


# Suction cup holders ESH

Technical data

FESTO

- With or without height compensation
- 6 holder sizes
- 8 holder types
- 3 tubing connectors


 - Temperature range  
 -10 ... +60






General technical data							
ESH-HA-... without height compensation							
	Holder size	Vacuum connection	Volume [cm <sup>3</sup> ]	Mounting thread	Suction cup connection	Max. tightening torque [Nm]	Weight [g]
Male thread, 2 nuts, vacuum connection on top							
QS	1	QS4	0.239	M6x0.75	∅ 3 mm	3	6
		PK-3	0.090	M5x0.5		2	3
	2	QS4	0.501	M10x1	∅ 4 mm	7	12
		PK-4	0.169	M8x0.75		3.5	7
PK	3	QS6	0.520	M12x1	M4x0.7	14	20
		PK-4	0.274	M8x0.75		3.5	10
	4	QS6	0.719	M14x1	M6x1	21	30
		PK-4	0.668	M12x1		14	23
G	5	G $\frac{1}{8}$	1.862	M20x1	M10x1.5	21	84
		G $\frac{1}{4}$	7.234	M24x2		50	200




General technical data						
ESH-HB-... without height compensation						
	Holder size	Vacuum connection	Volume [cm <sup>3</sup> ]	Mounting thread Female thread	Suction cup connection	Weight [g]
Female thread, vacuum connection on side						
QS	1	QS4	0.228	M3x0.5	∅ 3 mm	5
		PK-3	0.108			4
	2	QS6	0.418	M4x0.75	∅ 4 mm	13
		PK-4	0.188			11
PK	3	QS6	0.539	M6x1	M4x0.7	29
		PK-4	0.313			27
	4	QS6	0.646	M6x1	M6x1	27
		PK-4	0.416			25
G	5	G $\frac{1}{8}$	1.921	M8x1.25	M10x1.5	91
		G $\frac{1}{4}$	7.250			M16x2

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General technical data										
ESH-HC-... with height compensation										
	Holder size	Vacuum connection	Volume [cm <sup>3</sup> ]	Mounting thread	Suction cup connection	Height compensation [mm]	Spring force		Max. tightening torque [Nm]	Weight [g]
							min. [N]	max. [N]		
Male thread, 2 nuts, vacuum connection on top										
QS 	1	QS4	0.385	M12x1	∅ 3 mm	3	0	0.1	14	17
		PK-3	0.117	M8x0.75					3.5	8
	2	QS6	0.551	M12x1	∅ 4 mm	3	0	0.1	14	18
		PK-4	0.192	M8x0.75					3.5	8
PK 	3	QS6	1.041	M14x1	M4x0.7	6	2	5	21	34
		PK-4	0.789							32
	4	QS6	1.153	M14x1	M6x1	6	5	10	21	33
		PK-4	0.911							31
G 	5	G <sup>1</sup> / <sub>8</sub>	3.327	M22x1	M10x1.5	10	8	18	50	112
	6	G <sup>1</sup> / <sub>4</sub>	11.537	M30x2	M20x2	20	12	22		472




General technical data										
ESH-HCL-... with height compensation, long										
	Holder size	Vacuum connection	Volume [cm <sup>3</sup> ]	Mounting thread	Suction cup connection	Height compensation [mm]	Spring force		Max. tightening torque [Nm]	Weight [g]
							min. [N]	max. [N]		
Male thread, 2 nuts, vacuum connection on top										
QS 	1	QS4	0.489	M12x1	∅ 3 mm	10	0	0.1	14	20
		PK-3	0.360							
	2	QS6	0.519	M12x1	∅ 4 mm	10	0	0.1	14	20
		PK-4	0.398							
PK 	3	QS6	1.616	M14x1	M4x0.7	20	1	3	21	48
		PK-4	1.383							
	4	QS6	1.780	M14x1	M6x1	20	1	9	21	47
		PK-4	1.535							
G 	5	G <sup>1</sup> / <sub>8</sub>	6.060	M22x1	M10x1.5	30	10	16	50	169
	6	G <sup>1</sup> / <sub>4</sub>	16.325	M30x2	M20x2	40	15	32		560

# Suction cup holders ESH

Technical data

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General technical data										
ESH-HD-... with height compensation										
	Holder size	Vacuum connection	Volume [cm <sup>3</sup> ]	Mounting thread	Suction cup connection	Height compensation [mm]	Spring force		Max. tightening torque [Nm]	Weight [g]
							min. [N]	max. [N]		
Male thread, 2 nuts, vacuum connection on side										
QS 	1	QS4	0.241	M8x0.75	∅ 3 mm	3	0	0.1	3.5	13
		PK-3	0.120							11
	2	QS6	0.417	M8x0.75	∅ 4 mm	3	0	0.1	3.5	15
		PK-4	0.183							12
PK 	3	QS6	0.573	M14x1	M4x0.7	6	2	5	21	46
		PK-4	0.343							44
	4	QS6	0.678	M14x1	M6x1	6	5	10	21	45
		PK-4	0.449							43
G 	5	G <sup>1</sup> / <sub>8</sub>	2.072	M22x1	M10x1.5	10	8	18	50	195
		G <sup>1</sup> / <sub>4</sub>	13.171							M30x2


General technical data										
ESH-HDL-... with height compensation, long										
	Holder size	Vacuum connection	Volume [cm <sup>3</sup> ]	Mounting thread	Suction cup connection	Height compensation [mm]	Spring force		Max. tightening torque [Nm]	Weight [g]
							min. [N]	max. [N]		
Male thread, 2 nuts, vacuum connection on side										
QS 	1	QS4	0.272	M12x1	∅ 3 mm	10	0	0.1	14	29
		PK-3	0.150							28
	2	QS6	0.260	M12x1	∅ 4 mm	10	0	0.1	14	33
		PK-4	0.138							32
PK 	3	QS6	0.474	M14x1	M4x0.7	20	1	3	21	65
		PK-4	0.252							63
	4	QS6	0.370	M14x1	M6x1	20	1	9	21	65
		PK-4	0.448							63
G 	5	G <sup>1</sup> / <sub>8</sub>	1.667	M22x1	M10x1.5	30	10	16	50	273
		G <sup>1</sup> / <sub>4</sub>	16.968							M30x2

# Suction cup holders ESH

Technical data

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General technical data					
ESH-HE-... without height compensation					
	Holder size	Vacuum connection Male thread	Suction cup connection	Max. tightening torque [Nm]	Weight [g]
With threaded connection for direct attachment					
	1	M3x0.5	∅ 3 mm	0.7	1
	2	M5x0.8	∅ 4 mm	1.9	3
	3	G <sup>1</sup> / <sub>8</sub>	M4x0.7	9	11
	4	G <sup>1</sup> / <sub>8</sub>	M6x1	9	11
	5	G <sup>1</sup> / <sub>4</sub>	M10x1.5	14	24

General technical data								
ESH-HF-... with height compensation								
	Holder size	Vacuum connection Male thread	Suction cup connection	Height compensator [mm]	Spring force		Max. tightening torque [Nm]	Weight [g]
					min. [N]	max. [N]		
With threaded connection for direct attachment								
	1	M10x1	∅ 3 mm	2.6	2	4	7	14
	2	M10x1	∅ 4 mm	2.6	2	4	7	14
	3	M14x1	M4x0.7	6	6	12	21	54
	4	M14x1	M6x1	6	6	12	21	52

# Suction cup holders ESH

Technical data

Materials									
	ESH-...-	HA-...	HB-...	HC-...	HCL-...	HD-...	HDL-...	HE-...	HF-...
	Steel								
QS connection	Steel, polyacetate, nitrile rubber							-	

Ambient conditions	
	ESH-...-...
Ambient temperature [°C]	-10 ... +60
Corrosion resistance class CRC <sup>1)</sup>	1

1) Corrosion resistance class 1 according to Festo standard 940 070  
 Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

# Suction cup holders ESH

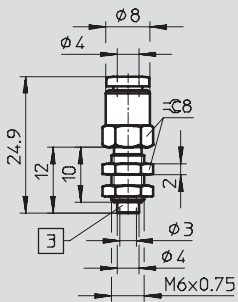
Technical data

FESTO

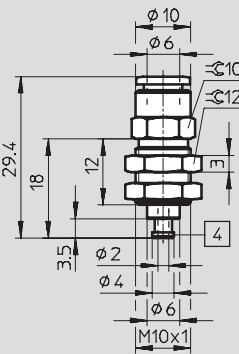
## Dimensions – ESH-HA

Push-in connector QS

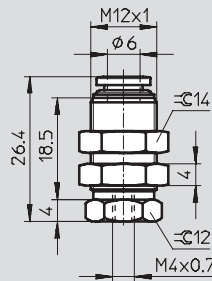
Holder size 1



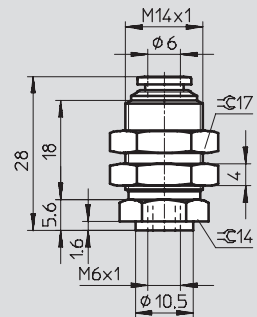
Holder size 2



Holder size 3

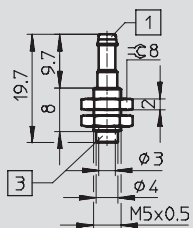


Holder size 4

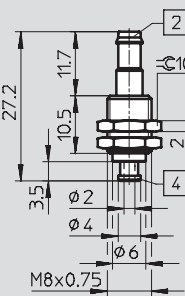


## Barbed fitting connector PK

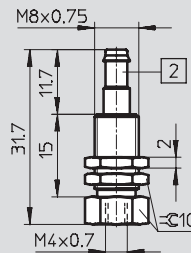
Holder size 1



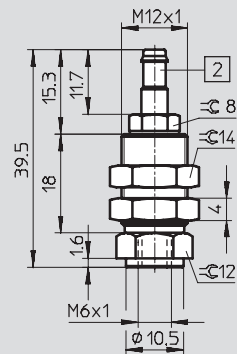
Holder size 2



Holder size 3



Holder size 4

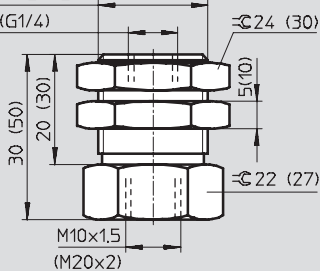


## Threaded connection G

Holder size 5/Holder size 6\*

M20x1 (M24x2)

G1/8 (G1/4)



1 Barbed fitting for 3 mm plastic tubing

2 Barbed fitting for 4 mm plastic tubing

3 Hole for vacuum generator

4 Barbed fitting for vacuum generator

\* Dimensions in brackets

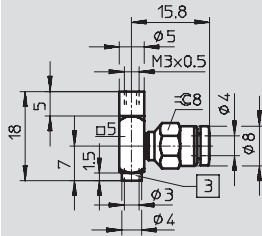
# Suction cup holders ESH

Technical data

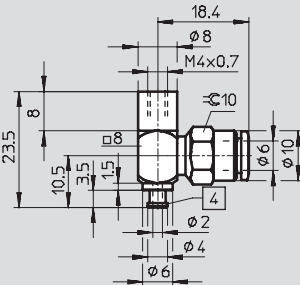
## Dimensions – ESH-HB

Push-in connector QS

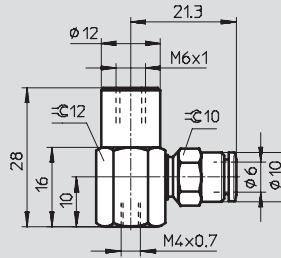
Holder size 1



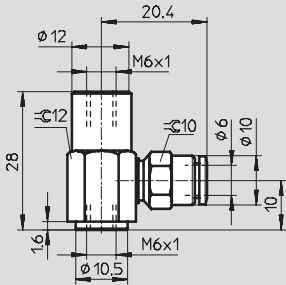
Holder size 2



Holder size 3

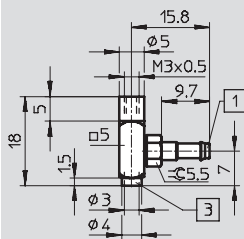


Holder size 4

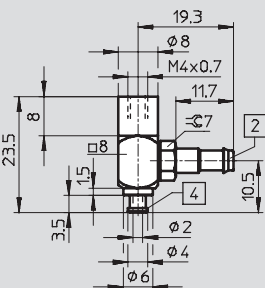


## Barbed fitting connector PK

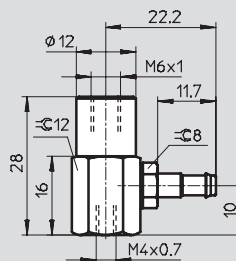
Holder size 1



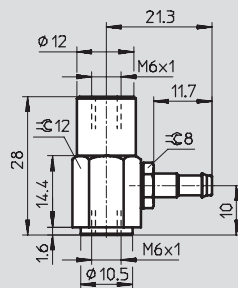
Holder size 2



Holder size 3

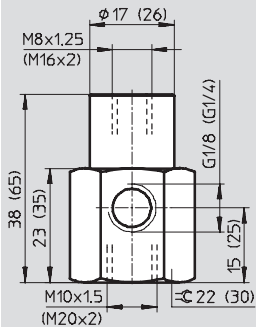


Holder size 4



## Threaded connection G

Holder size 5/Holder size 6\*



1 Barbed fitting for 3 mm plastic tubing

2 Barbed fitting for 4 mm plastic tubing

3 Hole for vacuum generator tubing

4 Barbed fitting for vacuum generator

\* Dimensions in brackets

# Suction cup holders ESH

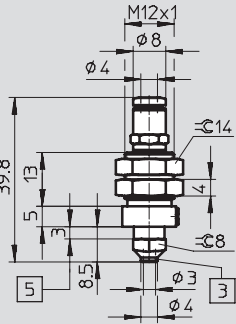
Technical data

FESTO

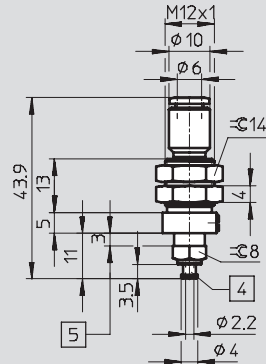
## Dimensions – ESH-HC

Push-in connector QS

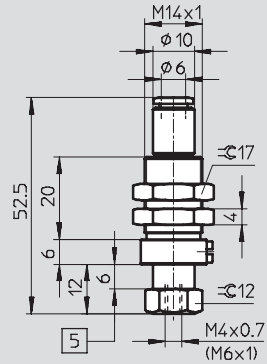
Holder size 1



Holder size 2

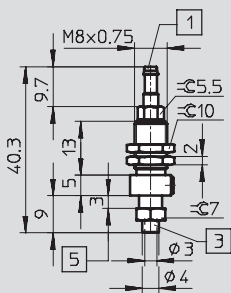


Holder size 3/Holder size 4\*

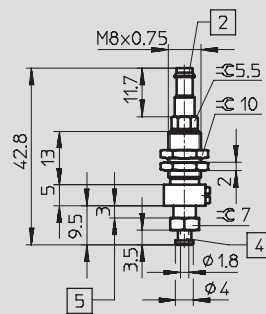


## Barbed fitting connector PK

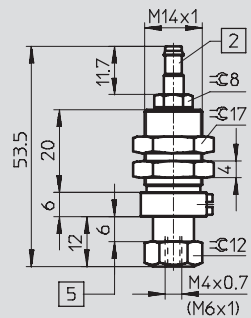
Holder size 1



Holder size 2

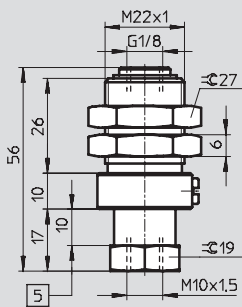


Holder size 3/Holder size 4\*

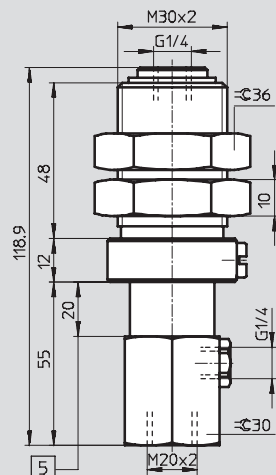


## Threaded connection G

Holder size 5



Holder size 6



1 Barbed fitting for 3 mm plastic tubing

2 Barbed fitting for 4 mm plastic tubing

3 Hole for vacuum generator  
4 Barbed fitting for vacuum generator

5 Stroke

\* Dimensions in brackets



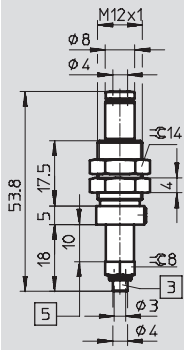
# Suction cup holders ESH

Technical data

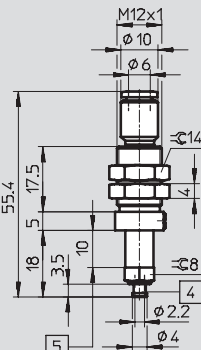
## Dimensions – ESH-HCL

Push-in connector QS

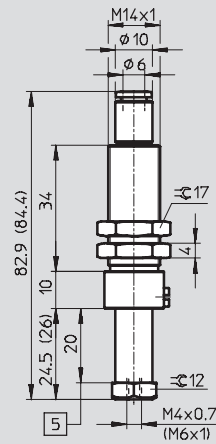
Holder size 1



Holder size 2

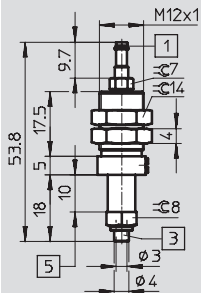


Holder size 3/Holder size 4\*

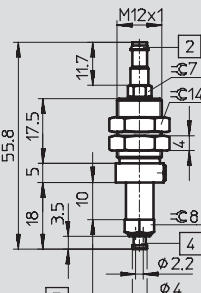


Barbed fitting connector PK

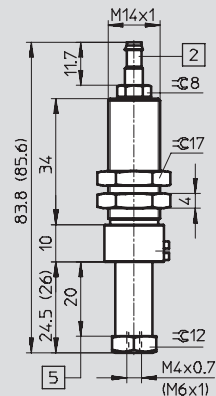
Holder size 1



Holder size 2

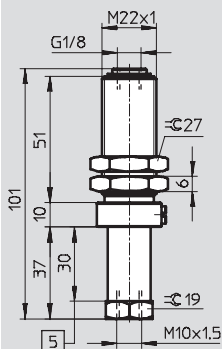


Holder size 3/Holder size 4\*

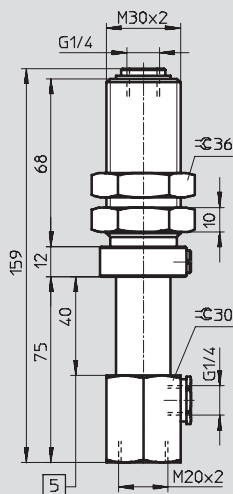


Threaded connection G

Holder size 5



Holder size 6



- 1) Barbed fitting for 3 mm plastic tubing
- 2) Barbed fitting for 4 mm plastic tubing
- 3) Hole for vacuum generator
- 4) Barbed fitting for vacuum generator
- 5) Stroke

1) Dimensions in brackets

# Suction cup holders ESH

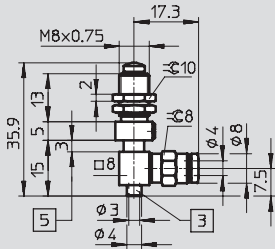
Technical data

FESTO

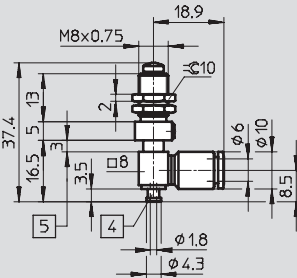
## Dimensions – ESH-HD

Push-in connector QS

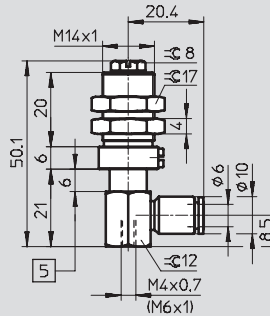
Holder size 1



Holder size 2

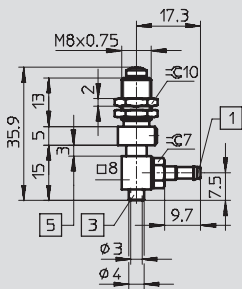


Holder size 3/Holder size 4\*

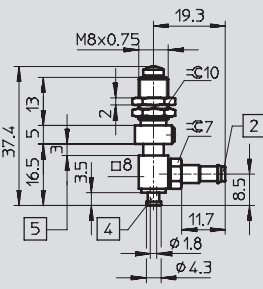


Barbed fitting connector PK

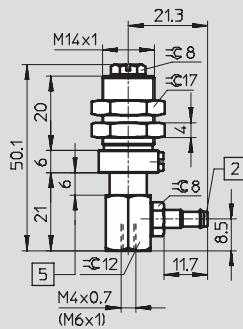
Holder size 1



Holder size 2

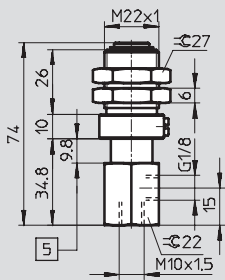


Holder size 3/Holder size 4\*

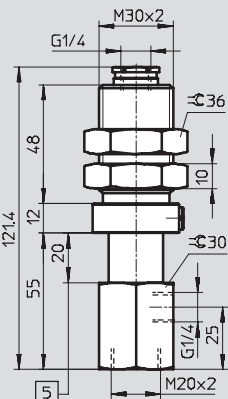


Threaded connection G

Holder size 5



Holder size 6



1 Barbed fitting for 3 mm plastic tubing

2 Barbed fitting for 4 mm plastic tubing

3 Hole for vacuum generator  
4 Barbed fitting for vacuum generator

5 Stroke

\* Dimensions in brackets



# Suction cup holders ESH

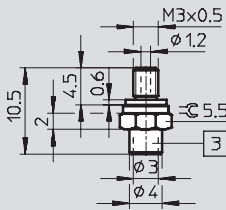
Technical data

FESTO

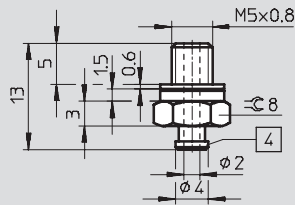
## Dimensions – ESH-HE

G and M thread

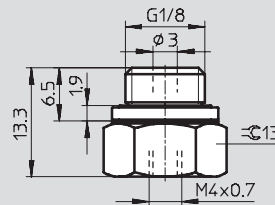
Holder size 1



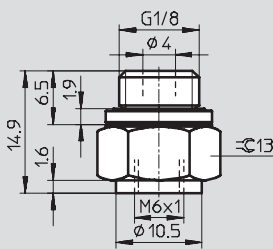
Holder size 2



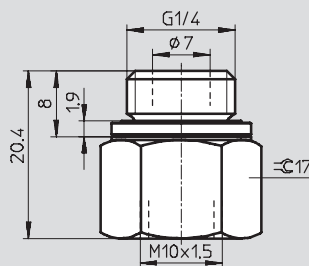
Holder size 3



Holder size 4



Holder size 5



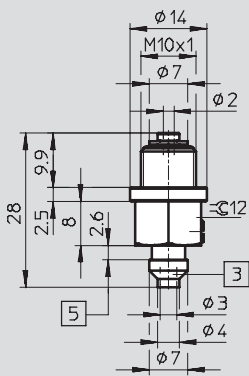
3 Hole for vacuum generator

4 Barbed fitting for vacuum generator

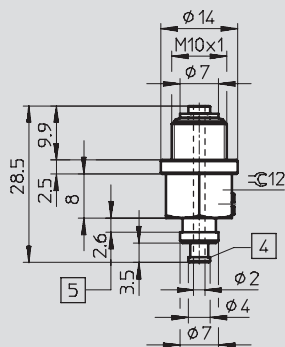
## Dimensions – ESH-HF

M thread

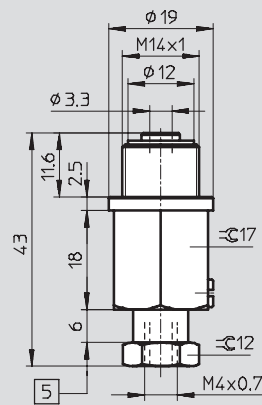
Holder size 1



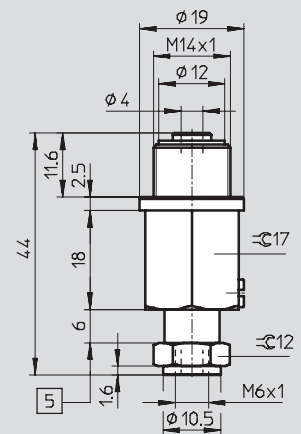
Holder size 2



Holder size 3



Holder size 4



3 Hole for vacuum generator

4 Barbed fitting for vacuum generator

5 Stroke

# Suction cup holders ESH

Technical data

**FESTO**

Ordering data							
ESH-HA							
Holder size	Connection	Push-in connector		Barbed fitting connector		Threaded connection	
		Part No.	Type	Part No.	Type	Part No.	Type
Male thread, 2 nuts, vacuum connection on top							
1	QS4	<b>189 193</b>	<b>ESH-HA-1-QS</b>	–	–	–	–
	PK-3	–	–	<b>189 194</b>	<b>ESH-HA-1-PK</b>	–	–
2	QS4	<b>189 195</b>	<b>ESH-HA-2-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 196</b>	<b>ESH-HA-2-PK</b>	–	–
3	QS6	<b>189 197</b>	<b>ESH-HA-3-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 198</b>	<b>ESH-HA-3-PK</b>	–	–
4	QS6	<b>189 199</b>	<b>ESH-HA-4-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 200</b>	<b>ESH-HA-4-PK</b>	–	–
5	G1/8	–	–	–	–	<b>189 201</b>	<b>ESH-HA-5-G</b>
6	G1/4	–	–	–	–	<b>189 202</b>	<b>ESH-HA-6-G</b>

Ordering data							
ESH-HB							
Holder size	Connection	Push-in connector		Barbed fitting connector		Threaded connection	
		Part No.	Type	Part No.	Type	Part No.	Type
Female thread, vacuum connection on side							
1	QS4	<b>189 203</b>	<b>ESH-HB-1-QS</b>	–	–	–	–
	PK-3	–	–	<b>189 204</b>	<b>ESH-HB-1-PK</b>	–	–
2	QS6	<b>189 205</b>	<b>ESH-HB-2-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 206</b>	<b>ESH-HB-2-PK</b>	–	–
3	QS6	<b>189 207</b>	<b>ESH-HB-3-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 208</b>	<b>ESH-HB-3-PK</b>	–	–
4	QS6	<b>189 209</b>	<b>ESH-HB-4-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 210</b>	<b>ESH-HB-4-PK</b>	–	–
5	G1/8	–	–	–	–	<b>189 211</b>	<b>ESH-HB-5-G</b>
6	G1/4	–	–	–	–	<b>189 212</b>	<b>ESH-HB-6-G</b>

Ordering data							
ESH-HC							
Holder size	Connection	Push-in connector		Barbed fitting connector		Threaded connection	
		Part No.	Type	Part No.	Type	Part No.	Type
Male thread, 2 nuts, vacuum connection on top, height compensator							
1	QS4	<b>189 213</b>	<b>ESH-HC-1-QS</b>	–	–	–	–
	PK-3	–	–	<b>189 214</b>	<b>ESH-HC-1-PK</b>	–	–
2	QS6	<b>189 215</b>	<b>ESH-HC-2-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 216</b>	<b>ESH-HC-2-PK</b>	–	–
3	QS6	<b>189 217</b>	<b>ESH-HC-3-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 218</b>	<b>ESH-HC-3-PK</b>	–	–
4	QS6	<b>189 219</b>	<b>ESH-HC-4-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 220</b>	<b>ESH-HC-4-PK</b>	–	–
5	G1/8	–	–	–	–	<b>189 221</b>	<b>ESH-HC-5-G</b>
6	G1/4	–	–	–	–	<b>189 222</b>	<b>ESH-HC-6-G</b>

# Suction cup holders ESH

Technical data

**FESTO**

Ordering data							
ESH-HCL							
Holder size	Connection	Push-in connector		Barbed fitting connector		Threaded connection	
		Part No.	Type	Part No.	Type	Part No.	Type
Male thread, 2 nuts, vacuum connection on top, height compensator, long							
1	QS4	<b>189 223</b>	<b>ESH-HCL-1-QS</b>	–	–	–	–
	PK-3	–	–	<b>189 224</b>	<b>ESH-HCL-1-PK</b>	–	–
2	QS6	<b>189 225</b>	<b>ESH-HCL-2-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 226</b>	<b>ESH-HCL-2-PK</b>	–	–
3	QS6	<b>189 227</b>	<b>ESH-HCL-3-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 228</b>	<b>ESH-HCL-3-PK</b>	–	–
4	QS6	<b>189 229</b>	<b>ESH-HCL-4-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 230</b>	<b>ESH-HCL-4-PK</b>	–	–
5	G1/8	–	–	–	–	<b>189 231</b>	<b>ESH-HCL-5-G</b>
6	G1/4	–	–	–	–	<b>189 232</b>	<b>ESH-HCL-6-G</b>

Ordering data							
ESH-HD							
Holder size	Connection	Push-in connector		Barbed fitting connector		Threaded connection	
		Part No.	Type	Part No.	Type	Part No.	Type
Male thread, 2 nuts, vacuum connection on side, height compensator							
1	QS4	<b>189 233</b>	<b>ESH-HD-1-QS</b>	–	–	–	–
	PK-3	–	–	<b>189 234</b>	<b>ESH-HD-1-PK</b>	–	–
2	QS6	<b>189 235</b>	<b>ESH-HD-2-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 236</b>	<b>ESH-HD-2-PK</b>	–	–
3	QS6	<b>189 237</b>	<b>ESH-HD-3-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 238</b>	<b>ESH-HD-3-PK</b>	–	–
4	QS6	<b>189 239</b>	<b>ESH-HD-4-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 240</b>	<b>ESH-HD-4-PK</b>	–	–
5	G1/8	–	–	–	–	<b>189 241</b>	<b>ESH-HD-5-G</b>
6	G1/4	–	–	–	–	<b>189 242</b>	<b>ESH-HD-6-G</b>

Ordering data							
ESH-HDL							
Holder size	Connection	Push-in connector		Barbed fitting connector		Threaded connection	
		Part No.	Type	Part No.	Type	Part No.	Type
Male thread, 2 nuts, vacuum connection on side, height compensator, long							
1	QS4	<b>189 243</b>	<b>ESH-HDL-1-QS</b>	–	–	–	–
	PK-3	–	–	<b>189 244</b>	<b>ESH-HDL-1-PK</b>	–	–
2	QS6	<b>189 245</b>	<b>ESH-HDL-2-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 246</b>	<b>ESH-HDL-2-PK</b>	–	–
3	QS6	<b>189 247</b>	<b>ESH-HDL-3-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 248</b>	<b>ESH-HDL-3-PK</b>	–	–
4	QS6	<b>189 249</b>	<b>ESH-HDL-4-QS</b>	–	–	–	–
	PK-4	–	–	<b>189 250</b>	<b>ESH-HDL-4-PK</b>	–	–
5	G1/8	–	–	–	–	<b>189 251</b>	<b>ESH-HDL-5-G</b>
6	G1/4	–	–	–	–	<b>189 252</b>	<b>ESH-HDL-6-G</b>

# Suction cup holders ESH

Technical data

Ordering data			
ESH-HE			
Holder size	Connection	Part No.	Type
Threaded connection for direct attachment			
1	M3	189 253	ESH-HE-1-M3
2	M5	189 254	ESH-HE-2-M5
3	G1/8	189 255	ESH-HE-3-G1/8
4	G1/8	189 256	ESH-HE-4-G1/8
5	G1/4	189 257	ESH-HE-5-G1/4

Ordering data			
ESH-HF			
Holder size	Connection	Part No.	Type
Threaded connection for direct attachment, height compensator			
1	M10	189 260	ESH-HF-1-M10x1
2	M10	189 261	ESH-HF-2-M10x1
3	M14	189 262	ESH-HF-3-M14x1
4	M14	189 263	ESH-HF-4-M14x1