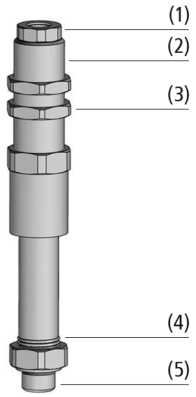
Spring Plungers FSTE-HDB

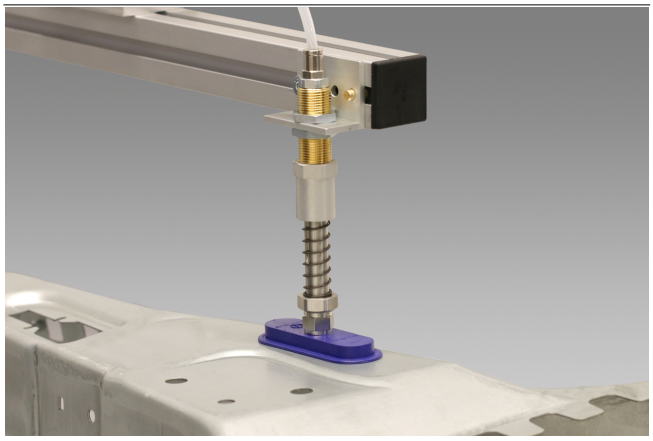
Stroke from 15 mm to 120 mm

UNIVERSAL

Spring Plungers FSTE-HDB



System design Spring Plungers FSTE-HDB



Spring plunger FSTE-HDB when handling body parts

Suitability for industry specific applications

Application

- Spring plunger with special sliding bearings and one damping spring for handling of workpieces with differing heights, such as curved metal sheets, etc.
- Handling of very sensitive workpieces (such as sheets of glass) without additional control functions to prevent damage, since the plunger ensures soft placement
- Handling tasks with very dynamic motion and short cycle times
- Extra smooth running, anti-rotation design for process secured operation even under harsh and difficult conditions

Design

- Spring plunger consisting of high strength stainless steel rod, brass sleeve (2) with integrated bearing and damping spring (4)
- Plunger rod with integrated vacuum feed, always female connection thread (1)
- Ball bearing anti-rotation guard
- Always male connection thread for suction cup (5)
- Long male mounting thread with lock nuts (3)
- Block guard for damping spring

Product highlights

- Maintenance-free and durable thanks to high-quality slide bearings; enables minimum cycle times
- Very smooth-running, anti-rotation version for oval suction cups in demanding applications
- Long male thread opens up a large, flexible adjustment range
- Durable damping springs thanks to block protection

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Designation code Spring Plungers FSTE-HDB

FSTE	–	HDB	–	G1/4-AG	–	25	–	VG-AB
1		2		3		4		5

1 – Abbreviated designation

Code	Version
FSTE	FSTE

2 – Variant

Code	Type
HDB	Heavy Duty Ball (ball bearing-mounted anti-rotation guard)

3 – Suction cup connection

Code	Connection
G1/8-AG	G1/8-AG (AG = male (M))
G1/4-AG	G1/4-AG
G3/8-AG	G3/8-AG
G1/2-AG	G1/2-AG

4 – Plunger stroke

Code	Plunger stroke in mm
15…120	15 to 120

5 – Product addition

Code	Type
VG-AB	Anti-rotation guard, anti block

Spring plunger FSTE-HDB is delivered as a ready-to-connect product.

Ordering data Spring Plungers FSTE-HDB

Type*		Plunger stroke in mm:				
		15	25	45	80	120
FSTE-HDB	G1/8-AG	10.01.02.01437	10.01.02.01438	10.01.02.01439	-	-
FSTE-HDB	G1/4-AG	-	10.01.02.01427	10.01.02.01382	10.01.02.01377	10.01.02.01527
FSTE-HDB	G3/8-AG	-	10.01.02.01436	10.01.02.01422	10.01.02.01423	10.01.02.01530
FSTE-HDB	G1/2-AG	-	10.01.02.01440	-	10.01.02.01441	-

*Recommendation: To raise the lifetime in continuous operation, prevent the maximal slide stroke

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Technical data Spring Plungers FSTE-HDB

Type	Spring rate [N/mm]	Spring pretension [N]	Spring force center [N]*	Vertical load [N]**	Horizontal load [N]***	Anzugsdrehmoment (max) [Nm]	Weight [g]	Operating temperature [°C]
FSTE-HDB G1/8-AG 15 VG-AB	0.211	3.8	5.42	3,700	385	40	130	0 ... 80 °C
FSTE-HDB G1/8-AG 25 VG-AB	0.143	3.7	5.51	3,700	283	40	137	0 ... 80 °C
FSTE-HDB G1/8-AG 45 VG-AB	0.097	3.6	5.77	3,700	173	40	149	0 ... 80 °C
FSTE-HDB G1/4-AG 25 VG-AB	0.711	3.1	11.95	2,400	747	40	235	0 ... 80 °C
FSTE-HDB G1/4-AG 45 VG-AB	0.453	3.5	13.71	2,400	466	40	253	0 ... 80 °C
FSTE-HDB G1/4-AG 80 VG-AB	0.417	12.4	29.06	2,400	340	40	298	0 ... 80 °C
FSTE-HDB G3/8-AG 25 VG-AB	0.711	3.1	11.95	2,400	747	40	240	0 ... 80 °C
FSTE-HDB G3/8-AG 45 VG-AB	0.453	3.5	13.71	2,400	466	40	256	0 ... 80 °C
FSTE-HDB G3/8-AG 80 VG-AB	0.417	12.4	29.06	2,400	340	40	304	0 ... 80 °C
FSTE-HDB G1/2-AG 25 VG-AB	3.828	4.6	52.50	4,900	1,870	50	590	0 ... 80 °C
FSTE-HDB G1/2-AG 80 VG-AB	1.072	21.5	64.50	4,900	800	50	725	0 ... 80 °C
FSTE-HDB G1/4-AG 120 VG-AB	0.232	10.4	24.29	2,400	290	40	345	0 ... 80 °C
FSTE-HDB G3/8-AG 120 VG-AB	0.232	10.4	24.29	2,400	290	40	350	0 ... 80 °C

*Referred to 50 % of operating stroke
**Maximum static loading
***The specification of the horizontal load refers to the lower edge of the plunger with extended spring. It is a maximum static stress and it impairs the spring compression and extension in horizontal position.

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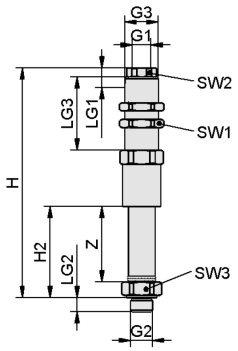

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Type	G1	G2	G3	H [mm]	H2 [mm]	LG1 [mm]	LG2 [mm]	LG3 [mm]	SW1 [mm]	SW2 [mm]	SW3 [mm]	Z (Stroke) [mm]
FSTE-HDB G1/8-AG 15 VG-AB	G1/8"-F	G1/8"-M	M16x1-M	93	23	7	8.5	34	22	12	19	15
FSTE-HDB G1/8-AG 25 VG-AB	G1/8"-F	G1/8"-M	M16x1-M	106	33	7	8.5	34	22	12	19	25
FSTE-HDB G1/8-AG 45 VG-AB	G1/8"-F	G1/8"-M	M16x1-M	131	53	7	8.5	34	22	12	19	45
FSTE-HDB G3/8-AG 25 VG-AB	G1/8"-F	G3/8"-M	M20x1.5-M	119	36	12	8.0	44	24	17	22	25
FSTE-HDB G3/8-AG 45 VG-AB	G1/8"-F	G3/8"-M	M20x1.5-M	139	56	12	8.0	44	24	17	22	45
FSTE-HDB G3/8-AG 80 VG-AB	G1/8"-F	G3/8"-M	M20x1.5-M	189	91	12	8.0	44	24	17	22	80
FSTE-HDB G1/4-AG 25 VG-AB	G1/8"-F	G1/4"-M	M20x1.5-M	119	35	12	8.5	44	24	17	22	25
FSTE-HDB G1/4-AG 45 VG-AB	G1/8"-F	G1/4"-M	M20x1.5-M	139	55	12	8.5	44	24	17	22	45
FSTE-HDB G1/4-AG 80 VG-AB	G1/8"-F	G1/4"-M	M20x1.5-M	189	90	12	8.5	44	24	17	22	80
FSTE-HDB G1/2-AG 25 VG-AB	G3/8"-F	G1/2"-M	M30x1.5-M	137	37	16	10.5	50	36	24	32	25
FSTE-HDB G1/2-AG 80 VG-AB	G3/8"-F	G1/2"-M	M30x1.5-M	217	92	16	10.5	50	36	24	32	80
FSTE-HDB G1/4-AG 120 VG-AB	G1/8"-F	G1/4"-M	M20x1.5-M	239	130	12	8.5	44	24	17	22	120
FSTE-HDB G3/8-AG 120 VG-AB	G1/8"-F	G3/8"-M	M20x1.5-M	239	131	12	8.0	44	24	17	22	120

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