

Spring plungers

Spring plunger FSTI



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Our highlights...

- Spring plunger with high-quality sliding bearings and excellent guidance
- Internal damping spring
- Minimum overall height; weight optimized
- Anti-rotation guard available as option

Your advantages...

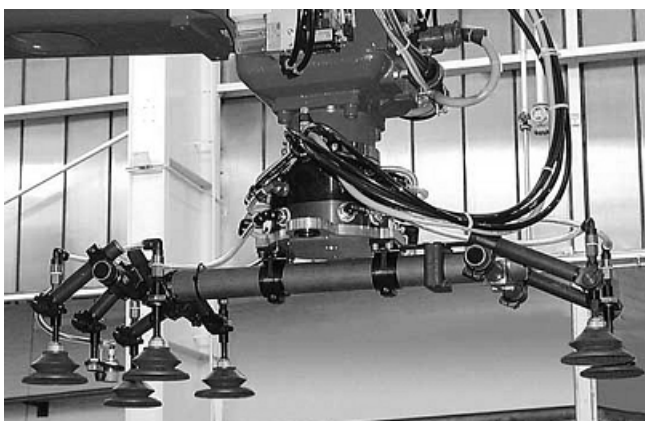
- >Very economical operation, since no maintenance needed
- >Soft placement on easily damaged workpieces; spring protected against dirt and external mechanical forces
- >Suitable for use in very small spaces and with highly dynamic motion
- >Suitable for use with oval suction pads



Vacuum cross-beam with spring plungers FSTI

Applications

- Handling of workpieces with differing heights (such as curved sheet-metal parts, etc.)
- Handling of easily damaged workpieces (such as sheets of glass) without additional control functions to prevent damage, since the plunger ensures soft placement
- Particularly suitable for handling tasks in the automobile sector



Robot vacuum spider with spring plungers FSTI

Construction

- Spring plunger consisting of high-strength steel rod, guide sleeve with integrated sliding bearing and internal damping spring
- Burnished surface finish; on the version with anti-turning function, the plunger rod is specially coated for optimum sliding behaviour
- Plunger rod with integrated vacuum feed (connection thread at top)
- Anti-rotation guard by a flat side machined on the plunger rod and a correspondingly shaped guide sleeve
- Thread for suction pad is always a male thread
- Thread for vacuum line is either a female or male thread, as desired



Suitability for branch-specific applications

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Designation code Spring plunger FSTI

Short designation	Suction-pad connection	Vacuum connection	Plunger stroke in mm	Additional function
Example: FSTI	G1/4-AG	G1/8-AG	10	VG
FSTI	G1/4-AG (male) G3/8-AG	G1/8-AG (AG = male) G1/8-IG (IG = female)	10 to 50	VG...with anti-rotation guard



Ordering data Spring plunger FSTI

Type*	Plunger stroke in mm**		
	10	25	50
FSTI G1/4-AG G1/8-AG	10.01.02.00864	10.01.02.00868	10.01.02.00992
FSTI G1/4-AG G1/8-AG VG	10.01.02.00865	10.01.02.00869	10.01.02.00993
FSTI G1/4-AG G1/8-IG	10.01.02.00866	10.01.02.00870	10.01.02.00994
FSTI G1/4-AG G1/8-IG VG	10.01.02.00867	10.01.02.00871	10.01.02.00995
FSTI G3/8-AG G1/8-AG	10.01.02.00755	10.01.02.00843	10.01.02.00996
FSTI G3/8-AG G1/8-AG VG	10.01.02.00860	10.01.02.00862	10.01.02.00997
FSTI G3/8-AG G1/8-IG	10.01.02.00851	10.01.02.00850	10.01.02.00998
FSTI G3/8-AG G1/8-IG VG	10.01.02.00861	10.01.02.00863	10.01.02.00999

*VG = Version with rotation lock for repeatedly accurate positioning of suction pads

**Commendation: To raise the lifetime in continuous duty, prevent the maximal slide stroke



Technical data Spring plunger FSTI

Type	Spring rate [N/mm]	Spring pre-tension [N]	Spring force [N]*	Vertical load [N]**	Horizontal load [N]***	Weight [g]	Operating temperature [°C]
FSTI G1/4-AG G1/8-AG 10	0,097	7,08	7,57	1000	700	150	0...80
FSTI G1/4-AG G1/8-AG 10 VG	0,097	7,08	7,57	1000	500	150	0...80
FSTI G1/4-AG G1/8-IG 10	0,097	7,08	7,57	1000	700	150	0...80
FSTI G1/4-AG G1/8-IG 10 VG	0,097	7,08	7,57	1000	500	150	0...80
FSTI G1/4-AG G1/8-AG 25	0,097	5,63	6,84	1000	700	180	0...80
FSTI G1/4-AG G1/8-AG 25 VG	0,097	5,63	6,84	1000	500	180	0...80
FSTI G1/4-AG G1/8-IG 25	0,097	5,63	6,84	1000	700	180	0...80
FSTI G1/4-AG G1/8-IG 25 VG	0,097	5,63	6,84	1000	500	180	0...80
FSTI G1/4-AG G1/8-AG 50	0,097	2,30	4,70	1000	700	230	0...80
FSTI G1/4-AG G1/8-AG 50 VG	0,097	2,30	4,70	1000	500	230	0...80
FSTI G1/4-AG G1/8-IG 50	0,097	2,30	4,70	1000	700	230	0...80
FSTI G1/4-AG G1/8-IG 50 VG	0,097	2,30	4,70	1000	500	230	0...80
FSTI G3/8-AG G1/8-AG 10	0,097	7,08	7,57	1000	700	150	0...80
FSTI G3/8-AG G1/8-AG 10 VG	0,097	7,08	7,57	1000	500	150	0...80
FSTI G3/8-AG G1/8-IG 10	0,097	7,08	7,57	1000	700	150	0...80
FSTI G3/8-AG G1/8-IG 10 VG	0,097	7,08	7,57	1000	500	150	0...80
FSTI G3/8-AG G1/8-AG 25	0,097	5,63	6,84	1000	700	180	0...80
FSTI G3/8-AG G1/8-AG 25 VG	0,097	5,63	6,84	1000	500	180	0...80
FSTI G3/8-AG G1/8-IG 25	0,097	5,63	6,84	1000	700	180	0...80
FSTI G3/8-AG G1/8-IG 25 VG	0,097	5,63	6,84	1000	500	180	0...80
FSTI G3/8-AG G1/8-AG 50	0,097	2,30	4,70	1000	700	230	0...80
FSTI G3/8-AG G1/8-AG 50 VG	0,097	2,30	4,70	1000	500	230	0...80
FSTI G3/8-AG G1/8-IG 50	0,097	2,30	4,70	1000	700	230	0...80
FSTI G3/8-AG G1/8-IG 50 VG	0,097	2,30	4,70	1000	500	230	0...80

*Referred to 50% of operating stroke

**Maximum static loading

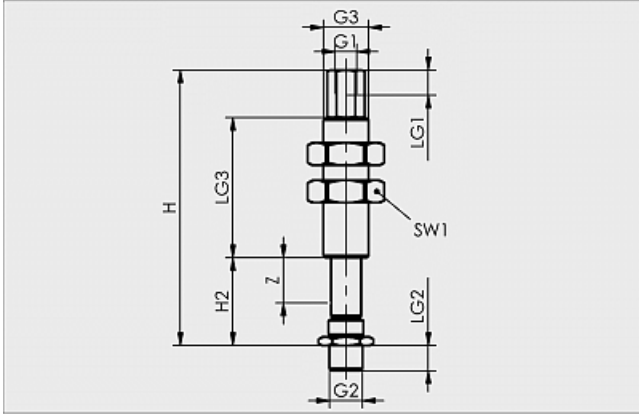
***The horizontal loading is a maximum static loading and has a negative effect on the in and out movement in a horizontal position

Spring plungers

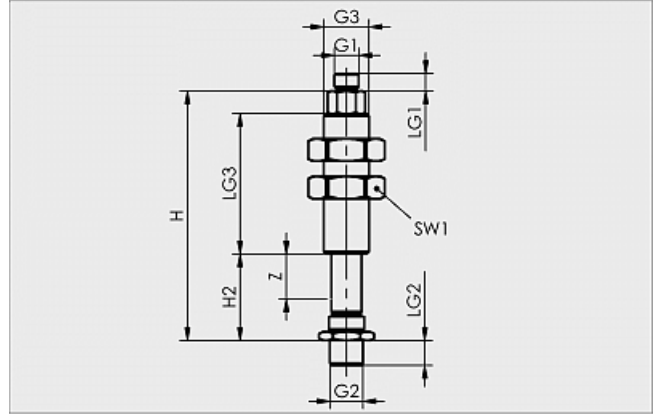
Spring plunger FSTI



Design data Spring plunger FSTI



FSTI...AG...IG(-VG)



FSTI...AG...AG(-VG)

Type	Dimensions in mm										
	G1	G2	G3	H	H2	LG1	LG2	LG3	SW1	Z (Stroke)	
FSTI G1/4-AG G1/8-AG 10	G1/8"-M	G1/4"-M	M18x1.5-M	71,0	21,0	6,5	10	41	27	10	
FSTI G1/4-AG G1/8-AG 10 VG	G1/8"-M	G1/4"-M	M18x1.5-M	71,0	21,0	6,5	10	41	27	10	
FSTI G1/4-AG G1/8-IG 10	G1/8"-F	G1/4"-M	M18x1.5-M	79,5	19,5	12,0	10	41	27	10	
FSTI G1/4-AG G1/8-IG 10 VG	G1/8"-F	G1/4"-M	M18x1.5-M	79,5	19,5	12,0	10	41	27	10	
FSTI G1/4-AG G1/8-AG 25	G1/8"-M	G1/4"-M	M18x1.5-M	101,0	36,0	6,5	10	56	27	25	
FSTI G1/4-AG G1/8-AG 25 VG	G1/8"-M	G1/4"-M	M18x1.5-M	101,0	36,0	6,5	10	56	27	25	
FSTI G1/4-AG G1/8-IG 25	G1/8"-F	G1/4"-M	M18x1.5-M	109,5	34,5	12,0	10	56	27	25	
FSTI G1/4-AG G1/8-IG 25 VG	G1/8"-F	G1/4"-M	M18x1.5-M	109,5	34,5	12,0	10	56	27	25	
FSTI G1/4-AG G1/8-AG 50	G1/8"-M	G1/4"-M	M18x1.5-M	176,5	59,0	6,5	8	91	27	50	
FSTI G1/4-AG G1/8-AG 50 VG	G1/8"-M	G1/4"-M	M18x1.5-M	176,5	59,0	6,5	8	91	27	50	
FSTI G1/4-AG G1/8-IG 50	G1/8"-F	G1/4"-M	M18x1.5-M	180,0	59,0	12,0	8	91	27	50	
FSTI G1/4-AG G1/8-IG 50 VG	G1/8"-F	G1/4"-M	M18x1.5-M	180,0	59,0	12,0	8	91	27	50	
FSTI G3/8-AG G1/8-AG 10	G1/8"-M	G3/8"-M	M18x1.5-M	72,0	22,0	6,5	9	41	27	10	
FSTI G3/8-AG G1/8-AG 10 VG	G1/8"-M	G3/8"-M	M18x1.5-M	72,0	22,0	6,5	9	41	27	10	
FSTI G3/8-AG G1/8-IG 10	G1/8"-F	G3/8"-M	M18x1.5-M	82,5	22,5	12,0	9	41	27	10	
FSTI G3/8-AG G1/8-IG 10 VG	G1/8"-F	G3/8"-M	M18x1.5-M	82,5	22,5	12,0	9	41	27	10	
FSTI G3/8-AG G1/8-AG 25	G1/8"-M	G3/8"-M	M18x1.5-M	102,0	37,0	6,5	9	56	27	25	
FSTI G3/8-AG G1/8-AG 25 VG	G1/8"-M	G3/8"-M	M18x1.5-M	102,0	37,0	6,5	9	56	27	25	
FSTI G3/8-AG G1/8-IG 25	G1/8"-F	G3/8"-M	M18x1.5-M	112,5	37,5	12,0	9	56	27	25	
FSTI G3/8-AG G1/8-IG 25 VG	G1/8"-F	G3/8"-M	M18x1.5-M	112,5	37,5	12,0	9	56	27	25	
FSTI G3/8-AG G1/8-AG 50	G1/8"-M	G3/8"-M	M18x1.5-M	176,5	54,0	6,5	8	91	27	50	
FSTI G3/8-AG G1/8-AG 50 VG	G1/8"-M	G3/8"-M	M18x1.5-M	176,5	54,0	6,5	8	91	27	50	
FSTI G3/8-AG G1/8-IG 50	G1/8"-F	G3/8"-M	M18x1.5-M	180,0	54,0	12,0	8	91	27	50	
FSTI G3/8-AG G1/8-IG 50 VG	G1/8"-F	G3/8"-M	M18x1.5-M	180,0	54,0	12,0	8	91	27	50	