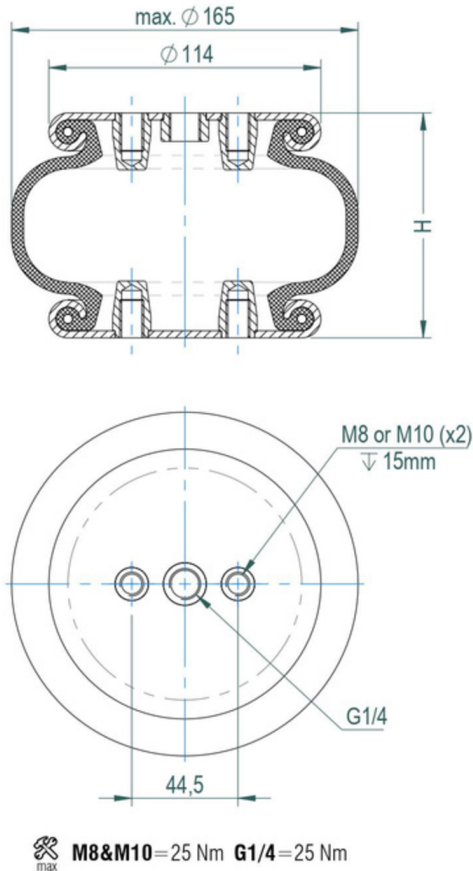


F SERIES
Crimped Design

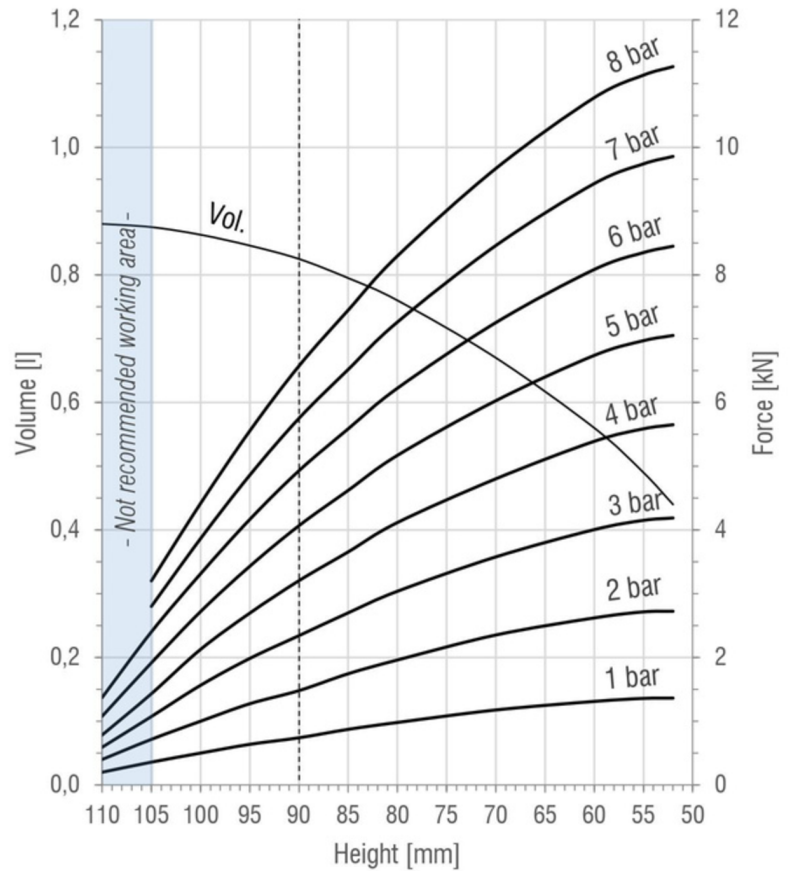
TV-20-E

SINGLE
CONVOLUTION

DRAWING



FORCE-HEIGHT CHART



TECHNICAL DATA

PRODUCT CHARACTERISTICS

Static diameter [mm]	146
Max. diameter [mm]	165
Required space diameter [mm]	180
Min. height [mm]	52
Static height [mm]	89
Design height [mm]	90
Max. usable height [mm]	105
Max. stroke [mm]	53
Force to compress to H_{min} at 0 bar [N]	186
Weight [kg]	1,33

REFERENCES

M-20-E_B	Rubber bellow only
M-20-E_C_G1/4	With crimped plates & G1/4 air inlet

Designs available with stainless steel and high temperature rubber compounds. Additional designs on request.

DYNAMIC CHARACTERISTICS FOR USE AS ISOLATOR

Pressure [bar]	3	4	5	6	7	Vol. [l]
Load [kN]	2,3	3,2	4,1	4,9	5,8	0,83
Spring rate [N/mm]	104	138	170	201	233	
Natural frequency [Hz]	3,34	3,29	3,23	3,19	3,18	
Isolation rate at 10 Hz	87,5%	87,9%	88,4%	88,7%	88,7%	

Values at recommended design height H: 90 mm - - - -

STATIC CHARACTERISTICS FOR USE AS ACTUATOR

Pressure [bar]		3	4	5	6	7	Vol. [l]
Height H [mm]	60	4,0	5,4	6,7	8,1	9,4	0,6
	70	3,6	4,8	6,0	7,3	8,5	0,7
	80	3,0	4,1	5,2	6,2	7,3	0,8
	90	2,3	3,2	4,1	4,9	5,8	0,8
	100	1,6	2,1	2,7	3,3	3,9	0,9

Force values [kN]

All Volume [l] values at 7 bar