



## **R1 41 01 04      Technical Directive**

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

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### Information on

Subject of document

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**Contents:**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.1.	SUB PLATES, GANGED SUB PLATES AND ACCESSORIES .....	49
		R1 41 01 04
	Pneumatics directive for suppliers, erection companies, managers and users	
	Part 4: Selection energy distribution (valves)	

4.1.1. Scope and application .....	50
------------------------------------	----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

4.1.2. Subplates.....	63
-----------------------	----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.1.3. Ganged sub plates ISO 1 and 2 .....	88
--	----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



4.1.4. Ganged sub plates ISO 3 and 4.....	106
---	-----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.1.5. Cover plate ..... 123

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

4.2.	DIRECTIONAL CONTROL VALVES ACCORDING ISO 5599-1, SIZE 1 - 4 .....	135
	R1 41 01 04	
	Pneumatics directive for suppliers, erection companies, managers and users	
	Part 4: Selection energy distribution (valves)	

4.2.1. Scope and application .....	136
------------------------------------	-----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.2.2. Symbols .....	143
----------------------	-----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.2.3. *Technical data* ..... 145

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

4.2.4. Manufactures and types .....	163
-------------------------------------	-----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



4.3.1. Scope and application .....	223
------------------------------------	-----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.3.2. *Symbol according NEN 3348 (ISO 1219-1)* ..... 227

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.3.3. *Technical data manufacturer: Mannesmann, Rexroth* .....229

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.3.4. *Technical data manufacturer: Herion*..... 239

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

4.4.	SANDWICH VALVES ACCORDING ISO 5599 .....	253
		R1 41 01 04
		Pneumatics directive for suppliers, erection
		companies, managers and users
		Part 4: Selection energy distribution (valves)

4.4.1. Scope and application .....	254
------------------------------------	-----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.4.2. Throttle valves, sandwich type .....257

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.4.3. *Manufactures and sizes* ..... 260

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



4.4.4. Reducing valve, sandwich type (ISO).....269

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.5. IN LINE VALVES..... 302

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

4.5.1. Scope and application .....	303
------------------------------------	-----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.5.2. Symbols according NEN 3348 (ISO 1219-1)..... 313

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



4.5.3. Check valves.....315

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.5.4. *Throttle non return valve, female threaded* ..... 327

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.5.5. Shuttle valves, female threaded.....350

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.5.6. *Quick exhaust valves, female threaded*..... 365

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

4.6.	"SLOW START" VALVE .....	384
		R1 41 01 04
		Pneumatics directive for suppliers, erection companies, managers and users
		Part 4: Selection energy distribution (valves)

4.6.1. *Scope and application* ..... 385

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

4.6.2. *Symbol according NEN 3348 (ISO 1219-1)* ..... 392

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



4.7.	SHUT OFF VALVES / BALL VALVES PN 16.....	R1 41 01 04.....408
		Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)

4.7.1. *Ball valves with male thread ends* ..... 409

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.7.2. Ball valves for flange mounting.....	428
---	-----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.7.3. *Three-way ball valves, male threaded*..... 454

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.8.	REFERENCES.....	477
	R1 41 01 04	
	Pneumatics directive for suppliers, erection	
	companies, managers and users	
	Part 4: Selection energy distribution (valves)	

4.9. EXPLANATION.....	501
	R1 41 01 04 Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



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R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**4.1. Sub plates, ganged sub plates and accessories**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

#### **4.1.1. *Scope and application***

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

For the mounting of valves with a surface according ISO 5599 (see Technical Directive R1  
R1 41 01 04  
Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

41 01 04E, paragraph 4.2.) **ganged sub plates** are to be used, with side ports by  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

preference, because of the assembly in cabinets.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

While pipelines often are long, the connection ports are LARGER than described  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



according VDMA.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Mounting of a single valve can be done with normal sub plates.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Coverplates are used when valves are not present on the sub plate position, for example  
R1 41 01 04  
Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

after a revision, or as a spare position.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



**4.1.2. Subplates**

R1 41 01 04

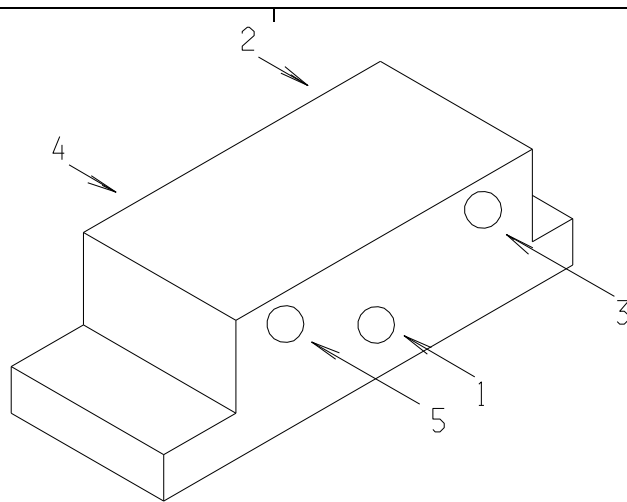
Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Figure 4.1**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



04  
suppliers, erection  
rs and users  
stribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.1**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Dimensions in mm (unless otherwise stated)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

ISO	Manufacture	Type	Connections R1 41 01 04	Dimensions
			Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)	




size			Location	Thread	l x w x h
			<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>		

Parker

19704

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)


	1	Herion	25381.15		side	G 1/4" R1 41 01 04	110 x 48 x 32
				<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>			
				 corus			

Norgren

M/P 19125

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

		Parker	29704				
				<div data-bbox="1090 136 1249 170">R1 41 01 04</div> <div data-bbox="879 174 1458 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</div> <div data-bbox="700 2058 812 2143"> corus</div>			

2

Herion

25382.15

side

G 3/8"  
R1 41 01 04

124 x 57 x 40

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)


Parker

39704

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)




	3	Herion	25383.15		side	G 1/2" R1 41 01 04	149 x 71 x 32
					Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)		
					 corus		


Norgren


M/P 19138

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

		Parker	PS. 1456			R1 41 01 04	213 x 94 x 53
				<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>			
				 corus			

	4	Herion	25384.15		side   G 3/8" R1 41 01 04	186 x 85 x 42
				<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>		
				 corus		

	Norgren	M/P 19144			R1 41 01 04	186 x 85 x 42
			<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>			
			 corus			

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

G thread according ISO 228-1.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**4.1.3. Ganged sub plates ISO 1 and 2**

R1 41 01 04

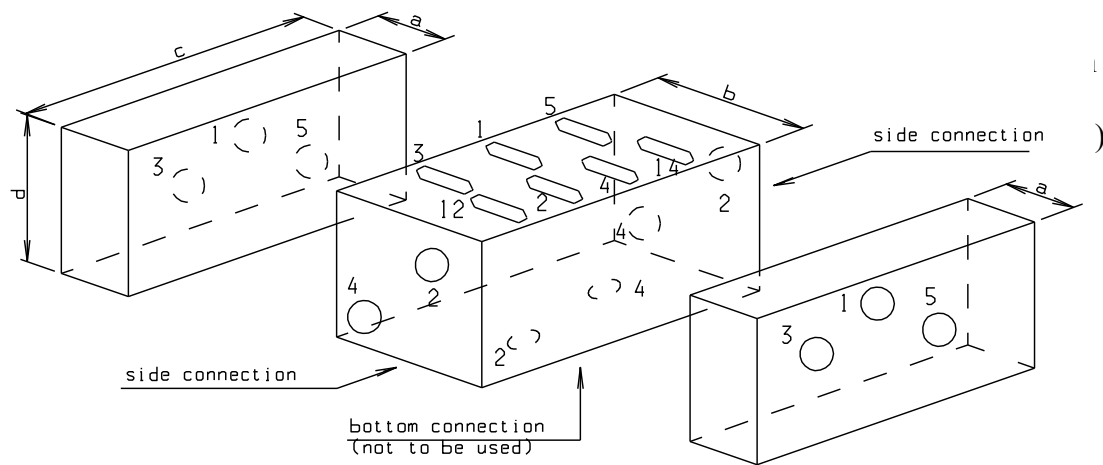
Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

**Figure 4.2**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



**Scheme 4.2**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Dimensions in mm (unless otherwise stated)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

ISO	Loc.	a	b	c	d	1	2	3	4	5	Type	Man..
										R141.01.04		
							Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)					



patt.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



## Pneumatics directive for suppliers, erection companies, managers and users

### Part 4: Selection energy distribution (valves)

1	both sides	38	43	100	63	G 3/8"	G 3/8"	G 3/8"	G 3/8"	EAXt502-1-	EAXT502-	SMC
---	------------	----	----	-----	----	--------	--------	--------	--------	------------	----------	-----

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



1	both sides	40	56	142	805	G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"	EAXT512-1-	EAXT512-	SMC
---	------------	----	----	-----	-----	--------	--------	--------	--------	--------	------------	----------	-----

RI 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



G thread according ISO 228-1.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**4.1.4. Ganged sub plates ISO 3 and 4**

R1 41 01 04

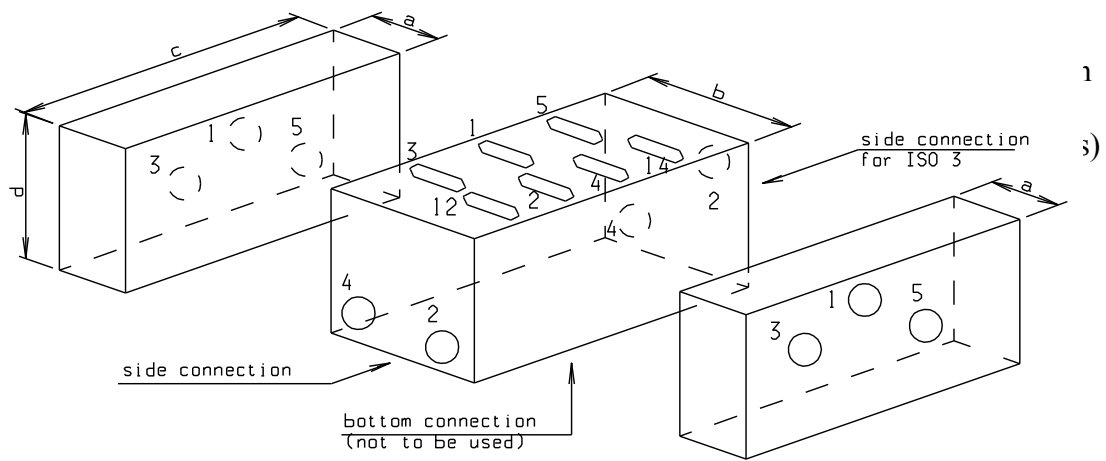
Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

**Figure 4.3**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



**Scheme 4.3**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Dimensions in mm (unless otherwise stated)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

ISO-	Port	a	b	c	d	1	2	3	4	5	Type	Man.
------	------	---	---	---	---	---	---	---	---	---	------	------

R1410104

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

patt.

R1410104

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)





Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

3	zij	27	72	176	68	G 1"	G 3/4"	G 1"	G 3/4"	G 1"	2523320000	2153300000	Herion
---	-----	----	----	-----	----	------	--------	------	--------	------	------------	------------	--------

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

3	zij	32	71	190	131,5	G 1"	G 3/4"	G 1"	G 3/4"	G 1"	39903	39907	Parker
---	-----	----	----	-----	-------	------	--------	------	--------	------	-------	-------	--------

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4	zij	25	84	230	82	G 1"	G 3/4"	G 1"	G 3/4"	G 1"	PS1444C	PS1437	Parker
---	-----	----	----	-----	----	------	--------	------	--------	------	---------	--------	--------

RI 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

G thread according ISO 228-1.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

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companies, managers and users  
Part 4: Selection energy distribution (valves)

**4.1.5. Cover plate**

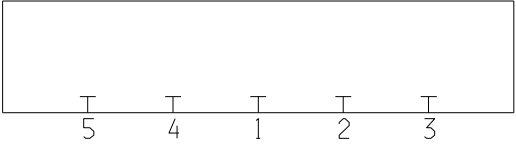
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companies, managers and users  
Part 4: Selection energy distribution (valves)

**Figure 4.4**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



01 04  
for suppliers, erection  
rangers and users  
y distribution (valves)


**Scheme 4.4**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



ISO pattern	<p data-bbox="884 125 1249 174">Manufacture and type RP 41 01 04</p> <p data-bbox="884 176 1453 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p> <div data-bbox="700 2063 813 2143"> corus</div>
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	Parker		SMC	Herion RI 4101 04	Norgren
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Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



2	PS1267	EAXT512-9A	0557734 R1 41 01 04	CQM/222/53/3/2/3
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Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

3	PS1364		0557674 <del>R1 41 01 04</del>	CQM/223/54/3/2/3
			<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

4	PS1479		0558456 R1 41 01 04	CQM/224/56/3/2/3
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Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



## 4.2. Directional control valves according ISO 5599-1, size 1 - 4

R141 01 04

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companies, managers and users  
Part 4: Selection energy distribution (valves)

#### 4.2.1. *Scope and application*

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Directional control valves for pneumatics	have a mounting face according R1 41 01 04 Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)
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ISO 5599-1. The valves are equipped with Cnomo pilots and plugs according ISO 4400 (3  
R1 41 01 04  
Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

poles with earth contact, 24 VAC, indicator LED).

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Plugs are also available integrated with cable.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

These values are for general applications.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Maximum pressure: 10 bar.

R1 41 01 04

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companies, managers and users

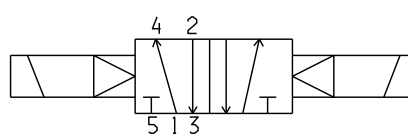
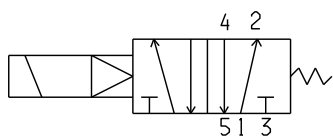
Part 4: Selection energy distribution (valves)



#### 4.2.2. *Symbols*

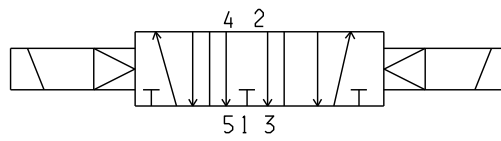
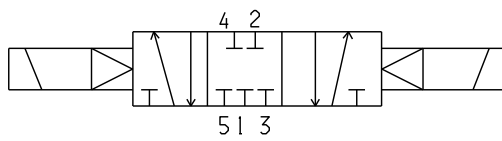
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



on

as)



**4.2.3. Technical data**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Maximum pressure : 10 bar

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Minimal pressure : 2,5 bar

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Allowable capacity

: size 1 - 880

l/min. ( $\Delta P=1$  bar,  $P_1=6$  bar)

RI 4101 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

size 2 - 1640 l/min. ( $\Delta P=1$  bar,  $P_1=6$  bar)  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

size 3 - 3270 l/min. ( $\Delta P=1$  bar,  $P_1=6$  bar)  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



size 4 - 4910 l/min. ( $\Delta P=1$  bar,  $P_1=6$  bar)  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Medium

: filtered and dried air, lubricated or non lubricated

RI 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Control

: Solenoids 24 V=, max. 10 Watt R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Valve plug

: Solenoids equipped with plug with red indication LED

R1410104

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

(type Hirschman: GDME 2011 + screw 3N-7 + print +  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

GDME-LED 24 or Murrel elektronik plug + 5 mtr. cable,  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

type 3124239)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Emergency manual

: by means of spring return push button

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



control

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Seal

: flexible seal

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**4.2.4. *Manufactures and types***

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.5**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Size 1

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Symbol	Manufacture		Type
			<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>





Herion

2531268.0154 + plug

~~R1 41 01 04~~

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

2	Parker	19424 NTF + plug R1 41 01 04
	<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

	Herion	2531268.0154 + plug
--	--------	---------------------

~~R1 41 01 04~~

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

3	Parker	19414XNTF + plug R1 41 01 04
	<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

	Herion		2531668.0154 + plug <del>R1 41 01 04</del>
--	--------	--	---

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4	Parker	19424YNTF + plug R1 41 01 04
	<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

	Herion		2531768.0154 + plugs
			<del>R1 41 01 04</del>

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.6**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Size 2

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)





Herion

2532268.0154 + plug

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



2	Parker	29424 NTF + plugs R1 41 01 04
---	--------	----------------------------------

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)





	Norgren		UM/22253/123/N/24 V= + plugs
--	---------	--	------------------------------

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

3	Parker	29424XNTF + plugs R1 41 01 04
	<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

	Herion		2532668.0154 + plugs <del>R1 41 01 04</del>
--	--------	--	--

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



4	Parker	19424YNTF + plugs R1 41 01 04
---	--------	----------------------------------

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



	Norgren		UM/22263/6123/N/24 V= + plugs
--	---------	--	-------------------------------

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.7**

R1 41 01 04


Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Size 3

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Symbol	Manufacture	Type
		R1 41 01 04 Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)







Norgren

UM/22353/172/N/24 V= + plug

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



2	Parker	39424 NTF + plugs R1 41 01 04
	<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

	Herion		2533568.0154 + plugs <del>R1 41 01 04</del>
--	--------	--	--

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



3	Parker	39424XNTF + plugs R1 41 01 04
---	--------	----------------------------------

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



	Norgren		UM/22354/6123/N/24 V= + plugs
--	---------	--	-------------------------------

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4	Parker	39424YNTF + plugs R1 41 01 04
	<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

	Herion		2533768.0154 + plugs <del>R1 41 01 04</del>
--	--------	--	--

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)





R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.8**

R1 41 01 04


Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Size 4

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Symbol	Manufacture	Type
		R1 41 01 04 Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)







2	Herion	2534568.0154 + plugs R1 41 01 04
---	--------	-------------------------------------

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)





3	Herion	2534668.0154 + plugs R1 41 01 04
---	--------	-------------------------------------

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



4	Herion	2534768.0154 + plugs R1 41 01 04
---	--------	-------------------------------------

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

### 4.3. Proportional pressure control valves

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



#### **4.3.1. *Scope and application***

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Proportional pressure control valves will be used at applications where an adjustable force  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

is required.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

The pilot signal is electrical. The valve has a closed circuit built in pressure control.

R1 41 01 04

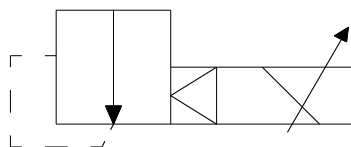
Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

**4.3.2. Symbol according NEN 3348 (ISO 1219-1)**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



R1 41 01 04  
ctive for suppliers, erection  
s, managers and users  
energy distribution (valves)

**4.3.3. Technical data manufacturer: Mannesmann, Rexroth**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Precision pressure control valve, proportional

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



Maximum supply pressure 8 bar

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Maximum flow 600 l/min ( $\Delta P=1$  bar,  $P_1 = 7$  bar)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Connection BSP 1/4"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Controlled pressure 0,1 - 6 bar

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Repeatability and hysteresis 0,4 bar

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Power supply 24 V=

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Current control 4-20 mA

Type: 561.010.215.0

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Voltage control 0-10 V

Type: 561.010.202.0.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



**4.3.4. Technical data manufacturer: Herion**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Proportional pressure control valve with integrated electronic pressure control

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Maximum supply pressure 10 bar

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Can be mounted at a ISO 5599 mounting face size 1, 2 or 3 by means of an adapter plate.  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Repeatability and hysteresis 0,05 bar

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Power supply 24 V=.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)


**Scheme 4.9**

R1 41 01 04


Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)




<div data-bbox="485 114 539 152" data-label="Text"><p>ISO</p></div> <div data-bbox="699 2058 813 2145" data-label="Image">The logo for Corus, featuring a stylized 'C' inside a circle with the word 'corus' in lowercase letters below it.</div>	<div data-bbox="879 114 1458 286" data-label="Text"><p>Control signal R1 41 01 04 Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p></div>
--	---

pattern	4 - 20 mA	R1 41 01 04 <sup>0</sup> - 10 V
		<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>

1	4091112	4091110
	<div>R1 41 01 04</div> <div>Pneumatics directive for suppliers, erection companies, managers and users</div> <div>Part 4: Selection energy distribution (valves)</div>	
<div></div>		

2		4091312	4091310
		<p data-bbox="1013 141 1173 174">R1 41 01 04</p> <p data-bbox="802 174 1383 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p>	

3		4091412	4091410
		<div data-bbox="1091 141 1248 174">R1 41 01 04</div> <p data-bbox="879 176 1458 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p> <div data-bbox="700 2058 813 2143"> corus</div>	

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

#### 4.4. Sandwich valves according ISO 5599

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

#### 4.4.1. *Scope and application*

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



Sandwich valves are used mainly for limiting of pressures and flows. Mounting face  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

according ISO 5599. Max. pressure 10 bar.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

**4.4.2. Throttle valves, sandwich type**

R1 41 01 04

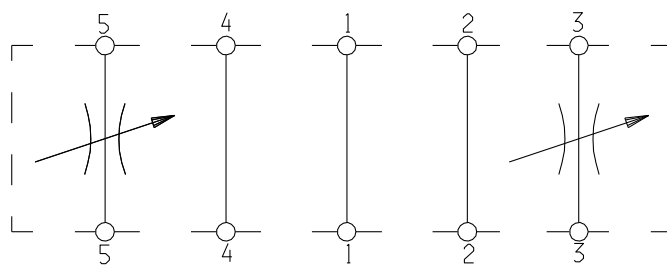
Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Throttling in connection 3 and 5.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



Suppliers, erection  
and users  
distribution (valves)

**4.4.3. Manufactures and sizes**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

		Parker		Herion	Norgren
				R1 41 01 04	
				Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)	

ISO-size	Ordering number	Ordering number	Ordering number
----------	-----------------	-----------------	-----------------


R1 41 01 04


Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)





2	29501	0557619	CQM 22153/3/26
		<p data-bbox="1013 141 1173 174">R1 41 01 04</p> <p data-bbox="802 174 1382 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p>	

3	39501	0557620	CQM 22154/3/26
		<div data-bbox="1091 141 1249 170">R1 41 01 04</div> <p data-bbox="879 176 1458 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p> <div data-bbox="700 2063 812 2143"> corus</div>	

4	N 91262	0558357	CQM 22156/3/26
		<p data-bbox="1011 141 1174 170">R1 41 01 04</p> <p data-bbox="802 174 1382 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p>	
			

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**4.4.4. Reducing valve, sandwich type (ISO)**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**4.4.4.art.a. Reducer function in port 1**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



Manufacture  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

ISO size		Parker	R1 41 01 04 Herion
----------	--	--------	--------------------

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

1	19/N91374-1	2538130 (button left) R1 41 01 04
	<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

2	29/N91375-1	R1 41 01 04
		<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>

3	39/N91376-1	2538330 (button left)
---	-------------	-----------------------

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



**4.4.4.art.b. Reducer function in port 2**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Manufacture  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

ISO size		Parker	R1 41 01 04Norgren
		Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)	

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

2	29/N91375-2	R1 41 01 04
		<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>

3	39/N91376-2	FP 7074
---	-------------	---------

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4	49/N91377-2	R1 41 01 04
		<p>Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p>

**4.4.4.art.c. Reducer function in port 4**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)




Manufacture  
R1 41 01 04


Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

ISO size		Parker	R1 41 01 04	Norgren
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Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

1	19/N91374-4	FP 7055
	<div data-bbox="1091 141 1248 174">R1 41 01 04</div> <div data-bbox="879 176 1458 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</div> <div data-bbox="700 2058 813 2143"> corus</div>	

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

3	39/N91376-4	FP 7075
		<p data-bbox="1091 141 1249 174">R1 41 01 04</p> <p data-bbox="879 176 1458 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p> <div data-bbox="700 2063 813 2145"> corus</div>

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**4.4.4.art.d. Reducer function in port 2 and 4**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Manufacture  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)





Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

2	29/N91375-2/4	R1 41 01 04
		<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>

3

39/N91376-2/4

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4	49/N91377-2/4	R1 41 01 04
		<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

#### 4.5. In line valves

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



**4.5.1. *Scope and application***

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

In line valves for sub plate mounting are preferred.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

For special functions are large size, in line mounting is some inevitable.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

The following components with female threaded connection are to be applied:

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

– check valves (non return valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

– throttle/non return valves

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



– shuttle valves

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

– quick exhaust valves.

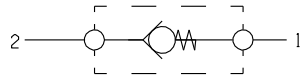
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

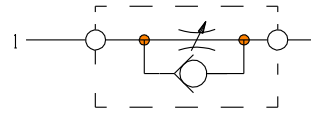
**4.5.2. Symbols according NEN 3348 (ISO 1219-1)**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

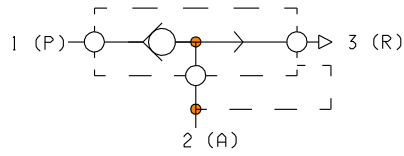


Check valve

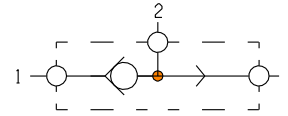


Throttle non return valve

ers, erection  
users  
ion (valves)



Quick exhaust valve



Shuttle valve

**4.5.3. Check valves**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Figure 4.5**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Manufacture: Norgren, max. pressure 17 bar, opening pressure 0,5 bar  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



Type number	Connection inside
	Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)

S/520

G 1/8"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

S/521

G 1/4"  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

S/522

G 1/2"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

S/523

G 3/4"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

S/524

G 1"  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



**4.5.4. Throttle non return valve, female threaded**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Manufacture: Norgren, max. pressure 17,5 bar, opening pressure 1 bar  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)


R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Type number		NW	Connection"
-------------	--	----	-------------

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)


S/836		G 1/8"
		<div data-bbox="1088 138 1248 170" data-label="Text"><del>R1 41 01 04</del></div> <div data-bbox="879 174 1458 286" data-label="Text"><p>Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p></div> <div data-bbox="699 2056 813 2145" data-label="Page-Footer"> corus</div>

M/837

G 1/4"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

M/839		G 1/2"
		<div data-bbox="1086 136 1249 170" data-label="Text"><p>R1 41 01 04</p></div> <div data-bbox="879 174 1458 286" data-label="Text"><p>Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p></div> <div data-bbox="699 2058 813 2143" data-label="Page-Footer"><p>corus</p></div>

M/840

G 3/4"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



M/855		G 1" R1 41 01 04
	<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.10**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Manufacture: Ross, max. pressure 10 bar, opening pressure 0,3 bar  
R1 41 01 04  
Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)


R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Type number

Connection"  
RI 4I 0I 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

New	Old	R1 41 01 04
		Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)
		

D 1968 A 2007

D 515 M 1

G 1/8"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



D 1968 A 3007	D 515 M 1	G 1/4" <del>R1 41 01 04</del>
	<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

D 1968 A 4007

D 515 M 1

G 1/2"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

D 1968 A 5007	D 515 M 1	G 3/4" <del>R1 41 01 04</del>
		<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>

D 1968 A 6007

D 515 M 1

G 1"  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

D 1968 A 7007	D 515 M 1	G 1 1/4" <del>R1 41 01 04</del>
	<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	


D 1968 A 8007

D 515 M 1

G 1 1/2"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

D 1968 A 9007	D 515 M 1	<div>G 2"</div> <div>R1 41 01 04</div>
		<div>Pneumatics directive for suppliers, erection companies, managers and users</div> <div>Part 4: Selection energy distribution (valves)</div> <div></div>

**4.5.5. Shuttle valves, female threaded**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



**Scheme 4.11**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Manufacture: Norgren, max. pressure 10 bar, opening pressure 0,7 bar  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Type number		NW	Connection G
			R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

S/575

1/8"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

S/592

1/4"  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.12**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



Manufacture: Ross, max. pressure 10 bar, opening pressure 0,3 bar  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Type number		NW	Connection G R1 41 01 04
		<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

D 1968 A 2003

1/4"  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**4.5.6. *Quick exhaust valves, female threaded***

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.13**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



Manufacture: Norgren, max. pressure 10 bar, opening pressure 0,7 bar  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Type number	NW	Connection
		<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>

			G 1 - 2 - 3 R1 41 01 04
--	--	--	----------------------------

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

S/510		1/4" - 3/8" - 3/4" R1 41 01 04
	<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

S/511

1/2" - 3/4" - 3/4"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.14**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



Manufacture: Ross, max. pressure 10 bar, opening pressure 0,3 bar  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



D 1968 A 3005

16

3/8" - 3/8" - 1/2"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

D 1968 A 4005

16

1/2" - 1/2" - 1/2"  
R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

D 1968 A 5005

18

3/4" - 3/4" - 1"

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

#### 4.6. "Slow start" valve

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

**4.6.1. *Scope and application***

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

In certain circuits, especially with large flows, the switch-on of supply pressure will cause

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

undesired movements.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

With a slow start valve, the pressurisation will be decelerated.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Note:

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



**A “slow start” valve is no safety valve!**

R1 41 01 04

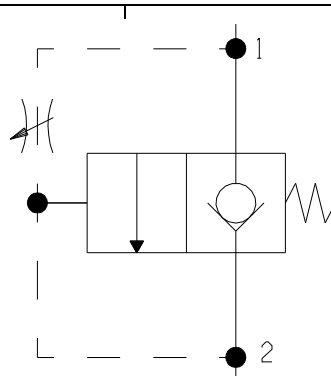
Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

4.6.2. *Symbol according NEN 3348 (ISO 1219-1)*

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



R1 41 01 04  
irreversible for suppliers, erection  
ies, managers and users  
on energy distribution (valves)

**4.6.3. Technical data**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

**Scheme 4.15**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Manufacture: Ross, max. pressure 10 bar

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Type number		NW	Connection G
		R1 41 01 04	

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



D 2781 A 4017		13	1/2" <del>R1 41 01 04</del>
		<p>Pneumatics directive for suppliers, erection companies, managers and users</p> <p>Part 4: Selection energy distribution (valves)</p>	

D 2781 A 6017

21

R1 41 01 04<sup>1"</sup>

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

D 2781 A 8017

38

1 1/2"

~~R1 41 01 04~~

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Manufacture Norgren:

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

In the line of FRL units from Norgren is also a slow start valve available. See Technical  
R1 41 01 04  
Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Directive R1 41 01 04E, paragraph 4.3.1.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

#### 4.7. Shut off valves / ball valves PN 16

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

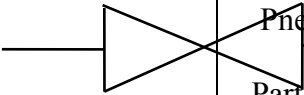
Part 4: Selection energy distribution (valves)

**4.7.1. *Ball valves with male thread ends***

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Figure 4.6**



R1 41 01 04  
Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.16**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

DN	Connection D	Building length according <del>RI 41 01 04</del>
----	--------------	---

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)






6

G 1/4"

50

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

10	G 3/8"	60
		<div data-bbox="1090 141 1249 174" data-label="Text"> RT 41 01 04 </div> <div data-bbox="880 174 1458 288" data-label="Text"> Pneumatics directive for suppliers, erection  companies, managers and users  Part 4: Selection energy distribution (valves) </div> <div data-bbox="700 2063 813 2145" data-label="Page-Footer">    corus </div>


16

G 1/2"

75

RT 41 01 04


Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)


20	G 3/4"	80
		<div data-bbox="1090 141 1249 174">RT 41 01 04</div> <div data-bbox="879 176 1458 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</div> <div data-bbox="700 2063 813 2145"> corus</div>

25	G 1"	90
----	------	----

RI 4I 0I 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

32	G 1 1/4"	110
		<p data-bbox="1086 147 1246 170">RT 41 01 04</p> <p data-bbox="879 181 1458 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p> <div data-bbox="700 2063 813 2145"> corus</div>

40	G 1 1/2"	120
		<div data-bbox="1013 141 1173 174">RT 41 01 04</div> <div data-bbox="802 174 1383 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</div> <div data-bbox="625 2063 737 2145"> corus</div>



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Material:

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Housing: Messing, nickled

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Ball: Messing, chromed

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Seal: Teflon, Perbunan.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

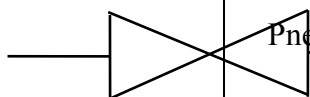
**4.7.2. Ball valves for flange mounting**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

**Figure 4.7**



R1 41 01 04  
Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.17**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users


Part 4: Selection energy distribution (valves)

DN

Building length according DIN 3202  
R1 41 01 04


Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)




40	140	F4
	<div data-bbox="1069 138 1252 172">R1 41 01 04</div> <div data-bbox="877 174 1460 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</div>	
	<div data-bbox="699 2056 815 2145"> corus</div>	

50	150	R1 41 01 04 F4
----	-----	----------------

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

65	170	F4
		<div data-bbox="1070 136 1251 174">R1 41 01 04</div> <div data-bbox="879 174 1458 286">Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</div> <div data-bbox="700 2058 813 2143"> corus</div>

80	180	F4
		<div data-bbox="1011 138 1174 172" data-label="Text"> <p>R1 41 01 04</p> </div> <div data-bbox="804 174 1382 250" data-label="Text"> <p>Pneumatics directive for suppliers, erection companies, managers and users</p> </div> <div data-bbox="804 250 1382 286" data-label="Text"> <p>Part 4: Selection energy distribution (valves)</p> </div> <div data-bbox="627 2063 735 2145" data-label="Page-Footer">  </div>



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Material:

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

Body: C22/GS-C25 according NEN-EN 10083-196

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Ball: X5CrNiMo 17-12-2 (AISI 316) according NEN-EN 10088

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companies, managers and users

Part 4: Selection energy distribution (valves)

Seals: ball-PTFE, spindle-FPM.

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companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Construction:

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Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Floating ball

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companies, managers and users

Part 4: Selection energy distribution (valves)



90° shift with indicator

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Part 4: Selection energy distribution (valves)

including handle

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companies, managers and users  
Part 4: Selection energy distribution (valves)

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companies, managers and users  
Part 4: Selection energy distribution (valves)

Flanges drilled according DIN 2501

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companies, managers and users  
Part 4: Selection energy distribution (valves)

Building length according DIN 3202 F4/F5

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companies, managers and users  
Part 4: Selection energy distribution (valves)

Testing according DIN 3230, Teil 5 en 6

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companies, managers and users

Part 4: Selection energy distribution (valves)

Marking according EN 19.

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Part 4: Selection energy distribution (valves)

**4.7.3. Three-way ball valves, male threaded**

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Pneumatics directive for suppliers, erection  
companies, managers and users

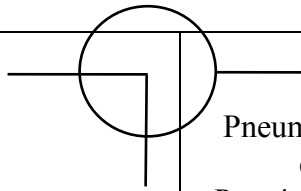
Part 4: Selection energy distribution (valves)



**Figure 4.8**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

**Scheme 4.18**

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Dimensions in mm

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Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

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Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)


DN	Connection D	DIN ISO 228/1	Building length L
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Pneumatics directive for suppliers, erection companies, managers and users  
Part 4: Selection energy distribution (valves)



6	G 1/4"	82 <del>R1 41 01 04</del>
	<p>Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p>	

10	G 3/8"	92 <del>R1 41 01 04</del>
	Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)	
		

16	G 1/2"	113
	<div data-bbox="1070 152 1251 174" data-label="Text"> R1 41 01 04 </div> <div data-bbox="879 174 1458 286" data-label="Text"> Pneumatics directive for suppliers, erection companies, managers and users  Part 4: Selection energy distribution (valves) </div>	

20

G 3/4"

129

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

25	G 1'	<div>151</div> <div>R1 41 01 04</div>
		<div>Pneumatics directive for suppliers, erection companies, managers and users</div> <div>Part 4: Selection energy distribution (valves)</div>

32	G 1 1/4"	172 R1 41 01 04
	<p>Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p>	

40	G 1 1/2"	206 R1 41 01 04
	<p>Pneumatics directive for suppliers, erection companies, managers and users Part 4: Selection energy distribution (valves)</p>	

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



Material:

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Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Body: Steel, GGG

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Part 4: Selection energy distribution (valves)

Ball: Stainless steel, brass GGG chromated

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Part 4: Selection energy distribution (valves)

Seals: ball-Teflon, spindle-Perbunan.

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companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

## 4.8. References

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

In this Technical Directive reference is made to

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

NEN 3348 (= ISO 1219-1)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

EN

R1 41 01 04

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companies, managers and users

Part 4: Selection energy distribution (valves)



10083

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companies, managers and users

Part 4: Selection energy distribution (valves)

10088

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companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)



ISO

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

228-1

R1 41 01 04

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companies, managers and users

Part 4: Selection energy distribution (valves)

1219-1

R1 41 01 04

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companies, managers and users  
Part 4: Selection energy distribution (valves)

4400

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Part 4: Selection energy distribution (valves)

5599

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companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

DIN

R1 41 01 04

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companies, managers and users  
Part 4: Selection energy distribution (valves)

2501

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companies, managers and users  
Part 4: Selection energy distribution (valves)



3202

R1 41 01 04

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companies, managers and users  
Part 4: Selection energy distribution (valves)

3230

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companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

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companies, managers and users  
Part 4: Selection energy distribution (valves)

Technical Directive R1 41 01 04E.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

#### 4.9. Explanation

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Version 1.0:

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)



none.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

Version 1.1:

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users  
Part 4: Selection energy distribution (valves)

logo has changed.

R1 41 01 04

Pneumatics directive for suppliers, erection  
companies, managers and users

Part 4: Selection energy distribution (valves)