




2/2-Way; 1/4" NPT - 2" NPT; 0-145 PSI



Advantages/Benefits

- ▶ Waterhammer-free
- ▶ Low noise
- ▶ Zero differential pressure
- ▶ Compact design with high flow rates
- ▶ Low maintenance
- ▶ Coil can be locked in 4 x 90° positions, or move freely between, as required
- ▶ Modular solenoid coil system includes different sizes and power ratings
- ▶ Easy coil change
- ▶ Wide range of cable plug options Type 2508
- ▶ UL Listed   

Design/Function

The valves are based on a modular concept comprising three basic elements:

Valve assembly, push-over coil and standard cable plug. The servo-system with coupled diaphragm/armature assembly and armature guide tube is mounted on the valve body.

The coil is pushed over the armature guide tube and thus isolated from the medium. The coil is also sealed at both ends to prevent exposure to the environment.

All valves operate with zero pressure differential.

A wide selection of pipe and orifice sizes is offered. Valves are available with threaded ports in brass and stainless steel.

To simplify ordering, a wide selection of standard combinations of valve body, push-over coil and standard cable plug can be ordered with one Item Number.

Cable plug options of Type 2508 and 2511 HL are available to suit special electrical application requirements.

– The modular concept provides flexibility to meet application requirements.

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Irvine, CA 92614
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www.burkert-usa.com

Burkert Contromatic Inc.
760 Pacific Road, Unit 3
Oakville, Ontario, Canada
L6L 6M5
Tel. 905.847.5566
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Applications

Fluids

- Neutral liquids
- Per-solutions, hot oils and oils with additives

Applications

- Process systems
- Chemical processing
- Water treatment
- General purpose applications
- Sterilizers

burkert
Easy Fluid Control Solutions

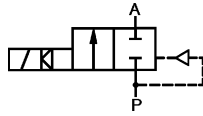
General Purpose

Technical Data

Circuit Function – A

2/2-way, normally closed, with 2-way pilot control and coupled solenoid system

Symbol



Operating Data (Valve)

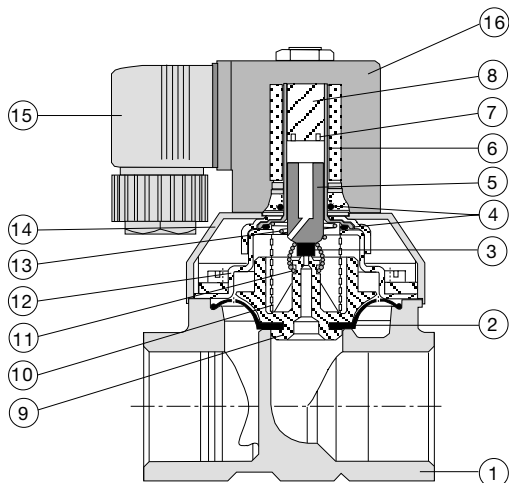
Pressure range	0-145 PSI
Port connection	1/4" NPT - 2" NPT
Fluid	
Seal material NBR:	Neutral liquids e.g. water, oils and fat without additives.
Seal material FPM:	Per-solutions, hot oils, oils with additives
Seal material EPDM:	See 6213 hot water version
Medium temperature	14°F to 194°F (Seal NBR) 14°F to 212°F (Seal FPM) -22°F to 248°F (Seal EPDM)
Maximum ambient temperature	+131°F
Maximum viscosity	21 cSt
Response times	opening: 50-700 ms ¹⁾ closing: 100-2500 ms ¹⁾ ¹⁾ Depends on orifice, fluid pressure and viscosity.
Installation	As required, but preferably with solenoid system upright

Operating Data (Actuator)

Operating voltages	AC 24, 120, 240 V/60 Hz
Standard versions:	DC 24 VDC* (*3/8" - 3/4" only)
Heavy-duty versions:	AC 24, 120, 240 V/50-60 Hz DC 24 V/UC ¹⁾
Voltages tolerance	±10%
Power consumption (AC)	Standard versions:
Orifice	3/8" 1/2" 3/4" 1" 1-1/2"
Inrush	34VA 36VA 38VA 160VA 202VA
Hold	14VA/8W 14VA/8W 14VA/8W 38VA/18W 38VA/18W
Heavy-duty versions:	
Orifice	1/2" 3/4"
Inrush	100VA 150VA
Hold	28VA/15W 38VA/18W
Power consumption (DC)	Standard versions:
Orifice	3/8" 1/2" 3/4"
Inrush	10W 10W 10W
Hold	10W 10W 10W
Heavy-duty versions: ¹⁾	
Orifice	1/2" 3/4"
Inrush	60W 72W
Hold	3W 4W
Duty cycle	100% continuously rated
Cycling rate	up to 15 c.p.m.
Protection class	NEMA 4
Electrical connection	
Delivery standard:	Cable plug DIN 43 650 A, 0-250 V (other versions see accessories)
Cable plug 2511 HL for 24 V/UC heavy-duty and 24 V/UC 1" to 1-1/2" orifice	

¹⁾ incl. 1" and 1-1/2" orifice standard versions

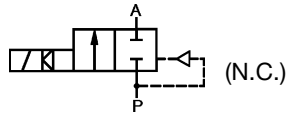
Materials



1	Valve body:	Brass or 316L Stainless Steel
2	Diaphragm:	NBR, FPM (Viton)
3	Plunger-seal:	NBR, FPM (Viton)
4	O-rings:	NBR, FPM (Viton)
5	Plunger:	430F Stainless Steel
6	Armature guide tube:	304 Stainless Steel
7	Shading ring:	Copper
8	Stopper:	430F Stainless Steel
9	Diaphragm support:	PPSGF40
10	Spring:	301 Stainless Steel
11	Tension spring:	301 Stainless Steel
12	Bonnet:	304 Stainless Steel
13	Taper spring:	301 Stainless Steel
14	Bonnet:	Durethan BKV30H
15	Cable plug:	Polyamide
16	Coil:	Epoxy

General Purpose

Specifications – Ordering Chart (Other Versions on Request)



U.L. Listed

with 1/2" conduit plug Type 1053
0-250 V AC/DC

Brass Body, NBR Seal

Port Connection [NPT]	Orifice [inch]	C _v	Pressure Range [PSI]	Weight [lbs.]	Item No. Voltage / Frequency			
					24/DC	24/60	120/60	240/60
3/8"	3/8	2.4	0 - 145	0.9	456 534 J	456 535 K	456 536 L	456 537 M
1/2"	3/8	2.4	0 - 145	1.2	456 546 W	456 547 X	456 548 G	456 549 H
1/2"	1/2	4.2	0 - 145	1.2	456 538 W	456 539 X	456 540 C	456 541 Z
3/4"	1/2	4.2	0 - 145	2.2	456 550 E	456 551 T	456 552 U	456 553 V
3/4"	3/4	10.5	0 - 145	2.2	456 542 S	456 543 T	456 544 U	456 545 V
1"	3/4	10.5	0 - 145	3.7	456 554 W	456 555 X	456 556 Y	456 557 Z
1"	1	12.9	0 - 145	3.7	—	457 339 F	457 340 L	457 341 H
1-1/4"	1	12.9	0 - 145	3.7	—	457 342 A	457 343 B	457 344 C
1-1/2"	1-1/2	35.1	0 - 145	7.9	—	457 345 D	457 346 E	457 347 F
2"	1-1/2	35.1	0 - 145	7.9	—	457 348 Q	457 349 R	457 350 N

Brass Body, FPM (Viton) Seal

Port Connection [NPT]	Orifice [inch]	C _v	Pressure Range [PSI]	Weight [lbs.]	Item No. Voltage / Frequency			
					24/DC	24/60	120/60	240/60
3/8"	3/8	2.4	0 - 145	0.9	456 558 A	456 559 B	456 560 G	456 561 V
1/2"	1/2	4.2	0 - 145	1.2	456 562 W	456 563 Y	456 564 Y	456 565 Z
3/4"	3/4	10.5	0 - 145	2.2	456 566 S	456 567 T	456 568 C	456 569 D

Stainless Steel Body, FPM (Viton) Seal

Port Connection [NPT]	Orifice [inch]	C _v	Pressure Range [PSI]	Weight [lbs.]	Item No. Voltage / Frequency			
					24/DC	24/60	120/60	240/60
1/4"	3/8	2.4	0 - 145	0.9	458 796 B	458 797 C	458 798 M	458 799 N
3/8"	3/8	2.4	0 - 145	0.9	458 800 L	458 801 H	458 802 A	458 803 B
1/2"	1/2	4.2	0 - 145	1.2	458 804 C	458 805 D	458 806 E	458 807 F
3/4"	3/4	10.5	0 - 145	2.2	458 808 Q	458 809 R	458 810 D	458 811 S
1"	3/4	10.5	0 - 145	3.7	458 812 T	458 813 U	458 814 V	458 815 W

U.L. Recognized

with standard-cable plug, Type 2508
0-250 V AC/DC

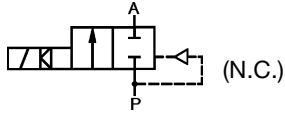
Brass Body, NBR Seal


Port Connection [NPT]	Orifice [inch]	C _v	Pressure Range [PSI]	Weight [lbs.]	Item No. Voltage / Frequency			
					24/DC	24/60	120/60	240/60
1/4"	3/8	2.4	0 - 145	0.9	458 078 N	458 079 P	458 080 D	458 081 S
3/8"	3/8	2.4	0 - 145	0.9	456 439 T	456 440 G	456 441 V	456 442 W
1/2"	3/8	2.4	0 - 145	1.2	456 449 D	456 450 A	456 451 X	456 452 Y
1/2"	1/2	4.2	0 - 145	1.2	456 443 X	456 444 Y	456 300 L	456 445 Z
3/4"	1/2	4.2	0 - 145	2.2	456 453 Z	456 454 S	456 455 T	456 456 U
3/4"	3/4	10.5	0 - 145	2.2	456 446 S	456 447 T	456 301 H	456 448 C
1"	3/4	10.5	0 - 145	3.7	456 457 Y	456 458 E	456 302 A	456 659 F
1"	1	12.9	0 - 145	3.7	457 980 X**	457 163 X	457 164 Y	457 165 Z
1-1/4"	1	12.9	0 - 145	3.7	457 981 L**	457 166 S	457 167 T	457 168 C
1-1/2"	1-1/2	35.1	0 - 145	7.9	457 982 M**	457 169 D	457 170 A	457 171 X
2"	1-1/2	35.1	0 - 145	7.9	457 983 N**	457 172 Y	457 173 Z	457 174 S

**with cable plug 2511 HL for UC

General Purpose

Specifications – Ordering Chart (Other Versions on Request)



U.L. Recognized 
with standard-cable plug, Type 2508
0-250 V AC/DC


Brass Body, FPM (Viton) Seal

Port Connection [NPT]	Orifice [inch]	C _v	Pressure Range [PSI]	Weight [lbs.]	Item No. Voltage / Frequency			
					24/DC	24/60	120/60	240/60
1/4"	3/8	2.4	0 - 145	0.9	458 082 T	458 083 U	458 084 V	458 085 W
3/8"	3/8	2.4	0 - 145	0.9	456 460 C	456 461 Z	456 462 S	456 463 T
1/2"	1/2	4.2	0 - 145	1.2	456 464 U	456 465 V	456 466 W	456 467 X
3/4"	3/4	10.5	0 - 145	1.2	456 468 G	456 469 H	456 470 E	456 471 T

Stainless Steel Body, FPM (Viton) Seal

Port Connection [NPT]	Orifice [inch]	C _v	Pressure Range [PSI]	Weight [lbs.]	Item No. Voltage / Frequency			
					24/DC	24/60	120/60	240/60
1/4"	3/8	2.4	0 - 145	0.9	458 732 A	458 733 B	458 734 C	458 735 D
3/8"	3/8	2.4	0 - 145	0.9	458 736 E	458 737 F	458 738 Q	458 739 R
1/2"	1/2	4.2	0 - 145	1.2	458 740 W	458 741 K	458 742 L	458 743 M
3/4"	3/4	10.5	0 - 145	2.2	458 744 W	458 745 P	458 746 Q	458 747 R
1"	3/4	10.5	0 - 145	3.7	458 748 S	458 749 T	458 750 Y	458 751 M

Specifications – Heavy Duty Version

U.L. Recognized 
with Type 2511 plug for UC coil**
0-250 V AC/DC

Brass Body, NBR Seal

Port Connection [NPT]	Orifice [inch]	C _v	Pressure Range [PSI]	Weight [lbs.]	Item No. Voltage / Frequency			
					24/DC**	24/60	120/60	240/60
1/2"	1/2	4.2	0 - 145	1.2	458 263 L**	457 748 R	457 749 J	457 750 P
3/4"	1/2	4.2	0 - 145	2.2	458 264 M**	457 751 C	457 752 D	457 753 E
3/4"	3/4	10.5	0 - 145	2.2	458 265 N**	457 754 F	457 755 G	457 756 H
1"	3/4	10.5	0 - 145	3.7	458 266 P**	457 757 A	457 758 K	457 759 L

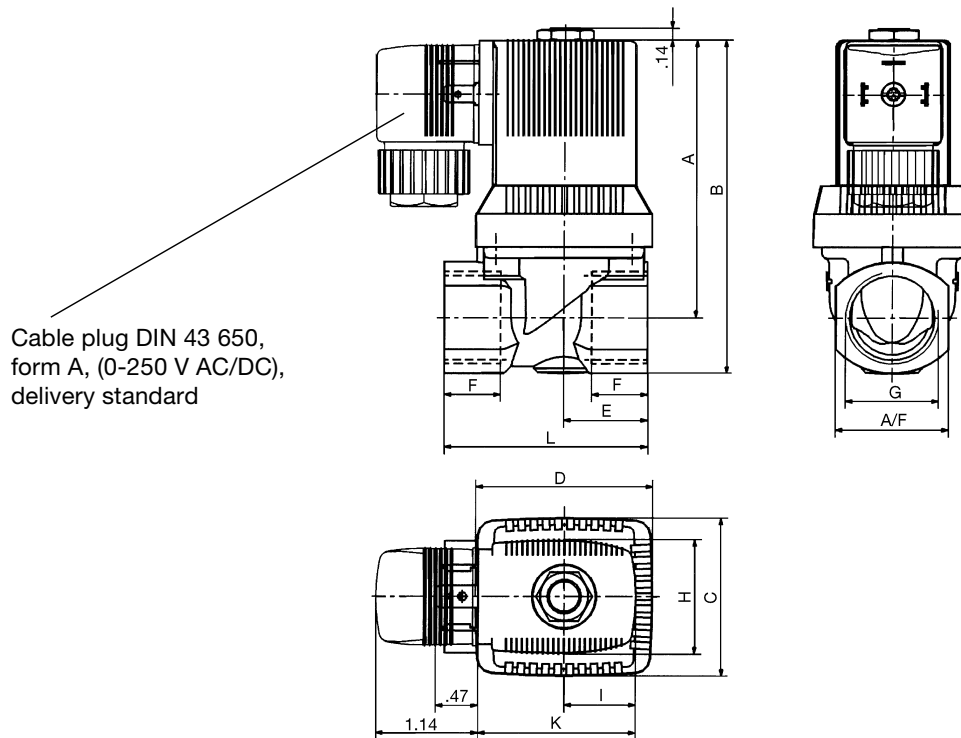
Stainless Steel Body, FPM (Viton) Seal

Port Connection [NPT]	Orifice [inch]	C _v	Pressure Range [PSI]	Weight [lbs.]	Item No. Voltage / Frequency			
					24/DC**	24/60	120/60	240/60
1/2"	1/2	2.4	0 - 145	1.2	458 764 J**	458 765 K	458 766 L	458 767 M
3/4"	3/4	10.5	0 - 145	2.2	458 768 W**	458 769 X	458 770 U	458 771 R
1"	3/4	10.5	0 - 145	3.7	458 772 J**	458 773 K	458 774 L	458 775 M

**with cable plug 2511 HL for UC

General Purpose

Dimensions [mm]



Standard and Reduced Port Versions

Threaded Port [NPT]	Orifice [inch]	Voltage	A [mm]	B [mm]	H [mm]	I [mm]	K [mm]	C [mm]	D [mm]	E ¹ (Brass) [mm]	E ² (S.S.) [mm]	F [mm]	L ¹ (Brass) [mm]	L ² (S.S.) [mm]	SW [mm]	M [mm]
1/4"	3/8	AC	68.0	82.0	32.0	20.5	45.0	37.5	38.0	20.0	25.0	12.0	50.0	55.0	27.0	3.5
3/8"	3/8	AC	68.0	82.0	32.0	20.5	45.0	37.5	38.0	20.0	25.0	12.0	50.0	55.0	27.0	3.5
1/2"	3/8	AC	68.0	82.0	32.0	20.5	45.0	37.5	38.0	20.0	25.0	14.0	50.0	55.0	27.0	3.5
1/2"	1/2	AC	79.5	95.5	32.0	20.5	45.0	45.0	50.5	24.0	31.0	14.0	58.0	65.0	32.0	3.5
3/4"	1/2	AC	79.5	95.5	32.0	20.5	45.0	45.0	50.5	24.0	31.0	16.0	58.0	65.0	32.0	3.5
3/4"	3/4	AC	95.0	115.5	32.0	20.5	45.0	66.0	66.0	35.0	50.0	16.0	80.0	100.0	41.0	3.5
1/4"	3/8	DC	68.5	82.5	40.0	23.5	51.0	37.5	38.0	20.0	25.0	12.0	50.0	55.0	27.0	3.5
3/8"	3/8	DC	68.5	82.5	40.0	23.5	51.0	37.5	38.0	20.0	25.0	12.0	50.0	55.0	27.0	3.5
1/2"	3/8	DC	68.5	82.5	40.0	23.5	51.0	37.5	38.0	20.0	25.0	14.0	50.0	55.0	27.0	3.5
1/2"	1/2	DC	80.0	96.0	40.0	23.5	51.0	45.0	50.5	24.0	31.0	14.0	58.0	65.0	32.0	3.5
3/4"	1/2	DC	80.0	96.0	40.0	23.5	51.0	45.0	50.5	24.0	31.0	16.0	58.0	65.0	32.0	3.5
3/4"	3/4	DC	95.5	116.0	40.0	23.5	51.0	66.0	66.0	35.0	50.0	16.0	80.0	100.0	41.0	3.5
1"	3/4	DC	95.5	116.0	40.0	23.5	51.0	66.0	66.0	35.0	50.0	18.0	80.0	100.0	41.0	3.5
1"	3/4	AC	95.0	115.5	32.0	20.5	45.0	66.0	66.0	35.0	50.0	18.0	80.0	100.0	41.0	3.5
1"	1	AC/UC	138.0	158.5	49.0	24.5	53.0	78.0	78.0	40.5	—	18.0	95.0	—	41.0	7.0
1-1/4"	1	AC/UC	138.0	163.0	49.0	24.5	53.0	78.0	78.0	40.5	—	20.0	95.0	—	50.0	7.0
1-1/2"	1-1/2	AC/UC	149.5	179.5	49.0	24.5	53.0	104.5	104.5	69.0	—	22.0	132.0	—	60.0	7.0
2"	1-1/2	AC/UC	149.5	184.5	49.0	24.5	53.0	104.5	104.5	69.0	—	24.0	132.0	—	70.0	7.0

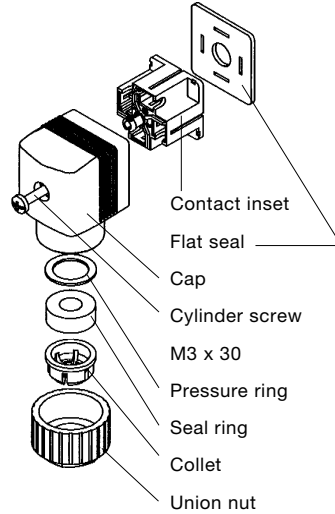
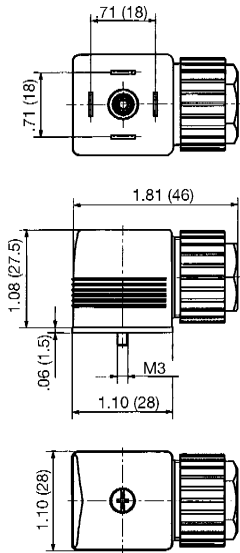
Heavy-Duty Versions

Threaded Port [NPT]	Orifice [inch]	Voltage	A [mm]	B [mm]	H [mm]	I [mm]	K [mm]	C [mm]	D [mm]	E ¹ (Brass) [mm]	E ² (S.S.) [mm]	F [mm]	L ¹ (Brass) [mm]	L ² (S.S.) [mm]	SW [mm]	M [mm]
1/2"	1/2	AC/UC	102.5	118.5	43.0	21.5	50.0	45.0	50.5	24.0	31.0	14.0	58.0	65.0	32.0	7.0
3/4"	1/2	AC/UC	102.5	118.5	43.0	21.5	50.0	45.0	50.5	24.0	31.0	16.0	58.0	65.0	32.0	7.0
3/4"	3/4	AC/UC	118.0	138.5	49.0	24.5	53.0	66.0	66.0	35.0	50.0	16.0	80.0	100.0	41.0	7.0
1"	3/4	AC/UC	118.0	138.5	49.0	24.5	53.0	66.0	66.0	35.0	50.0	18.0	80.0	100.0	41.0	7.0

General Purpose

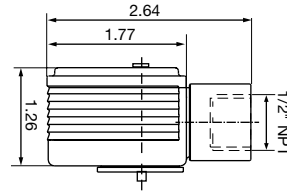
Dimensions Accessories [inch (mm)]

UL U.L. Recognized
with standard cable plug
Type 2508 (0-250 V AC/DC)



Transparent cap, when
wired with LED.

UL U.L. Listed
with conduit plug Type 1053
(0-250 V AC/DC)



UL U.L. Recognized
cable plug Type 2511 HL
(high power electronics)
(0-250 V AC/DC)

Ordering Chart for Accessories

Device/ Accessory	Features	Item No.
Cable-plugs¹⁾ Type 2508	Standard cable plug, 0-250 V AC/DC (standard-delivery) ¹⁾	008 376 N
	with LED, 12-24 V AC/DC	008 360 S
	with LED, 100-120 V AC/DC	008 361 P
	with LED + varistor, 12-24 V AC/DC	008 367 M
	with LED + varistor, 100-120 V AC/DC	008 368 W
	with LED + varistor, 200-240 V AC/DC	008 369 X
Type 1053	U.L. Listed, 1/2" conduit plug	006 508 A
Type 2511	with electronics for UC coil, 24-48 V AC/DC	138 307 G

¹⁾ The standard cable plug (0-250 V AC/DC), Item No. 008 376 N is part of the standard delivery.

Order optional cable plugs using separate item no.

For additional cable plug selections, see datasheet Type 2508