

### SFF Series



#### Features(特征)

- Various sizes, suitable for workpiece with different shapes and sizes
- Large inner support structure protects the metal sheets from deformation and damage during handling process
- Slot structure efficiently increases the friction force between vacuum pad and workpiece in order to prevent the oily metal sheets from slipping during the process of handling
- Two material shore hardness are available(45 shore and 60 shore), metal sheets with different thickness and shapes
- Vacuum pads are available with various connection types
- 尺寸型号齐全，适合不同形状和尺寸的工件
- 内部大面积支撑结构，能有效保护金属薄板在搬运过程中免于变形损伤
- 凹槽式内部支撑结构，有效增大吸盘与工件接触面摩擦力，防止油性金属板搬运过程中发生侧滑
- 吸盘有两种硬度(45和60)可供选择，适合不同厚度及形状的金属板材
- 吸盘有多种连接方式可供选择

#### Applications(适用范围)

- Car stamped steel plates with irregular shapes
- Steel plates with oily surface
- Glass, stamping parts, plywood
- Handling normal sheet metal (in order to avoid deformation)
- 不规则形状的汽车冲压钢板
- 油性表面类钢板
- 玻璃、冲压件、胶合板
- 普通金属薄板搬运(防止变形)

#### Model(型号规格)

| Model (型号) | Diameter(mm) (直径) | Material And Hardness (材质及硬度) | Connection Thread (连接螺纹规格)      |
|------------|-------------------|-------------------------------|---------------------------------|
| SFF        | 30                | N-45(Green)(N-NBR)            | G1/4M (M-Male Thread)(M-外螺纹)    |
|            | 40                |                               | G1/4F (F-Female Thread)(F-内螺纹)  |
|            | 50                |                               | G3/8F                           |
|            | 60                | N-60(Orange)(N-NBR)           | M10M                            |
|            | 80                |                               | M14X1.5M                        |
|            | 100               |                               | RA Rectangular Tdapter(RA矩形适配器) |

#### Technical parameters (性能参数)

| Model (型号) | Vertical Pull-out Force (N) (垂直拉脱力)(N)<br>-60kPa | Lateral Pull-out Force(N) (横向拉脱力)(N)<br>-60kPa | Lateral Pull-Out Force On Oily Surface(N) (油性表面横向拉脱力)(N)<br>-60kPa | Inner Volume(cm <sup>3</sup> ) (内部体积) | Min.Curve Radius of Workpiece(cm) (工件最小曲率半径) | Recommended Tube Diameter(mm) (推荐软管直径) | Weight(g) (重量) |
|------------|--|--|--|---------------------------------------|--|--|----------------|
| SFF30      | 45   | 35   | 33   | 1.6                                   | 35   | 4                                      | 11-21          |
| SFF40      | 72   | 54   | 51   | 3.5                                   | 47.5   | 4                                      | 13-23          |
| SFF50      | 112  | 90   | 86   | 7.5                                   | 70   | 6                                      | 20-30          |
| SFF60      | 145  | 102  | 93   | 12.6                                  | 81   | 6                                      | 26-36          |
| SFF80      | 288  | 212  | 190  | 35                                    | 115  | 6                                      | 43-53          |
| SFF100     | 445  | 322  | 308  | 60                                    | 141  | 6                                      | 57-67          |

△Workpiece is with smooth, dry surface, the above pull-out force datas don't include a safety factor.

Values may change according to different workpiece surfaces.

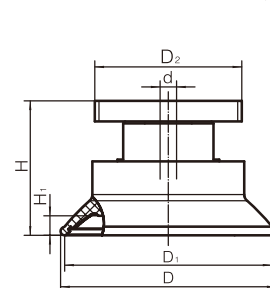
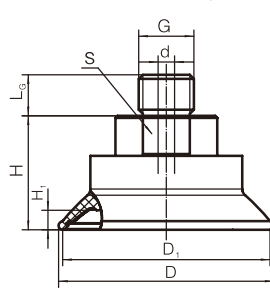
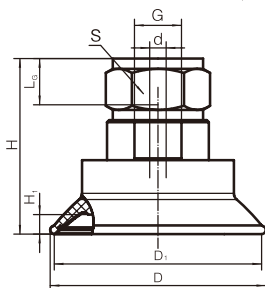
△测量工件表面光滑、干燥。以上拉脱力数据不包括安全系数。根据工件表面状况不同，数值可能会有变化。

#### Dimensions(mm)(外形尺寸图(毫米))

SFF30—SFF100(Female thread) (内螺纹)

SFF30—SFF100(Male thread) (外螺纹)

SFF30—SFF100 RA(Rectangular adapter) (RA 矩形适配器)



## Dimensions (mm)(外形尺寸(毫米))

| Size (mm)<br>Model(型号)<br>(尺寸(毫米)) | D   | D <sub>1</sub> | d | G        | H  | L <sub>G</sub> | D <sub>2</sub> | S  | H <sub>1</sub> |
|------------------------------------|-----|----------------|---|----------|----|----------------|----------------|----|----------------|
| SFF30N-45-G1/4F                    | 32  | 30             | 4 | G1/4F    | 20 | 12             | --             | 17 | 2.7            |
| SFF30N-45-G1/4M                    | 32  | 30             | 4 | G1/4M    | 20 | 12             | --             | 17 | 2.7            |
| SFF30N-45-G3/8F                    | 32  | 30             | 4 | G3/8F    | 34 | 11             | --             | 22 | 2.7            |
| SFF30N-45-M10M                     | 32  | 30             | 4 | M10M     | 20 | 12             | --             | 17 | 2.7            |
| SFF30N-45-M14M                     | 32  | 30             | 4 | M14X1.5M | 20 | 12             | --             | 17 | 2.7            |
| SFF30N-45-RA                       | 32  | 30             | 4 | --       | 25 | --             | 32             | -- | 2.7            |
| SFF40N-45-G1/4F                    | 46  | 42             | 4 | G1/4F    | 22 | 12             | --             | 17 | 3.7            |
| SFF40N-45-G1/4M                    | 46  | 42             | 4 | G1/4M    | 22 | 12             | --             | 17 | 3.7            |
| SFF40N-45-G3/8F                    | 46  | 42             | 4 | G3/8F    | 36 | 11             | --             | 22 | 3.7            |
| SFF40N-45-M10M                     | 46  | 42             | 4 | M10M     | 22 | 12             | --             | 17 | 3.7            |
| SFF40N-45-M14M                     | 46  | 42             | 4 | M14M     | 22 | 12             | --             | 17 | 3.7            |
| SFF40N-45-RA                       | 46  | 42             | 4 | --       | 27 | --             | 32             | -- | 3.7            |
| SFF50N-45-G1/4F                    | 56  | 52             | 6 | G1/4F    | 42 | 11             | --             | 22 | 4.7            |
| SFF50N-45-G1/4M                    | 56  | 52             | 6 | G1/4M    | 28 | 12             | --             | 22 | 4.7            |
| SFF50N-45-G3/8F                    | 56  | 52             | 6 | G3/8F    | 28 | 15             | --             | 22 | 4.7            |
| SFF50N-45-M10M                     | 56  | 52             | 4 | M10M     | 28 | 12             | --             | 22 | 4.7            |
| SFF50N-45-M14M                     | 56  | 52             | 6 | M14M     | 28 | 12             | --             | 22 | 4.7            |
| SFF50N-45-RA                       | 56  | 52             | 6 | --       | 33 | --             | 32             | -- | 4.7            |
| SFF60N-45-G1/4F                    | 67  | 63             | 6 | G1/4F    | 45 | 11             | --             | 22 | 6              |
| SFF60N-45-G1/4M                    | 67  | 63             | 6 | G1/4M    | 31 | 12             | --             | 22 | 6              |
| SFF60N-45-G3/8F                    | 67  | 63             | 6 | G3/8F    | 31 | 15             | --             | 22 | 6              |
| SFF60N-45-M10M                     | 67  | 63             | 4 | M10M     | 31 | 12             | --             | 22 | 6              |
| SFF60N-45-M14M                     | 67  | 63             | 6 | M14M     | 31 | 12             | --             | 22 | 6              |
| SFF60N-45-RA                       | 67  | 63             | 6 | --       | 36 | --             | 32             | -- | 6              |
| SFF80N-45-G1/4F                    | 89  | 83             | 6 | G1/4F    | 48 | 11             | --             | 22 | 7.5            |
| SFF80N-45-G1/4M                    | 89  | 83             | 6 | G1/4M    | 34 | 12             | --             | 22 | 7.5            |
| SFF80N-45-G3/8F                    | 89  | 83             | 6 | G3/8F    | 34 | 15             | --             | 22 | 7.5            |
| SFF80N-45-M10M                     | 89  | 83             | 4 | M10M     | 34 | 12             | --             | 22 | 7.5            |
| SFF80N-45-M14M                     | 89  | 83             | 6 | M14M     | 34 | 12             | --             | 22 | 7.5            |
| SFF80N-45-RA                       | 89  | 83             | 6 | --       | 39 | --             | 32             | -- | 7.5            |
| SFF100N-45-G1/4F                   | 110 | 103            | 6 | G1/4F    | 50 | 11             | --             | 22 | 9.2            |
| SFF100N-45-G1/4M                   | 110 | 103            | 6 | G1/4M    | 36 | 12             | --             | 22 | 9.2            |
| SFF100N-45-G3/8F                   | 110 | 103            | 6 | G3/8F    | 36 | 15             | --             | 22 | 9.2            |
| SFF100N-45-M10M                    | 110 | 103            | 4 | M10M     | 36 | 12             | --             | 22 | 9.2            |
| SFF100N-45-M14M                    | 110 | 103            | 6 | M14M     | 36 | 12             | --             | 22 | 9.2            |
| SFF100N-45-RA                      | 110 | 103            | 6 | --       | 41 | --             | 32             | -- | 9.2            |