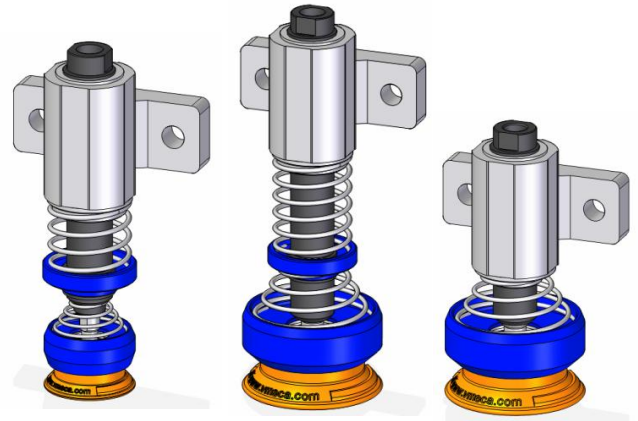


Smart Plunger - FCF Series

Feature

- Easy replace suction cup rubber
- Always return back to center position (wide ball-joint angle)
- Less slide friction (with ball bush)
- Light weight and long lifetime (hard anodized aluminum)
- Very compact size (compare with typical ball-joint mount)
- Easy installation and flexible mount
(Integral bracket with level spring plunger)



PAD Feature

- Excellent for flat and curved material in vertical and horizontal application
- Great designed pattern for anti-sliding
- Excellent for transfer without slipperiness
- Available transferring without vibration

Suitable for handling

- Metal sheet
- Car panel
- Press metal sheet
- Panel
- Electrical goods
- Curved glass

Order No.

SP30 - BJ03 - FCF50- PU



① Stroke

| | | |
|--------|---|------|
| SP20 | - | 20mm |
| ● SP30 | - | 30mm |
| SP50 | - | 50mm |
| SP70 | - | 70mm |

② Ball Joint

| | | |
|--------|---|---|
| BJ02 | - | Ball Joint (FCF30.40) |
| ● BJ03 | - | Ball Joint (FCF50.60.70.80.100.125) |
| SM02 | - | Without Ball Joint (FCF25.30.40) |
| SM03 | - | Without Ball Joint (FCF50.60.70.80.100.125) |

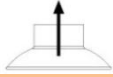
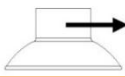
③ Pad

| | | |
|---------|---|------|
| FCF30 | - | ø30 |
| FCF40 | - | ø40 |
| ● FCF50 | - | ø50 |
| FCF60 | - | ø60 |
| FCF70 | - | ø70 |
| FCF80 | - | ø80 |
| FCF100 | - | ø100 |
| FCF125 | - | ø125 |

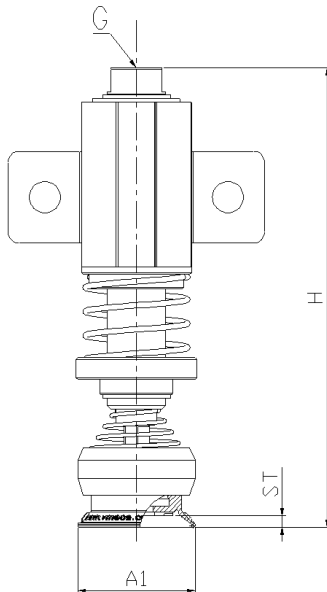
④ Material

| | | |
|------|---|------------------------------|
| N | - | NBR |
| S | - | Silicon |
| WS | - | White Silicon |
| HS | - | High Temp. Silicon |
| CS | - | Conductive (Special mat'l) |
| A | - | Mark Free |
| ● PU | - | Poly Urethane |
| WPU | - | Poly Urethane (Minimal mark) |

Recommended (max.) lifting forces

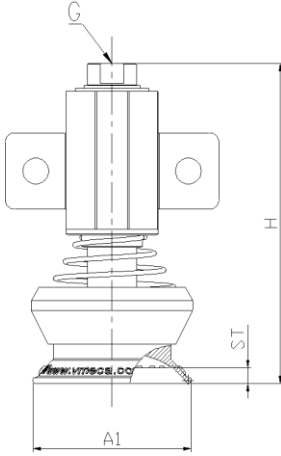
| Model | Volume (cm ³) | Lifting Force (kg) - Perpendicular  | | | Lifting Force (kg) - Parallel  | | |
|---------|----------------------------|--|---------|---------|---|---------|---------|
| | | -20 kPa | -60 kPa | -90 kPa | -20 kPa | -60 kPa | -90 kPa |
| FCF 30 | 2.0 | 2 | 4.6 | 6.4 | 0.8 | 2.0 | 2.9 |
| FCF 40 | 4.4 | 2.9 | 6.9 | 9.9 | 2.1 | 5.0 | 7.2 |
| FCF 50 | 8 | 4.2 | 10.8 | 15.4 | 3.7 | 6.7 | 8.9 |
| FCF 60 | 14.6 | 5.6 | 15.2 | 22.3 | 5.5 | 13.3 | 16.7 |
| FCF 70 | 20.7 | 7.6 | 19.6 | 28.2 | 6.3 | 15.8 | 20.1 |
| FCF 80 | 36.0 | 10.3 | 25.9 | 34.4 | 6.7 | 17.7 | 23.8 |
| FCF 100 | 58.0 | 14.7 | 37.1 | 50.6 | 13.6 | 35.4 | 43.7 |
| FCF 125 | 115.0 | 19.4 | 44.5 | 57.9 | 19.1 | 42.5 | 64.9 |

Dimension (Ball Joint type)

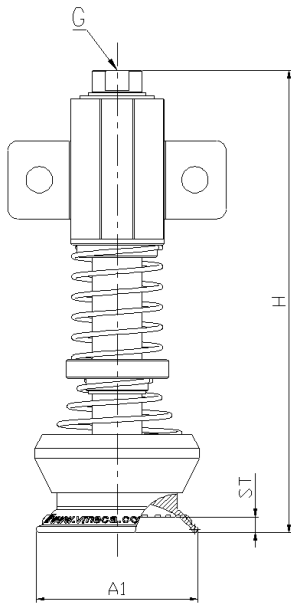


| Model | | A1 | ST | H | G |
|-----------|-------|----|-----|-------|------|
| SP20-BJ02 | FCF30 | 32 | 3.3 | 125.2 | G1/8 |
| | FCF40 | 42 | 4 | 126.9 | |
| SP30-BJ02 | FCF30 | 32 | 3.3 | 139.2 | |
| | FCF40 | 42 | 4 | 140.9 | |
| SP50-BJ02 | FCF30 | 32 | 3.3 | 165.2 | |
| | FCF40 | 42 | 4 | 166.9 | |
| SP70-BJ02 | FCF30 | 32 | 3.3 | 191.2 | |
| | FCF40 | 42 | 4 | 192.9 | |

Dimension (Level Spring Ball Joint Type)

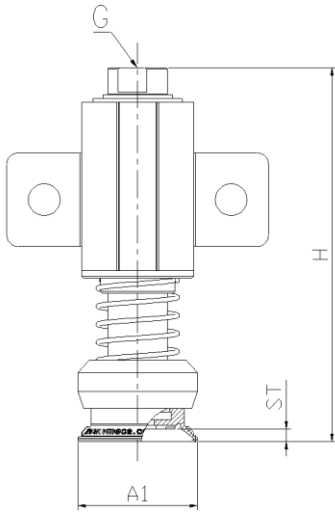


| Model | | A1 | ST | H | G |
|-----------|--------|------|-----|-------|------|
| SP20-BJ03 | FCF50 | 52 | 5 | 104.7 | G1/8 |
| | FCF60 | 62 | 6 | 107.7 | |
| | FCF70 | 72 | 6.5 | 107.7 | |
| | FCF80 | 82.5 | 7.6 | 111.2 | |
| | FCF100 | 104 | 9.5 | 111.2 | |
| | FCF125 | 128 | 13 | 117.7 | |

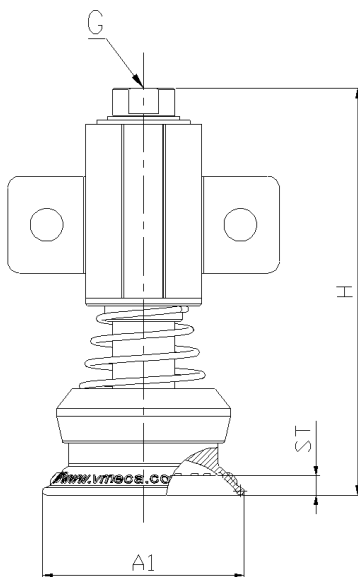


| Model | | A1 | ST | H | G |
|-----------|--------|------|-----|-------|------|
| SP30-BJ03 | FCF50 | 52 | 5 | 149.2 | G1/8 |
| | FCF60 | 62 | 6 | 152.2 | |
| | FCF70 | 72 | 6.5 | 152.2 | |
| | FCF80 | 82.5 | 7.6 | 155.7 | |
| | FCF100 | 104 | 9.5 | 155.7 | |
| | FCF125 | 128 | 13 | 162.2 | |
| SP50-BJ03 | FCF50 | 52 | 5 | 175.2 | G1/8 |
| | FCF60 | 62 | 6 | 178.2 | |
| | FCF70 | 72 | 6.5 | 178.2 | |
| | FCF80 | 82.5 | 7.6 | 181.7 | |
| | FCF100 | 104 | 9.5 | 181.7 | |
| | FCF125 | 128 | 13 | 188.2 | |
| SP70-BJ03 | FCF50 | 52 | 5 | 200.2 | G1/8 |
| | FCF60 | 62 | 6 | 203.2 | |
| | FCF70 | 72 | 6.5 | 203.2 | |
| | FCF80 | 82.5 | 7.6 | 206.7 | |
| | FCF100 | 104 | 9.5 | 206.7 | |
| | FCF125 | 128 | 13 | 213.2 | |

Dimension (Level Spring without Ball Joint Type)

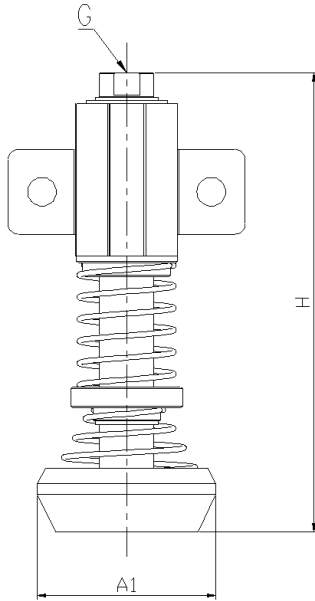


| Model | | A1 | ST | H | G |
|-----------|-------|----|-----|-------|------|
| SP20-SM02 | FCF30 | 32 | 3.3 | 99.8 | G1/8 |
| | FCF40 | 42 | 4 | 101.5 | |
| SP30-SM02 | FCF30 | 32 | 3.3 | 114.3 | |
| | FCF40 | 42 | 4 | 116 | |
| SP50-SM02 | FCF30 | 32 | 3.3 | 140.3 | |
| | FCF40 | 42 | 4 | 142 | |
| SP70-SM02 | FCF30 | 32 | 3.3 | 168.3 | |
| | FCF40 | 42 | 4 | 170 | |

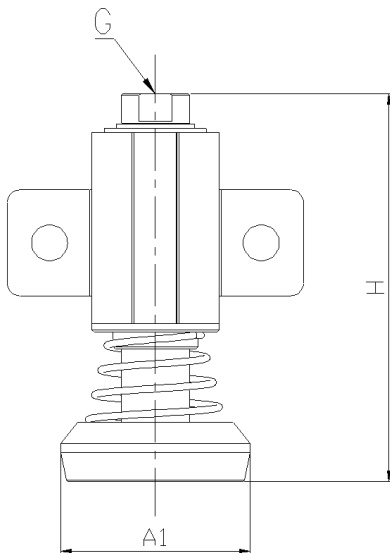


| Model | | A1 | ST | H | G |
|-----------|--------|------|-----|-------|------|
| SP20-SM03 | FCF50 | 52 | 5 | 105 | G1/8 |
| | FCF60 | 62 | 6 | 108 | |
| | FCF70 | 72 | 6.5 | 108 | |
| | FCF80 | 82.5 | 7.6 | 111.5 | |
| | FCF100 | 104 | 9.5 | 111.5 | |
| | FCF125 | 128 | 13 | 118 | |
| SP30-SM03 | FCF50 | 52 | 5 | 126 | |
| | FCF60 | 62 | 6 | 129 | |
| | FCF70 | 72 | 6.5 | 129 | |
| | FCF80 | 82.5 | 7.6 | 132.5 | |
| | FCF100 | 104 | 9.5 | 132.5 | |
| | FCF125 | 128 | 13 | 139 | |
| SP50-SM03 | FCF50 | 52 | 5 | 146 | |
| | FCF60 | 62 | 6 | 149 | |
| | FCF70 | 72 | 6.5 | 149 | |
| | FCF80 | 82.5 | 7.6 | 152.5 | |
| | FCF100 | 104 | 9.5 | 152.5 | |
| | FCF125 | 128 | 13 | 159 | |
| SP70-SM03 | FCF50 | 52 | 5 | 168 | |
| | FCF60 | 62 | 6 | 171 | |
| | FCF70 | 72 | 6.5 | 171 | |
| | FCF80 | 82.5 | 7.6 | 174.5 | |
| | FCF100 | 104 | 9.5 | 174.5 | |
| | FCF125 | 128 | 13 | 181 | |

Dimension (without Pad)



| Stroke | A1 | H | G |
|-----------|------|-------|------|
| SP20-BJ02 | 32 | 116.4 | G1/8 |
| SP30-BJ02 | | 130.4 | |
| SP50-BJ02 | | 156.4 | |
| SP70-BJ02 | | 182.4 | |
| SP20-BJ03 | 52.8 | 91.9 | |
| SP30-BJ03 | | 136.4 | |
| SP50-BJ03 | | 162.4 | |
| SP70-BJ03 | | 187.4 | |

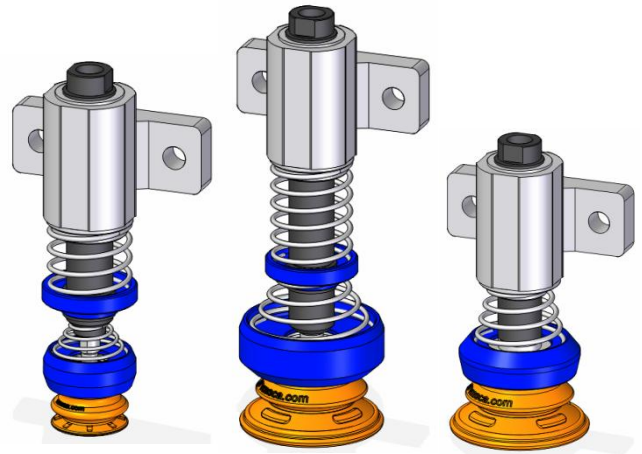


| Stroke | A1 | H | G |
|-----------|------|-------|------|
| SP20-SM02 | 32 | 91 | G1/8 |
| SP30-SM02 | | 105.5 | |
| SP50-SM02 | | 131.5 | |
| SP70-SM02 | | 159.5 | |
| SP20-SM03 | 44.8 | 91.5 | |
| SP30-SM03 | | 112.5 | |
| SP50-SM03 | | 132.5 | |
| SP70-SM03 | | 154.5 | |

Smart Plunger - VBF Series

Feature

- Easy replace suction cup rubber
- Always return back to center position (wide ball-joint angle)
- Less slide friction (with ball bush)
- Light weight and long lifetime (hard anodized aluminum)
- Very compact size (compare with typical ball-joint mount)
- Easy installation and flexible mount (Integral bracket with level spring plunger)



PAD Feature

- Excellent for flat and curved material in vertical and horizontal application
- Great designed pattern for anti-sliding
- Excellent for transfer without slipperiness
- Available transferring without vibration

- Metal sheet
- Car panel
- Press metal sheet
- Panel
- Electrical goods
- Curved glass

Order No.

SP30 - BJ03 - VBF50- PU

①

②

③

④

① Stroke

SP20 - 20mm

● SP30 - 30mm

SP50 - 50mm

SP70 - 70mm

② Ball Joint

BJ02 - Ball Joint (VBF25.30.40)

● BJ03 - Ball Joint (VBF50.60.80.100)

SM02 - Without Ball Joint (VBF25.30.40)

SM03 - Without Ball Joint (VBF50.60.80.100)

③ Pad

VBF25 - ø30

VBF30 - ø40

VBF40 - ø50

● VBF50 - ø60

VBF60 - ø70

VBF80 - ø80

VBF100 - ø100

④ Material

N - NBR

S - Silicon

WS - White Silicon

HS - High Temp. Silicon


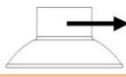
CS - Conductive (Special mat'l)

A - Mark Free

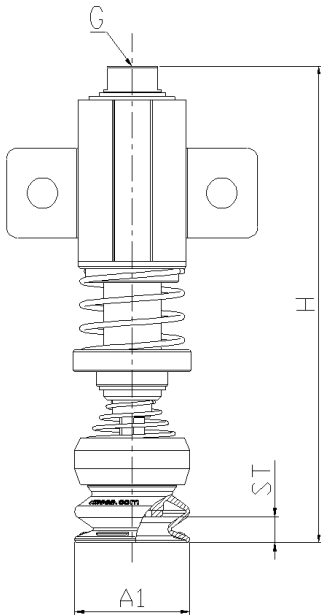
● PU - Poly Urethane

WPU - Poly Urethane (Minimal mark)

Recommended (max.) lifting forces

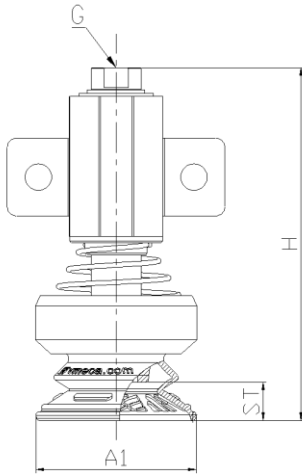
| Model | Volume (cm ³) | Lifting Force (kg) - Perpendicular  | | | Lifting Force (kg) - Parallel  | | |
|---------|---------------------------|--|---------|---------|---|---------|---------|
| | | -20 kPa | -60 kPa | -90 kPa | -20 kPa | -60 kPa | -90 kPa |
| VBF 25 | 2.6 | 1.1 | 3.2 | 3.8 | 0.61 | 1.37 | 1.89 |
| VBF 30 | 6 | 1.77 | 6.26 | 9.48 | 0.86 | 3.09 | 7.75 |
| VBF 40 | 7.2 | 2.5 | 9.66 | 12.8 | 1.18 | 6.5 | 11.3 |
| VBF 50 | 11 | 4.18 | 13.2 | 16.28 | 2.09 | 9.6 | 14.7 |
| VBF 60 | 22 | 8.94 | 16.26 | 18.54 | 6.84 | 12.84 | 16.92 |
| VBF 80 | 59.5 | 11.92 | 21.68 | 24.72 | 9.12 | 17.12 | 22.56 |
| VBF 100 | 103.5 | 14.9 | 27.1 | 30.9 | 11.4 | 21.4 | 28.2 |

Dimension (Ball Joint type)

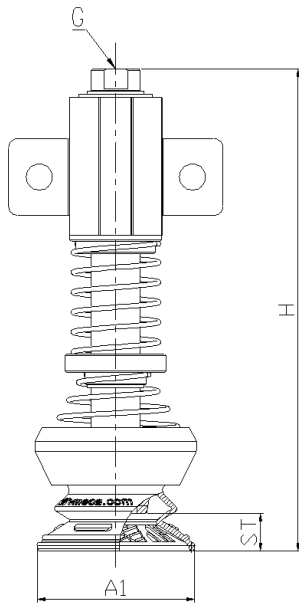


| Model | | A1 | ST | H | G |
|-----------|-------|------|-----|-------|------|
| SP20-BJ02 | VBF25 | 26.5 | 6 | 130.9 | G1/8 |
| | VBF30 | 32 | 7 | 132.4 | |
| | VBF40 | 42 | 9.6 | 135 | |
| SP30-BJ02 | VBF25 | 26.5 | 6 | 144.9 | |
| | VBF30 | 32 | 7 | 146.4 | |
| | VBF40 | 42 | 9.6 | 149 | |
| SP50-BJ02 | VBF25 | 26.5 | 6 | 170.9 | |
| | VBF30 | 32 | 7 | 172.4 | |
| | VBF40 | 42 | 9.6 | 175 | |
| SP70-BJ02 | VBF25 | 26.5 | 6 | 196.9 | |
| | VBF30 | 32 | 7 | 198.4 | |
| | VBF40 | 42 | 9.6 | 201 | |

Dimension (Level Spring Ball Joint Type)

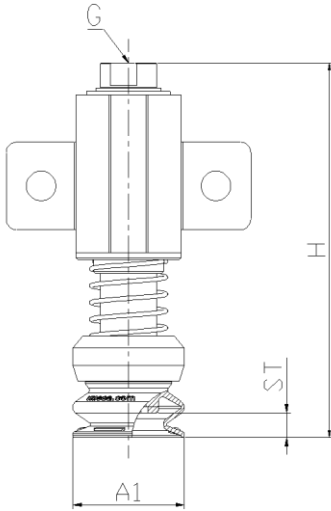


| Model | | A1 | ST | H | G |
|-----------|--------|------|------|-------|------|
| SP20-BJ03 | VBF50 | 50.5 | 12.3 | 113.4 | G1/8 |
| | VBF60 | 61.7 | 14.3 | 115.1 | |
| | VBF80 | 83 | 24.5 | 126.8 | |
| | VBF100 | 102 | 26.1 | 130.5 | |

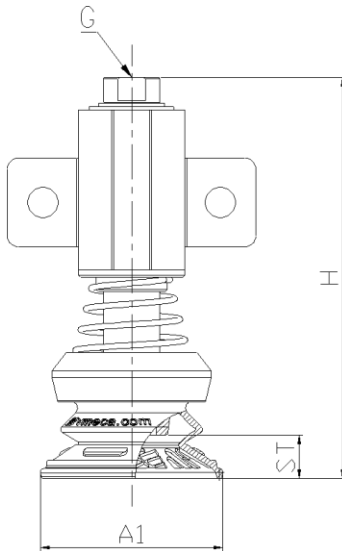


| Model | | A1 | ST | H | G |
|-----------|--------|------|------|-------|------|
| SP30-BJ03 | VBF50 | 50.5 | 12.3 | 157.9 | G1/8 |
| | VBF60 | 61.7 | 14.3 | 159.6 | |
| | VBF80 | 83 | 24.5 | 171.3 | |
| | VBF100 | 102 | 26.1 | 175 | |
| SP50-BJ03 | VBF50 | 50.5 | 12.3 | 183.9 | |
| | VBF60 | 61.7 | 14.3 | 185.6 | |
| | VBF80 | 83 | 24.5 | 197.3 | |
| | VBF100 | 102 | 26.1 | 201 | |
| SP70-BJ03 | VBF50 | 50.5 | 12.3 | 208.9 | |
| | VBF60 | 61.7 | 14.3 | 210.6 | |
| | VBF80 | 83 | 24.5 | 222.3 | |
| | VBF100 | 102 | 26.1 | 226 | |

Dimension (Level Spring without Ball Joint Type)

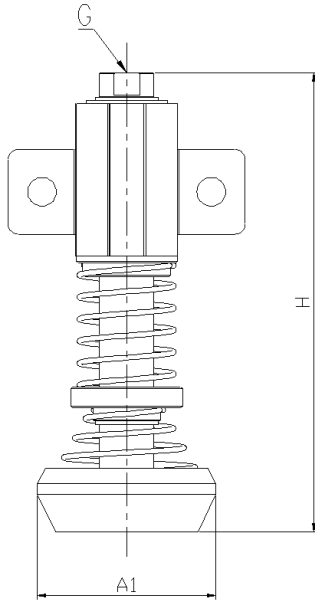


| Model | | A1 | ST | H | G |
|-----------|-------|------|-----|-------|------|
| SP20-SM02 | VBF25 | 26.5 | 6 | 105.5 | G1/8 |
| | VBF30 | 32 | 7 | 107 | |
| | VBF40 | 42 | 9.6 | 109.6 | |
| SP30-SM02 | VBF25 | 26.5 | 6 | 120 | |
| | VBF30 | 32 | 7 | 121.5 | |
| | VBF40 | 42 | 9.6 | 124.1 | |
| SP50-SM02 | VBF25 | 26.5 | 6 | 146 | |
| | VBF30 | 32 | 7 | 147.5 | |
| | VBF40 | 42 | 9.6 | 150.1 | |
| SP70-SM02 | VBF25 | 26.5 | 6 | 174 | |
| | VBF30 | 32 | 7 | 175.5 | |
| | VBF40 | 42 | 9.6 | 178.1 | |

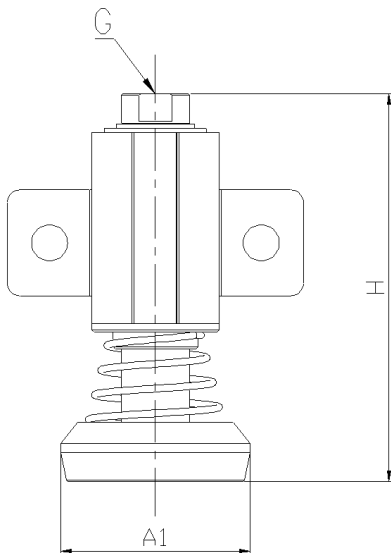


| Model | | A1 | ST | H | G |
|-----------|--------|------|------|-------|------|
| SP20-SM03 | VBF50 | 50.5 | 12.3 | 113.7 | G1/8 |
| | VBF60 | 61.7 | 14.3 | 115.4 | |
| | VBF80 | 83 | 24.5 | 127.1 | |
| | VBF100 | 102 | 26.1 | 130.8 | |
| SP30-SM03 | VBF50 | 50.5 | 12.3 | 134.7 | |
| | VBF60 | 61.7 | 14.3 | 136.4 | |
| | VBF80 | 83 | 24.5 | 148.1 | |
| | VBF100 | 102 | 26.1 | 151.8 | |
| SP50-SM03 | VBF50 | 50.5 | 12.3 | 154.7 | |
| | VBF60 | 61.7 | 14.3 | 156.4 | |
| | VBF80 | 83 | 24.5 | 168.1 | |
| | VBF100 | 102 | 26.1 | 171.8 | |
| SP70-SM03 | VBF50 | 50.5 | 12.3 | 176.7 | |
| | VBF60 | 61.7 | 14.3 | 178.4 | |
| | VBF80 | 83 | 24.5 | 190.1 | |
| | VBF100 | 102 | 26.1 | 193.8 | |

Dimension (without Pad)



| Stroke | A1 | H | G |
|-----------|------|-------|------|
| SP20-BJ02 | 32 | 116.4 | G1/8 |
| SP30-BJ02 | | 130.4 | |
| SP50-BJ02 | | 156.4 | |
| SP70-BJ02 | | 182.4 | |
| SP20-BJ03 | 52.8 | 91.9 | |
| SP30-BJ03 | | 136.4 | |
| SP50-BJ03 | | 162.4 | |
| SP70-BJ03 | | 187.4 | |

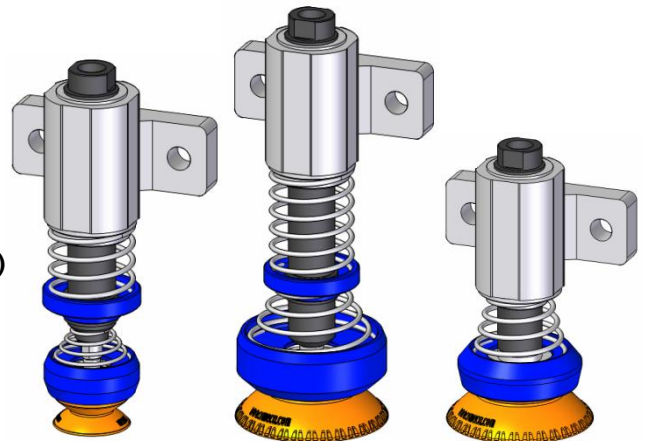


| Stroke | A1 | H | G |
|-----------|------|-------|------|
| SP20-SM02 | 32 | 91 | G1/8 |
| SP30-SM02 | | 105.5 | |
| SP50-SM02 | | 131.5 | |
| SP70-SM02 | | 159.5 | |
| SP20-SM03 | 44.8 | 91.5 | |
| SP30-SM03 | | 112.5 | |
| SP50-SM03 | | 132.5 | |
| SP70-SM03 | | 154.5 | |

Smart Plunger - VDF Series

Feature

- Easy replace suction cup rubber
- Always return back to center position (wide ball-joint angle)
- Less slide friction (with ball bush)
- Light weight and long lifetime (hard anodized aluminum)
- Very compact size (compare with typical ball-joint mount)
- Easy installation and flexible mount (Integral bracket with level spring plunger)



PAD Feature

- Excellent for flat and curved material in vertical and horizontal application
- Great designed pattern for anti-sliding
- Excellent for transfer without slipperiness
- Available transferring without vibration

- Metal sheet
- Car panel
- Press metal sheet
- Panel
- Electrical goods
- Curved glass

Order No.

SP30 - BJ03 - VDF50- PU

① ② ③ ④

① Stroke

| | | |
|--------|---|------|
| SP20 | - | 20mm |
| ● SP30 | - | 30mm |
| SP50 | - | 50mm |
| SP70 | - | 70mm |

② Ball Joint

| | | |
|--------|---|--------------------------------------|
| BJ02 | - | Ball Joint (VDF25.30.40) |
| ● BJ03 | - | Ball Joint (VDF50.60.80.100) |
| SM02 | - | Without Ball Joint (FCF25.30.40) |
| SM03 | - | Without Ball Joint (FCF50.60.80.100) |

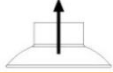
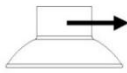
③ Pad

| | | |
|---------|---|------|
| VDF25 | - | ø25 |
| VDF30 | - | ø30 |
| VDF40 | - | ø40 |
| ● VDF50 | - | ø50 |
| VDF60 | - | ø60 |
| VDF80 | - | ø80 |
| VDF100 | - | ø100 |

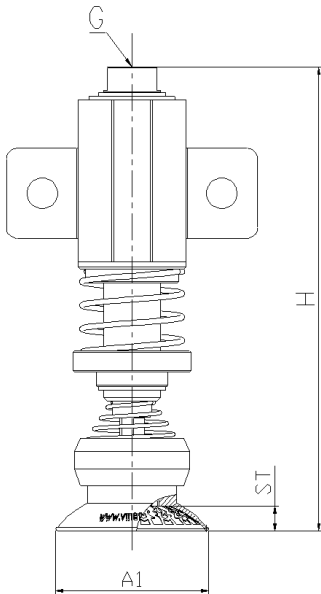
④ Material

| | | |
|------|---|------------------------------|
| N | - | NBR |
| S | - | Silicon |
| WS | - | White Silicon |
| HS | - | High Temp. Silicon |
| CS | - | Conductive (Special mat'l) |
| A | - | Mark Free |
| ● PU | - | Poly Urethane |
| WPU | - | Poly Urethane (Minimal mark) |

Recommended (max.) lifting forces

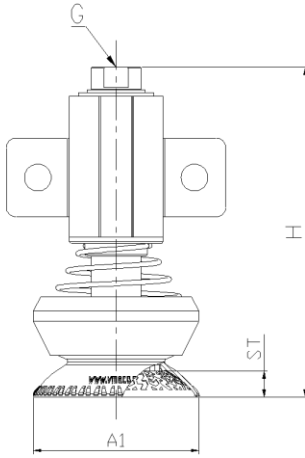
| Model | Volume (cm ³) | Lifting Force (kg) - Perpendicular  | | | Lifting Force (kg) - Parallel  | | |
|--------|----------------------------|--|---------|---------|---|---------|---------|
| | | -20 kPa | -60 kPa | -90 kPa | -20 kPa | -60 kPa | -90 kPa |
| VDF25 | 1.5 | 1.4 | 3.0 | 4.1 | 0.7 | 1.9 | 2.9 |
| VDF30 | 2.7 | 1.8 | 4.4 | 5.7 | 1 | 2.8 | 3.8 |
| VDF40 | 7 | 2.7 | 6.2 | 8.3 | 2.4 | 4.7 | 7.1 |
| VDF50 | 14 | 4.1 | 10.1 | 14 | 3.5 | 9.2 | 18.5 |
| VDF60 | 24 | 5.6 | 13.7 | 19 | 4.3 | 13.8 | 24.5 |
| VDF80 | 50.5 | 8.6 | 21.2 | 29.3 | 7.2 | 18.5 | 27 |
| VDF100 | 94 | 12.6 | 30.8 | 41.7 | 12.3 | 28.2 | 39.6 |

Dimension (Ball Joint type)

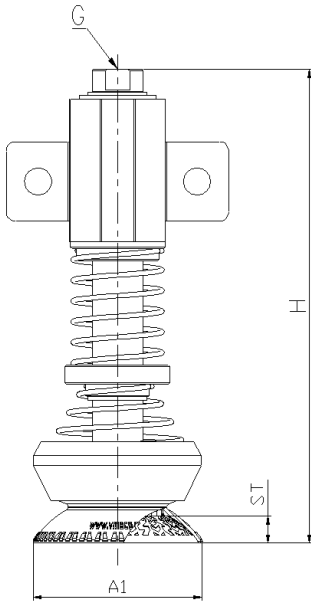


| Model | | A1 | ST | H | G |
|-----------|-------|------|-----|-------|------|
| SP20-BJ02 | VDF25 | 26 | 4 | 128.1 | G1/8 |
| | VDF30 | 32.2 | 4.3 | 127.2 | |
| | VDF40 | 42.5 | 6.9 | 129 | |
| SP30-BJ02 | VDF25 | 26 | 4 | 142.1 | |
| | VDF30 | 32.2 | 4.3 | 141.2 | |
| | VDF40 | 42.5 | 6.9 | 143 | |
| SP50-BJ02 | VDF25 | 26 | 4 | 168.1 | |
| | VDF30 | 32.2 | 4.3 | 167.2 | |
| | VDF40 | 42.5 | 6.9 | 169 | |
| SP70-BJ02 | VDF25 | 26 | 4 | 194.1 | |
| | VDF30 | 32.2 | 4.3 | 193.2 | |
| | VDF40 | 42.5 | 6.9 | 195 | |

Dimension (Level Spring Ball Joint Type)

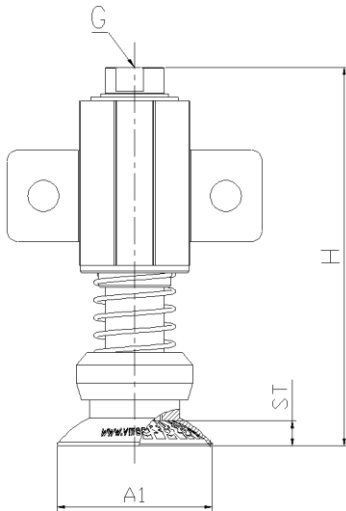


| Model | | A1 | ST | H | G |
|-----------|--------|-------|------|-------|------|
| SP20-BJ03 | VDF50 | 53 | 8.4 | 105.2 | G1/8 |
| | VDF60 | 63.5 | 10.9 | 108.5 | |
| | VDF80 | 83.5 | 13.9 | 112.1 | |
| | VDF100 | 104.2 | 17.3 | 114.8 | |

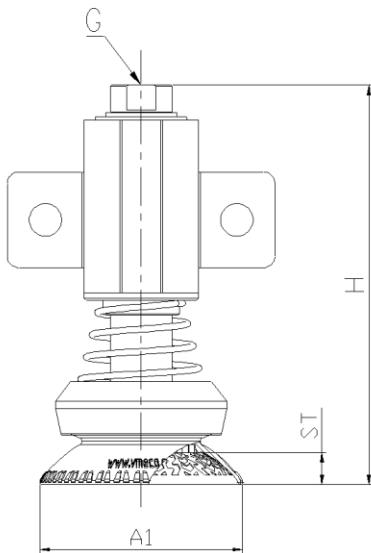


| Model | | A1 | ST | H | G |
|-----------|--------|-------|------|-------|------|
| SP30-BJ03 | VDF50 | 53 | 8.4 | 149.7 | G1/8 |
| | VDF60 | 63.5 | 10.9 | 153 | |
| | VDF80 | 83.5 | 13.9 | 156.6 | |
| | VDF100 | 104.2 | 17.3 | 159.3 | |
| SP50-BJ03 | VDF50 | 53 | 8.4 | 175.7 | |
| | VDF60 | 63.5 | 10.9 | 179 | |
| | VDF80 | 83.5 | 13.9 | 182.6 | |
| | VDF100 | 104.2 | 17.3 | 185.3 | |
| SP70-BJ03 | VDF50 | 53 | 8.4 | 200.7 | |
| | VDF60 | 63.5 | 10.9 | 204 | |
| | VDF80 | 83.5 | 13.9 | 207.6 | |
| | VDF100 | 104.2 | 17.3 | 210.3 | |

Dimension (Level Spring without Ball Joint Type)

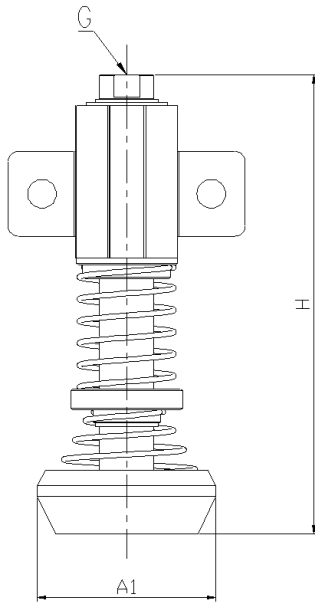


| Model | | A1 | ST | H | G |
|-----------|-------|------|-----|-------|------|
| SP20-SM02 | VDF25 | 26 | 4 | 102.7 | G1/8 |
| | VDF30 | 32.2 | 4.3 | 101.8 | |
| | VDF40 | 42.5 | 6.9 | 103.6 | |
| SP30-SM02 | VDF25 | 26 | 4 | 117.2 | |
| | VDF30 | 32.2 | 4.3 | 116.3 | |
| | VDF40 | 42.5 | 6.9 | 118.1 | |
| SP50-SM02 | VDF25 | 26 | 4 | 143.2 | |
| | VDF30 | 32.2 | 4.3 | 142.3 | |
| | VDF40 | 42.5 | 6.9 | 144.1 | |
| SP70-SM02 | VDF25 | 26 | 4 | 171.2 | |
| | VDF30 | 32.2 | 4.3 | 170.3 | |
| | VDF40 | 42.5 | 6.9 | 172.1 | |

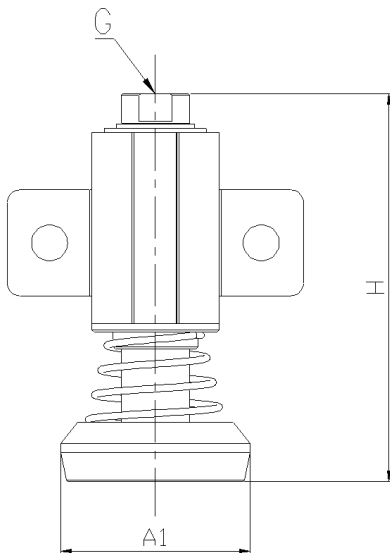


| Model | | A1 | ST | H | G |
|-----------|--------|-------|------|-------|------|
| SP20-SM03 | VDF50 | 53 | 8.4 | 105.5 | G1/8 |
| | VDF60 | 63.5 | 10.9 | 108.8 | |
| | VDF80 | 83.5 | 13.9 | 112.4 | |
| | VDF100 | 104.2 | 17.3 | 115.1 | |
| SP30-SM03 | VDF50 | 53 | 8.4 | 126.5 | |
| | VDF60 | 63.5 | 10.9 | 129.8 | |
| | VDF80 | 83.5 | 13.9 | 133.4 | |
| | VDF100 | 104.2 | 17.3 | 136.1 | |
| SP50-SM03 | VDF50 | 53 | 8.4 | 146.5 | |
| | VDF60 | 63.5 | 10.9 | 149.8 | |
| | VDF80 | 83.5 | 13.9 | 153.4 | |
| | VDF100 | 104.2 | 17.3 | 156.1 | |
| SP70-SM03 | VDF50 | 53 | 8.4 | 168.5 | |
| | VDF60 | 63.5 | 10.9 | 171.8 | |
| | VDF80 | 83.5 | 13.9 | 175.4 | |
| | VDF100 | 104.2 | 17.3 | 178.1 | |

Dimension (without Pad)



| Stroke | A1 | H | G |
|-----------|------|-------|------|
| SP20-BJ02 | 32 | 116.4 | G1/8 |
| SP30-BJ02 | | 130.4 | |
| SP50-BJ02 | | 156.4 | |
| SP70-BJ02 | | 182.4 | |
| SP20-BJ03 | 52.8 | 91.9 | |
| SP30-BJ03 | | 136.4 | |
| SP50-BJ03 | | 162.4 | |
| SP70-BJ03 | | 187.4 | |



| Stroke | A1 | H | G |
|-----------|------|-------|------|
| SP20-SM02 | 32 | 91 | G1/8 |
| SP30-SM02 | | 105.5 | |
| SP50-SM02 | | 131.5 | |
| SP70-SM02 | | 159.5 | |
| SP20-SM03 | 44.8 | 91.5 | |
| SP30-SM03 | | 112.5 | |
| SP50-SM03 | | 132.5 | |
| SP70-SM03 | | 154.5 | |