Disposition forces:

Disposition actuator forces Fs [kN]:

Pneumatic actuator type P: $Fs = 10^{-4} \cdot A \cdot (p_z - p_2)$,

Pneumatic actuator type R: $Fs = 10^{-4} \cdot A \cdot p_1$

where:

A - Diaphragm effective area [cm^2] - acc. table 1,

p_z - supply pressure [kPa] - acc. table 4

p_1; p_2 - Opening and closing spring range [kPa] - acc. table 4.

Table 4. Disposition forces for actuators Fs [kN].

Size	Actuator P			Actuator R					
	Supply pressure [kPa]			Spring range [kPa]					
	140	250	400	20…100	40…120 40…200	60…140	80…240	120…280	180…380
250	1,0	3,8	7,5	0,5	1,0	1,5	2,0	3,0	-
400	1,6	6,0	12,0	0,8	1,6	2,4	3,2	4,8	-
630	2,5	9,5	18,9	1,3	2,5	3,8	5,0	7,6	11,3
R-630T	-	-	-	2,6	5,0	7,6	10,0	15,2	22,6
1000	4,0	15,0	30,0	2,0	4,0	6,0	8,0	12,0	18,0
1500	6,0	22,5	45,0	3,0	6,0	9,0	12,0	18,0	27,0
1500T	12,0	45,0	90,0	6,0	12,0	18,0	24,0	36,0	54,0

Note:

1. For actuators ”P” assumed spring range 20…100 kPa and standard supply pressure.
2. Disposition forces calculated with the use of formulas or given in the table do not take into consideration friction or manufacture tolerances so the forces should be assumed as 15...20% lower than those values.
3. Actuator 630T occure only in type „R”.

PRODUCT CODE

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Type:

- direct action:	**P**
- reverse action:	**R**
- direct action, handwheel:	**PN**
- reverse action, handwheel:	**RN**

Size:

250
400
630
630T
1000
1500
1500T

Threaded connection:

M12x1,25	**12**
M16x1,5	**16**
M20x1,5	**20**
M24x1,5	**24**

Spring range [kPa] **/ coding:**

20…100	**1**
40…200	**2**
40…120	**3**
80…240	**4**
60…140	**5**
120…280	**6**
180…380	**7**

Stroke [mm]:

20
38
50
63
80
100

Example of the product code:

The pneumatic actuator of inversed action, with a handwheel, size – 400, threaded connection M12x1,25, stroke 20 mm, spring range 40...200:

RN - 400 - 20 - 2 - 12