



Cert. No. LRQ 0963008

ISO 9001

# spirax sarco

TI-P357-22  
CH Issue 3

## PN1000 and PN2000 Pneumatic Actuators

### Closing Pressures for 1" to 4" 'C' Series Valves

#### 'C' series valve

Valve size	1" DN25	1½" DN40	2" DN50	2½" DN65	3" DN80	4" DN100
Standard travel in inches and (mm)	¾" (20)		1⅜" (30)	1½" (38)		2" (50)
Equal % C <sub>v</sub> (US) and K <sub>vS</sub> in brackets	18 (15)	36 (31)	60 (51)	99 (85)	136 (116)	223 (191)

#### PN1000 and PN2000 series actuators

##### Class IV and VI shut-off with:

PTFE chevron or graphite stem seal. For extended bonnets and bellows seal read 'PTFE' or 'graphite' depending on seal chosen.

#### Maximum differential pressures (bar) - UNBALANCED valves controlled by positioner

Actuator	Spring range		Minimum air pressure bar g		Positioner required	Maximum differential pressure (bar) for standard valve trim with either graphite or PTFE stem seal											
	Spring extend PN1000	Spring retract PN2000	Spring extend PN1000	Spring retract PN2000		PTFE	Graphite	PTFE	Graphite	PTFE	Graphite	PTFE	Graphite	PTFE	Graphite	PTFE	Graphite
PN_300	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	5	3	-	-	-	-	-	-	-	-	-	-
PN_400	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	13	11	5	4	3	2	-	-	-	-	-	-
PN_500	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	25	23	10	10	6	6	3	3	-	-	-	-
PN_600	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	-	-	17	16	11	10	6	6	4	4	-	-
PN_700	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	-	-	35	34	23	22	14	14	9	9	5	5
PN_300	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	26	24	11	10	7	6	-	-	-	-	-	-
PN_400	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	45	43	20	19	13	12	8	7	5	5	-	-
PN_500	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	74	72	35	33	23	22	14	13	9	9	5	5
PN_600	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	-	-	51	50	33	33	20	20	14	14	8	8
PN_700	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	-	-	97	95	64	63	40	39	28	27	17	16
PN_300	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	60	58	27	25	17	16	-	-	-	-	-	-
PN_400	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	98	95	46	45	30	29	18	18	13	12	-	-
PN_500	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	103	103	74	73	49	48	30	30	21	21	13	12
PN_600	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	-	-	103	103	72	71	45	44	31	31	19	19
PN_700	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	-	-	-	-	103	103	83	82	58	58	35	35

#### PN1000 and PN2000 series actuators

##### Class IV shut-off with:

PTFE chevron or graphite stem and plug seal. For extended bonnets and bellows seal read 'PTFE' or 'graphite' depending on seal chosen.

#### Maximum differential pressures (bar) - BALANCED valves controlled by positioner

Actuator	Spring range		Minimum air pressure bar g		Positioner required	Maximum differential pressure (bar) for standard valve trim with either graphite or PTFE stem and plug seal											
	Spring extend PN1000	Spring retract PN2000	Spring extend PN1000	Spring retract PN2000		PTFE	Graphite	PTFE	Graphite	PTFE	Graphite	PTFE	Graphite	PTFE	Graphite	PTFE	Graphite
PN_300	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	18	-	-	-	-	-	-	-	-	-	-	-
PN_400	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	57	29	26	-	-	-	-	-	-	-	-	-
PN_500	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	103	91	70	40	49	27	36	-	22	-	-	-
PN_600	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	103	103	103	98	92	70	77	53	56	33	41	-
PN_700	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	-	-	-	-	-	-	103	103	103	103	103	103
PN_300	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	103	97	74	50	53	31	-	-	-	-	-	-
PN_400	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	103	103	103	103	103	88	95	70	71	47	-	-
PN_500	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	-	-	103	103	103	103	103	103	103	103	103	98
PN_600	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	-	-	-	-	-	-	-	-	103	103	103	103
PN_700	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	-	-	-	-	-	-	-	-	-	-	-	-
PN_300	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	103	103	103	103	103	103	-	-	-	-	-	-
PN_400	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	-	-	-	-	103	103	103	103	103	103	-	-
PN_500	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	-	-	-	-	-	-	-	-	-	-	103	103
PN_600	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	-	-	-	-	-	-	-	-	-	-	-	-
PN_700	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	-	-	-	-	-	-	-	-	-	-	-	-

Note: For reduced trims use the equivalent trim diameter. See overleaf for Class V shut-off.

Local regulations may restrict the use of this product to below the conditions quoted.

In the interests of development and improvement of the product, we reserve the right to change the specification.

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## 'C' series valve

Valve size	1" DN25	1½" DN40	2" DN50	2½" DN65	3" DN80	4" DN100
Standard travel in inches and (mm)	¾" (20)		1¾" (30)		2" (50)	
Equal % C <sub>V</sub> (US) and K <sub>VS</sub> in brackets	18 (15)	36 (31)	60 (51)	99 (85)	136 (116)	223 (191)

### PN1000 and PN2000 series actuators

#### Class V shut-off with:

PTFE chevron or graphite stem seal. For extended bonnets and bellows seal read 'PTFE' or 'graphite' depending on seal chosen.

### Maximum differential pressures (bar) - UNBALANCED valves controlled by positioner

Actuator	Spring range		Minimum air pressure bar g		Positioner required	Maximum differential pressure (bar) for standard valve trim with either graphite or PTFE stem seal											
	Spring extend PN1000	Spring retract PN2000	Spring extend PN1000	Spring retract PN2000		PTFE	Graphite	PTFE	Graphite	PTFE	Graphite	PTFE	Graphite	PTFE	Graphite		
PN_300	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	-	-	-	-	-	-	-	-	-	-	-	-
PN_400	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	-	-	-	-	-	-	-	-	-	-	-	-
PN_500	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	-	-	-	-	-	-	-	-	-	-	-	-
PN_600	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	-	-	-	-	-	-	-	-	-	-	-	-
PN_700	0.4 - 1.2	0.2 - 1.0	1.4	1.4	Yes	-	-	19	18	10	9	3	3	-	-	-	-
PN_300	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	2	-	-	-	-	-	-	-	-	-	-	-
PN_400	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	21	18	4	2	-	-	-	-	-	-	-	-
PN_500	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	50	48	18	17	9	8	3	2	-	-	-	-
PN_600	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	-	-	34	33	20	19	10	9	5	5	-	-
PN_700	1.0 - 2.0	0.2 - 1.0	2.2	2.0	Yes	-	-	80	79	50	50	29	28	19	18	9	9
PN_300	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	36	33	11	10	-	-	-	-	-	-	-	-
PN_400	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	73	71	29	28	16	16	-	-	-	-	-	-
PN_500	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	103	103	57	56	35	34	19	19	12	11	-	-
PN_600	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	-	-	91	90	58	57	34	33	22	22	12	11
PN_700	2.0 - 4.0	0.2 - 1.0	4.2	3.0	Yes	-	-	-	-	103	103	72	71	49	48	28	28