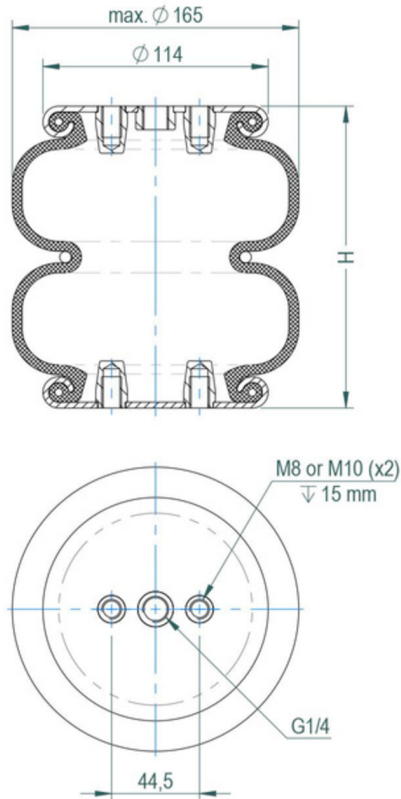


F SERIES  
Crimped Design

## TV-70-E

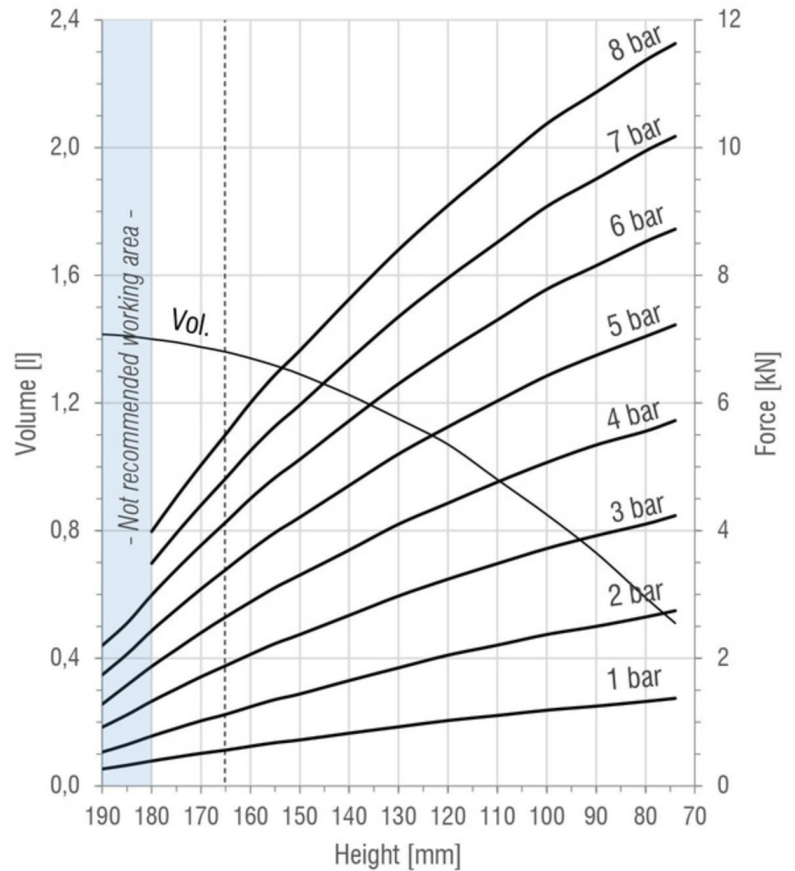
DOUBLE  
CONVOLUTION

### DRAWING



**M8&M10=25 Nm G1/4=25 Nm**

### FORCE-HEIGHT CHART



### TECHNICAL DATA

#### PRODUCT CHARACTERISTICS

Static diameter [mm]	146
Max. diameter [mm]	165
Required space diameter [mm]	180
Min. height [mm]	74
Static height [mm]	150
Design height [mm]	165
Max. usable height [mm]	180
Max. stroke [mm]	106
Force to compress to $H_{min}$ at 0 bar [N]	170
Weight [kg]	1,61

#### REFERENCES

M-70-E_B	Rubber bellow only
M-70-E_C_G1/4	With crimped plates & G1/4 air inlet
M-70-E_R_SH	With socket head bead rings
M-70-E_R_TR	With threaded bead rings

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]	1,9	2,6	3,4	4,1	4,8	1,4
Spring rate [N/mm]	45	61	76	91	105	
Natural frequency [Hz]	2,45	2,41	2,37	2,34	2,34	
Isolation rate at 10 Hz	93,6%	93,9%	94,1%	94,2%	94,2%	

Values at recommended design height H: 165 mm - - - -

#### STATIC CHARACTERISTICS FOR USE AS ACTUATOR

Height H [mm]	Pressure [bar]	3	4	5	6	7	Vol. [l]
	80	4,1	5,6	7,0	8,5	9,9	0,6
100	3,7	5,1	6,4	7,8	9,1	0,9	
120	3,2	4,4	5,6	6,8	8,0	1,1	
140	2,7	3,7	4,7	5,7	6,7	1,2	
160	2,1	2,9	3,7	4,5	5,3	1,3	
175	1,5	2,1	2,8	3,4	4,0	1,4	
180	1,3	1,9	2,4	3,0	3,5	1,4	

Force values [kN]

All Volume [l] values at 7 bar