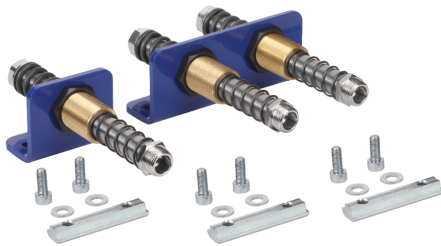
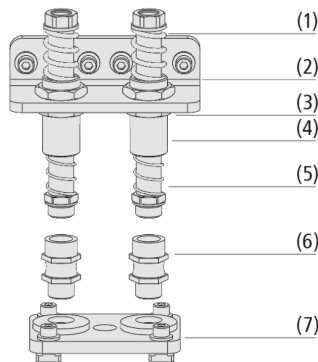


# Suspension Rigid FST-STARR

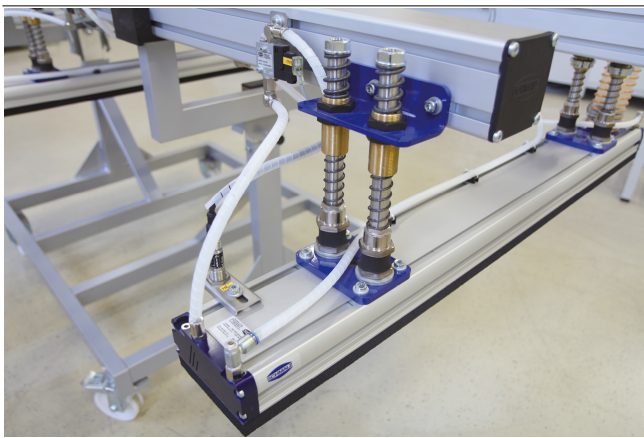
Stroke from 25 mm to 75 mm



Suspension Rigid FST-STARR



System Design Suspension Rigid FST-STARR



Mounting example rigid suspension FST-STARR

## Suitability for Industry Specific Applications

### Applications

- Spring plunger with two damping springs and special slide bearings for handling workpieces with differences in height, e.g. curved sheet metal or wooden parts
- Handling very sensitive components without additional control requirements (e.g. glass sheets), it ensures that workpieces are set down gently
- Handling very warped and naturally grown materials (e.g. dried wood) without additional technical control requirements
- Use under harsh conditions
- For handling tasks with very dynamic motion and short cycle times

### Design

- Spring plunger with stainless steel plunger rod, brass guide sleeve with integrated sliding sleeve, both lower (5) and upper (1) damping spring
- Powder coated retaining plate (2) as attachment to an aluminum section to hold the brass guide sleeve (4) and integrated sliding sleeve; the guide sleeve is attached by two lock nuts (3)
- Jointed mounting (6) available as an option
- Powder coated connection plate (7) for connection to an area gripper; the connection plate can be adapted to individual area gripping systems

### Product Highlights

- Maintenance-free and durable thanks to high-quality plain bearings and push rod; enables minimum cycle times
- With two damping springs optimized for sensitive workpieces
- Connection plate enables easy connection to Schmalz grippers of the F-series and SBX-C
- Suction cup connections with male and female thread suitable for numerous suction cups

# Suspension Rigid FST-STARR

Stroke from 25 mm to 75 mm

## Designation Code Suspension Rigid FST-STARR

<b>FST-STARR</b>	–	<b>50</b>	–	<b>HD</b>		<b>1</b>	–	<b>G1/2-AG</b>	–	<b>G3/8-IG</b>
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>		<b>6</b>

### 1 – Abbreviated designation

Code	Version
FST-STARR	Rigid

### 2 – Plunger stroke

Code	Plunger stroke in mm
25...75	25 to 75

### 3 – Variant

Code	Type
HD	Heavy duty

### 4 – Number of spring plungers

Code	Number
1...2	1 and 2

### 5 – Suction cup connection

Code	Connection
G1/2-AG	G1/2-AG

### 6 – Vacuum connection

Code	Connection
G3/8-IG	G3/8-IG

The rigid suspension FST-STARR (retaining plate + spring plunger) is supplied as an individual part. To receive a complete rigid suspension (retaining plate + spring plunger + connection plate + accessories), the following ordering steps are required:

- Rigid suspension FST-STARR (step 1) – retaining plate + spring plunger, available with different strokes and number of spring plungers
- Connection plate FLAN-PL (step 2) – available for different area grippers

Available accessories: Flexolink (FLK), flange plate (FLAN-PL)

## Ordering Data Suspension Rigid FST-STARR

Type*	Part no.
FST-STARR 25 HD1 G1/2-AG G3/8-IG	10.01.10.05810
FST-STARR 50 HD1 G1/2-AG G3/8-IG	10.01.10.05809
FST-STARR 75 HD1 G1/2-AG G3/8-IG	10.01.10.05808
FST-STARR 25 HD2 G1/2-AG G3/8-IG	10.01.10.05806
FST-STARR 50 HD2 G1/2-AG G3/8-IG	10.01.10.05805
FST-STARR 75 HD2 G1/2-AG G3/8-IG	10.01.10.05803
*MO-PROF 90x90, 120x120	

Type*	Part no.
FST-STARR 25 HD1 G1/2-AG G3/8-IG	10.01.10.07009
FST-STARR 50 HD1 G1/2-AG G3/8-IG	10.01.10.07010
FST-STARR 75 HD1 G1/2-AG G3/8-IG	10.01.10.07011
FST-STARR 25 HD2 G1/2-AG G3/8-IG	10.01.10.07012
FST-STARR 50 HD2 G1/2-AG G3/8-IG	10.01.10.07013
FST-STARR 75 HD2 G1/2-AG G3/8-IG	10.01.10.07014
*MO-PROF 40x40, 80x40	

## Ordering Data Accessories Suspension Rigid FST-STARR

Type	Part no.
Flange plate   FLAN-PL 120x85x10 ST FLGR	10.01.10.05701
Flange plate   FLAN-PL 400x90x10 ST SBX	10.01.10.05702

Type	Part no.
Flexolink   FLK G1/2-IG G1/2-AG	10.01.03.00175
Flexolink   FLK G1/2-IG G1/2-AG V	10.01.03.00207

## Suspension Rigid FST-STARR

Stroke from 25 mm to 75 mm

### Technical Data Suspension Rigid FST-STARR

Type	Spring rate [N/mm]	Spring pretension [N/mm]	Spring force center [N]*	Vertical load [N]**	Horizontal load [N]***	Weight [g]	Operating temperature [°C]
FST-STARR 25 HD1 G1/2-AG G3/8-IG	4	26	74	3,000	620	1,200	0 ... 80 °C
FST-STARR 25 HD1 G1/2-AG G3/8-IG	4	26	74	2,100	620	1,200	0 ... 80 °C
FST-STARR 25 HD2 G1/2-AG G3/8-IG	4	52	147	6,000	1,240	2,300	0 ... 80 °C
FST-STARR 25 HD2 G1/2-AG G3/8-IG	4	52	147	4,200	1,240	2,300	0 ... 80 °C
FST-STARR 50 HD1 G1/2-AG G3/8-IG	2	6	51	3,000	480	1,250	0 ... 80 °C
FST-STARR 50 HD1 G1/2-AG G3/8-IG	2	6	51	2,100	480	1,250	0 ... 80 °C
FST-STARR 50 HD2 G1/2-AG G3/8-IG	2	11	102	6,000	960	2,400	0 ... 80 °C
FST-STARR 50 HD2 G1/2-AG G3/8-IG	2	11	102	4,200	960	2,400	0 ... 80 °C
FST-STARR 75 HD1 G1/2-AG G3/8-IG	2	37	78	3,000	400	1,300	0 ... 80 °C
FST-STARR 75 HD1 G1/2-AG G3/8-IG	2	37	78	2,100	400	1,300	0 ... 80 °C
FST-STARR 75 HD2 G1/2-AG G3/8-IG	2	74	155	6,000	800	2,500	0 ... 80 °C
FST-STARR 75 HD2 G1/2-AG G3/8-IG	2	74	155	4,200	800	2,500	0 ... 80 °C

\*Referred to 50 % of operating stroke

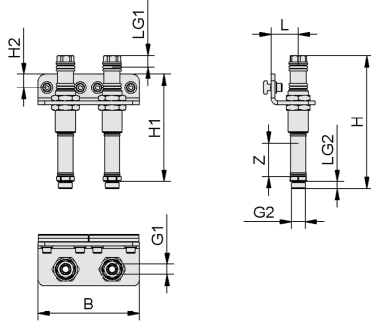
\*\*Maximum static loading

\*\*\*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.

# Suspension Rigid FST-STARR

Stroke from 25 mm to 75 mm

## Design Data Suspension Rigid FST-STARR



FST-STARR, FLAN-PL

# Suspension Rigid FST-STARR

Stroke from 25 mm to 75 mm

## Design Data Suspension Rigid FST-STARR

Type	B [mm]	G1	G2	G3	H [mm]*	H1 [mm]	H2 [mm]	H3 [mm]	H4 [mm]	L [mm]	L3 [mm]	L4 [mm]	LG2 [mm]	LG3 [mm]	Z (Stroke) [mm]
FST-STARR 25 HD1 G1/2-AG G3/8-IG	75	G3/8"-F	G1/2"-M	G1/2"-M	167.6	129	20	10	20	41	6	12	11	14	25
FST-STARR 50 HD1 G1/2-AG G3/8-IG	75	G3/8"-F	G1/2"-M	G1/2"-M	199.8	161	20	10	20	41	6	12	11	-	50
FST-STARR 75 HD1 G1/2-AG G3/8-IG	75	G3/8"-F	G1/2"-M	G1/2"-M	238.6	200	20	10	20	41	6	12	11	14	75
FST-STARR 25 HD2 G1/2-AG G3/8-IG	152	G3/8"-F	G1/2"-M	G1/2"-M	167.6	129	20	10	20	41	6	12	11	11	25
FST-STARR 50 HD2 G1/2-AG G3/8-IG	152	G3/8"-F	G1/2"-M	G1/2"-M	199.8	161	20	10	20	41	6	12	11	11	50
FST-STARR 75 HD2 G1/2-AG G3/8-IG	152	G3/8"-F	G1/2"-M	G1/2"-M	238.6	200	20	10	20	41	6	12	11	11	75
FST-STARR 25 HD1 G1/2-AG G3/8-IG	75	G3/8"-F	G1/2"-M	G1/2"-M	167.6	129	20	10	20	41	2	7	11	14	25
FST-STARR 50 HD1 G1/2-AG G3/8-IG	75	G3/8"-F	G1/2"-M	G1/2"-M	199.8	161	20	10	20	41	2	7	11	14	50
FST-STARR 75 HD1 G1/2-AG G3/8-IG	75	G3/8"-F	G1/2"-M	G1/2"-M	238.6	200	20	10	20	41	2	7	11	14	75
FST-STARR 25 HD2 G1/2-AG G3/8-IG	152	G3/8"-F	G1/2"-M	G1/2"-M	167.6	129	20	10	20	41	2	7	11	11	25
FST-STARR 50 HD2 G1/2-AG G3/8-IG	152	G3/8"-F	G1/2"-M	G1/2"-M	199.8	161	20	10	20	41	2	7	11	11	50
FST-STARR 75 HD2 G1/2-AG G3/8-IG	152	G3/8"-F	G1/2"-M	G1/2"-M	238.6	200	20	10	20	41	2	7	11	11	75

\*when installed, 33.5 mm higher with Flexolink; 53.0 mm higher with Flexolink in reinforced design

Type	B1 [mm]	L1 [mm]	X1 [mm]	Y1 [mm]
FLAN-PL 120x85x10 ST FLGR	-	-	90	65
FLAN-PL 400x90x10 ST SBX	-	-	280	65