



FEATURES

- Reliability: long service life of 30 million cycles
- Choice of internal/external supply with selector seals (vacuum use to -0,950 bar)
- Modular assembly with joinable subbases
- Subbases with side or bottom ports

GENERAL

	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 +12 bar (with external supply to pilot)		
	Can be used with vacuum - 0,950 bar max.		
Pilot pressure	See specifications tables		
Ambient temperature	- 10°C to +60°C		
Flow (Qv at 6 bar)	1400 l/min (ANR)	2800 l/min (ANR)	4200 l/min (ANR)
Flow coefficients	C = 5,8 x 10 ⁻⁸ m ³ /s.Pa (sonic conductance)		
	b = 0,28 (absolute static pressure)		
	Kv = 20 (l/min)		
	See tables choice of equipment		
Response time	30 millions of cycles		
Life	30 millions of cycles		15 millions of cycles
Base	ISO 5599/01 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

Cover	Painted steel
Pilot and return assembly	POM (polyacetal)
Seals	NBR (nitrile) and PUR (polyurethane)
Internal parts	POM (polyacetal), light alloy

ELECTRICAL CHARACTERISTICS

pilot	voltage		consumption		insulation class	protection degree	electrical connection
	~	=	inrush	hold			
series 189	~	24V-48V-115V-230V/50Hz	6 VA	3,5 VA (2,5 W)	F	IP 65	spade plug size 22 connector, DIN 43650, 11 mm, industry standard B, rotatable by 180°
	=	24V-48V	2,5 W				
series 190	~	24V-48V-115V-230V/50 Hz	9 VA	4 VA (3 W)	F	IP 65	spade plug size 30 connector, ISO4400/EN175301-803, form A, rotatable by 90°
	=	24V-48V	3 W				

The solenoid valve 190 is dual-voltage (24V~, 12V=) (48V~, 24V=) (115V~, 48V=) (230V~, 110V=)

SPECIFICATIONS 5/2

function 5/2 symbol	operators pilot (14) solenoid air operated return (12)	size	response time (1) (ms)		pilot pressure (bar)		2 catalogue numbers		(M)
			ener-gized	de-ener-gized	min.	max.	valve	+ solenoid pilot quantity & catalogue number with standard connector	
	spring return	ISO 1	25	66	3	10	54191023	+ 1x { 18900001 - 19000005 19000006 19000017	● × ● ▼
		ISO 2	19	68	2,5		54292023		
		ISO 3	45	130	3		54391023		
	differential return	ISO 1	41	45	3	10	54191024	+ 1x { 18900001 - 19000005 19000006 19000017	● × ● ▼
		ISO 2	32	49	2		54292024		
		ISO 3	71	82	3		54391024		
	air return	ISO 1	21	-	1,5	10	54191025	+ 1x { 18900001 - 19000005 19000006 19000017	● × ● ▼
		ISO 2	16	-	1,5		54292025		
		ISO 3	28	-	1,5		54391025		
	solenoid differential return	ISO 1	16	18	3	10	54191026	+ 2x { 18900001 - 19000005 19000006 19000017	● × ● ▼
		ISO 2	15	16	2		54292026		
		ISO 3	21	23	3		54391026		
	Solenoid air operated return	ISO 1	17	16	1,5	10	54191027	+ 2x { 18900001 - 19000005 19000006 19000017	● × ● ▼
		ISO 2	16	15	1,5		54292027		
		ISO 3	26	25	1,5		54391027		

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

(1) With solenoid valve series 190

SPECIFICATIONS 5/3

function 5/3 symbol	operators pilot (14) return (12) solenoid air operated	size	response time (1) (ms)		pilot pressure (bar)		2 catalogue numbers			
			ener- gized	de-ener- gized	min.	max.	valve	+ solenoid pilot quantity & catalogue number with standard connector	(M)	
	pressure held W1	ISO 1	16	17	3	10	54191028	+ 1x	18900001 ● - 19000005 × 19000006 ● 19000017 ▼	
		ISO 2	16	16			54292028			
		ISO 3	27	26			54391028			
	pressure applied W2	ISO 1	44	18	3	10	54191030			
		ISO 2	54	18			54292030			
		ISO 3	93	27			54391029			
	pressure release W3	ISO 1	17	47	3	10	54191029			
		ISO 2	19	61			54292029			
		ISO 3	29	28			54391030			

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

(1) With solenoid valve series 190

OPTIONS

- Solenoid valve pilot 3/2 series 192 in 3 versions
- Equipment with manual testers so that the spool position can be checked
- Material and solenoid pilot valve for use in potentially **explosive atmospheres** caused by gases or dusts - ATEX directive 94/9/EC (consult our ATEX - X019 catalogue)
- Connector with cable 2m long (see "Coils and accessories" section)
- Connector with transil protection (see "Coils and accessories" section)
- Solenoid valve with plug and built-in visual control and protection :

Solenoid valve **without** connector ——— + ——— Connector with built-in visual control and VDR/RC protection

type of valve	(M)	catalogue number solenoid valve without connector	catalogue number (~ / =)			
			24V	48V	115V	230V
189 NC	●	18900002	88122405	88122406	88122407	88122410
190 NC	×	19000013				
	●	19000014				
	▼	19000018				
192 NC (2)	×	19200022	88122603	88122604	88122605	88122608
	●	19200023				
	▼	19200024				

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

(2) Solenoid valve series 192 - 3/2 NC - Ø 2,1mm with exhaust in base

SUBBASES AND ACCESSORIES : see next pages