

FEATURES

- M12 connection: Prevents wiring errors, reduces installation time and reduces wiring costs
- Modular assembly with joinable subbases

GENERAL

Fluid

Operating pressure

503
542-543

Pilot pressure

Ambient temperature

Flow (Qv at 6 bar)

Flow coefficients

- conforming to ISO 6358

Response time

Life (millions of cycles)

Base

Subbase

	ISO 1	ISO 2	ISO 3
Fluid	Air or neutral gas, filtered, lubricated or not		
Operating pressure	+3 to +10 bar (with internal supply to pilot)		
	-0,950 to +10 bar (with external supply to pilot)		
	-0,950 to +12 bar (with external supply to pilot)		
	Can be used with vacuum -0,950 bar max.		
Pilot pressure	See tables choice of equipment		
Ambient temperature	-10°C to +50°C (503 pilot)/+60°C (302 pilot)		
Flow (Qv at 6 bar)	1200 l/min (ANR)	2800 l/min (ANR)	4200 l/min (ANR)
Flow coefficients	-		
	- conforming to ISO 6358		
Response time	See specifications tables		
Life (millions of cycles)	30	30	30
Base	ISO 5599/1 sizes 1-2-3 - AFNOR NF E49080		
Subbase	Single subbase ISO/AFNOR NF E49085		
	Joinable subbase ISO/VDMA 24345		
	Joinable subbase with integrated functions		



CONSTRUCTION

Body/Cover

Pilot and return assembly

Seals

Internal parts

503

Aluminium, E-coating treatment

POM

NBR (nitrile) and PUR (polyurethane)

PARA (polyarylamide), steel

542-543

Painted steel

POM

NBR (nitrile) and PUR (polyurethane)

POM (polyacetal), light alloy

SPECIFICATIONS (SPOOL VALVE WITH INTERNAL PILOT SUPPLY)

function symbol	operators pilot (14) solenoid air operated return (12)	size	response time (ms)		pilot pressure (bar)		catalogue number spool valve with pilot series 302 (with internal supply) (M)			
			energized	de-energized	min.	max.	×	●	▼	
	spring return	ISO 1	20	60	3	10	R503A2B10Q82KF1	R503A2B10Q81GF1	R503A2B10Q14BF1	
		ISO 2	32	65	2,5	10	54202151	54202172	54202193	
		ISO 3	62	104	3	10	54302151	54302172	54302193	
		differential return	ISO 1	28	40	3	10	R503A2BN0Q82KF1	R503A2BN0Q81GF1	R503A2BN0Q14BF1
			ISO 2	51	62	2	10	54202152	54202173	54202194
			ISO 3	97	71	3	10	54302152	54302173	54302194
	air return	ISO 1	-	-	-	10	-	-	-	
		ISO 2	21	-	1,5	10	54202153	54202174	54202195	
		ISO 3	34	-	1,5	10	54302153	54302174	54302195	
	differential return	ISO 1	-	-	-	10	-	-	-	
		ISO 2	17	21	2	10	54202154	54202175	54202196	
		ISO 3	29	39	3	10	54302154	54302175	54302196	
solenoid air operated	ISO 1	20	20	2	10	R503A2B40Q82KF1	R503A2B40Q81GF1	R503A2B40Q14BF1		
	ISO 2	18	20	2	10	54202155	54202176	54202197		
	ISO 3	33	38	2	10	54302155	54302176	54302197		
	W1 closed centre position	ISO 1	15	20	3	10	R503A2B60Q82KF1	R503A2B60Q81GF1	R503A2B60Q14BF1	
		ISO 2	25	26	2,5	10	54202156	54202177	54202198	
		ISO 3	37	46	3	10	54302156	54302177	54302198	
	W2 centre open to pressure	ISO 1	-	-	-	10	-	-	-	
		ISO 2	54	26	2,5	10	54202157	54202178	54202199	
		ISO 3	77	50	3	10	54302157	54302178	54302199	
	W3 centre open to exhaust	ISO 1	18	45	3	10	R503A2B50Q82KF1	R503A2B50Q81GF1	R503A2B50Q14BF1	
		ISO 2	28	59	2,5	10	54202158	54202179	54202200	
		ISO 3	40	52	3	10	54302158	54302179	54302200	

(M) Type of manual operator on pilot(s): X : without ● : maintained ▼ : impulse

SPECIFICATIONS (SPOOL VALVE WITH EXTERNAL PILOT SUPPLY)

function symbol	operators pilot (14) solenoid air operated return (12)	size	response time (ms)		pilot pressure (bar)		catalogue number spool valve with pilot series 503 or 302 (with external supply) ⁽¹⁾		
			energized	de-energized	min.	max.	(M)		
							×	●	▼
	spring return	ISO 1	20	60	3	10	R503A2B10Q11MF1	R503A2B10Q11BF1	R503A2B10QA00F1
		ISO 2	32	65	2,5		54202159	54202180	54202201
		ISO 3	62	104	3		54302159	54302180	54302201
	differential return	ISO 1	28	40	3	10	R503A2BN0Q11MF1	R503A2BN0Q11BF1	R503A2BN0QA00F1
		ISO 2	51	62	2		54202160	54202181	54202202
		ISO 3	97	71	3		54302160	54302181	54302202
	air return	ISO 1	-	-	-	10	-	-	-
		ISO 2	21	-	1,5		54202161	54202182	54202203
		ISO 3	34	-	1,5		54302161	54302182	54302203
differential return	ISO 1	-	-	-	10	-	-	-	
	ISO 2	17	21	2		54202162	54202183	54202204	
	ISO 3	29	39	3		54302162	54302183	54302204	
solenoid air operated	ISO 1	20	20	2	10	R503A2B40Q11MF1	R503A2B40Q11BF1	R503A2B40QA00F1	
	ISO 2	18	20	2		54202163	54202184	54202205	
	ISO 3	33	38	2		54302163	54302184	54302205	
	W1 closed centre position	ISO 1	15	20	3	10	R503A2B60Q11MF1	R503A2B60Q11BF1	R503A2B60QA00F1
		ISO 2	25	26	2,5		54202164	54202185	54202206
		ISO 3	37	46	3		54302164	54302185	54302206
	W2 centre open to pressure	ISO 1	-	-	-	10	-	-	-
		ISO 2	54	26	2,5		54202165	54202186	54202207
		ISO 3	77	50	3		54302165	54302186	54302207
	W3 centre open to exhaust	ISO 1	18	45	3	10	R503A2B50Q11MF1	R503A2B50Q11BF1	R503A2B50QA00F1
		ISO 2	28	59	2,5		54202166	54202187	54202208
		ISO 3	40	52	3		54302166	54302187	54302208

(M) Type of manual operator on pilot(s): × : without ● : maintained ▼ : impulse

⁽¹⁾ In external pilot version, the spool valve can be used in an air system at pressures between:
503 : -0,950 bar to +10 bar / 542-543 : -0,950 bar to +12 bar

ELECTRICAL CHARACTERISTICS OF PILOTS

size	type of valve	voltage	consumption	insulation class	protection degree	connection
ISO 1	series 503	24 V DC	1,7 W 1,4 W	F	IP 65	for M12 centralised connection IEC 60947.5.2 - ISO/CD20401 CNOMO E03.62.520N on base with 3 male contacts
ISO 2 - 3	series 302	24 V DC	2 W 1 W			

CONNECTORS

Straight M12 connector with 5 female contacts, Ø4 to 6 mm cable entry, code: **88100304**
 Straight M12 connector with 5 female contacts, Ø6 to 8 mm cable entry, code: **88100256**
 Straight M12 connector with 5 female contacts, cable length 5 m, code: **88130212**
 Right-angle M12 connector with 5 female contacts, cable length 5 m, code: **88130213**

SUBBASES AND ACCESSORIES (page: 81): www.asco.com