










## Valve Actuator Selection

					
		<b>NAVA/M</b>	<b>NABA/M</b>	<b>*NACA/M</b>	<b>NAYA/NAYM</b>
		<b>Actuating force (N)</b>	<b>Torque (Nm)</b>	<b>Torque (Nm)</b>	<b>Torque (Nm)</b>
	<b>Valve Size</b> 15,25,32,40, 50,80,100,12 5,150	500N=DN30-32 1000N=DN40-50 1800N=DN65-100 3000N=DN100-150			
	<b>Valve Size</b> 15,25,32,40, 50,80,100,12 5,150		5Nm=DN15-32 10Nm=DN40-50	20Nm=DN65-80 32Nm=DN100-150	
	<b>Valve Size</b> 50,65,80,100 ,125,150,200 ,250,300,350 ,400,450,500				50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500



## Valve

NENUTEC	Valve	Type	Series	Configuration	Valve Size	X	Y
N	V	CB	7	2	015	B	E

### Valve Type Designation

#### Type Designation

CS = Globe Screwed Type  
 CF = Globe Flanged Type  
 CB = Ball  
 BF = Butterfly Type

#### Valve Size

Control Valves & Ball Valves;-  
 15,25,32,40,50,80,100,125,150

Butterfly Valves;-  
 50,65,80,100,125,150,200,250,300,350,400,450,500

#### Series

7,9 = Ball Valves  
 8,9,10,11 = Butterfly Valves

\*Not Applicable for Control Valve

#### X

##### Control Valves;-

S = Steel    B = BSP  
 B = Brass    F = Flanged  
 I = Iron  
 C = SS with Cooling Fin

##### Ball Valves;-

CDSE = Manual  
 CDNE = Auto

##### Butterfly valve;-

#### Configuration

2 = 2 Way  
 3 = 3 Way

#### Y

##### Control Valves;-

\*Not applicable  
 applicable  
 F = Full Port

##### Ball Valves;-

E = Characterised

##### Butterfly valve;-

\*Not



# Valve Actuator

NENUTEC	Actuator	Type	Controls	Voltage	Dot	Input Signal	Hyphenated	Torque	X	Y
N	A	V	M	1	.	1	-	05	S1	LN

## Valve Actuator Type Designation

### Type Designation

V = Control Valve Actuator  
 B = Ball Valve Actuator  
 Y = Butterfly Valve Actuator

### Controls

A = 2/3 Points  
 M = Modulating

### Voltage

1 = 24 VAC/VDC  
 2 = 230 VAC

### Input Signals (Not applicable for 2/3 Points)

1 = 0(2)...10 VDC and 0(4)...20 mA  
 2 = 0...10 VDC only

### Torque

<u>Control Valves;-</u>	<u>Ball Valves;-</u>	<u>Butterfly valve;-</u>
5 = 500N	2 = 2Nm	50 = 50Nm
10 = 1000N	5 = 5Nm	80 = 80Nm
18 = 1800N	10 = 10Nm	150 = 150Nm
30 = 3000N		350 = 350Nm
		500 = 500Nm
		650 = 650Nm
		800 = 800Nm
		1100 = 1100Nm
		1600 = 1600Nm
		2000 = 2000Nm
		3000 = 3000Nm

### X

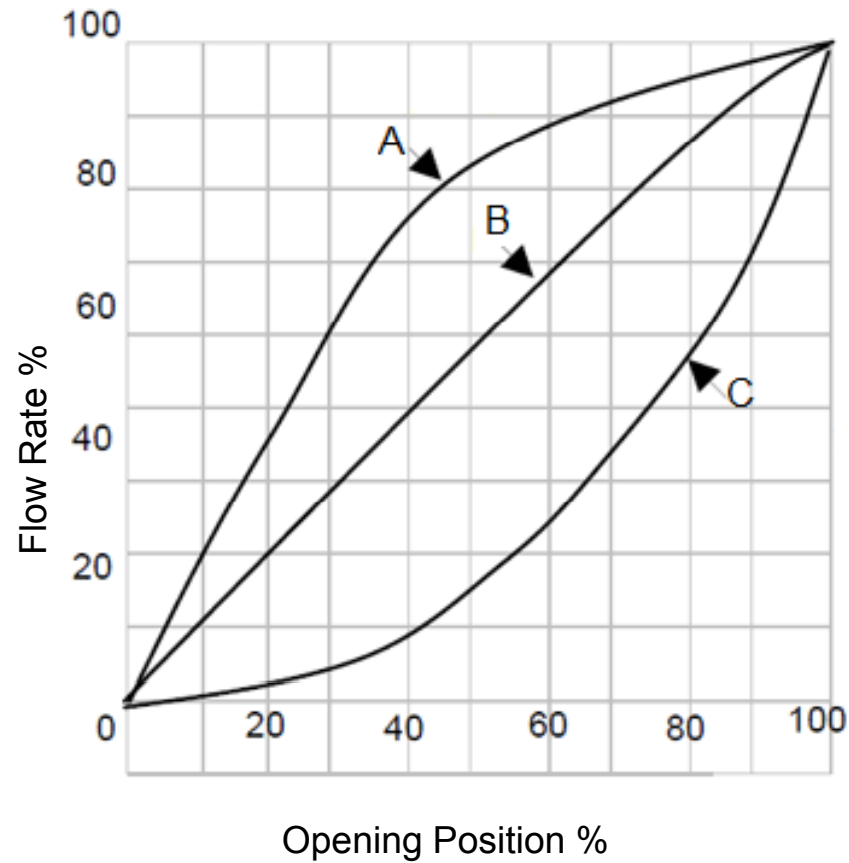
<u>Control Valves;-</u>	<u>Ball Valves;-</u>	<u>Butterfly valve;-</u>
M = Manual Override	S1 = Aux . Switch	H = Heater

### Y

<u>Control Valves;-</u>	<u>Ball Valves;-</u>	<u>Butterfly valve;-</u>
Not applicable	LN = Low Neck HN = High Neck	S = Aux . Switch



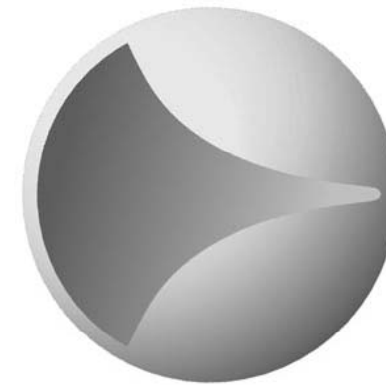
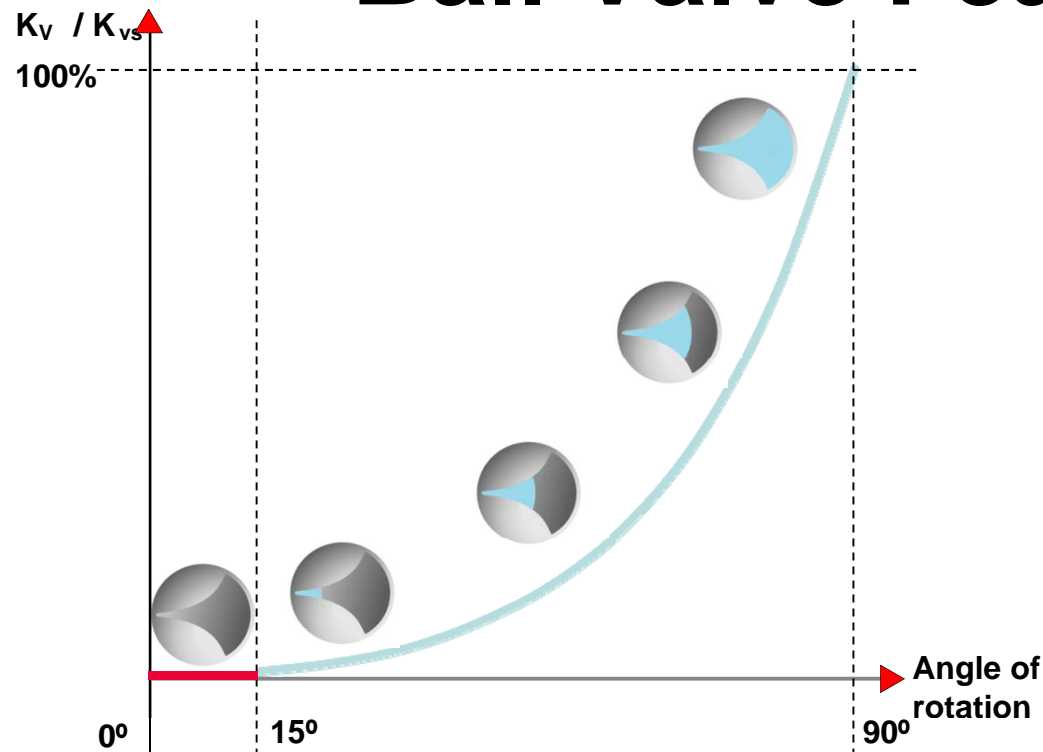
## Equal Percentage



- A = Heat Exchanger Coil Characteristic
- B = Resultant Thermal capacity
- C = Equal Percentage Characteristic



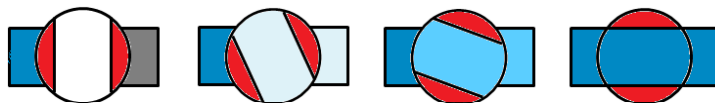
## Ball Valve Features



### Angle of rotation

0° ... 15° = Tight closing shut-off valves

15° ... 90° = Regulating devices





## Globe vs Ball Valves

	Globe Valves	Ball Valves
Cost	Higher	Lower
Closeoff $\Delta P$	2 to 3 Bar	7 to 9 Bar
Rangeability	25:1 to 100:1	Up to 1500:1
Size/Weight	Larger/heavier	Smaller/Lighter
$C_v$ Available	1 per size	2 to 3 per size
Serviceability	Replaceable Packing	None