
G	Threaded connection	
PK	Barbed connector connection	
QS	Push-in connector	
M3	Threaded connection M3	
M5	Threaded connection M5	
G1/8	Threaded connection G1/8	
G1/4	Threaded connection G1/4	
M10X1	Threaded connection M10x1	
M14X1	Threaded connection M14x1	

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Datasheet

Technical data – ESH-HA

Vacuum connection	G1/8	G1/4	QS-4	QS-6	PK-3	PK-4
Correlation to suction-cup holder	Size 5	Size 6	Size 1	Size 4 Size 3 Size 2	Size 1	Size 4 Size 3 Size 2
Suction cup mounting	M10	M20x2	Diameter 3 mm	Diameter 4 mm M4 M6	Diameter 3 mm	Diameter 4 mm M4 M6
Design	Vacuum port on top					
Type of mounting	Via lock nut					
Mounting position	optional					
Operating medium	Atmospheric air based on ISO 8573-1:2010 [7:-:-]					
Ambient temperature	-10 ... 60°C		0 ... 60°C		-10 ... 60°C	
Corrosion resistance class CRC [1]	1 - Low corrosion stress					
Material retaining bracket	Aluminium, Nickel-plated brass, POM, Tempered steel, High-alloy steel					
Material seals	–		NBR		NBR, Steel	
Note on materials	RoHS-compliant					
LABS (PWIS) conformity	VDMA24364-A1-L					

1) More information www.festo.com/x/topic/crc

Technical data – ESH-HB

Vacuum connection	G1/8	G1/4	QS-4	QS-6	PK-3	PK-4
Correlation to suction-cup holder	Size 5	Size 6	Size 1	Size 4 Size 3 Size 2	Size 1	Size 4 Size 3 Size 2
Suction cup mounting	M10	M20x2	Diameter 3 mm	Diameter 4 mm M4 M6	Diameter 3 mm	Diameter 4 mm M4 M6
Design	Vacuum port on side					
Type of mounting	Via female thread					
Mounting position	optional					
Operating medium	Atmospheric air based on ISO 8573-1:2010 [7:-:-]					
Ambient temperature	-10 ... 60°C		0 ... 60°C		-10 ... 60°C	
Corrosion resistance class CRC [1]	1 - Low corrosion stress					
Material retaining bracket	Aluminium, Nickel-plated brass, POM, Tempered steel, High-alloy steel					
Material seals	–		NBR, Steel			
Note on materials	RoHS-compliant					
LABS (PWIS) conformity	VDMA24364-A1-L					

1) More information www.festo.com/x/topic/crc

Technical data – ESH-HC

Vacuum connection	G1/8	G1/4	QS-4	QS-6	PK-3	PK-4
Correlation to suction-cup holder	Size 5	Size 6	Size 1	Size 4 Size 3 Size 2	Size 1	Size 4 Size 3 Size 2
Suction cup mounting	M10	M20x2	Diameter 3 mm	Diameter 4 mm M4 M6	Diameter 3 mm	Diameter 4 mm M4 M6
Design	Vacuum port on top, With height compensator					
Type of mounting	Via lock nut					
Mounting position	Vertical					
Operating medium	Atmospheric air based on ISO 8573-1:2010 [7:-:-]					
Ambient temperature	-10 ... 60°C		0 ... 60°C		-10 ... 60°C	
Corrosion resistance class CRC [1]	1 - Low corrosion stress					
Material retaining bracket	Aluminium, Nickel-plated brass, POM, Tempered steel, High-alloy steel					
Material seals	–		NBR, Steel			
Note on materials	RoHS-compliant					
LABS (PWIS) conformity	VDMA24364-A1-L					

1) More information www.festo.com/x/topic/crc

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Datasheet

Technical data – ESH-HCL

Vacuum connection	G1/8	G1/4	QS-4	QS-6	PK-3	PK-4
Correlation to suction-cup holder	Size 5	Size 6	Size 1	Size 4 Size 3 Size 2	Size 1	Size 4 Size 3 Size 2
Suction cup mounting	M10	M20x2	Diameter 3 mm	Diameter 4 mm M4 M6	Diameter 3 mm	Diameter 4 mm M4 M6
Design	Vacuum port on top, With height compensator					
Type of mounting	Via lock nut					
Mounting position	Vertical					
Operating medium	Atmospheric air based on ISO 8573-1:2010 [7:-:-]					
Ambient temperature	-10 ... 60°C		0 ... 60°C		-10 ... 60°C	
Corrosion resistance class CRC [1]	1 - Low corrosion stress					
Material retaining bracket	Aluminium, Nickel-plated brass, POM, Tempered steel, High-alloy steel					
Material seals	–		NBR, Steel			
Note on materials	RoHS-compliant					
LABS (PWIS) conformity	VDMA24364-A1-L					

1) More information www.festo.com/x/topic/crc

Technical data – ESH-HD

Vacuum connection	G1/8	G1/4	QS-4	QS-6	PK-3	PK-4
Correlation to suction-cup holder	Size 5	Size 6	Size 1	Size 4 Size 3 Size 2	Size 1	Size 4 Size 3 Size 2
Suction cup mounting	M10	M20x2	Diameter 3 mm	Diameter 4 mm M4 M6	Diameter 3 mm	Diameter 4 mm M4 M6
Design	Vacuum port on side, With height compensator					
Type of mounting	Via lock nut					
Mounting position	Vertical					
Operating medium	Atmospheric air based on ISO 8573-1:2010 [7:-:-]					
Ambient temperature	-10 ... 60°C		0 ... 60°C		-10 ... 60°C	
Corrosion resistance class CRC [1]	1 - Low corrosion stress					
Material retaining bracket	Aluminium, Nickel-plated brass, POM, Tempered steel, High-alloy steel					
Material seals	–		NBR, Steel			
Note on materials	RoHS-compliant					
LABS (PWIS) conformity	VDMA24364-A1-L					

1) More information www.festo.com/x/topic/crc

Technical data – ESH-HDL

Vacuum connection	G1/8	G1/4	QS-4	QS-6	PK-3	PK-4
Correlation to suction-cup holder	Size 5	Size 6	Size 1	Size 4 Size 3 Size 2	Size 1	Size 4 Size 3 Size 2
Suction cup mounting	M10	M20x2	Diameter 3 mm	Diameter 4 mm M4 M6	Diameter 3 mm	Diameter 4 mm M4 M6
Design	Vacuum port on side, With height compensator					
Type of mounting	Via lock nut					
Mounting position	Vertical					
Operating medium	Atmospheric air based on ISO 8573-1:2010 [7:-:-]					
Ambient temperature	-10 ... 60°C		0 ... 60°C		-10 ... 60°C	
Corrosion resistance class CRC [1]	1 - Low corrosion stress					
Material retaining bracket	Aluminium, Nickel-plated brass, POM, Tempered steel, High-alloy steel					
Material seals	–		NBR, Steel			
Note on materials	RoHS-compliant					
LABS (PWIS) conformity	VDMA24364-A1-L					

1) More information www.festo.com/x/topic/crc

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Datasheet

Technical data – ESH-HE				
Vacuum connection	M3	M5	G1/8	G1/4
Correlation to suction-cup holder	Size 1	Size 2	Size 4 Size 3	Size 5
Suction cup mounting	Diameter 3 mm	Diameter 4 mm	M4 M6	M10
Design	Vacuum port on top			
Type of mounting	Via male thread, Via vacuum port			
Mounting position	optional			
Operating medium	Atmospheric air based on ISO 8573-1:2010 [7:-:-]			
Ambient temperature	-10 ... 60°C			
Corrosion resistance class CRC [1]	1 - Low corrosion stress			
Material retaining bracket	Tempered steel			
Material seals	Wrought aluminium alloy, NBR, POM, Steel			
Note on materials	RoHS-compliant			
LABS (PWIS) conformity	VDMA24364-A1-L			

1) More information www.festo.com/x/topic/crc

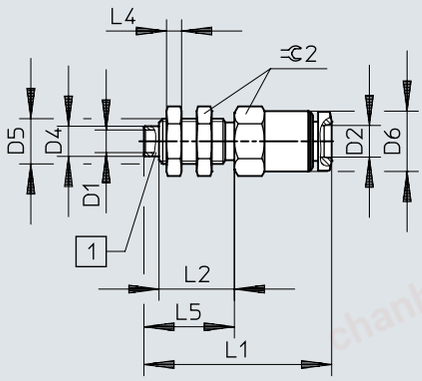
Technical data – ESH-HF		
Vacuum connection	M10x1	M14x1
Correlation to suction-cup holder	Size 2 Size 1	Size 4 Size 3
Suction cup mounting	Diameter 3 mm Diameter 4 mm	M4 M6
Design	Vacuum port on top, With height compensator	
Type of mounting	Via male thread, Via vacuum port	
Mounting position	Vertical	
Operating medium	Atmospheric air based on ISO 8573-1:2010 [7:-:-]	
Ambient temperature	-10 ... 60°C	
Corrosion resistance class CRC [1]	1 - Low corrosion stress	
Material retaining bracket	Tempered steel	
Material seals	NBR, POM	
Note on materials	RoHS-compliant	
LABS (PWIS) conformity	VDMA24364-A1-L	

1) More information www.festo.com/x/topic/crc

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Dimensions

Dimensions – ESH-HA, push-in connector QS, size 1 Download CAD data www.festo.com



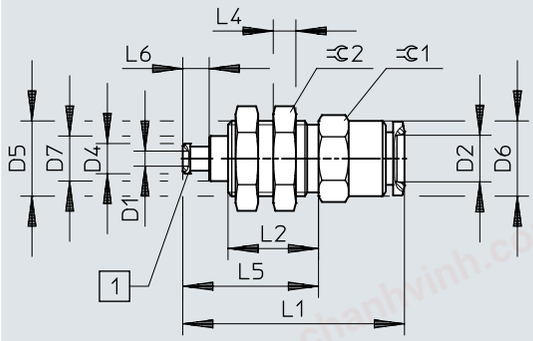
[1] Drilled hole for suction cup

	D1 ø	D2 ø	D4 ø	D5	D6 ø	L1	L2	L4	L5	⊂2
ESH-HA-1-QS	3	4	4	M6x0,75	8	24,9	10	2	12	8

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Dimensions

Dimensions – ESH-HA, push-in connector QS, size 2 Download CAD data www.festo.com



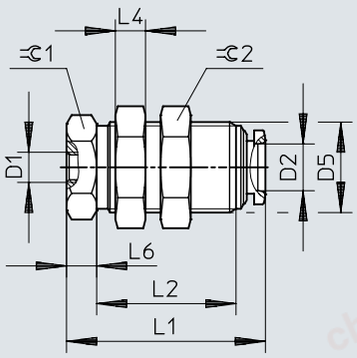
[1] Barbed connector for suction cup

	D1 ø	D2 ø	D4 ø	D5	D6 ø	D7 ø	L1	L2	L4	L5	L6	⊂ 1	⊂ 2
ESH-HA-2-QS	2	6	4	M10x1	10	6	29,4	12	3	18	3,5	10	12

Dimensions

Dimensions – ESH-HA, push-in connector QS, size 3

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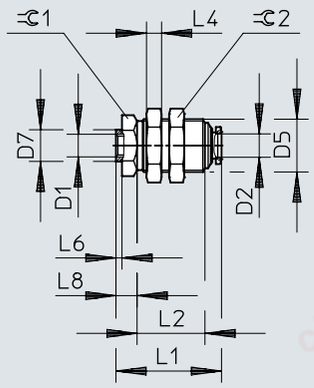
	D1 ø	D2 ø	D5	L1	L2	L4	L6	⊂ 1	⊂ 2
ESH-HA-3-QS	M4	6	M12x1	26,4	18,5	4	4	12	14

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Dimensions

Dimensions – ESH-HA, push-in connector QS, size 4

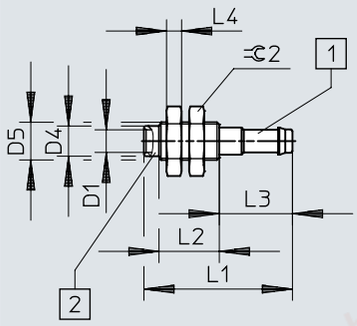
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	D1 ⌀	D2 ⌀	D5	D7 ⌀	L1	L2	L4	L6	L8	⌀1	⌀2
ESH-HA-4-QS	M6	6	M14x1	8,4	28	18	4	1,6	5,6	14	17

Dimensions

Dimensions – ESH-HA, barbed connector PK, size 1 Download CAD data www.festo.com



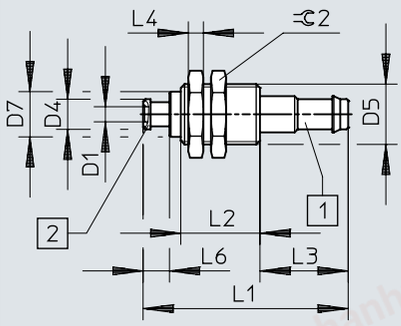
[1] Barbed connector PK-3 for plastic tubing
[2] Drilled hole for suction cup

	D1 ø	D4 ø	D5	L1	L2	L3	L4	⊂ 2
ESH-HA-1-PK	3	4	M5x0,5	19,7	8	9,7	2	8

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Dimensions

Dimensions – ESH-HA, barbed connector PK, size 2 Download CAD data www.festo.com



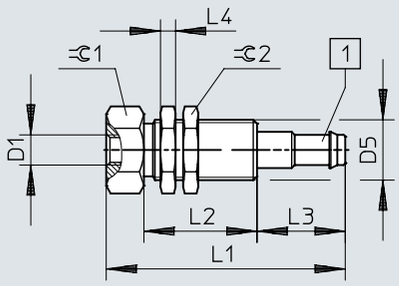
[1] Barbed connector PK-4 for plastic tubing
[2] Barbed connector for suction cup

	D1 ø	D4 ø	D5	D7 ø	L1	L2	L3	L4	L6	⊂2
ESH-HA-2-PK	2	4	M8x0,75	65	27,2	10,5	11,7	2	3,5	10

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Dimensions

Dimensions – ESH-HA, barbed connector PK, size 3 Download CAD data www.festo.com



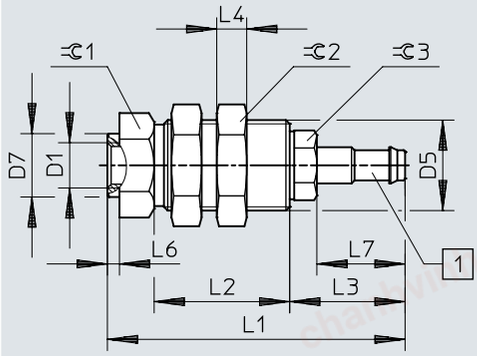
[1] Barbed connector PK-4 for plastic tubing

	D1 ø	D5	L1	L2	L3	L4	⊂ 1	⊂ 2
ESH-HA-3-PK	M4	M8x0,75	31,7	15	11,7	2	10	10

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Dimensions

Dimensions – ESH-HA, barbed connector PK, size 4 Download CAD data www.festo.com



[1] Barbed connector PK-4 for plastic tubing

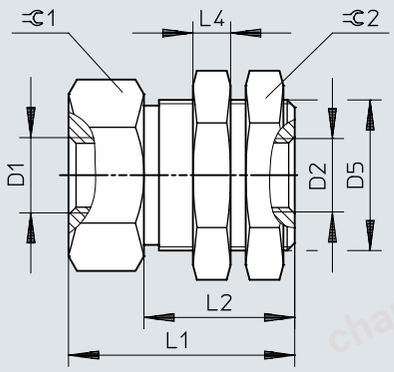
	D1 ø	D5	D7 ø	L1	L2	L3	L4	L6	L7	⊂ 1	⊂ 2	⊂ 3
ESH-HA-4-PK	M6	M12x1	8,4	39,5	18	15,3	4	1,6	11,7	12	14	5,5

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Dimensions

Dimensions – ESH-HA, threaded connection G, size 5/6

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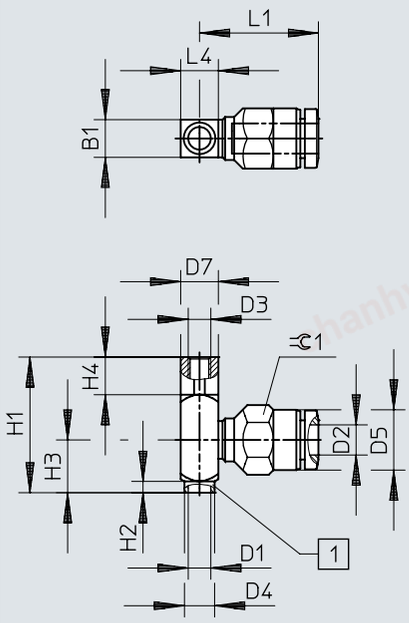


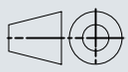
	D1	D2	D5	L1	L2	L4	⌀1	⌀2
ESH-HA-5-G	M10	G1/8	M20x1	30	20	5	22	24
ESH-HA-6-G	M20x2	G1/4	M24x2	50	30	10	27	30

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Dimensions

Dimensions – ESH-HB, push-in connector QS, size 1 Download CAD data www.festo.com





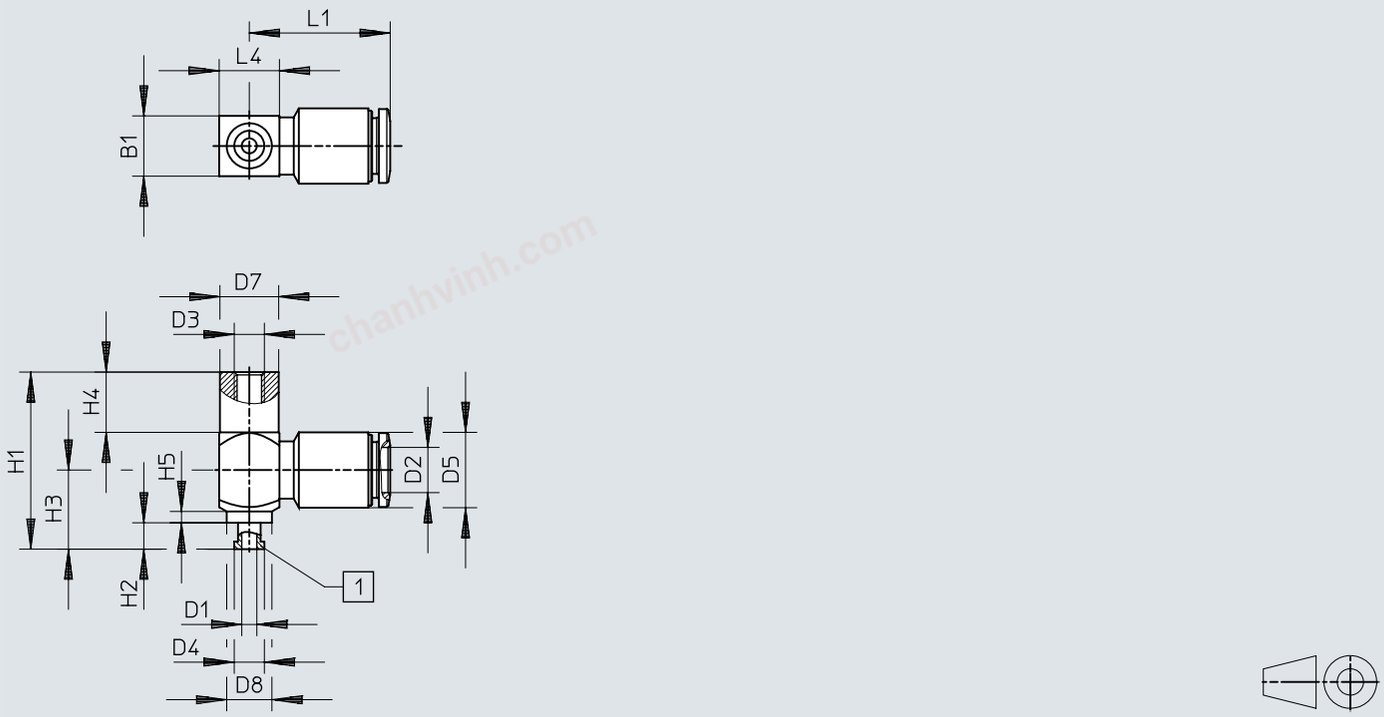
[1] Drilled hole for suction cup

	B1	D1	D2 ⌀	D3	D4 ⌀	D5 ⌀	D7 ⌀	H1	H2	H3	H4	L1	L4	⌀1
ESH-HB-1-QS	5	3	4	M3	4	8	5	18	1,5	7	5	15,8	5	8

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Dimensions

Dimensions – ESH-HB, push-in connector QS, size 2 Download CAD data www.festo.com



[1] Barbed connector for suction cup

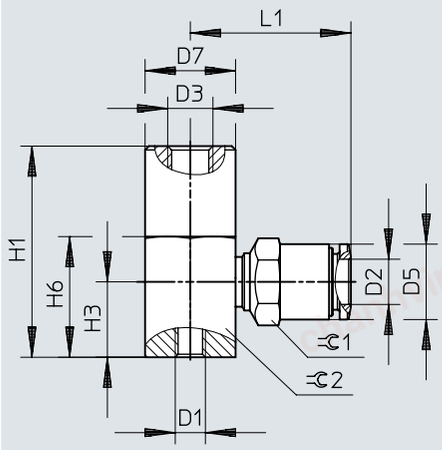
	B1	D1	D2 ø	D3	D4 ø	D5 ø	D7 ø	D8 ø	H1	H2	H3	H4	L1	L4
ESH-HB-2-QS	8	2	6	M4	4	10	8	6	23,5	3,5	10,5	8	18,7	8

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Dimensions

Dimensions – ESH-HB, push-in connector QS, size 3

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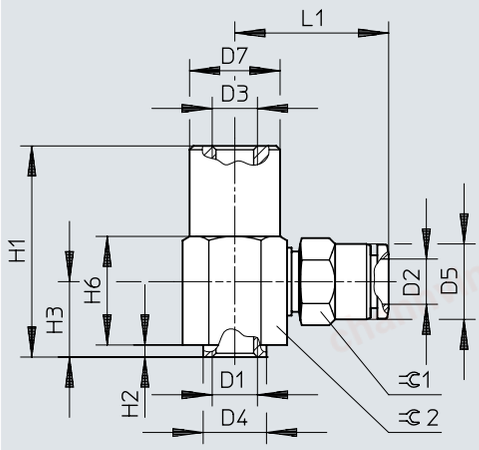
	D1	D2 ø	D3	D5 ø	D7 ø	H1	H3	H6	L1	⊂ 1	⊂ 2
ESH-HB-3-QS	M4	6	M6	10	12	28	10	16	21,3	10	12

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Dimensions

Dimensions – ESH-HB, push-in connector QS, size 4

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	D1	D2 ⌀	D3	D4 ⌀	D5 ⌀	D7 ⌀	H1	H2	H3	H6	L1	⌀1	⌀2
ESH-HB-4-QS	M6	6	M6	8,4	10	12	28	1,6	10	14,4	20,4	10	12

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Dimensions

Dimensions – ESH-HB, barbed connector PK, size 1 Download CAD data www.festo.com



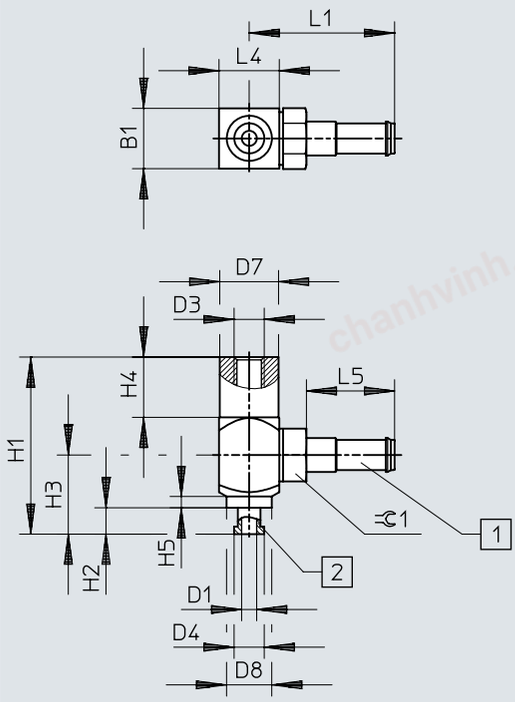
[1] Barbed connector PK-3 for plastic tubing
[2] Drilled hole for suction cup

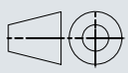
	B1	D1	D3	D4 ⌀	D7 ⌀	H1	H2	H3	H4	L1	L4	L5	⌀1
ESH-HB-1-PK	5	3	M3	4	5	18	1,5	7	5	15,8	5	9,7	5,5

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Dimensions

Dimensions – ESH-HB, barbed connector PK, size 2 Download CAD data www.festo.com





[1] Barbed connector PK-4 for plastic tubing
[2] Barbed connector for suction cup

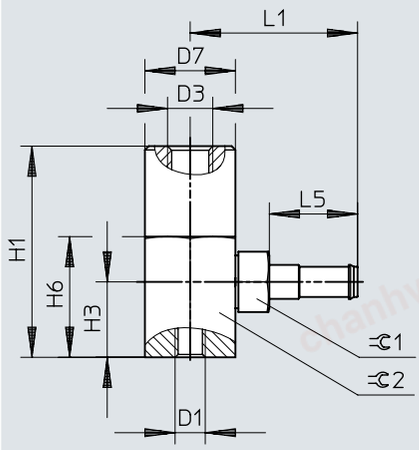
	B1	D1	D3	D4 ⌀	D7 ⌀	D8 ⌀	H1	H2	H3	H4	H5	L1	L4	L5	⊂1
ESH-HB-2-PK	8	2	M4	4	8	6	23,5	3,5	10,5	8	1,5	19,3	8	11,7	7

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Dimensions

Dimensions – ESH-HB, barbed connector PK, size 3

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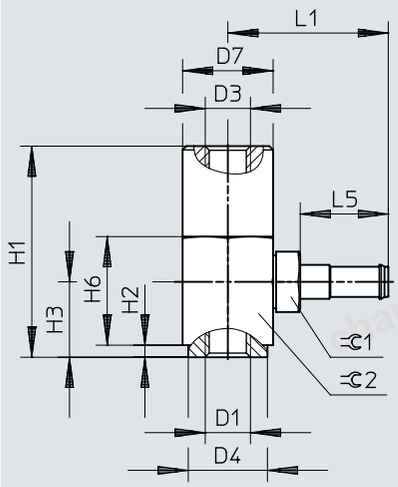


	D1	D3	D7 ø	H1	H3	H6	L1	L5	⊂ 1	⊂ 2
ESH-HB-3-PK	M4	M6	12	28	10	16	21,3	11,7	8	12

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Dimensions

Dimensions – ESH-HB, barbed connector PK, size 4 Download CAD data www.festo.com



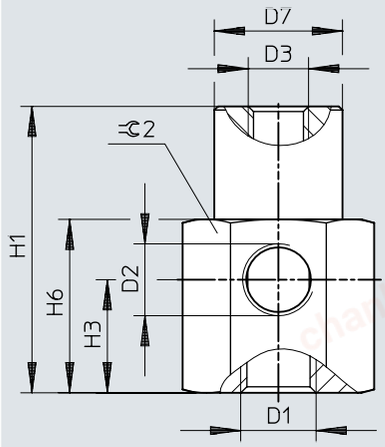
	D1	D3	D4 ø	D7 ø	H1	H2	H3	H6	L1	L5	⊂ 1	⊂ 2
ESH-HB-4-PK	M6	M6	10,5	12	28	1,6	10	14,4	21,3	11,7	8	12

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Dimensions

Dimensions – ESH-HB, threaded connection G, size 5/6

Download CAD data www.festo.com

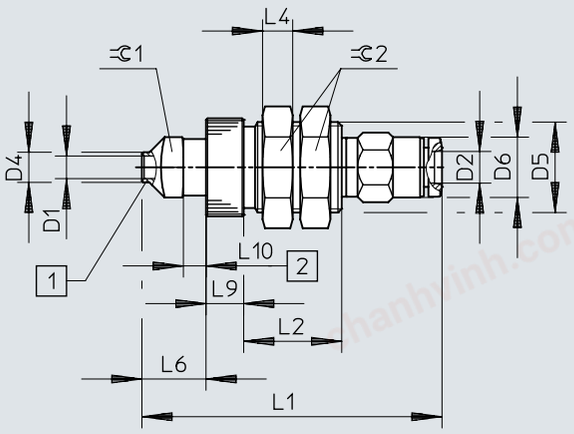


	D1	D2 ⌀	D3	D7 ⌀	H1	H3	H6	⌀2
ESH-HB-5-G	M10	G1/8	M8	17	38	15	23	22
ESH-HB-6-G	M20x2	G1/4	M16	26	65	25	35	30

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Dimensions

Dimensions – ESH-HC, push-in connector QS, size 1 Download CAD data www.festo.com



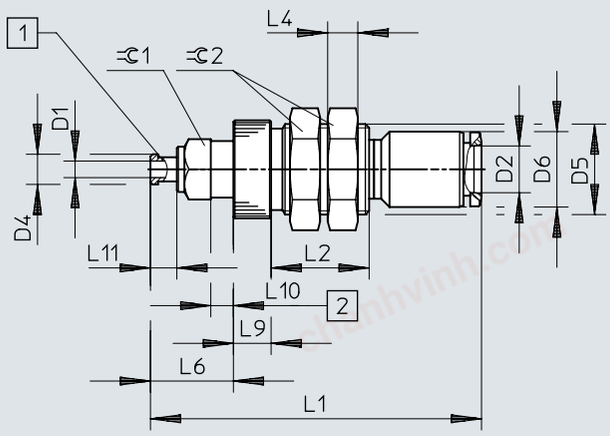
[1] Drilled hole for suction cup
[2] Stroke

	D1	D2 ø	D4 ø	D5	D6	L1	L2	L4	L6	L9	L10	⊂ 1	⊂ 2
ESH-HC-1-QS	3	4	4	M12x1	8	39,8	13	4	8,5	5	3	8	14

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Dimensions

Dimensions – ESH-HC, push-in connector QS, size 2 Download CAD data www.festo.com



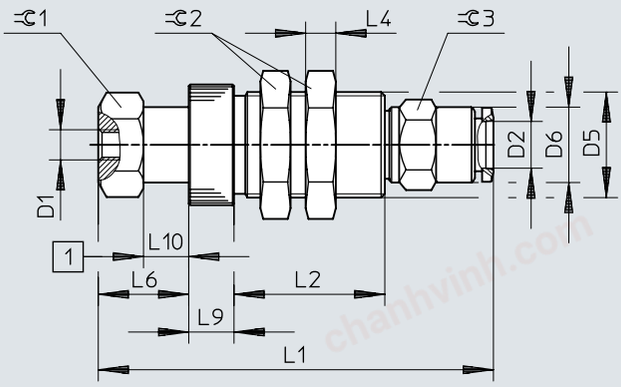
[1] Barbed connector for suction cup
[2] Stroke

	D1	D2 ø	D4 ø	D5	D6	L1	L2	L4	L6	L9	L10	⊂1	⊂2
ESH-HC-2-QS	2,2	6	4	M12x1	M10	43,9	13	4	11	5	3	8	14

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Dimensions

Dimensions – ESH-HC, push-in connector QS, size 3/4 Download CAD data www.festo.com



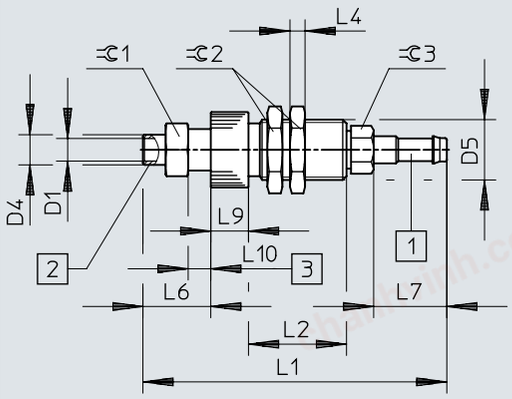
[1] Stroke

	D1	D2 ⌀	D5	D6	L1	L2	L4	L6	L9	L10	⌀ 1	⌀ 2	⌀ 3
ESH-HC-3-QS	M4	6	M14x1	10	52,4	20	4	12	6	6	12	17	10
ESH-HC-4-QS	M6	6	M14x1	10	52,4	20	4	12	6	6	12	17	10

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Dimensions

Dimensions – ESH-HC, barbed connector PK, size 1 Download CAD data www.festo.com

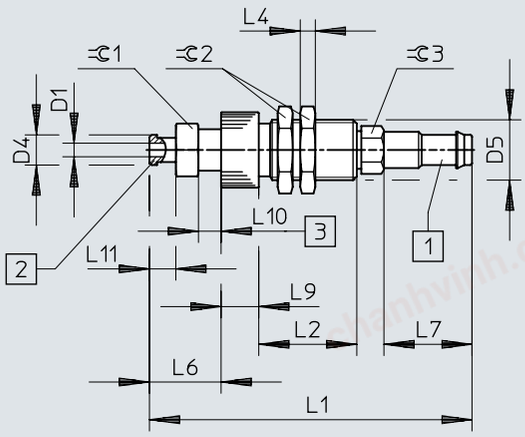


[1] Barbed connector PK-3 for plastic tubing
[2] Drilled hole for suction cup
[3] Stroke

	D1	D4 ⌀	D5	L1	L2	L4	L6	L7	L9	L10	⌀1	⌀2	⌀3
ESH-HC-1-PK	3	4	M8x0,75	40,3	13	2	9	9,7	5	3	7	10	5,5

Dimensions

Dimensions – ESH-HC, barbed connector PK, size 2 Download CAD data www.festo.com



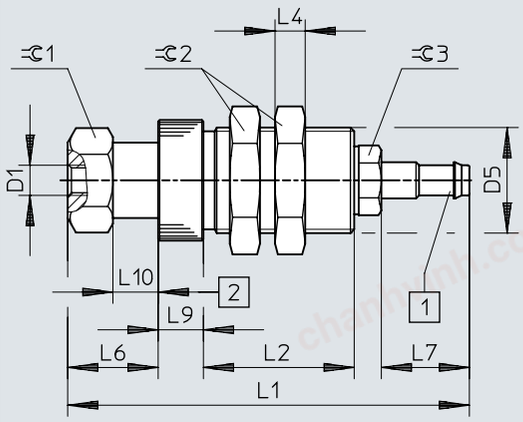
[1] Barbed connector PK-4 for plastic tubing
[2] Barbed connector for suction cup
[3] Stroke

	D1	D4 ø	D5	L1	L2	L4	L6	L7	L9	L10	L11	⊂ 1	⊂ 2	⊂ 3
ESH-HC-2-PK	1,8	4	M8x0,75	42,8	13	2	9,5	11,7	5	3	3,5	7	10	5

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Dimensions

Dimensions – ESH-HC, barbed connector PK, size 3/4 Download CAD data www.festo.com



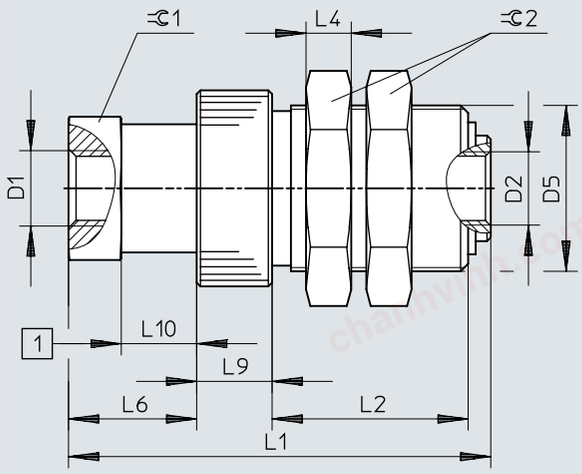
[1] Barbed connector PK-4 for plastic tubing
[2] Stroke

	D1	D5	L1	L2	L4	L6	L7	L9	L10	⌀1	⌀2	⌀3
ESH-HC-3-PK	M4	M14x1	53,3	20	4	12	11,7	6	6	12	17	8
ESH-HC-4-PK	M6	M14x1	53,3	20	4	12	11,7	6	6	12	17	8

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Dimensions

Dimensions – ESH-HC, threaded connection G, size 5 Download CAD data www.festo.com



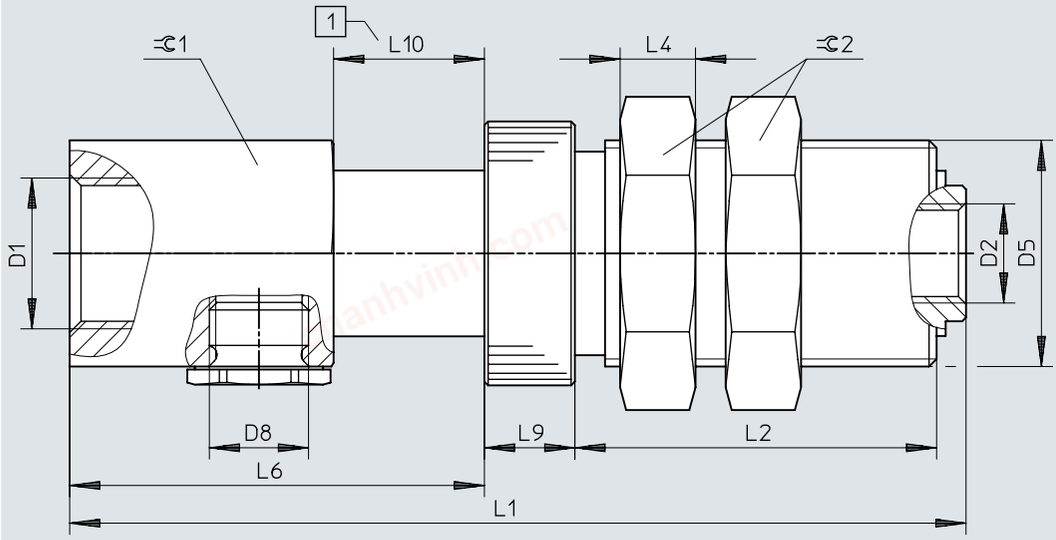
[1] Stroke

	D1	D2	D5	L1	L2	L4	L6	L9	L10	⊂ 1	⊂ 2
ESH-HC-5-G	M10	G1/8	M22x1	56	26	6	17	10	10	19	27

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Dimensions

Dimensions – ESH-HC, threaded connection G, size 6 Download CAD data www.festo.com



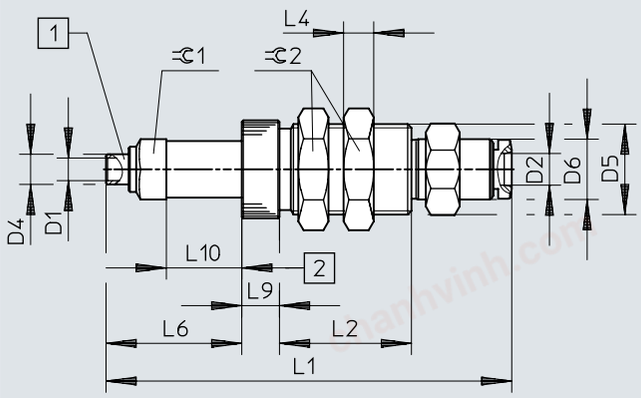
[1] Stroke

	D1	D2	D5	D8	L1	L2	L4	L6	L9	L10	⊂ 1	⊂ 2
ESH-HC-6-G	M20x2	G1/4	M30x2	G1/4	118,9	48	10	55	12	20	30	36

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Dimensions

Dimensions – ESH-HCL, push-in connector QS, size 1 Download CAD data www.festo.com



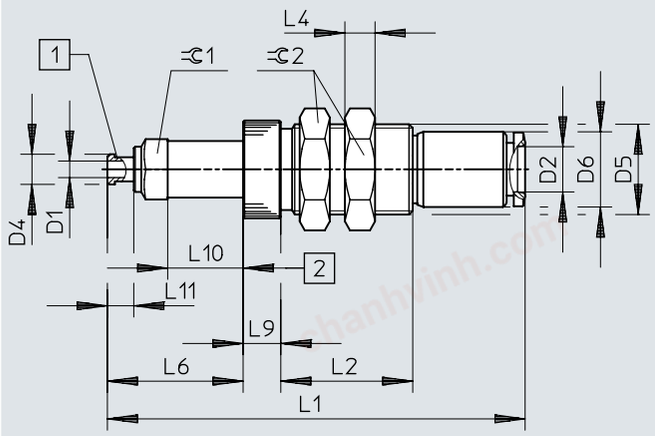
[1] Drilled hole for suction cup
[2] Stroke

	D1	D2 ø	D4 ø	D5	D6 ø	L1	L2	L4	L6	L9	L10	⊂1	⊂2
ESH-HCL-1-QS	3	4	4	M12x1	8	53,8	17,5	4	18	5	10	8	14

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Dimensions

Dimensions – ESH-HCL, push-in connector QS, size 2 Download CAD data www.festo.com



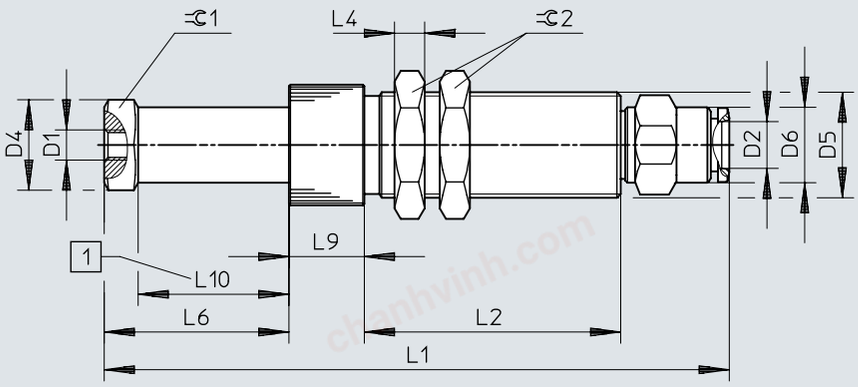
[1] Barbed connector for suction cup
[2] Stroke

	D1	D2 ⌀	D4 ⌀	D5	D6 ⌀	L1	L2	L4	L6	L9	L10	L11	⌀1	⌀2
ESH-HCL-2-QS	2,2	6	4	M12x1	6	55,4	17,5	4	18	5	10	3,5	8	14

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Dimensions

Dimensions – ESH-HCL, push-in connector QS, size 3/4 Download CAD data www.festo.com



[1] Stroke

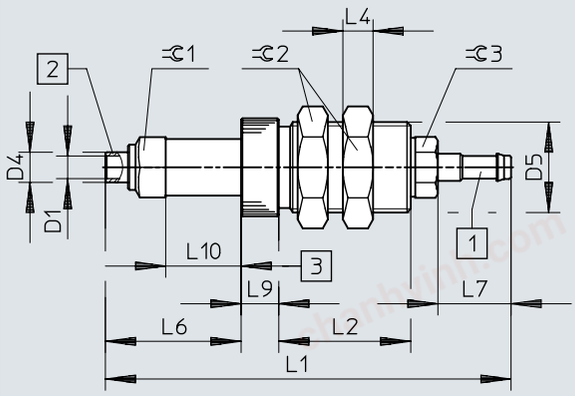
	D1	D2 ø	D4 ø	D5	D6 ø	L1	L2	L4	L6	L9	L10	⫧1	⫧2
ESH-HCL-3-QS	M4	6	10	M14x1	10	82,9	34	4	24,5	10	20	12	17
ESH-HCL-4-QS	M6	6	10	M14x1	10	82,9	34	4	24,5	10	20	12	17

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Dimensions

Dimensions – ESH-HCL, barbed connector PK, size 1

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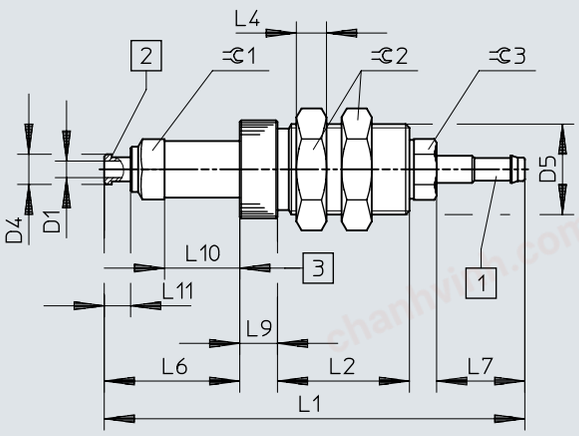
[1] Barbed connector PK-3 for plastic tubing
[2] Drilled hole for suction cup
[3] Stroke

	D1	D4 ⌀	D5	L1	L2	L4	L6	L7	L9	L10	⌀1	⌀2	⌀3
ESH-HCL-1-PK	3	4	M12x1	53,8	17,5	4	18	9,7	5	10	8	14	7

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Dimensions

Dimensions – ESH-HCL, barbed connector PK, size 2 Download CAD data www.festo.com



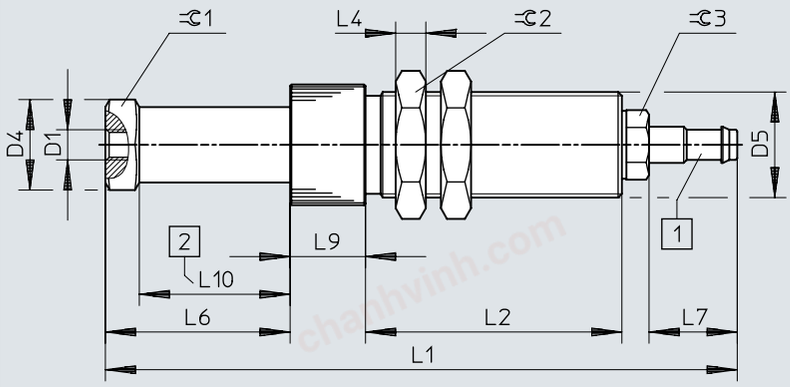
[1] Barbed connector PK-4 for plastic tubing
[2] Barbed connector for suction cup
[3] Stroke

	D1	D4 ø	D5	L1	L2	L4	L6	L7	L9	L10	L11	⊂1	⊂2	⊂3
ESH-HCL-2-PK	2,2	4	M12x1	55,8	17,5	4	18	11,7	5	10	3,5	8	14	7

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Dimensions

Dimensions – ESH-HCL, barbed connector PK, size 3/4 Download CAD data www.festo.com



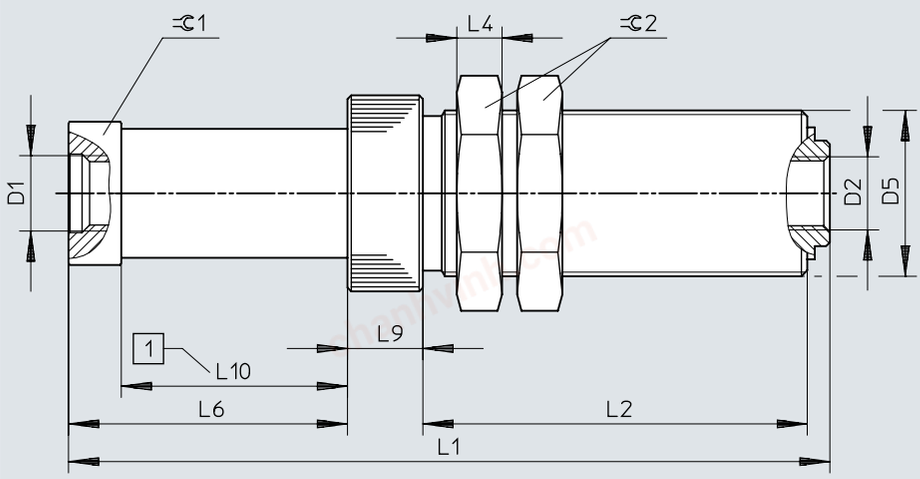
[1] Barbed connector PK-4 for plastic tubing
[2] Stroke

	D1	D4 ⌀	D5	L1	L2	L4	L6	L7	L9	L10	⌀1	⌀2	⌀3
ESH-HCL-3-PK	M4	10	M14x1	83,8	34	4	24,5	11	10	20	12	17	8
ESH-HCL-4-PK	M6	10	M14x1	83,8	34	4	24,5	11	10	20	12	17	8

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Dimensions

Dimensions – ESH-HCL, threaded connection G, size 5 Download CAD data www.festo.com



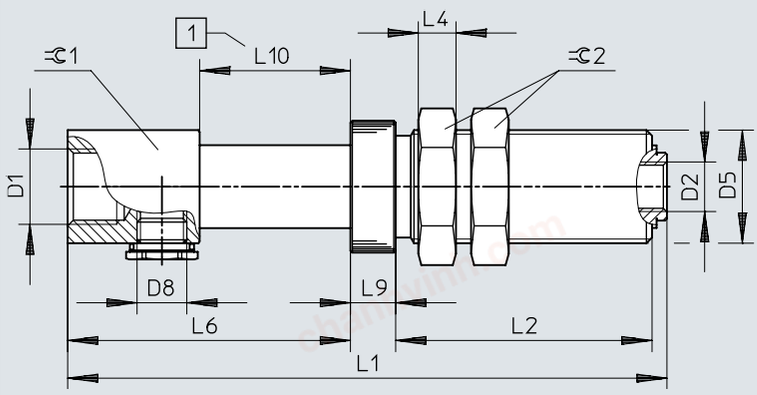
[1] Stroke

	D1	D2	D5	L1	L2	L4	L6	L9	L10	⌀1	⌀2
ESH-HCL-5-G	M10	G1/8	M22x1	101	51	6	37	10	M30	19	27

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Dimensions

Dimensions – ESH-HCL, threaded connection G, size 6 Download CAD data www.festo.com



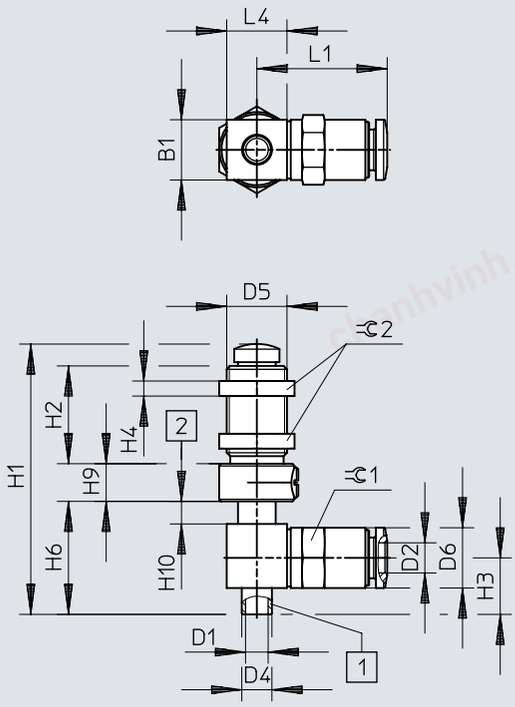
[1] Stroke

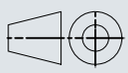
	D1	D2	D5	L1	L2	L4	L6	L9	L10	⊂ 1	⊂ 2
ESH-HCL-6-G	M20x2	G1/4	M30x2	159	68	10	75	12	40	30	36

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Dimensions

Dimensions – ESH-HD, push-in connector QS, size 1 Download CAD data www.festo.com





[1] Drilled hole for suction cup
[2] Stroke

	B1	D1	D2 ø	D4 ø	D5	D6 ø	H1	H2
ESH-HD-1-QS	8	3	4	4	M8x0,75	8	35,9	13

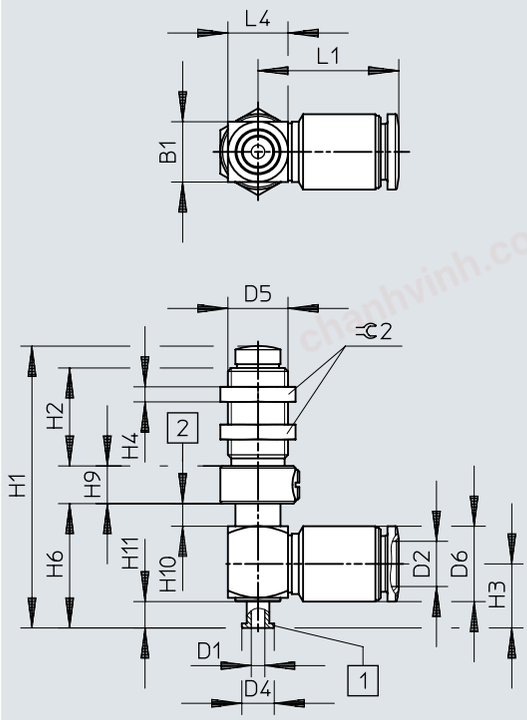
	H3	H4	H6	H9	H10	L1	L4	⊂ 1	⊂ 2
ESH-HD-1-QS	7,5	2	15	5	3	17,3	8	8	10

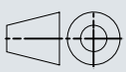
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Dimensions

Dimensions – ESH-HD, push-in connector QS, size 2

Download CAD data www.festo.com





[1] Barbed connector for suction cup
[2] Stroke

	B1	D1	D2 ø	D4 ø	D5	D6 ø	H1	H2
ESH-HD-2-QS	8	1,8	6	4,3	M8x0,75	10	37,4	13

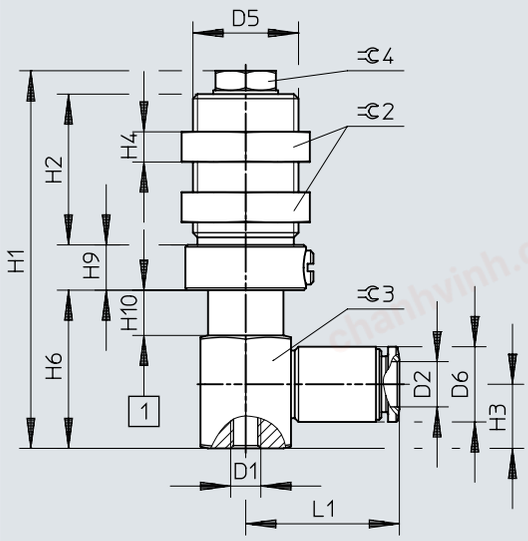
	H3	H4	H6	H9	H10	H11	L1	L4	⊂ 2
ESH-HD-2-QS	8,5	2	16,5	5	3	3,5	18,7	8	10

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Dimensions

Dimensions – ESH-HD, push-in connector QS, size 3/4

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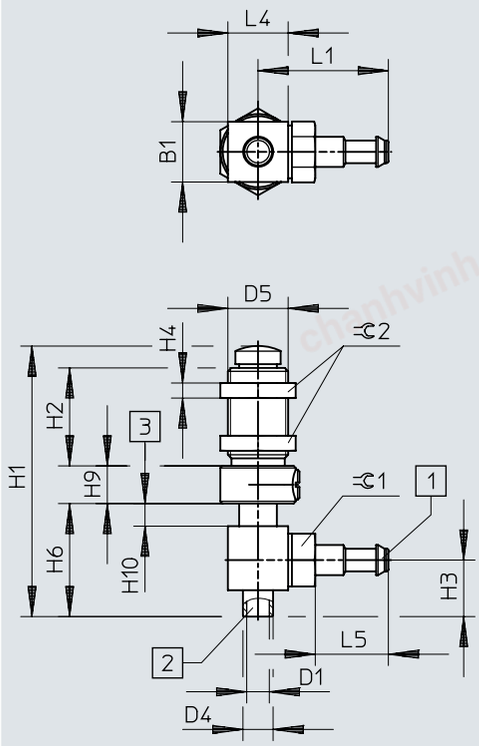
[1] Stroke

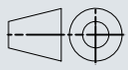
	D1	D2 ø	D5	D6 ø	H1	H2	H3	H4	H6	H9	H10	L1	2	3	4
ESH-HD-3-QS	M4	6	M14x1	10	50,1	20	8,5	4	21	6	6	20,4	17	12	8
ESH-HD-4-QS	M6	6	M14x1	10	50,1	20	8,5	4	21	6	6	20,4	17	12	8

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Dimensions

Dimensions – ESH-HD, barbed connector PK, size 1 Download CAD data www.festo.com





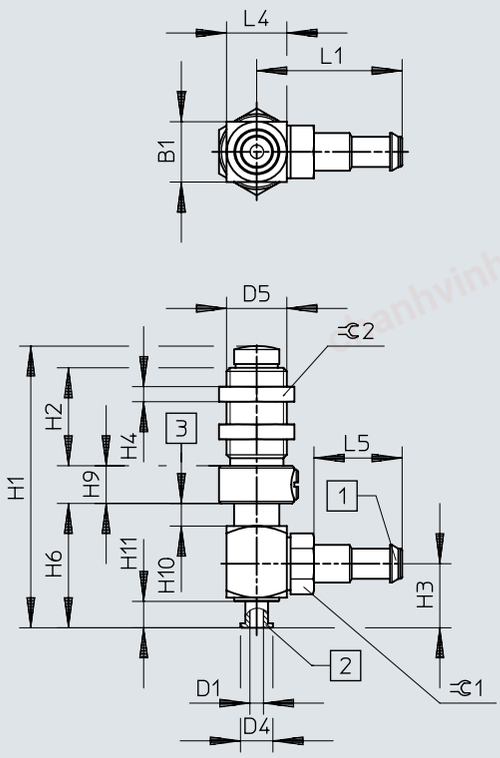
[1] Barbed connector PK-3 for plastic tubing
[2] Drilled hole for suction cup
[3] Stroke

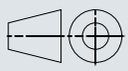
	B1	D1	D2 ⌀	D4 ⌀	D5	D6 ⌀	H1	H2
ESH-HD-1-PK	8	3	4	4	M8x0,75	8	35,9	13

	H3	H4	H6	H9	H10	L1	L4	⫧1	⫧2
ESH-HD-1-PK	7,5	2	15	5	3	17,3	8	8	10

Dimensions

Dimensions – ESH-HD, barbed connector PK, size 2 Download CAD data www.festo.com





[1] Barbed connector PK-4 for plastic tubing
[2] Barbed connector for suction cup
[3] Stroke

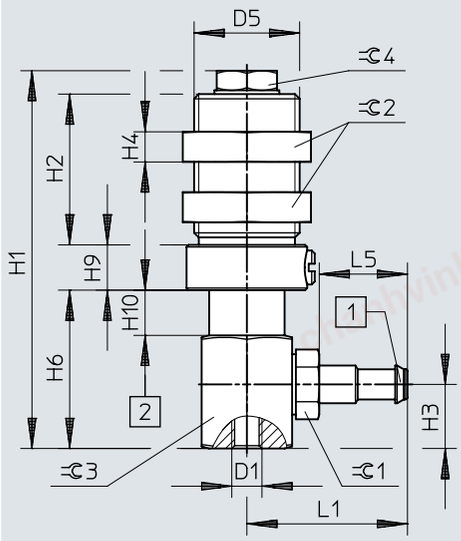
	B1	D1	D2 ø	D4 ø	D5	D6 ø	H1	H2
ESH-HD-2-PK	8	1,8	6	4,3	M8x0,75	10	37,4	13

	H3	H4	H6	H9	H10	H11	L1	L4	⊂ 2
ESH-HD-2-PK	8,5	2	16,5	5	3	3,5	18,7	8	10

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Dimensions

Dimensions – ESH-HD, barbed connector PK, size 3/4 Download CAD data www.festo.com

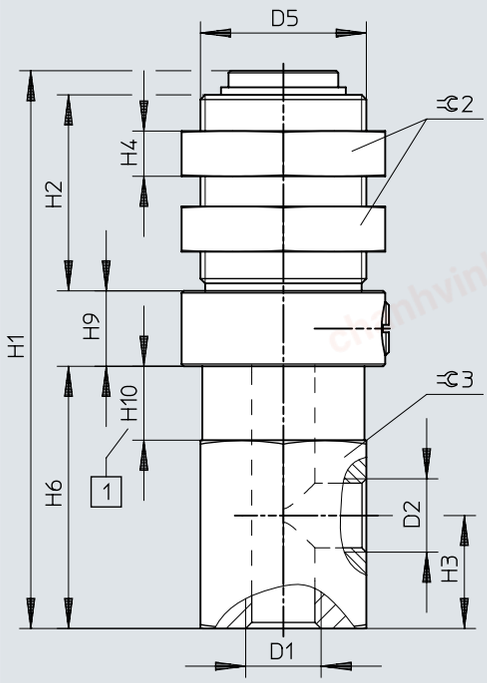


[1] Barbed connector PK-4 for plastic tubing
[2] Stroke

	D1	D2 ø	D5	D6 ø	H1	H2	H3	H4	H6	H9	H10	L1	⊂2	⊂3	⊂4
ESH-HD-3-PK	M4	6	M14x1	10	50,1	20	8,5	4	21	6	6	20,4	17	12	8
ESH-HD-4-PK	M6	6	M14x1	10	50,1	20	8,5	4	21	6	6	20,4	17	12	8

Dimensions

Dimensions – ESH-HD, threaded connection G, size 5 Download CAD data www.festo.com



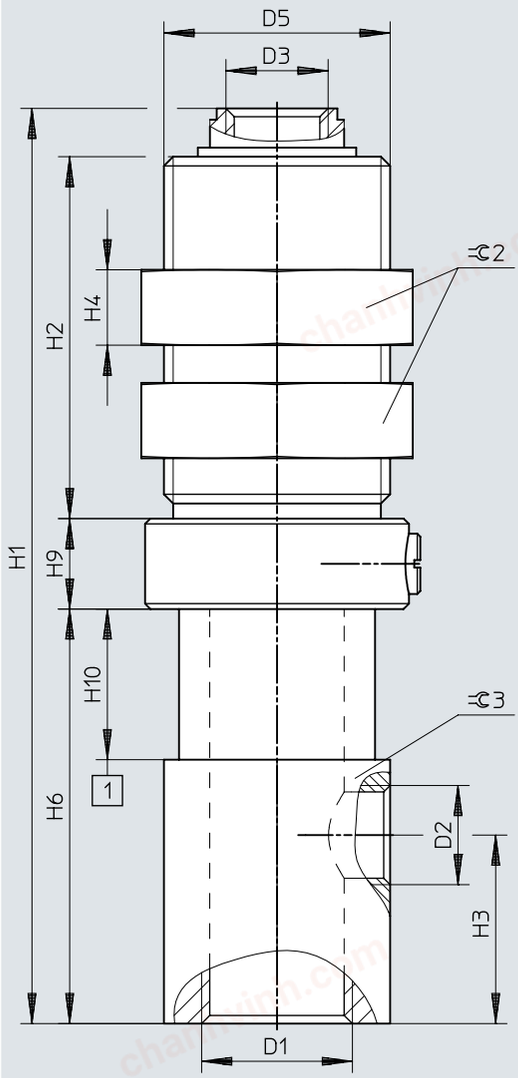
[1] Stroke

	D1	D2	D5	H1	H2	H3	H4	H6	H9	H10	⌀2	⌀3
ESH-HD-5-G	M10	G1/8	M22x1	74	26	15	6	34,8	10	9,8	27	22

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Dimensions

Dimensions – ESH-HD, threaded connection G, size 6 Download CAD data www.festo.com



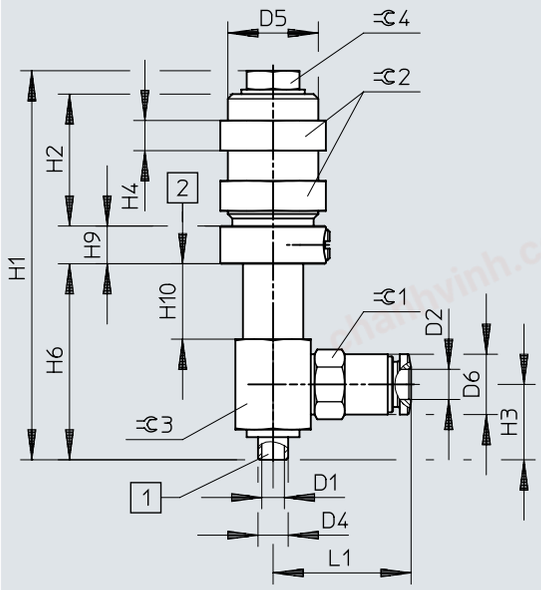
[1] Stroke

	D1	D2	D3	D5	H1	H2	H3	H4	H6	H9	H10	⊂ 2	⊂ 3
ESH-HD-6-G	M20x2	G1/4	G1/4	M30x2	121,4	48	25	10	55	12	20	36	30

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Dimensions

Dimensions – ESH-HDL, push-in connector QS, size 1 Download CAD data www.festo.com



[1] Drilled hole for suction cup
[2] Stroke

	D1	D2 ø	D4 ø	D5	D6 ø	H1	H2	H3
ESH-HDL-1-QS	3	4	4	M12x1	8	51,6	17,5	10

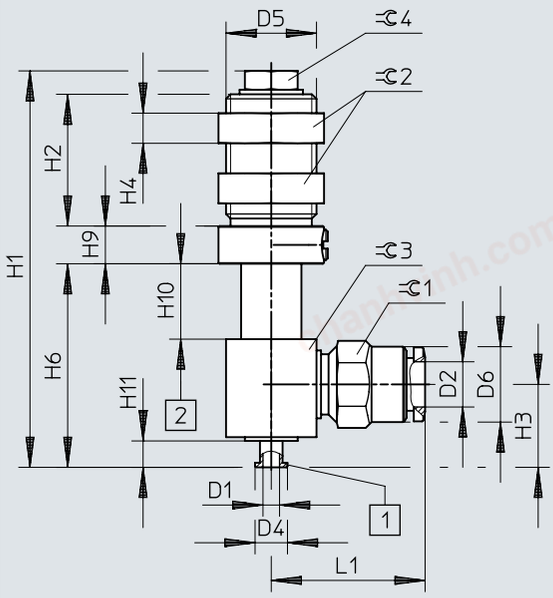
	H4	H6	H9	H10	L1	⌀ 1	⌀ 2	⌀ 3	⌀ 4
ESH-HDL-1-QS	4	26	5	10	18,3	8	14	10	7

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Dimensions

Dimensions – ESH-HDL, push-in connector QS, size 2

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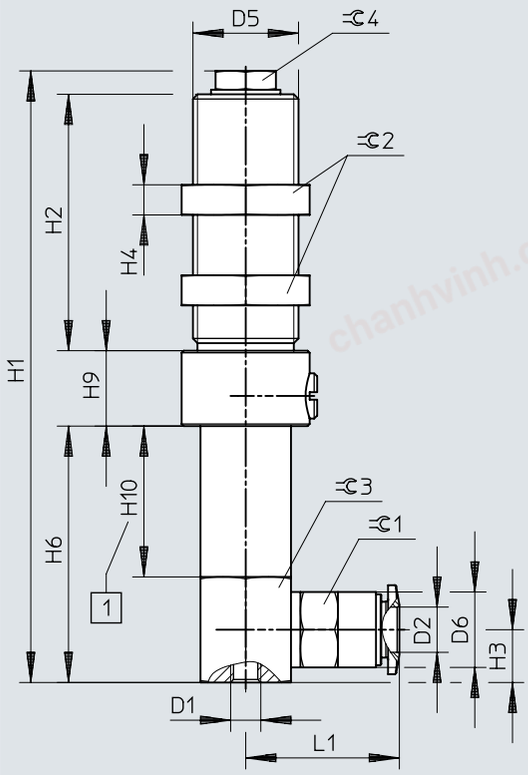
[1] Barbed connector for suction cup
[2] Stroke

	D1	D2 ø	D4 ø	D5	D6 ø	H1	H2	H3	H4
ESH-HDL-2-QS	2,2	6	4	M12x1	10	52,6	17,5	11	4

	H6	H9	H10	H11	L1	1	2	3	4
ESH-HDL-2-QS	27	5	10	3,5	20,4	8	14	12	7

Dimensions

Dimensions – ESH-HDL, push-in connector QS, size 3/4 Download CAD data www.festo.com



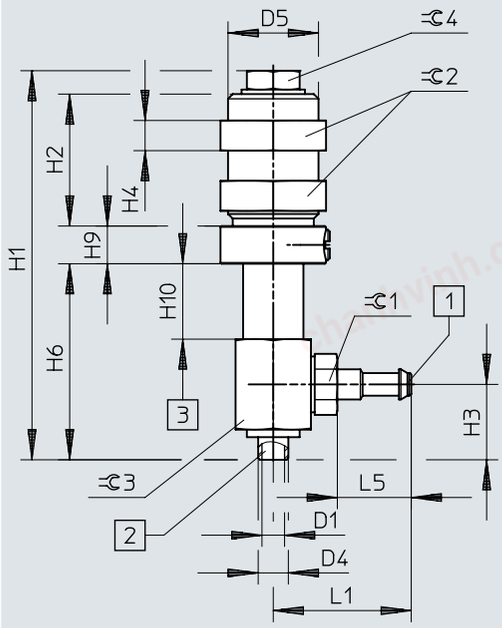
[1] Stroke

	D1	D2 ⌀	D5	D6 ⌀	H1	H2	H3	H4	H6	H9	H10	L1	1	2	3	4
ESH-HDL-3-QS	M4	6	M14x1	10	81,1	34	7	4	34	10	20	20,4	10	17	12	8
ESH-HDL-4-QS	M6	6	M14x1	10	81,1	34	7	4	34	10	20	20,4	10	17	12	8

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Dimensions

Dimensions – ESH-HDL, barbed connector PK, size 1 Download CAD data www.festo.com

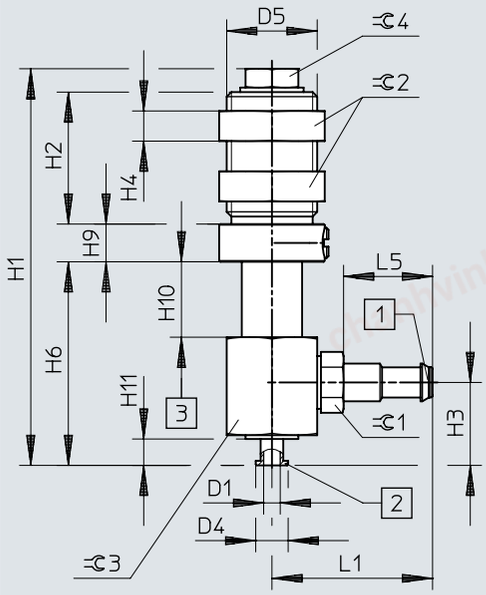


[1] Barbed connector PK-3 for plastic tubing
[2] Drilled hole for suction cup
[3] Stroke

	D1	D4 ⌀	D5	H1	H2	H3	H4	H6	H9	H10	L1	L5	⌀ 1	⌀ 2	⌀ 3	⌀ 4
ESH-HDL-1-PK	3	4	M12x1	51,6	17,5	10	4	26	5	10	18,3	9,8	7	14	10	7

Dimensions

Dimensions – ESH-HDL, barbed connector PK, size 2 Download CAD data www.festo.com



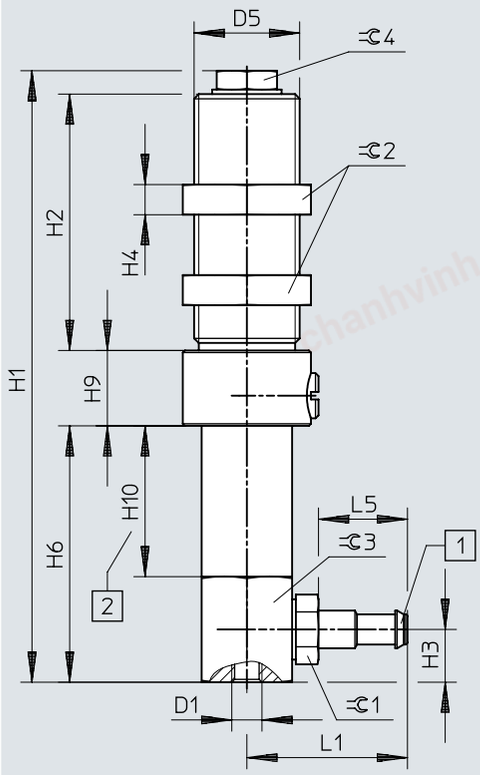
[1] Barbed connector PK-4 for plastic tubing
[2] Barbed connector for suction cup
[3] Stroke

	D1	D4 ø	D5	H1	H2	H3	H4	H6	H9	H10	H11	L1	L5	⊂ 1	⊂ 2	⊂ 3	⊂ 4
ESH-HDL-2-PK	2,2	4	M12x1	52,6	17,5	11	4	27	5	10	3,5	21,3	11,8	7	14	12	7

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Dimensions

Dimensions – ESH-HDL, barbed connector PK, size 3/4 Download CAD data www.festo.com



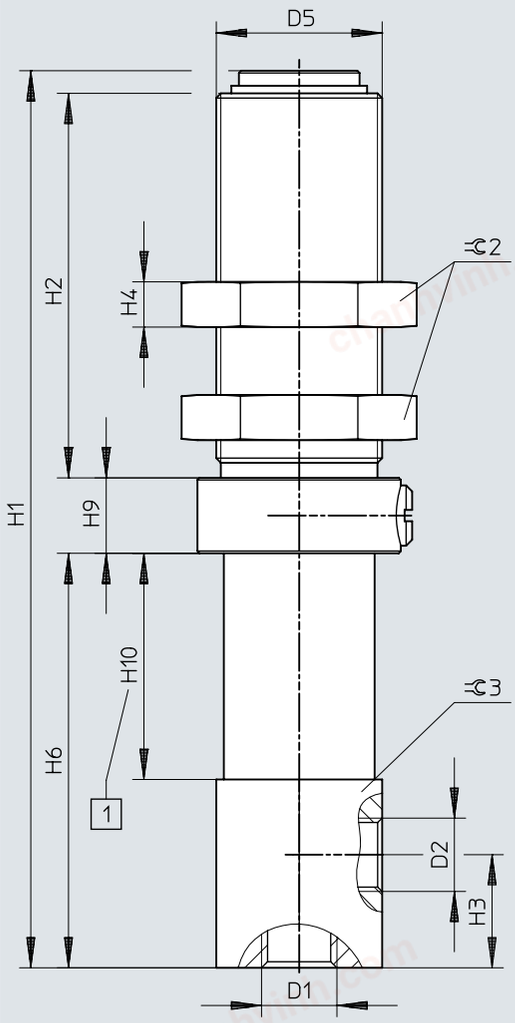
[1] Barbed connector PK-4 for plastic tubing
[2] Stroke

	D1	D5	H1	H2	H3	H4	H6	H9	H10	L1	L5	⌀1	⌀2	⌀3	⌀4
ESH-HDL-3-PK	M4	M14x1	81,1	34	7	4	34	10	20	21,3	11,8	8	17	12	8
ESH-HDL-4-PK	M4	M14x1	81,1	34	7	4	34	10	20	21,3	11,8	8	17	12	8

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Dimensions

Dimensions – ESH-HDL, threaded connection G, size 5 Download CAD data www.festo.com



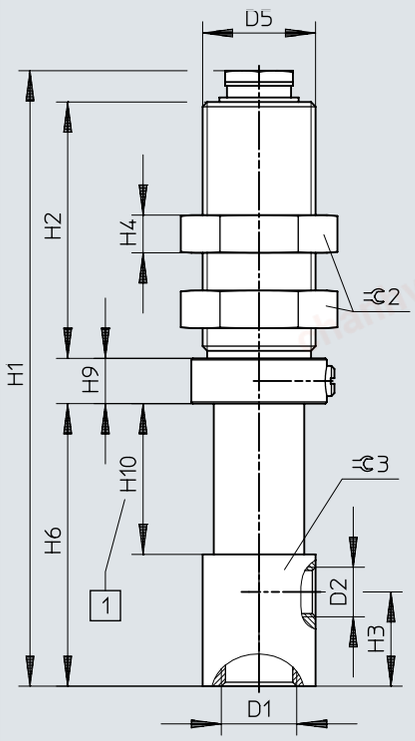
[1] Stroke

	D1	D2	D5	H1	H2	H3	H4	H6	H9	H10	⌀2	⌀3
ESH-HDL-5-G	M10	G1/8	M22x1	119	51	15	6	55	10	30	27	22

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Dimensions

Dimensions – ESH-HDL, threaded connection G, size 6 Download CAD data www.festo.com



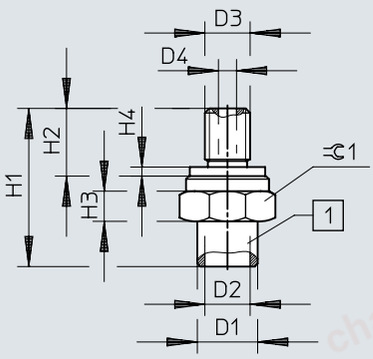
[1] Stroke

	D1	D2	D5	H1	H2	H3	H4	H6	H9	H10	SW 2	SW 3
ESH-HDL-6-G	M20x2	G1/4	M30x2	163,3	68	25	10	75	12	40	36	30

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Dimensions

Dimensions – ESH-HE, G and M thread, size 1 Download CAD data www.festo.com



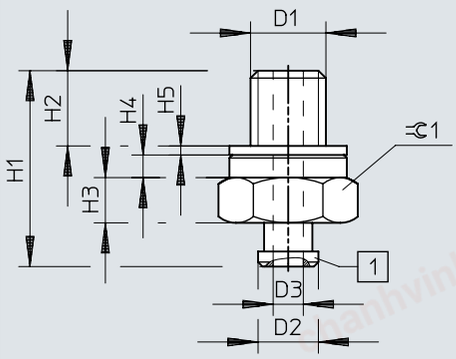
[1] Drilled hole for suction cup

	D1 ø	D2 ø	D3	D4 ø	H1	H2	H3	H4	1
ESH-HE-1	4	3	M3	1,2	9	3	2	0,6	5,5

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Dimensions

Dimensions – ESH-HE, G and M thread, size 2 Download CAD data www.festo.com



[1] Barbed connector for suction cup

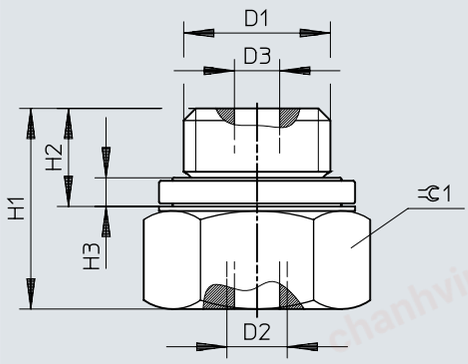
	D1	D2 ø	D3 ø	H1	H2	H3	H4	H5	1
ESH-HE-2	M5	4	2	11,5	3,5	3	1,5	0,6	8

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Dimensions

Dimensions – ESH-HE, G and M thread, size 3

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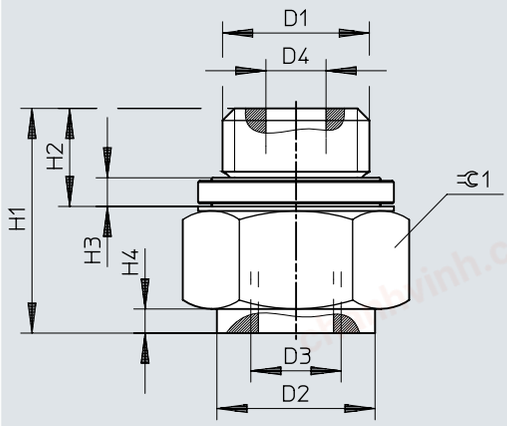
	D1	D2	D3 ø	H1	H2	H3	⊂1
ESH-HE-3	G1/8	M4	3	13,3	6,5	1,9	13

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Dimensions

Dimensions – ESH-HE, G and M thread, size 4

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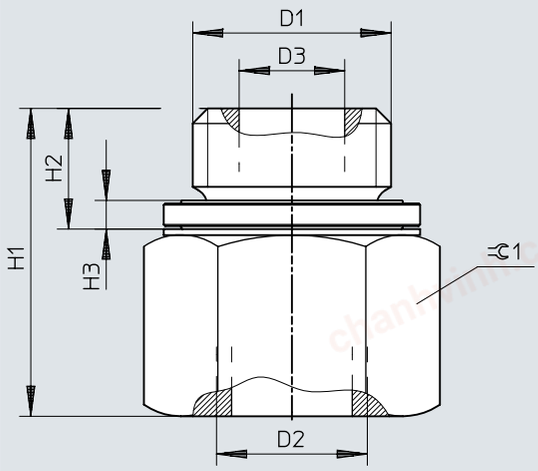
	D1	D2 ø	D3	D4 ø	H1	H2	H3	H4	⊂ 1
ESH-HE-4	G1/8	10,5	M6	4	14,9	6,5	1,9	1,6	13

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Dimensions

Dimensions – ESH-HE, G and M thread, size 5

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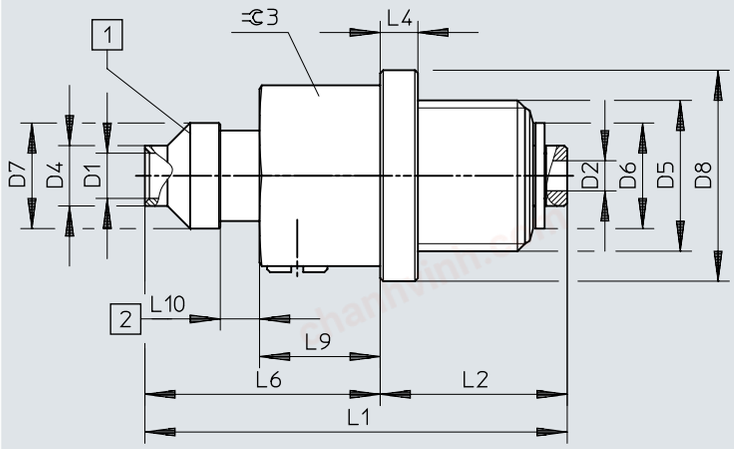


	D1	D2	D3 Ø	H1	H2	H3	⊂1
ESH-HE-5	G1/4	M10	7	20,9	8,5	1,9	17

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Dimensions

Dimensions – ESH-HF, M thread, size 1 Download CAD data www.festo.com

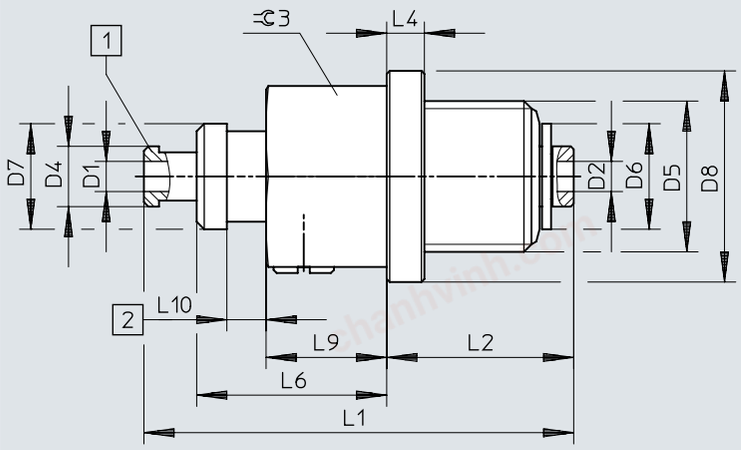


[1] Drilled hole for suction cup
[2] Stroke

	D1	D2 ⌀	D4 ⌀	D5	D6 ⌀	D7	D8 ⌀	L1	L2	L4	L6	L9	L10	3
ESH-HF-1-M10x1	3	2	4	M10x1	7	7	14	28	12,4	2,5	15,6	8	2,6	12

Dimensions

Dimensions – ESH-HF, M thread, size 2 Download CAD data www.festo.com



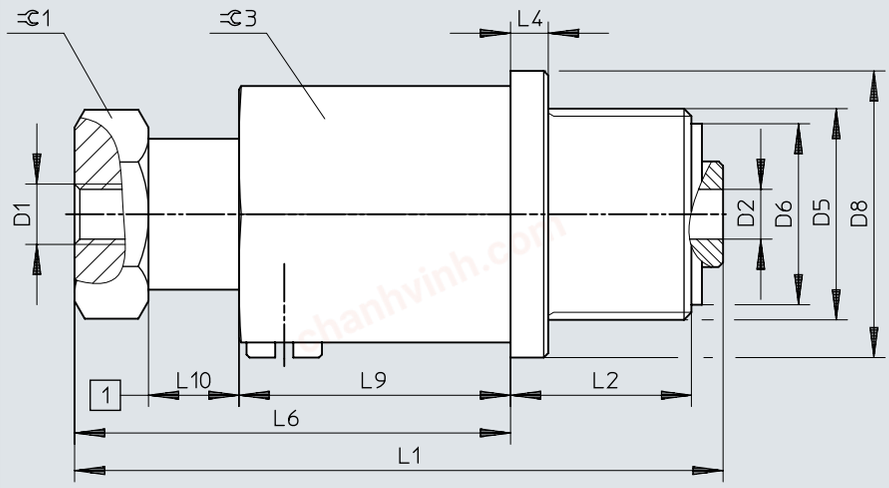
[1] Barbed connector for suction cup
[2] Stroke

	D1	D2 ø	D4 ø	D5	D6 ø	D7	D8 ø	L1	L2	L4	L6	L9	L10	⊂3
ESH-HF-2-M10x1	2	2	4	M10x1	7	7	14	28,5	12,4	2,5	12,6	8	2,6	12

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Dimensions

Dimensions – ESH-HF, M thread, size 3 Download CAD data www.festo.com



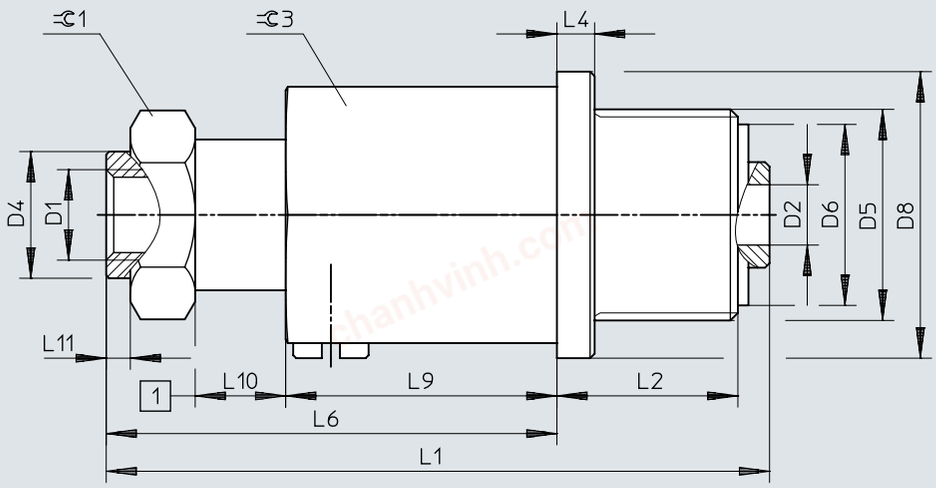
[1] Stroke

	D1	D2 ø	D5	D6 ø	D8 ø	L1	L2	L4	L6	L9	L10	⫧1	⫧3
ESH-HF-3-M14x1	M4	3,3	M14x1	12	19	43	12	2,5	28,9	18	6	12	17

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Dimensions

Dimensions – ESH-HF, M thread, size 4 Download CAD data www.festo.com



[1] Stroke

	D1	D2 ⌀	D4 ⌀	D5	D6 ⌀	D8 ⌀	L1	L2	L4	L6	L9	L10	⌀1	⌀3
ESH-HF-4-M14x1	M6	4	8,4	M14x1	12	19	44	12	2,5	29,9	18	6	12	17

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Ordering data

Ordering data – ESH-HA

	Correlation to suction-cup holder	Vacuum connection	Nominal size	Product weight	Part no.	Type
	Size 6	G1/4	10 mm	200 g	**189202**	**ESH-HA-6-G**
	Size 5	G1/8	8 mm	84 g	**189201**	**ESH-HA-5-G**
	Size 4	QS-6	5 mm	30 g	**189199**	**ESH-HA-4-QS**
		PK-4	2.5 mm	23 g	**189200**	**ESH-HA-4-PK**
	Size 3	QS-6	5 mm	20 g	**189197**	**ESH-HA-3-QS**
		PK-4	2.5 mm	10 g	**189198**	**ESH-HA-3-PK**
	Size 2	QS-6	2 mm	12 g	**189195**	**ESH-HA-2-QS**
		PK-4		7 g	**189196**	**ESH-HA-2-PK**
	Size 1	QS-4	3 mm	6 g	**189193**	**ESH-HA-1-QS**
		PK-3	2.5 mm	3 g	**189194**	**ESH-HA-1-PK**

Ordering data – ESH-HB

	Correlation to suction-cup holder	Vacuum connection	Nominal size	Product weight	Part no.	Type
	Size 6	G1/4	10 mm	271 g	**189212**	**ESH-HB-6-G**
	Size 5	G1/8	8.5 mm	91 g	**189211**	**ESH-HB-5-G**
	Size 4	QS-6	5 mm	27 g	**189209**	**ESH-HB-4-QS**
		PK-4	2.5 mm	25 g	**189210**	**ESH-HB-4-PK**
	Size 3	QS-6	3.3 mm	29 g	**189207**	**ESH-HB-3-QS**
		PK-4	2.5 mm	27 g	**189208**	**ESH-HB-3-PK**
	Size 2	QS-6	2 mm	13 g	**189205**	**ESH-HB-2-QS**
		PK-4		11 g	**189206**	**ESH-HB-2-PK**
	Size 1	QS-4	3 mm	5 g	**189203**	**ESH-HB-1-QS**
		PK-3	2.5 mm	4 g	**189204**	**ESH-HB-1-PK**

Ordering data – ESH-HC

	Correlation to suction-cup holder	Vacuum connection	Nominal size	Product weight	Part no.	Type
	Size 6	G1/4	10 mm	472 g	**189222**	**ESH-HC-6-G**
	Size 5	G1/8	8.4 mm	112 g	**189221**	**ESH-HC-5-G**
	Size 4	QS-6	3.4 mm	33 g	**189219**	**ESH-HC-4-QS**
		PK-4	2.5 mm	31 g	**189220**	**ESH-HC-4-PK**
	Size 3	QS-6	3.4 mm	34 g	**189217**	**ESH-HC-3-QS**
		PK-4	2.5 mm	32 g	**189218**	**ESH-HC-3-PK**
	Size 2	QS-6	2.2 mm	18 g	**189215**	**ESH-HC-2-QS**
		PK-4	1.2 mm	8 g	**189216**	**ESH-HC-2-PK**
	Size 1	QS-4	2.4 mm	17 g	**189213**	**ESH-HC-1-QS**
		PK-3	1.2 mm	8 g	**189214**	**ESH-HC-1-PK**

Ordering data – ESH-HCL

	Correlation to suction-cup holder	Vacuum connection	Nominal size	Product weight	Part no.	Type
	Size 6	G1/4	10 mm	560 g	**189232**	**ESH-HCL-6-G**

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Ordering data

Ordering data – ESH-HCL

	Correlation to suction-cup holder	Vacuum connection	Nominal size	Product weight	Part no.	Type
	Size 5	G1/8	8.4 mm	169 g	**189231**	**ESH-HCL-5-G**
	Size 4	QS-6	3.4 mm	47 g	**189229**	**ESH-HCL-4-QS**
		PK-4	3 mm	45 g	**189230**	**ESH-HCL-4-PK**
	Size 3	QS-6	3.4 mm	48 g	**189227**	**ESH-HCL-3-QS**
		PK-4	3 mm	46 g	**189228**	**ESH-HCL-3-PK**
	Size 2	QS-6	2.2 mm	20 g	**189225**	**ESH-HCL-2-QS**
		PK-4		19 g	**189226**	**ESH-HCL-2-PK**
	Size 1	QS-4	2.8 mm	20 g	**189223**	**ESH-HCL-1-QS**
		PK-3	1.9 mm	19 g	**189224**	**ESH-HCL-1-PK**

Ordering data – ESH-HD

	Correlation to suction-cup holder	Vacuum connection	Nominal size	Product weight	Part no.	Type
	Size 6	G1/4	10 mm	472 g	**189242**	**ESH-HD-6-G**
	Size 5	G1/8	8.5 mm	195 g	**189241**	**ESH-HD-5-G**
	Size 4	QS-6	5 mm	45 g	**189239**	**ESH-HD-4-QS**
		PK-4	3 mm	43 g	**189240**	**ESH-HD-4-PK**
	Size 3	QS-6	3.3 mm	46 g	**189237**	**ESH-HD-3-QS**
		PK-4	3 mm	44 g	**189238**	**ESH-HD-3-PK**
	Size 2	QS-6	1.8 mm	15 g	**189235**	**ESH-HD-2-QS**
		PK-4		12 g	**189236**	**ESH-HD-2-PK**
	Size 1	QS-4	3 mm	13 g	**189233**	**ESH-HD-1-QS**
		PK-3	1.9 mm	11 g	**189234**	**ESH-HD-1-PK**

Ordering data – ESH-HDL

	Correlation to suction-cup holder	Vacuum connection	Nominal size	Product weight	Part no.	Type
	Size 6	G1/4	10 mm	560 g	**189252**	**ESH-HDL-6-G**
	Size 5	G1/8	8.5 mm	273 g	**189251**	**ESH-HDL-5-G**
	Size 4	QS-6	5 mm	65 g	**189249**	**ESH-HDL-4-QS**
		PK-4	3 mm	63 g	**189250**	**ESH-HDL-4-PK**
	Size 3	QS-6	3.3 mm	65 g	**189247**	**ESH-HDL-3-QS**
		PK-4	3 mm	63 g	**189248**	**ESH-HDL-3-PK**
	Size 2	QS-6	2.2 mm	33 g	**189245**	**ESH-HDL-2-QS**
		PK-4		32 g	**189246**	**ESH-HDL-2-PK**
	Size 1	QS-4	3 mm	29 g	**189243**	**ESH-HDL-1-QS**
		PK-3	1.9 mm	28 g	**189244**	**ESH-HDL-1-PK**

Ordering data – ESH-HE

	Correlation to suction-cup holder	Vacuum connection	Nominal size	Product weight	Part no.	Type
	Size 5	G1/4	7 mm	24 g	**189257**	**ESH-HE-5-G1/4**
	Size 4	G1/8	4 mm	11 g	**189256**	**ESH-HE-4-G1/8**
	Size 3		3 mm		**189255**	**ESH-HE-3-G1/8**
	Size 2	M5	2 mm	3 g	**189254**	**ESH-HE-2-M5**
	Size 1	M3	1.2 mm	1 g	**189253**	**ESH-HE-1-M3**

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Ordering data

Ordering data – ESH-HF

	Correlation to suction-cup holder	Vacuum connection	Nominal size	Product weight	Part no.	Type
	Size 4	M14x1	4 mm	52 g	**189263**	**ESH-HF-4-M14X1**
	Size 3		3.3 mm	54 g	**189262**	**ESH-HF-3-M14X1**
	Size 2	M10x1	2 mm	14 g	**189261**	**ESH-HF-2-M10X1**
	Size 1				**189260**	**ESH-HF-1-M10X1**