

## VIBRATION DAMPING SYLOMER - elastomer



| SYLOMER            | static load till                | isolationrange (dyn. and stat. load) |
|--------------------|---------------------------------|--------------------------------------|
| SR 11 = yellow     | 0,000 - 0,011 N/mm <sup>2</sup> | 0,016 N/mm <sup>2</sup>              |
| SR 18 = orange     | 0,011 - 0,018 N/mm <sup>2</sup> | 0,028 N/mm <sup>2</sup>              |
| SR 28 = blue       | 0,018 - 0,025 N/mm <sup>2</sup> | 0,042 N/mm <sup>2</sup>              |
| SR 42 = pink       | 0,025 - 0,042 N/mm <sup>2</sup> | 0,065 N/mm <sup>2</sup>              |
| SR 55 = green      | 0,042 - 0,055 N/mm <sup>2</sup> | 0,085N/mm <sup>2</sup>               |
| SR 110 = brown     | 0,055 - 0,110 N/mm <sup>2</sup> | 0,16 N/mm <sup>2</sup>               |
| SR 220 = red       | 0,110 - 0,220 N/mm <sup>2</sup> | 0,35 N/mm <sup>2</sup>               |
| SR 450 = grey      | 0,220 - 0,450 N/mm <sup>2</sup> | 0,7 N/mm <sup>2</sup>                |
| SR 850 = turquoise | 0,450 - 0,850 N/mm <sup>2</sup> | 1,3 N/mm <sup>2</sup>                |
| SR 1200 = violet   | 0,850 - 1,200 N/mm <sup>2</sup> | 1,8 N/mm <sup>2</sup>                |

### Description

Sylomer is a high quality polyurethane foam (Elastomer) that, because of its elastic qualities, is eminently suitable for sprung assemblies.

Sylomer can be fitted with a wear resistant top layer and comes in standard thicknesses 12,5 and 25 mm.

### Characteristics

- Sylomer damps as well horizontal, vertical and torsional vibrations
- Permanent elastic properties, even with a large brief overload
- Sylomer plates / rolls can be cut to size with a (stanley)knife or bandsaw
- Resistant to water, motor oil, grease, diesel
- Resistance to dilute acids and bases, solvents available on request
- One of its not resistant to acetone, ethyl acetate, thinner
- Flame retardant in accordance with DIN 4102 (B2), EN ISO 11925-2 (B, C and D)
- Sylomer volume is reduced under load, without sideways expansion as with rubber, sylomer can therefore be applied for permanent shuttering
- Sprung assemblies across larger surface areas provide the following advantages:
  - Low building height
  - Low specific load of the base
  - Reduced torsional and bending vibration in machine
  - Improved structural stability
- Temperature resistant -30 °C tot +70 °C

### Application

Machines and equipment, floors, shipframes, walls, bridges, stair overlays, building, foundations, the lining of funnels

### Processing

Alternative thicknesses (as standard) can be created by gluing layers together for bonding SYLOMER (with wear-resistant top-layer) on steel, wood, concrete, direct exposure to the sun should be avoided plastic and so we recommend using contact adhesive TEROKAL-2444 or V607 BARYVIBRO two-component adhesive

### Sizes

Rolls of maximum 5.000 mm long and 1.500 mm wide  
Standard small rolls of 5000 x 50 mm and 5000 x 40 mm, adhesive or not-adhesive  
Special thicknesses, dimensions and combinations on demand

### Type selection

SYLOMER type can be determined as follows:

- Determine the weight of the device to machine (N) (1 kg = Newton 10)
- Calculate the contact area floor / machine, including two U-sections (in mm<sup>2</sup>)  
calculate the surface pressure = static load (N / mm)
- Determine what type of SYLOMER is suitable to the calculated static load (see table first page)

### Calculation method

To calculate the correct thickness of SYLOMER make use of specification sheet of the established type SYLOMER (ask us ATIS)

- Determine the frequency noise of the machine (if not known: divide rpm through 60 or choose the natural frequency as low as possible)
- Determine with graph "Natural frequency" what natural frequency is by thickness of 12 mm
- Determine with the natural frequency and the disturbing frequency in the graph "Vibration isolation efficiency" the reduction value in dB; herewith is above the line -10 dB well and above the line -20 dB is excellent

If the required reduction is not achieved, the insulation value with thicker types should be defined in the same way, until the optimum thickness has been determined the following notes apply to compression:

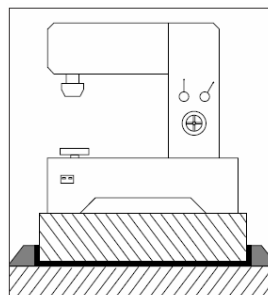
1. the compression is proportional to the load
2. with maximum static load compression is approx. 10%

If SYLOMER strips are applied, the strips should not be too narrow with respect to thickness; maintain minimum ratio of width = 2 x thickness

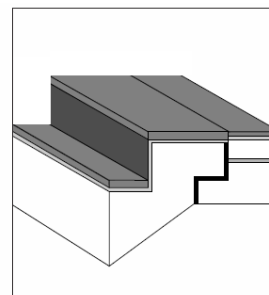
If this minimum ratio will be found please contact us

In order to keep the above calculation method as simple as possible, we have not indicated all SYLOMER possibilities, if has not been possible to define a suitable type of SYLOMER on the basis of the above information, or if further information is required, please do not hesitate to contact us

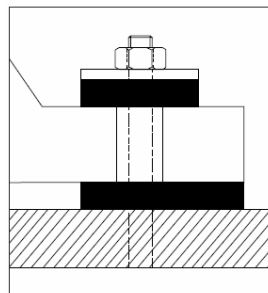
### Application samples



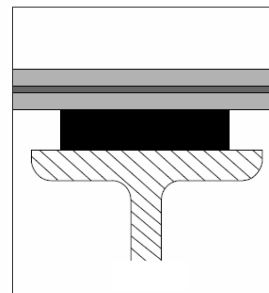
SYLOMER beneath machine base.



Acoustic segregation of stairs and floors.



Machine base detail.



Detail of floor support on steel truss.