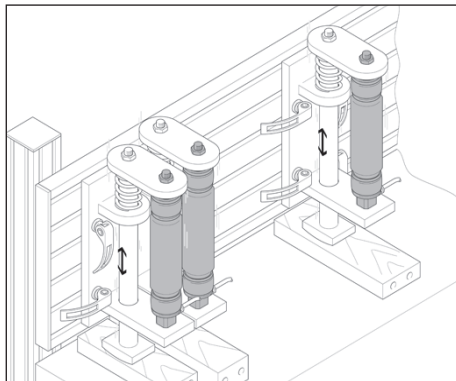


Fluidic Muscle

Established areas of application



Clamping

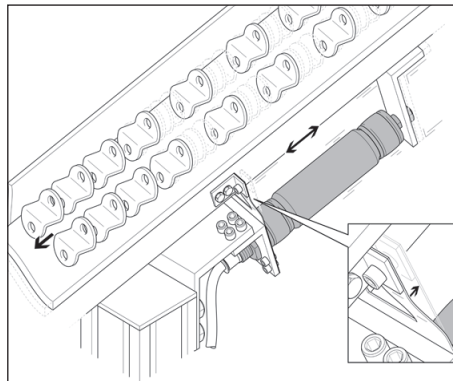


Under cramped conditions, Fluidic Muscle can deliver significantly higher clamping force than a conventional cylinder. Friction-free and without leaks.

Benefit:

- High force combined with a small diameter
- Unaffected by dirt
- Frictionless movement
- Hermetically sealed

Vibrating and shaking

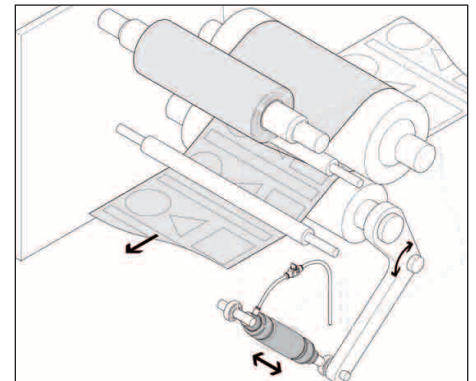


Fluidic Muscle can vibrate and shake at both low and high frequencies. Amplitude and frequency can be adjusted independently of each other.

Benefit:

- Frequency up to 150 Hz
- Amplitude/frequency can be adjusted independently of each other
- Unaffected by dirt

Pneumatic spring



Fluidic Muscle is an energy-efficient pneumatic spring. Its motion is always friction-free, even under extreme dynamic loads. The spring force can be controlled via the pressure.

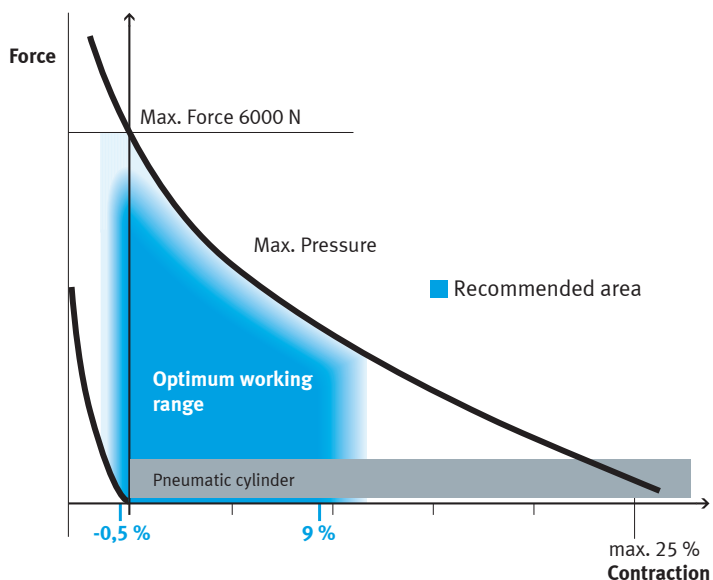
Benefit:

- Adjustable spring force
- Frictionless movement
- Hermetically sealed
- Easy to handle

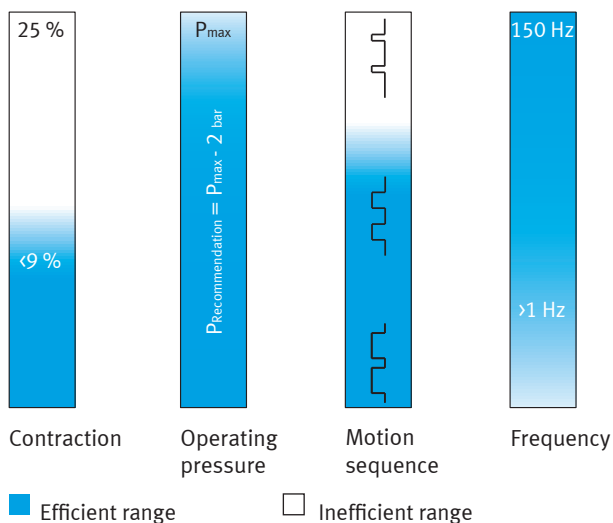
Fluidic Muscle	Operating pressure	Max. clamping force/ outside Ø	Clamping force of cylinders with comparable outside Ø
DMSF-5	6 bar	140 N/11 mm	EG-6: 12 N/10 mm
DMSF-10	8 bar	630 N/22 mm	ESNU-16: 143 N/20 mm
DMSF-20	6 bar	1500 N/35 mm	ESNU-32: 442 N/38 mm
DMSF-40	6 bar	6000 N/57 mm	ESNU-50: 1071 N/57 mm

Fluidic Muscle	Max. frequency with stroke:			
	0.1 mm	1 mm	10 mm	20 mm
DMSF-5-...-AM-AM	150 Hz	100 Hz	20 Hz	12 Hz
DMSF-10-...-AM-AM	150 Hz	100 Hz	20 Hz	12 Hz
DMSF-20-...-AM-AM	100 Hz	50 Hz	15 Hz	10 Hz
DMSF-40-...-AM-AM	80 Hz	35 Hz	12 Hz	6 Hz

Optimum working range



Dimensioning



Note

- Kinking, buckling or torsion are not permissible and will lead to premature failure of the diaphragm
- Pre-stretching by up to 0.5 % will prevent kinking and buckling
- Motion sequence: Minimise time in pressureless state (-> residual pressure down to 0.5 bar)

Ordering data – Modular product

Module no.	Function	Size	Nominal length	First connection	Second connection
3733012	DMSP	5	30 ... 1000	RM	CM
541 403		10	40 ... 9000	AM	RM
541 404		20	60 ... 9000		AM
541 405		40	120 ... 9000		CF (DMSP-5)
Ordering example					
541 404	DMSP	20	5000 N	AM	RM

Do you have questions, suggestions or requests?
Or do you need technical support?

We will be happy to help you with your dimensioning work!

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