

# Mark 2000 Series

## Angle Seat On/Off Control Valves

The Mark 2000 is an externally piloted angle-seat valve with self-adjusting packing gland, intermediate relief and wiper. The angle-seat construction of the body makes possible extremely high flow rates, particularly in comparison to conventional globe valves.

The compact size and light weight design makes this valve ideal for OEM machinery and other applications where space is at a premium.

All trim components and body are stainless steel for maximum corrosion resistance. However, the MK2000 is economical enough to use on general utility services as well. Whether steam, water, air or chemicals and process gases, the Mark 2000 provides unparalleled flexibility for on/off service.



### FEATURES

- Actuator can be rotated 360°
- Fast response
- Maintenance-free actuator with long service life
- Self-adjusting packing glands
- Lower life-cycle costs
- Compact design with high flow rates
- Low air consumption due to small actuator volume
- Water-hammer free design
- Stainless Steel body trim for wide variety of media
- Compact space saving actuator design
- Position indicator (open/close) standard
- Optional solenoid available

### APPLICATIONS & INDUSTRIES

- Dyeing and washing machines
- KEG washing and filling machines
- Test benches, presses
- Paint spray systems
- Textile
- Brewing
- Automotive
- Automotive/Chemical
- Gas turbine test benches
- Aerospace
- "Clean in place" systems
- Concrete and cement industry



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**SPECIFICATIONS**

**Description:** In the "NCA" configuration, the medium enters the MK2000 under the seat such that the valve closes against the pressure of the flow. This 'closing against the flow' eliminates water hammer damage associated with liquid service (or condensate hammer in steam lines), but is also ideally suited for gas service as well.

The "NCW" configuration 'closes with flow' and is primarily used on gas service. This option is used more frequently in larger valves as the pressure drop capability in the "NCA" configuration lowers.

- The Mark 2000 is normally closed, with flow under the seat. When air pressure is supplied to the actuator (i.e. when the solenoid is energized open), the piston is driven up to open the valve.
- When the solenoid is closed and the actuator is vented, the springs push the disc to the seat to close.

**Sizes:** 1/2" (DN15) through 2" (DN50)

**Body Material:** 316 SST

**Trim Material:** 304 SST (stem)

**End Connection:** NPT (consult factory for other options)

**Seat Material:** PTFE

**Packing Material:** Spring loaded, PTFE V-Rings

**Actuator Housing:**

- Nickel plated brass – 50 mm
- Aluminum – 80 mm

**Actuator Supply Material:** Air, neutral gas, clear neutral liquids

**Actuator Supply Pressure:** 29 - 145 psi (2 - 10 bar)

\* Differential pressure based on 87 psi pressure (6 bar)

**Pressure Range:** 0 - 362 psi (max 0 - 25 bar)

**Temperature Media:** -40° to +397°F (-40°C to +200°C)

**DIFFERENTIAL PRESSURE CHART – PSI (BAR)**

Ordering Schematic	Size	NCA	NCW
2K2050SSE5NCA	1/2"	232 (16)	X
2K2075SSE6NCA	3/4"	290 (20)	X
2K2100SSE6NCA	1"	145 (10)	X
2K2125SSE6NCA	1-1/4"	101 (7)	X
2K2150E6NCA	1-1/2"	87 (6)	X
2K2150A8NCW	1-1/2"	X	290 (20)
2K2200E6NCA	2"	43 (3)	X
2K2200A8NCW	2"	X	174 (12)

X – Not currently available, contact factory

**SOLENOID OPTIONS**



Solenoid Options: 125VAC or 24VDC available for mounting to 50mm or 80mm actuators.

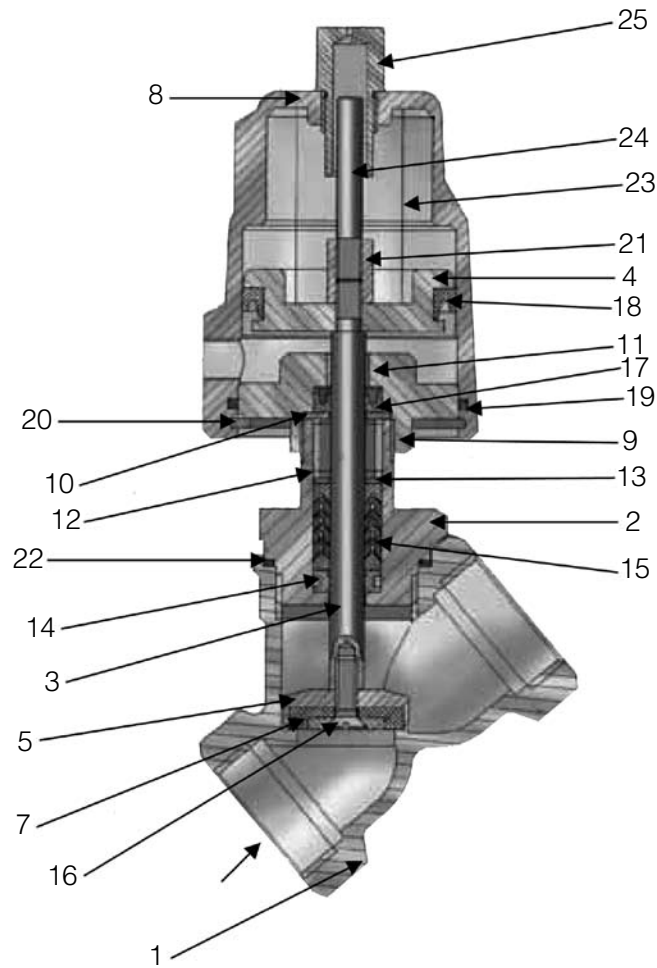
For 50mm, select 1/8" size  
For 80mm, select 1/4" size

These solenoids are 3/2 way valves which enable air supply to completely exhaust from the actuator to allow quick movement of the main valve.

Model No.	Size	Voltage
2K2-16913	1/8"	125VAC
2K2-16914	1/4"	125VAC
2K2-16915	1/8"	24VDC
2K2-16916	1/4"	24VDC

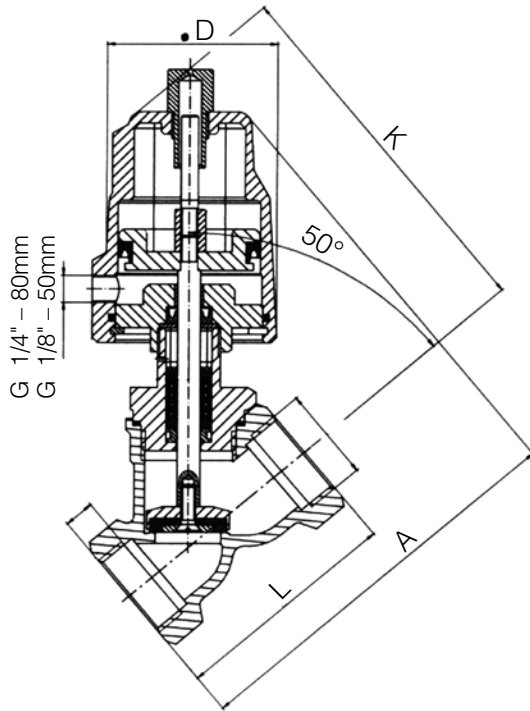
Add "N" to model number to get solenoid and mounting nipple. For example 2K2-16913N.

**BILL OF MATERIALS**



Part Number	Description	Part Number	Description
1	Body	14	Packing Wiper
2	Bonnet	15	V-Ring Packing
3	Stem	16	Seat Retaining Bolt
4	Piston	17	Actuator Stem Seal
5	Valve Disc	18	Actuator Piston Seal
6	N/A	19	O-Ring
7	Seat	20	Clip Ring
8	Actuator Housing	21	Stem Nut
9	Flange	22	Body Bonnet Gasket
10	Disc	23	Spring
11	Bushing	24	Positive Indicator
12	Packing Spring	25	Indicator Cover
13	Packing Ring		

**DIMENSIONS**



- Actuator – 50mm

Valve Size	Dimensions (inches)					Weight lbs
	A	D	K	L	T	
1/2"	5.31	2.44	5.51	2.60	0.47	2.9
3/4"	5.71	2.44	5.51	2.95	0.51	3.1
1"	5.90	2.44	5.71	3.54	0.59	3.5
1-1/4"	6.10	2.44	5.83	4.33	0.67	4.9
1-1/2"	6.30	2.44	6.10	4.72	0.75	5.5
2"	6.89	2.44	6.38	5.91	0.83	7.7

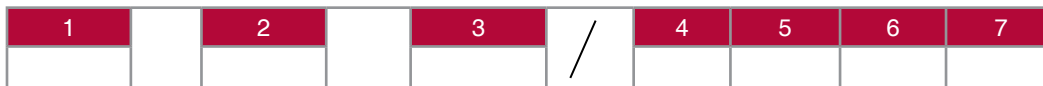
Valve Size	Dimensions (metric)					Weight kgs
	A	D	K	L	T	
DN15	135	62	140	65	12	1,3
DN20	145	62	140	75	13	1,4
DN25	150	62	145	90	15	1,6
DN32	155	62	148	110	17	2,2
DN40	160	62	155	120	19	2,5
DN50	175	62	162	150	21	3,5

- Actuator – 80mm

Valve Size	Dimensions (inches)					Weight lbs
	A	D	K	L	T	
1-1/2"	8.27	3.70	7.68	4.72	0.75	7.5
2"	9.06	3.70	8.07	5.91	0.83	10.2

Valve Size	Dimensions (metric)					Weight kgs
	A	D	K	L	T	
DN40	210	94	195	120	19	3,4
DN50	230	94	205	150	21	4,6

**ORDERING SCHEMATIC**



<b>1</b>	<b>Model</b>
2K	Standard

<b>2</b>	<b>Series</b>
2	2000

<b>3</b>	<b>Size</b>
SS	1/2" (DN15)
075	3/4" (DN20)
100	1" (DN25)
125	1-1/4" (DN32)
150	1-1/2" (DN40)
200	2" (DN50)

<b>4</b>	<b>Material</b>
SS	Stainless Steel

<b>5</b>	<b>Actuator Material</b>
E	Electroless Nickel Plated Brass
A <sup>1</sup>	Aluminum

<b>6</b>	<b>Actuator Size</b>
5 <sup>2</sup>	50mm
6	50mm – 2 springs
8 <sup>3</sup>	80mm

<b>7</b>	<b>Function</b>
NCA	Normally Closed Against Flow
NCW <sup>4</sup>	Normally Closed With Flow

1 Only available with actuator size 8  
 2 Only available with 1/2" valve  
 3 Only available with 1-1/2" & 2" sizes, NCW  
 4 Only available with 1-1/2" & 2" sizes w/ 80mm actuator

