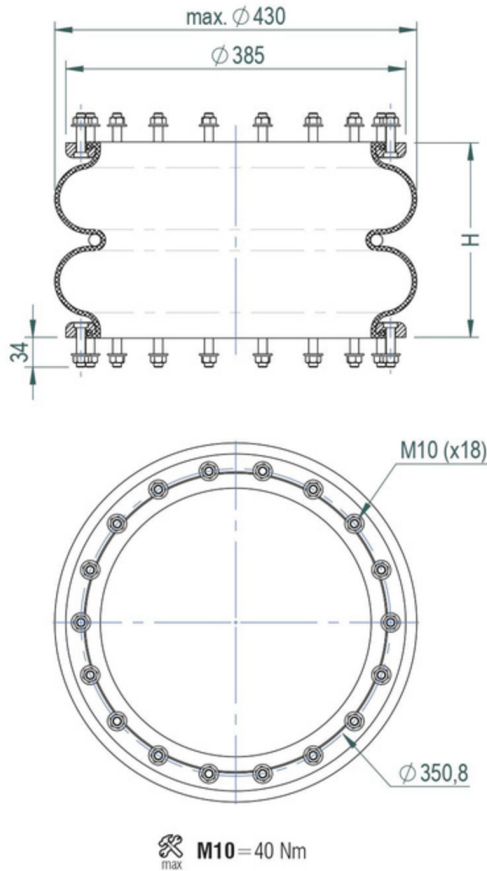


F SERIES
Socket Head Bead Ring Design

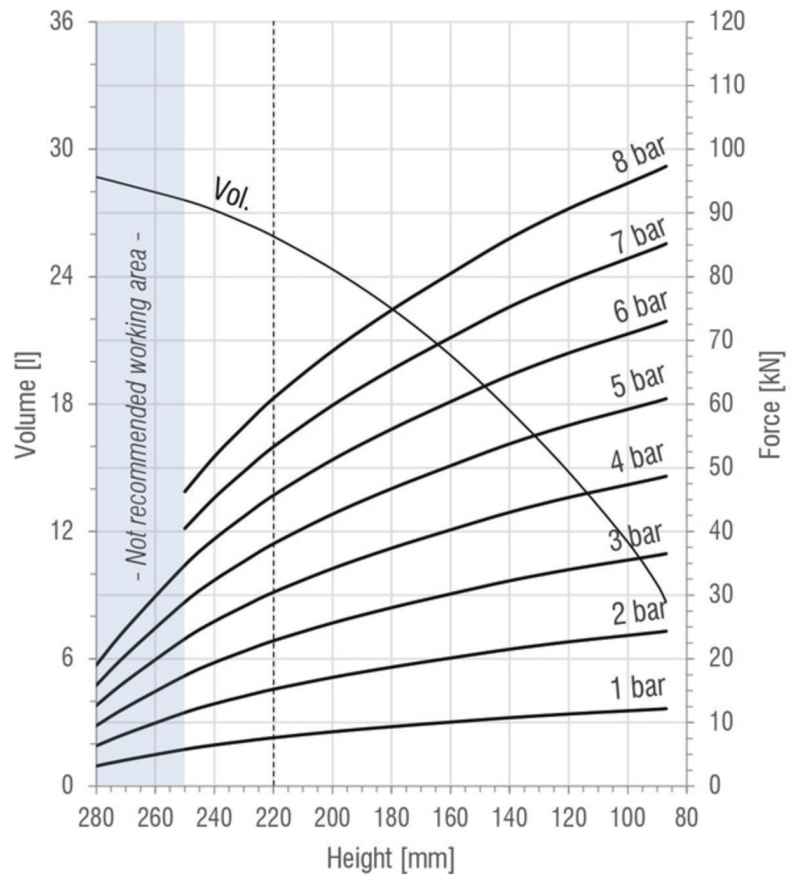
TV-110

DOUBLE
CONVOLUTION

DRAWING



FORCE-HEIGHT CHART



TECHNICAL DATA

PRODUCT CHARACTERISTICS

Static diameter [mm]	385
Max. diameter [mm]	430
Required space diameter [mm]	470
Min. height [mm]	87
Static height [mm]	215
Design height [mm]	220
Max. usable height [mm]	250
Max. stroke [mm]	163
Force to compress to H_{min} at 0 bar [N]	320
Weight [kg]	13,0

REFERENCES

M-110_B	Rubber bellow only
M-110_R_SH	With socket head bead rings
M-110_R_TR	With threaded bead rings
M-110_R_CS	With countersunk 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]	22,8	30,4	38,1	45,7	53,3	25,9
Spring rate [N/mm]	261	340	419	497	576	
Natural frequency [Hz]	1,69	1,67	1,66	1,65	1,64	
Isolation rate at 10 Hz	97,1%	97,1%	97,2%	97,2%	97,2%	

Values at recommended design height H: 220 mm - - - -

STATIC CHARACTERISTICS FOR USE AS ACTUATOR

Pressure [bar]	3	4	5	6	7	Vol. [l]	
Height H [mm]	100	35,5	47,3	59,2	71,0	82,8	11,5
	120	34,0	45,3	56,7	68,0	79,3	14,8
	140	32,3	43,0	53,8	64,5	75,3	17,7
	160	30,2	40,2	50,3	60,4	70,4	20,3
	180	28,0	37,4	46,7	56,1	65,4	22,5
	200	25,6	34,2	42,7	51,3	59,8	24,4
	220	22,8	30,4	38,1	45,7	53,3	25,9
240	19,4	25,9	32,3	38,8	45,3	27,1	

Force values [kN]

All Volume [l] values at 7 bar