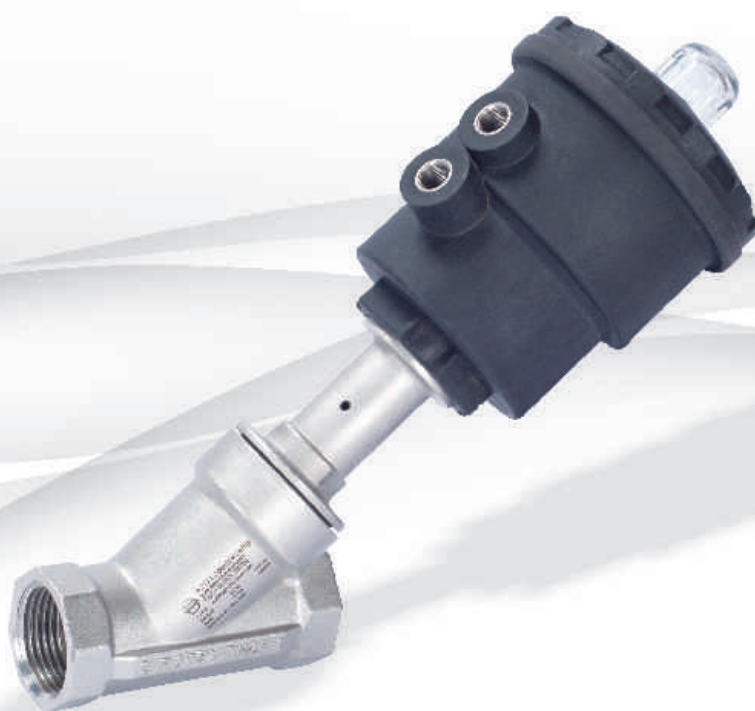


ANGLE SEAT VALVE



CE
PED



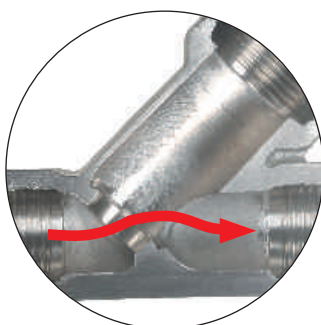
Engineering For The Future

FEATURES

- Easy conversion from Single Acting to Double Acting
- Modular Design, multiple Operator option possible on the same valve Body
- Lubricated pilot Air not required
- Designed to work up to 10^{-6} Torr Vacuum
- Fast acting up to 500 cycles/ hour
- Wetted Parts : CF8, SS 304. Optionally same can be provided with CF3M & SS 316L
- SS 303 inserts for Operator ports
- Operation Life > 3 Million cycles
- Pressurisation of spring chamber in case of single acting operator using appropriate 5/2 valve
- Quick operation of valve possible using appropriate 5/2 valve



- Self aligning plug ensures zero leak for every operation
- Swivel joint rotating in all 360°



- Smooth profile with minimum bend for higher flow



- Burnished valve stem with unique PTFE gland packing for lower friction, smoother operation and longer life
- No maintenance due to spring loaded V Packing

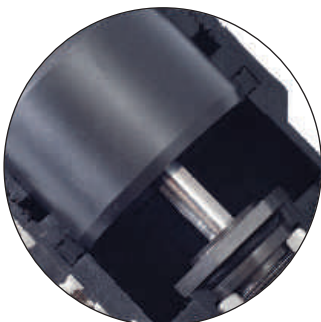


- Designed to avoid metal to metal contact, by use of longer sleeve for accommodating more gland packings, also resulting in better protection against leak
- Rugged gland packing for media and pilot air

ANGLE SEAT VALVE DOUBLE ACTING UNIVERSAL

FEATURES

- NC / NO / Bi Directional Operation
- Modular Design, multiple Operator option possible on the same valve Body
- Lubricated pilot Air not required
- Designed to work up to 10^{-6} Torr Vacuum
- Fast acting up to 1,000 cycles/ hour
- Wetted parts : CF8, SS 304. Optionally same can be provided with CF3M & SS 316L
- Operation Life > 3 Million cycles
- SS 303 inserts for Operator ports



- Aluminium hard anodized piston
- Stationery seal, Sealing on Aluminium Piston
- Low friction
- Longer life
- Sealing on Aluminium Piston



- Transparent Dome for visual valve open indication
- Indicator dome can be replaced by Limit Switch or Positioner or Stroke Limiter



Clean Port

- Operator can be rotated 360°
- Ideally suited for area in which contamination due to exhaust air and sedimentation of particles in the operator crevices are not desired
- Corrosion resistive glass filled Nylon Operator



NAMUR Port

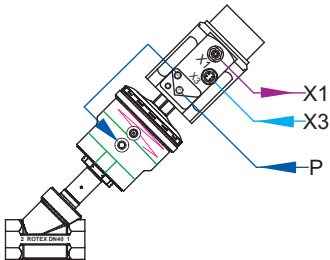
- Operator can be rotated 360°
- Corrosion resistive glass filled Nylon Operator
- NAMUR pad for ease of mounting Solenoid Valve

FEATURES

- Can be adapted to Single/ Double Acting Angle Seat Valve
- Auto tuning
- User friendly settings
- INPUT
 - Power 24V DC
 - Signal 0/4 - 20mA/ 0 - 5/10V
 - From Sensor 4 - 20mA (applicable for VL161, VL161D)
- OUTPUT
 - Position Feedback 0/4 - 20mA/ 0 - 5/10V
- Suitable for Pilot Pressure 3-7 bar
- Optional one Analog Input for Process Control
- Process Signal/ Signal Transmitter Available for VL161, VL161D
- Valve full Open/ Close status Signal provided
- Ambient Temperature 0 - 55 °C
- Explosion Proof IP66 Ex nA IIC T4 Gc

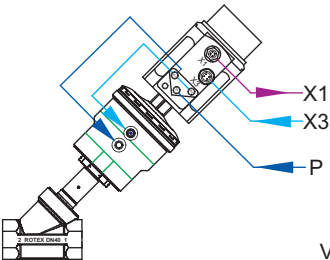
ORDERING CODE

- Select VL16, V16D, VL161, VL161D from accessories table
- (Refer pages 17, 21, 25)



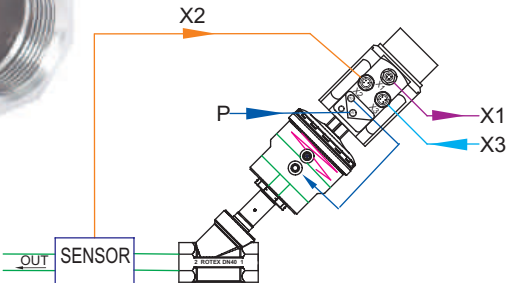
VL16

CONNECTION VL16	
X1	Position Feedback Output 0/4 - 20mA or 0 - 5/10V
X3	Input Signal 0/4 - 20mA, 0 - 5V/ 10V, Power 24V DC
P	Pilot Air Inlet 3-7 bar



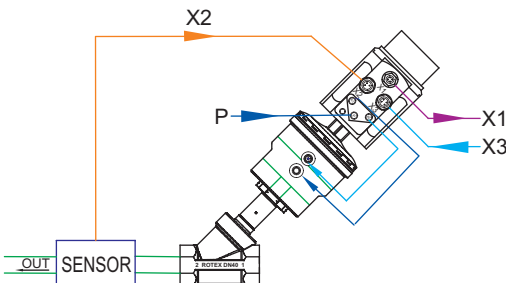
VL16D

CONNECTION VL16D	
X1	Position Feedback Output 0/4 - 20mA or 0 - 5/10V
X3	Input Signal 0/4 - 20mA, 0 - 5V/ 10V, Power 24V DC
P	Pilot Air Inlet 3-7 bar



VL161

CONNECTION VL161	
X1	Position Feedback Output 0/4 - 20mA or 0 - 5/10V
X2	From Process Control Sensor 4 - 20 mA
X3	Input Signal 0/4 - 20mA, 0 - 5V/ 10V, Power 24V DC
P	Pilot Air Inlet 3-7 bar



VL161D

CONNECTION VL161D	
X1	Position Feedback Output 0/4 - 20mA or 0 - 5/10V
X2	From Process Control Sensor 4 - 20 mA
X3	Input Signal 0/4 - 20mA, 0 - 5V/ 10V, Power 24V DC
P	Pilot Air Inlet 3-7 bar

ANGLE SEAT VALVE

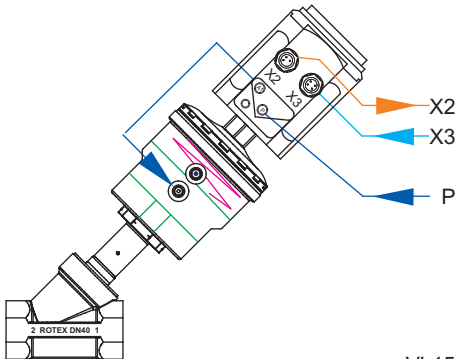
WITH ELECTRONIC POSITIONER

FEATURES

- Can be adapted to Single Acting Normally Closed / Normally Open Angle Seat Valve
- Prominent Visual LED indicator in 10 steps for indication of valve opening from 0 to 100%
- User Friendly Setting
- LED indication for Manual/ Auto mode
- INPUT
 - Power 24V DC
 - Signal 4 - 20mA
- OUTPUT
 - Position Feedback 4 - 20mA
- Suitable for Pilot Pressure 3-7 bar
- Ambient Temperature 0 - 55 °C
- Weather Proof IP66

ORDERING CODE

- Select VL15 from accessories table
(Refer pages 17, 21, 25)



VL15

CONNECTION VL15	
X2	Position Feedback Output 0/4 - 20mA
X3	Input Signal 4 - 20mA, Power 24V DC
P	Pilot Air Inlet 3-7 bar

FEATURES

- Suitable only for Normally Closed Single Acting Angle Seat Valve
- Can sense full open position of the valve
- Potential free feedback from SPDT, Micro Switch rating 3A AC, 0.5A DC

Refer to page 9 for more details



ORDERING CODE

- Select PSSA50 or PSSA63 or PSSA 90 or PSSA110 from accessories table
(Refer pages 17, 21, 25)

ANGLE SEAT VALVE WITH VALVE POSITION SENSOR

FEATURES

- Suitable for Double/ Single Acting NC, NO Angle Seat Valve
- Metallic Aluminium Cast Epoxy Powder coated enclosure having IP67 protection,
- Dual cable entry for possibility to terminate solenoid in the junction box and having one cable in to limit switch box
- Up to two sensors each for Open and Close position of the valve
- For ease of cabling, Limit Switch Box Can be rotated 360°
- Sensing element : Micro Switch, WP/ Ex ia, Proximity Switch

Refer to page 10 for more details



ORDERING CODE

- Select LS21 or LS41 or LS22 or LS42 or LS23 or LS43 from accessories table
(Refer pages 17, 21, 25)

SPECIFICATION

• Valve type	Angle Seat Valve
• Function	Single Acting/ Double Acting
• Action	NC/ NO/ Bi-Directional
• Operating Pressure	0 - 16 bar/ 0 - 25 bar
• Ambient Temperature	-10 °C to +60 °C
• Media	Steam, Air, Oil, Water, Fuel Gas and Liquid, Vacuum
• Fluid Temperature	-10 °C to +180 °C with A (PTFE Seat, NBR Seal) Optionally -10 °C to +220 °C with (PEEK Seat, VITON Seal)
• Size	1/2" 3/4", 1", 1 1/4", 1 1/2", 2" having inline body ports and inclined stem 2 1/2", 3" having inline body ports and perpendicular stem
• Material Body, Stem and Seat Seat, Seal Operator	CF8, SS 304 (optional CF3M, SS 316L) PTFE, NBR (optional PEEK, VITON) Corrosion resistive glass filled Nylon
• Surface Finish	< 3.2 micron, Electro polished
• Port Type	Threaded/ Socket Weld end/ Triclamp/ ANSI Flange/ Pipe weld
• Operator	SS 303 insert for port and Solenoid valve mounting
• Pilot Pressure	0.8 - 10 bar (Refer Pages 12 to 23)
• Pilot Fluid	Air, Inert Gas filtered to 50 micron

APPLICATION

Air Drying Equipment, Autoclave, Bottling and Dispensing Equipment, Chemical and Petrochemical Industries, Coolant Control for Machine Tool, Formulation machine, Fuel, Ink and Paint dispensing, Industrial Compressor, Laundry equipment, Nuclear energy, Pollution Control equipment, Process Control application, Power generation, Paper and Pulp Industries, PSA Plants, Pharmaceutical, Steam, Sterilizer, Textile Dyeing and Drying.

PRESSURE TEMPERATURE CHART

Angle Seat Valve intended to be installed in an area where PED is applicable, the valve should be connected to a lower fluid pressure as indicated in the table hereunder or as mentioned in the operating parameter table on pages 12, 14, 18, 22

DN	Class	Maximum Fluid Pressure kg/cm²					PED Applicable
		-10 °C To Room Temp.	50 °C	100 °C	150 °C	200 °C	
12	B40	≤25	≤25	≤25	≤25	≤25	Not Applicable
20	B40	≤25	≤25	≤25	≤25	≤25	Not Applicable
25	B40	≤25	≤25	≤25	≤25	≤25	Not Applicable
32	B25	24.5	23.2	20.8	19.0	17.6	Yes
40	B20	19.6	19.0	16.7	15.2	14.1	Yes
50	B25	24.5	23.7	20.8	19.6	17.6	Yes
65	B40	≤25	≤25	≤25	≤25	≤25	Yes
80	B40	≤15	≤15	≤15	≤15	≤15	Yes

STROKE LIMITER

FEATURES

- Ideal for application demanding preset flow adjustment
- Can be retrofitted at site
- Adjust stroke for Valve opening from 0% to 100%
- Can be adapted to Single/ Double acting Angle Seat Valve

SPECIFICATION

- Stainless Steel 304 bolt



ORDERING CODE

SL50	Stroke Limiter For Ø50 Operator
SL63	Stroke Limiter For Ø63 Operator
SL90	Stroke Limiter For Ø90 Operator
SL110	Stroke Limiter For Ø110 Operator

POSITION SENSOR FOR SINGLE ACTING NORMALLY CLOSED VALVE

FEATURES

- Can be retrofitted at site
- Can be installed on single acting Normally Closed Valve function F1 or F6

SPECIFICATION

- Positioning Sensor for single acting Normally Closed Valve
- **Type** : PSSA
 - **Ambient Temperature** : -10 °C to 60 °C
 - **Element type** : Micro Switch rating 3Amp
 - **Cable entry** : Suitable for 9 mm OD cable
 - **Contact** : SPDT



ORDERING CODE

PSSA 50	Suitable for Ø50 Operator, Function F1 or F6
PSSA 63	Suitable for Ø63 Operator, Function F1 or F6
PSSA 90	Suitable for Ø90 Operator, Function F1 or F6
PSSA 110	Suitable for Ø110 Operator, Function F1 or F6

POSITION SENSOR BOX (Should be ordered along with Valve)

FEATURES

- Adjustable Sensing elements
- Suitable for Single/ Double acting
Normally Close/ Open valve

SPECIFICATION

- **Enclosure Material** : Aluminium Cast Powder Coated
- **Protection** : Weather Proof, IP67
Optionally Weather Proof IP67 with Ex ia sensing Element
- **Sensing Element** : Micro Switch/ Proximity Sensor
- **Cable Entry** : 2 X M25 X 1.5



SENSING ELEMENT

Model	LS-21	LS-41
Make	Honey well	
No.	2 nos. (One each for Open & Close position)	4 nos. (Two each for Open & Close position)
Type of Element	Micro switch	
Rating	5 Amp 250V AC, 0.1 A 48V DC	

Model	LS-23	LS-43
Make	Pepperl+Fuchs	
No.	2 nos. (One each for Open & Close position)	4 nos. (Two each for Open & Close position)
Type of Element	Proximity Switch NBB3-V3-Z4	
Rating	10-60V, 100mA, NO	

Model	LS-22	LS-42
Make	Pepperl+Fuchs	
No.	2 nos. (One each for Open & Close position)	4 nos. (Two each for Open & Close position)
Type of Element	Proximity switch (EEx ia) NJ2-V3-N	
Rating	8V DC, 3mA, NC	

ANGLE SEAT VALVE ACCESSORIES

SOLENOID VALVE (Can be ordered Separately)

APPROVALS



SPECIFICATION (Refer pages 16, 20 & 24 for Solenoid Valve code)

VALVE

- **Pressure** : 10 bar
- **Port connection** : 1/4" BSP
- **Body Material** : Aluminium hard Anodised
- **Seat Seal** : NBR

SOLENOID

- **Voltage Current** : 24V DC, 110V 50-60 Hz, 230V 50-60 Hz
- **Power** : 8W/ 2W/ 1W
- **Protection** : Weather Proof IP67
Explosion Proof Ex d, Ex ia, Ex e mb, IIC T6, IP67
- **Cable Entry** : Pg 9, M20X1.5, 1/2" NPT, M25X1.5

	VALVE TYPE	POWER	FUNCTION		PORT CONNECTION		WEATHER PROOF, IP67			EXPLOSION PROOF IIC, IP 66/ IP67					
			F1/F2/F6	F4	STANDARD P1	NAMUR P2	PLUG IN	PLUG IN	TERMINAL BOX	Ex d		Ex ia		Ex e mb	
															
	05	5	✓		✓	✓		✓							
	04	8	✓		✓	✓	✓		✓	✓	✓	✓			✓
	16	8	✓		✓		✓		✓	✓	✓	✓			✓
	17	2	✓		✓		✓		✓	✓	✓				✓
	18	1	✓		✓								✓	✓	
	06	8		✓	✓		✓		✓	✓	✓	✓			✓
	12	2		✓	✓		✓		✓	✓	✓				✓
	13	1		✓	✓								✓	✓	
	07	8		✓	✓		✓		✓	✓	✓	✓			✓
	14	2		✓	✓		✓		✓	✓	✓				✓
	15	1		✓	✓								✓	✓	
	01	8	✓			✓	✓		✓	✓	✓	✓			✓
	02	8	✓	✓		✓	✓		✓	✓	✓	✓			✓
	08	2	✓	✓		✓	✓		✓	✓	✓				✓
	10	1	✓	✓		✓							✓	✓	
	03	8	✓	✓		✓	✓		✓	✓	✓	✓			✓
	09	2	✓	✓		✓	✓		✓	✓	✓				✓
	11	1	✓	✓		✓							✓	✓	

VALVE TYPE	BASIC MODEL
01	30106
02	51424
03	57450
04	30125
05	305
06	51440A

VALVE TYPE	BASIC MODEL
07	57440A
08	51424LW
09	57450LW
10	51424IS
11	57450IS
12	P5003 (51440LW)

VALVE TYPE	BASIC MODEL
13	I5005 (51440IS)
14	P5006 (57440LW)
15	I5006 (57440IS)
16	31119
17	P3001 (31119LW)
18	I3003 (31119IS)

VALVE TYPE	BASIC MODEL
19	P3004 (30125LW)
20	30106-B5
21	30138
23	30106LW
24	30146
25	51450IS

VALVE TYPE	BASIC MODEL
26	51424-SL

OPERATING PARAMETERS

DN Operator	Function	DN	Actuator Ø	Connection	Kv m³/h	Single Acting Normally Closed Bi-Directional					
						Pressure Above Plug			Pressure below Plug		
						Pilot Pressure	Fluid Pressure (bar)		Pilot Pressure	Fluid Pressure (bar)	
							Up to 10 bar	AV, AW, AP, AF #300		AK, AF #150	Up to 10 bar
12050V01	F1	12	50	1/2"	5.8	4.6	0	0	4.6	0	0
						5	16	16	4.4	16	16
						5.4	25		4.4	25	
20050V01	F1	20	50	3/4"	10.8	4.6	0	0	4.6	0	0
						5.5	16	16	4	8	8
						6	25				
20063V01	F6	20	63	3/4"	10.8	5.4	0	0	5.4	0	0
						5.6	16	16	4.9	16	16
						5.7	25		4.4	25	
25050V01	F1	25	50	1"	21	4.6	0	0	4.6	0	0
						6.8	16	16	4.2	5	5
						8.2	25				
25063V01	F6	25	63	1"	21	5.4	0	0	5.4	0	0
						5.6	16	16	4.9	16	16
						5.8	25				
32063V01	F6	32	63	1 1/4"	31	5.2	0	0	5.2	0	0
						6.2	12	16	4.4	12	12
						7.3	25				
32090V02	F1	32	90	1 1/4"	31	2.2	0	0	2.2	0	0
						3.6	16	16	2.2	2	2
						4.4	25				
40063V01	F1	40	63	1 1/2"	49	3	0	0	3	0	0
						8.2	16	16	2	2	2
						10	21				
40063V01	F6	40	63	1 1/2"	49	5.4	0	0	5.4	0	0
						8.4	12	12	4.8	4	4
						10	18				
40090V02	F1	40	90	1 1/2"	49	2.3	0	0	2.3	0	0
						4.2	16	16	1.4	1.4	1.4
						5.3	25				
40090V02	F6	40	90	1 1/2"	49	7	0	0	7	0	0
						7.4	16	16	6.2	14	14
						7.7	25				

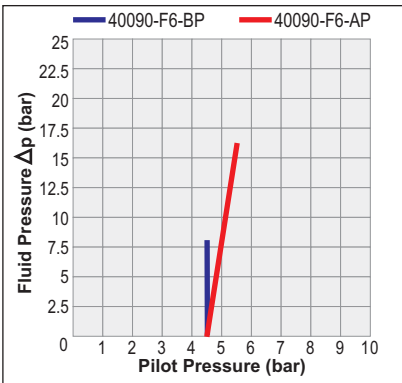
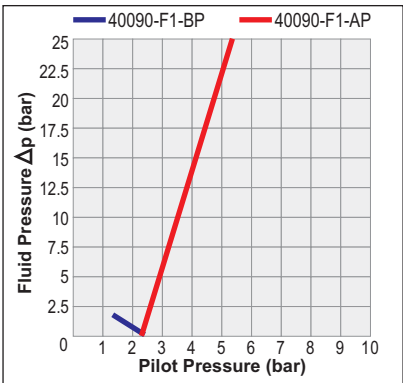
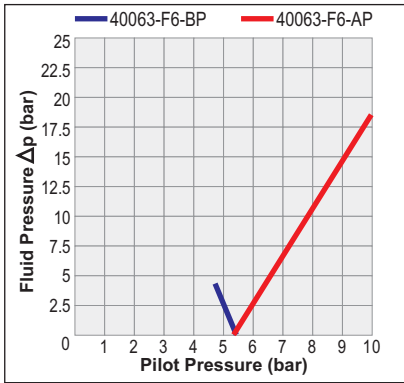
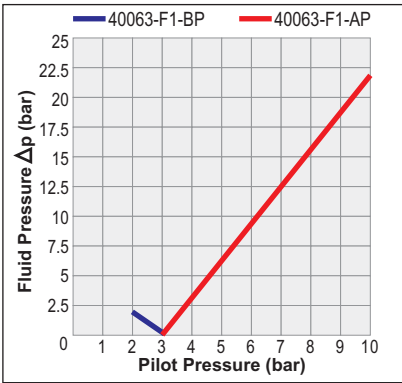
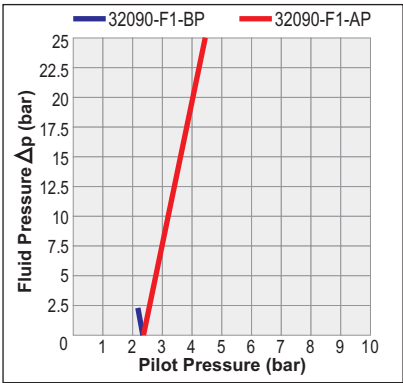
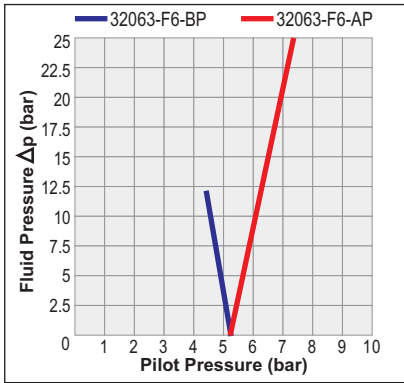
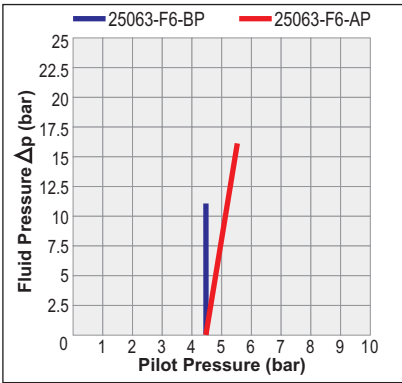
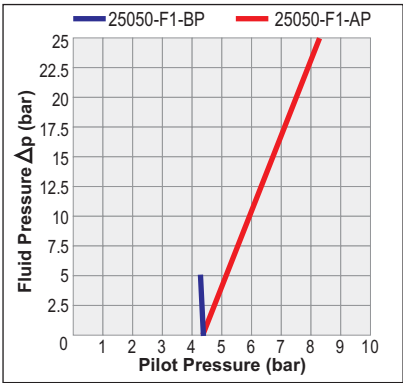
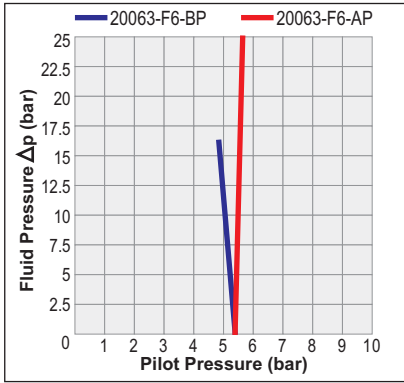
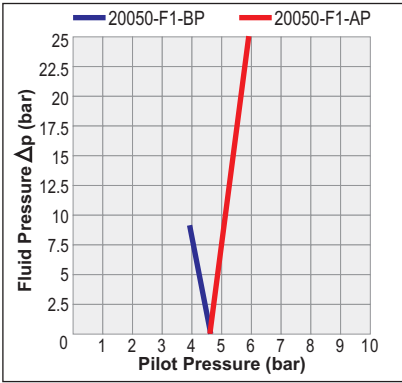
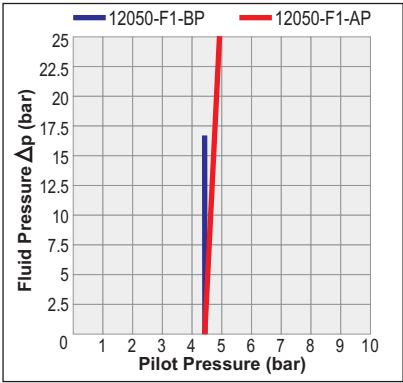
Note :

1. For PED certified valves, maximum fluid pressure is limited to minimum value specified in pressure temperature chart on page 8 or table above
2. Valve with F5 function using 5/2 solenoid valve should be replaced by valve with F1 function operated by 5/2 valve
3. Valve with F3 function should be replaced by selecting suitable valve meeting operating parameter of main fluid pressure above, below seat and pilot pressure

ANGLE SEAT VALVE

F1/ F6 SINGLE ACTING NORMALLY CLOSED

OPERATING PARAMETERS



OPERATING PARAMETERS

DN Operator	Function	DN	Actuator Ø	Connection	Kv m³/h	Single Acting Normally Closed Bi-Directional					
						Pressure Above Plug			Pressure below Plug		
						Pilot Pressure	Fluid Pressure (bar)		Pilot Pressure	Fluid Pressure (bar)	
							Up to 10 bar	AV, AW, AP, AF #300		AK, AF #150	Up to 10 bar
50063V01	F1	50	63	2"	68	2.8	0	0			
						7.6	10	10			
						10	14	14			
50090V02	F1	50	90	2"	68	2.3	0	0			
						5.8	16	16			
						7.8	25				
50090V02	F6	50	90	2"	68	6	0	0	6	0	0
						6.8	14	16	4.5	6	6
						7.5	25				
50110V02	F1	50	110	2"	68	1.4	0	0			
						4.2	16	16			
						5.8	25				
50110V02	F6	50	110	2"	68	6	0	0	6	0	0
						6.6	16	16	5.4	12	12
						6.9	25				
65090V02	F1	65	90	21/2"	120	2.2	0	0			
						8.5	12	12			
						10	14				
65110V02	F1	65	110	21/2"	120	1.4	0	0			
						6	16	16			
						8.6	25				
65110V02	F6	65	110	21/2"	120	4.2	0	0	4.2	0	0
						7.2	12	12	2.2	5	5
						10	23				
80110V02	F1	80	110	3"	185	1.6	0	0			
						6.6	10	10			
						10	16				
80110V02	F6	80	110	3"	185	4	0	0	4	0	0
						6.4	8	8	1	4	4
						10	19				

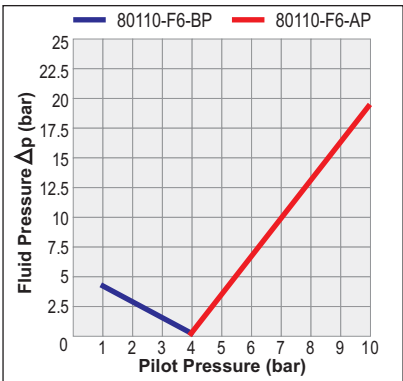
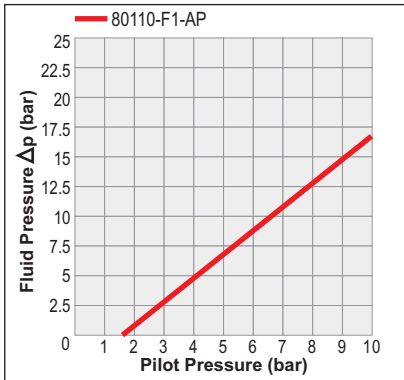
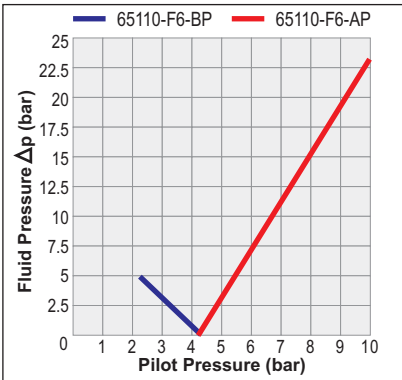
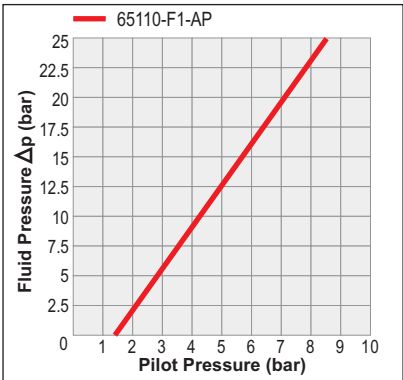
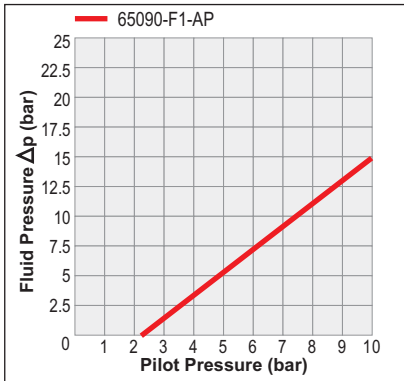
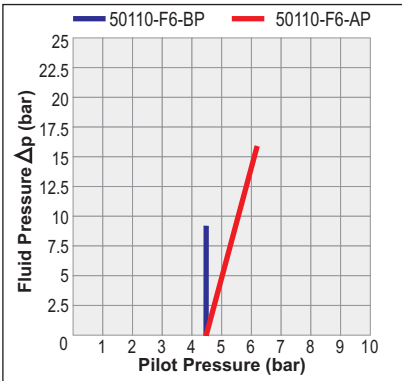
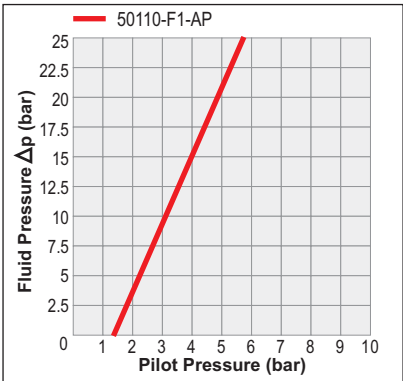
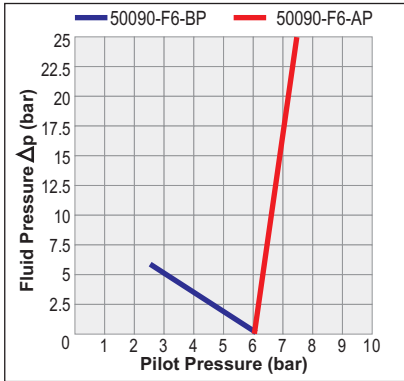
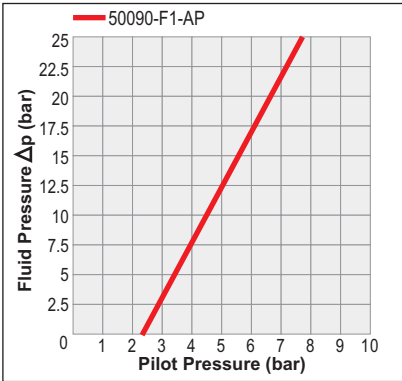
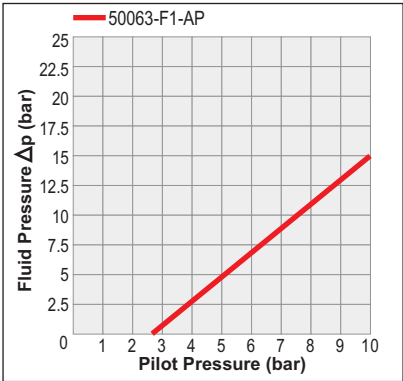
Note :

1. For PED certified valves, maximum fluid pressure is limited to minimum value specified in pressure temperature chart on page 8 or table above
2. Valve with F5 function using 5/2 solenoid valve should be replaced by valve with F1 function operated by 5/2 port valve
3. Valve with F3 function should be replaced by selecting suitable valve meeting operating parameter of main fluid pressure above, below seat and pilot pressure

ANGLE SEAT VALVE

F1/ F6 SINGLE ACTING NORMALLY CLOSED

OPERATING PARAMETERS



ORDERING CODE

1	2	3	4	5	6	7	8	9	10
PORT TYPE	DN OPERATOR - FUNCTION		PILOT	SEAL SEAT	PORT SIZE	BODY	SOLENOID VALVE	ACCESSORIES	MEDIA
AV	12050V01 - F1		P1	S17	4G	B14	02 - 37 - C	PSSA50	※

1	2-3							
PORT TYPE	DN OPERATOR-FUNCTION							
CODE DESCRIPTION	DN OPERATOR-FUNCTION	DN	OPERATOR	INLET	DN OPERATOR-FUNCTION	DN	OPERATOR	INLET
③ AV Threaded Port	12050V01-F1	12	Ø50	Bi-Directional	50063V01-F1	50	Ø63	Above Plug
③ AF Flanged ANSI # 150	20050V01-F1	20	Ø50	Bi-Directional	⑩ 50090V02-F1	50	Ø90	Above Plug
③ AF300 Flanged ANSI # 300	20063V01-F6	20	Ø63	Bi-Directional	⑩ 50090V02-F6	50	Ø90	Bi-Directional
③ AW Weld Neck	25050V01-F1	25	Ø50	Bi-Directional	50110V02-F1	50	Ø110	Above Plug
③ AP Pipe Weld	25063V01-F6	25	Ø63	Bi-Directional	50110V02-F6	50	Ø110	Bi-Directional
③ APM Pipe Weld ISO1127	32063V01-F6	32	Ø63	Bi-Directional	⑩ 65090V02-F1	65	Ø90	Above Plug
③ AK Tri Clamp	32090V02-F1	32	Ø90	Bi-Directional	65110V02-F1	65	Ø110	Above Plug
② IV Inline Threaded	40063V01-F1	40	Ø63	Bi-Directional	65110V02-F6	65	Ø110	Bi-Directional
② IF Inline Flanged # 150	40063V01-F6	40	Ø63	Bi-Directional	80110V02-F1	80	Ø110	Above Plug
② IF300 Inline Flanged # 300	⑩ 40090V02-F1	40	Ø90	Bi-Directional	80110V02-F6	80	Ø110	Bi-Directional
	⑩ 40090V02-F6	40	Ø90	Bi-Directional				

4	5	6	7
PILOT	SEAL/ SEAT	⑫ ④ PORT SIZE	BODY (INTERNAL)
CODE DESCRIPTION	CODE SEAL SEAT	SIZE BSP NPT SIZE BSP NPT	CODE DESCRIPTION
P1 Clean Port	① ※ NBR PTFE	1/2" 4G 4R 11/2" 12G 12R	B13 CF8 (SS 304)
P2 NAMUR	S17 VITON PEEK	3/4" 6G 6R 2" 16G 16R	B14 CF3M (SS 316L)
		1" 8G 8R 21/2" 20G 20R	
		11/4" 10G 10R 3" 24G 24R	

8									
SOLENOID VALVE (A B C) Refer to page 11 for more details									
A		B				C			
CODE	VALVE MODEL	CODE	COIL CODE		CODE	VOLTAGE			
① ※	Solenoid Valve Not Required	① ※	Solenoid Valve Not Required		※ ①	Solenoid Valve Not Required			
01	3/2 NAMUR Type 30106	Weather Proof IP67				A	24V DC, 8 WATT		
02	5/2 3/2 Convertible Single Solenoid NAMUR Type 51424	22	Plug In as per DIN 43650B		A-01	24V DC, 8 WATT, ATEX			
03	5/2 3/2 Convertible Double Solenoid NAMUR Type 57450	25	Plug In as per DIN 43650A		A-01B	24V DC, 8 WATT, INDIAN+ATEX			
04	3/2 Body Ported Type 30125	22S	Plug In as per DIN 43650B		B	230V 50Hz, 6 WATT			
05	3/2 Direct Mount Type 305	⑥ 19	Coil With Integral Terminal Box, Cable Entry M20 X1.5		C	110V 50Hz, 6 WATT			
⑦ 08	5/2 3/2 Convertible Single Solenoid NAMUR Low Power Type 51424LW2	Flame Proof IP67				C-01	110V 50Hz, 6 WATT, ATEX		
⑦ 09	5/2 3/2 Convertible Double Solenoid Low Power NAMUR Type 57450LW2	39	Ex d, IIC, T4, Cable Entry M20 X 1.5		D ⑦	24V DC, 2 WATT			
⑧ 10	5/2 3/2 Convertible Single Solenoid NAMUR Valve With Intrinsically Safe Coil Type 51424IS	37	Ex d, IIC, T4, Cable Entry 1/2" NPT (F)		E ⑧	24V DC Ex ia			
⑧ 11	5/2 3/2 Convertible Double Solenoid NAMUR Valve With Intrinsically Safe Coil Type 57450IS	⑥ 87MS	Ex d, IIC, T6, IIC, T6, Cable Entry M20X1.5		E-01⑧	24V DC, Ex ia, IEC Ex,ATEX			
		⑥ 58MS	Ex e mb, IIC, T6, Cable Entry M20X1.5		F	24V 50Hz, 6 WATT			
		⑧ 65CR	Ex ia IIC, T6, Plug In as per DIN 43650A		G	24V DC, 8 WATT, SIZE III			
		⑥ 67MS	Ex ia, Integral Terminal Box, IIC, T6, Cable Entry M20 X 1.5		H	24V DC, 1 WATT			
		⑥ 66MS	Ex ia, IIC, T6, With Booster Circuit, Integral Terminal Box, Cable Entry M20 X 1.5		H-01	24V DC, 1 WATT, ATEX			
		⑧							

Note : Contact Rotex for ordering code of solenoid valve having approval other than 

ORDERING EXAMPLE (Solenoid Valve)

- 01 22 A >>> 3/2 NAMUR valve type 01 (basic model 30106), Aluminium Body, 1/4" BSP, with 24V DC DIN plug, IP67 coil
- 12 67NS E >>> 5/2, 3/2 Convertible Double Solenoid NAMUR valve type 12 (basic model 57450IS) Aluminium Body, 1/4" Port, with Intrinsically Safe, Ex ia IIC T6, IP67 Solenoid
- 08 37 D >>> 5/2 3/2 Convertible Single Solenoid NAMUR valve type 08 (basic model 51424) Aluminium Body, 1/4" BSP, with Explosion Proof Ex d IIC T6, IP67 Coil

ORDERING CODE

9			
ACCESSORIES (refer to page 9 & 10 for more details)		Sensing Element Qty.	
CODE	DESCRIPTION	OPEN	CLOSE
① ×	Transparent Indicating Dome	Nil	Nil
PSSA50	Microswitch, SPDT, 3 AMP, NC/ NO for Operator Ø50	One	Nil
PSSA63	Microswitch, SPDT, 3 AMP, NC/ NO for Operator Ø63	One	Nil
PSSA90	Microswitch, SPDT, 3 AMP, NC/ NO for Operator Ø90	One	Nil
PSSA110	Microswitch, SPDT, 3 AMP, NC/ NO for Operator Ø110	One	Nil
SL50	Stroke Limiter for Operator Ø50		
SL63	Stroke Limiter for Operator Ø63		
SL90	Stroke Limiter for Operator Ø90		
SL110	Stroke Limiter for Operator Ø110		
LS21	Microswitch, 5 Amp 250V AC, 0.1 A 48V DC, SPDT, Make : Honeywell	One	One
LS41	Microswitch, 5 Amp 250V AC, 0.1 A 48V DC, SPDT, Make : Honeywell	Two	Two
LS22	Proximity Switch EEx ia, Type NJ2-V3-N, 8V DC, 3 mA, NC, Make: PEPPERL + FUCHS	One	One
LS42	Proximity Switch EEx ia, Type NJ2-V3-N, 8V DC, 3 mA, NC, Make: PEPPERL + FUCHS	Two	Two
LS23	Proximity Switch Weather Proof, 10V - 60V, 100 mA, NO	One	One
LS43	Proximity Switch Weather Proof, 10V - 60V, 100 mA, NO	Two	Two
⑨ VL15	Electronic Positioner, with feedback, single acting valve		
⑨ VL16	Intelligent Positioner, with feedback, single acting valve		
⑨ VL161	Intelligent Positioner, with feedback and process control Analog Input single acting valve		

10	
⑪ MEDIA	
CODE	DESCRIPTION
×	Above Plug- Air, Inert Gas
×	Below Plug- Air, Inert Gas, Oil, Water

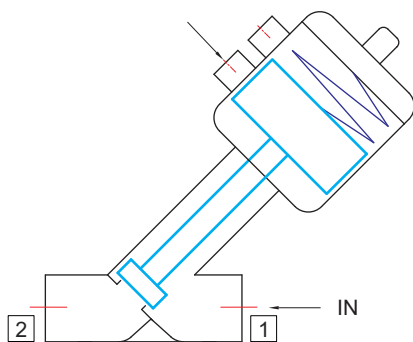
Note

- ① Do not specify when opted
- ② DN Operator can be 65090/ 65110/ 80110
- ③ DN Operator can be other than 65090/ 65110/ 80110
- ④ Should be opted only for port type AV & IV
- ⑤ Solenoid valve type 6, 7, 16, 17, 18 cannot be fitted on Valve
- ⑥ For 1/2" NPT Cable Entry, replace 19/ 87MS/ 58MS/ 67MS/ 66MS with 16/ 87NS/ 58NS/ 67NS/ 66NS

- ⑦ Valve type 08 & 09 can be supplied with coil voltage type D only
- ⑧ Select coil code 65CR/ 67MS/ 67NS and voltage E
- ⑨ Solenoid valve should not be opted
- ⑩ Pilot P1 not available.
- ⑪ Select media code other than default Media.
- ⑫ Port types Can be supplied with Port Size Suffix "F" for AF/IF, Suffix "P" for AP/APM, suffix "T" for AK

RECOMMENDED INSTALLATION

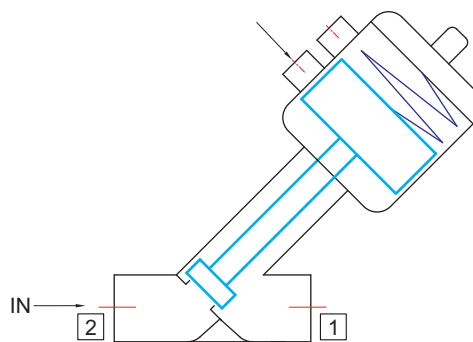
PRESSURE ABOVE SEAT



MEDIA

Gas, Steam, Air, Vacuum, LPG

PRESSURE BELOW SEAT



MEDIA

Gas, Air, Water, Vacuum, Oil, Liquid, Fuel

ORDERING EXAMPLE

AV25050V01-F1-P1-4G-B13

25NB Single Acting Normally Closed Angle Seat valve having 1" BSP port connection, PTFE seat, Body and Wetted part CF8, SS 304 and Operator 50, Clean port, seals and O ring NBR

AV40090V02-F6-P2-S17-12R-B14-08-16-D-PSSA90

40NB Single Acting Normally Closed Angle Seat Valve having 1 1/2" NPT threaded port connection, PEEK Seat, Body and wetted parts CF3M, SS 316L, Operator 90 NAMUR Ports, Seals and O ring VITON, along with Position Sensor Type PSSA90 having Cable entry PG9, SPDT Micro switch 3 AMP for sensing Open Position of the valve, with 5/2 3/2 Convertible Low Power Solenoid Valve, Body Material Aluminium Hard Anodised, Low Power Weather Proof Solenoid having integral Terminals Junction Box, Cable Entry M20X1.5, Voltage 24V DC, Power 2 Watt, Type 0816MSD

OPERATING PARAMETERS

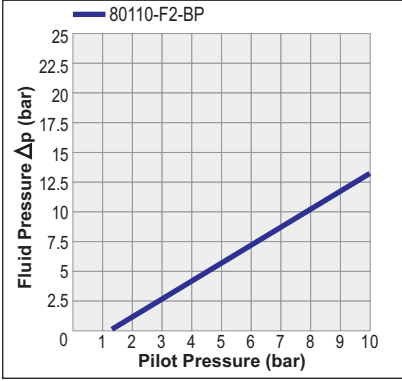
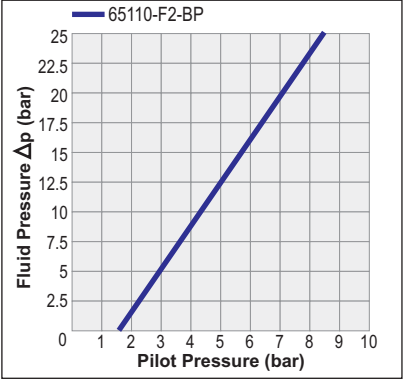
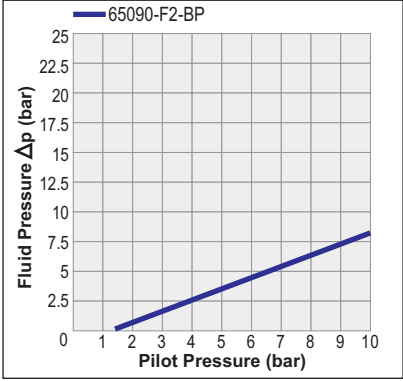
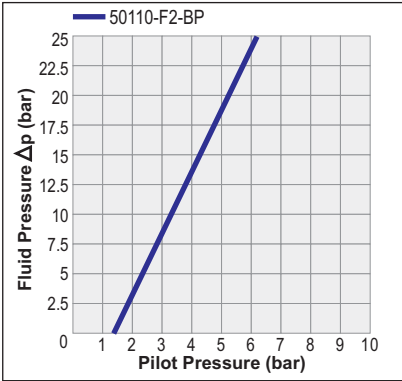
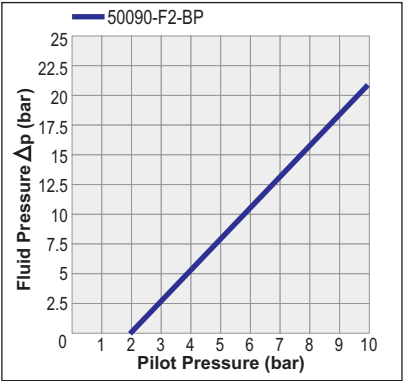
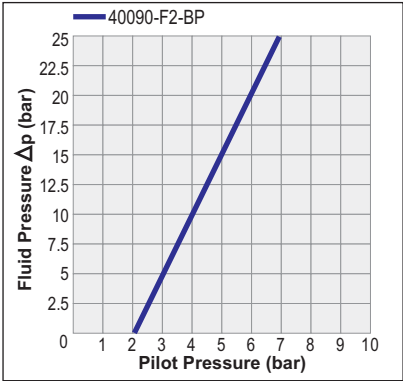
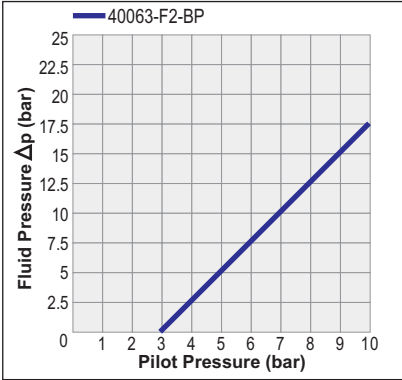
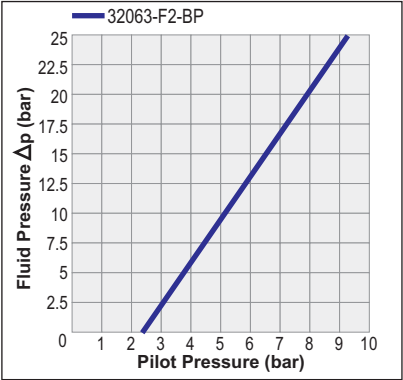
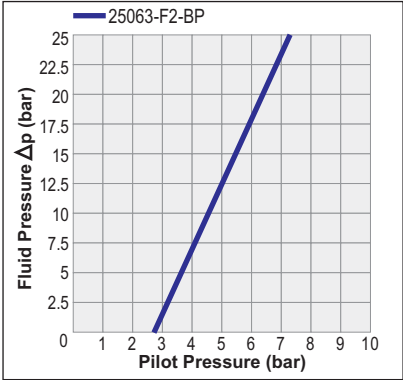
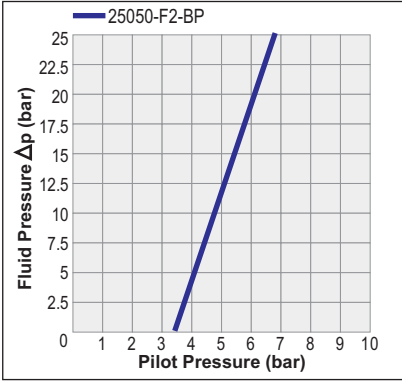
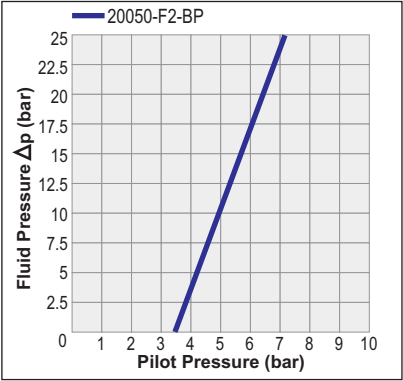
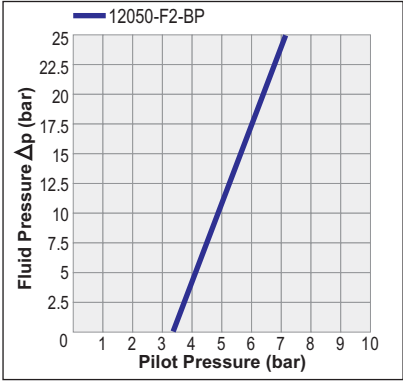
DN Operator	DN	Actuator Ø	Connection	Kv m³/h	Single Acting Normally Open		
					Pressure Below Plug		
					Pilot Pressure	Fluid Pressure (bar)	
					Up to 10 bar	AV, AW, AP, AF #300	AK, AF #150
12050V01	12	50	1/2"	5.8	3.4	0	0
					5.8	16	16
					7.1	25	
20050V01	20	50	3/4"	10.8	3.5	0	0
					5.8	16	16
					7.1	25	
25050V01	25	50	1"	21	4.6	0	0
					6	12	12
					7.8	25	
25063V01	25	63	1"	21	2.8	0	0
					5.6	16	16
					7.2	25	
32063V01	32	63	1 1/4"	31	2.4	0	0
					6.8	16	16
					9.2	25	
40063V01	40	63	1 1/2"	49	3	0	0
					7	10	10
					10	17	
40090V02	40	90	1 1/2"	49	2	0	0
					5.2	16	16
					7	25	
50090V02	50	90	2"	68	2	0	0
					6.7	12	12
					10	20	
50110V02	50	110	2"	68	1.4	0	0
					4.4	16	16
					6.1	25	
65090V02	65	90	2 1/2"	120	1.4	0	0
					5.8	4	4
					10	7.8	
65110V02	65	110	2 1/2"	120	1.6	0	0
					6	12	12
					8.5	25	
80110V02	80	110	3"	185	1.4	0	0
					6.8	8	8
					10	13	

Note : For PED certified valves, maximum fluid pressure is limited to minimum value specified in pressure temperature chart on page 8 or table above

ANGLE SEAT VALVE

F2 SINGLE ACTING NORMALLY OPEN

OPERATING PARAMETERS



ORDERING CODE

1	2	3	4	5	6	7	8	9	10
PORT TYPE	DN-OPERATOR	FUNCTION	PILOT	SEAL SEAT	PORT SIZE	BODY	SOLENOID VALVE	ACCESSORIES	MEDIA
AF300	25050V01	F2	P1	S17	4G	B14	05 - 22S - B	SL50	※

1	2	3
PORT TYPE	DN-OPERATOR	FUNCTION
CODE DESCRIPTION	CODE DN OPERATOR CODE DN OPERATOR	CODE DESCRIPTION
③ AV Threaded Port	12050V01 12 Ø50 ⑩ 40090V02 40 Ø90	F2 SINGLE ACTING NO
③ AF Flanged ANSI # 150	20050V01 20 Ø50 ⑩ 50090V02 50 Ø90	
③ AF300 Flanged ANSI # 300	25050V01 25 Ø50 ⑩ 50110V02 50 Ø110	
③ AW Weld Neck	25063V01 25 Ø63 ⑩ 65090V02 65 Ø90	
③ AP Pipe Weld	32063V01 32 Ø63 65110V02 65 Ø110	
③ APM Pipe Weld ISO1127	40063V01 40 Ø63 80110V02 80 Ø110	
③ AK Tri Clamp		
② IV Inline Threaded		
② IF Inline Flanged # 150		
② IF300 Inline Flanged # 300		

4	5	6	7
PILOT	SEAL/ SEAT	⑩ ④ PORT SIZE	BODY (INTERNAL)
CODE DESCRIPTION	CODE SEAL SEAT	SIZE BSP NPT SIZE BSP NPT	CODE DESCRIPTION
P1 Clean Port	① ※ NBR PTFE	1/2" 4G 4R 11/2" 12G 12R	B13 CF8 (SS 304)
P2 NAMUR	S17 VITON PEEK	3/4" 6G 6R 2" 16G 16R	B14 CF3M (SS 316L)
		1" 8G 8R 21/2" 20G 20R	
		11/4" 10G 10R 3" 24G 24R	

8		
SOLENOID VALVE (A B C) Refer to page 11 for more details		
A	B	C
CODE VALVE MODEL	CODE COIL CODE	CODE VOLTAGE
① ※ Solenoid Valve Not Required	① ※ Solenoid Valve Not Required	※ ① Solenoid Valve Not Required
01 3/2 NAMUR Type 30106	Weather Proof IP67	
02 5/2 3/2 Convertible Single Solenoid NAMUR Type 51424	22 Plug In as per DIN 43650B	A 24V DC, 8 WATT
03 5/2 3/2 Convertible Double Solenoid NAMUR Type 57450	25 Plug In as per DIN 43650A	A-01 24V DC, 8 WATT, ATEX
04 3/2 Body Ported Type 30125	22S Plug In as per DIN 43650B	A-01B 24V DC, 8 WATT, INDIAN+ATEX
05 3/2 Direct Mount Type 305	⑥ 19 Coil With Integral Terminal Box, Cable Entry M20 X1.5	B 230V 50Hz, 6 WATT
⑦ 08 5/2 3/2 Convertible Single Solenoid NAMUR Low Power Type 51424LW2	Flame Proof IP67	
⑦ 09 5/2 3/2 Convertible Double Solenoid Low Power NAMUR Type 57450LW2	39 Ex d, IIC, T4, Cable Entry M20 X 1.5	C 110V 50Hz, 6 WATT
⑧ 10 5/2 3/2 Convertible Single Solenoid NAMUR Valve With Intrinsically Safe Coil Type 51424IS	37 Ex d, IIC, T4, Cable Entry 1/2" NPT (F)	C-01 110V 50Hz, 6 WATT, ATEX
⑧ 11 5/2 3/2 Convertible Double Solenoid NAMUR Valve With Intrinsically Safe Coil Type 57450IS	⑥ 87MS Ex d, IIC, T6, IIC, T6, Cable Entry M20X1.5	D ⑦ 24V DC, 2 WATT
	⑥ 58MS Ex e mb, IIC, T6, Cable Entry M20X1.5	E ⑧ 24V DC Ex ia
	⑧ 65CR Ex ia IIC, T6, Plug In as per DIN 43650A	E-01⑧ 24V DC, Ex ia, IEC Ex,ATEX
	⑥ 67MS Ex ia, Integral Terminal Box, IIC, T6, Cable Entry M20 X 1.5	F 24V 50Hz, 6 WATT
	⑥ 66MS Ex ia, IIC, T6, With Booster Circuit, Integral Terminal Box, Cable Entry M20 X 1.5	G 24V DC, 8 WATT, SIZE III
		H 24V DC, 1 WATT
		H-01 24V DC, 1 WATT, ATEX

ORDERING EXAMPLE (Solenoid Valve)

- 01 22 A >>> 3/2 NAMUR valve type 01 (basic model 30106) Aluminium Body, 1/4" BSP, 24V DC with DIN plug coil, IP67
- 12 67NS E >>> 5/2, 3/2 Convertible Double Solenoid NAMUR valve type 12 (basic model 57450IS) Aluminium Body, 1/4" Port, with Intrinsically Safe, Ex ia IIC T6, IP67 Solenoid
- 08 37 D >>> 5/2 3/2 Convertible Single Solenoid NAMUR valve type 08 (basic model 51424) Aluminium Body, 1/4" BSP, with Explosion Proof Ex d IIC T6, IP67 Coil

ORDERING CODE

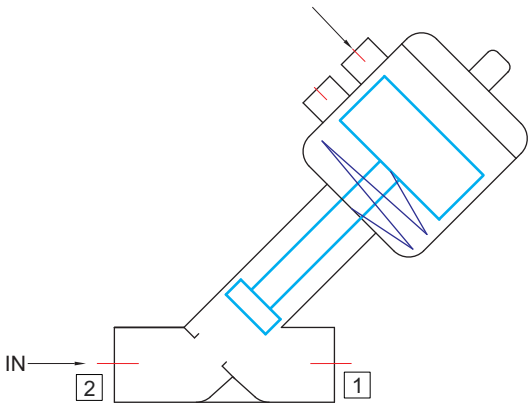
9				10	
ACCESSORIES (refer to page 9 & 10 for more details)			Sensing Element Qty.		11 MEDIA
CODE	DESCRIPTION		OPEN	CLOSE	CODE DESCRIPTION
1 ✖	Transparent Indicating Dome				✖ Air, Inert Gas, Oil, Water
SL50	Stroke Limiter for Operator Ø50				
SL63	Stroke Limiter for Operator Ø63				
SL90	Stroke Limiter for Operator Ø90				
SL110	Stroke Limiter for Operator Ø110				
LS21	Microswitch, 5 Amp 250V AC, 0.1 A 48V DC, SPDT, Make : Honeywell	One	One		
LS41	Microswitch, 5 Amp 250V AC, 0.1 A 48V DC, SPDT, Make : Honeywell	Two	Two		
LS22	Proximity Switch EEx ia, Type NJ2-V3-N, 8V DC, 3 mA, NC, Make: PEPPERL + FUCHS	One	One		
LS42	Proximity Switch EEx ia, Type NJ2-V3-N, 8V DC, 3 mA, NC, Make: PEPPERL + FUCHS	Two	Two		
LS23	Proximity Switch Weather Proof, 10V - 60V, 100 mA, NO	One	One		
LS43	Proximity Switch Weather Proof, 10V - 60V, 100 mA, NO	Two	Two		
9 VL15	Electronic Positioner, with feedback, single acting valve				
9 VL16	Intelligent Positioner, with feedback, single acting valve				
9 VL161	Intelligent Positioner, with feedback and process control Analog Input single acting valve				

Note

- 1 Do not specify when opted
- 2 DN Operator can be 65090/ 65110/ 80110
- 3 DN Operator can be other than 65090/ 65110/ 80110
- 4 Should be opted only for port type AV & IV
- 5 Solenoid valve type 6, 7, 16, 17, 18 cannot be fitted on Valve
- 6 For 1/2" NPT Cable Entry, replace 19/ 87MS/ 58MS/ 67MS/ 66MS with 16/ 87NS/ 58NS/ 67NS/ 66NS
- 7 Valve type 08 & 09 can be supplied with coil voltage type D only
- 8 Select coil code 65CR/ 67MS/ 67NS and voltage E
- 9 Solenoid valve should not be opted
- 10 Pilot P1 not available.
- 11 Select media code other than default Media.
- 12 Port types Can be supplied with Port Size Suffix "F" for AF/IF, Suffix "P" for AP/APM, suffix "T" for AK

CONNECTION DETAIL/ RECOMMENDED INSTALLATION

PRESSURE BELOW SEAT



MEDIA

Steam, Air, Oil, Water, Fuel Gas and Liquid, Vacuum

ORDERING EXAMPLE

AV50090V02-F2-P2-16G-B13

50NB Single Acting Normally Open Angle Seat valve having 2" BSP port connection, PTFE seat, Body and wetted part CF8, SS 304 and Operator 90, Clean port, seals and O ring NBR

AV40090V02-F2-P2-S17-12R-B14-02-37-C-SL90

40NB Single Acting Normally Open Angle Seat Valve having 11/2" NPT threaded port connection, PEEK Seat, Body and wetted parts CF3M, SS 316L, Operator 90 NAMUR Ports, Seals and O ring VITON, along with Stroke limiter Type SL90 with 5/2 3/2 Convertible NAMUR Solenoid Valve, Body Material Aluminium Hard Anodised, fitted with, Explosion proof solenoid Ex d IIC T6, having cable entry 1/2" NPT, Voltage 110V AC, 6 Watt, Type 0237C

OPERATING PARAMETERS

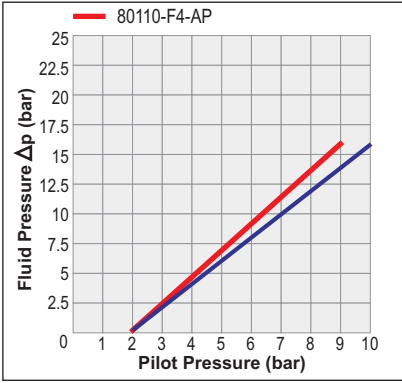
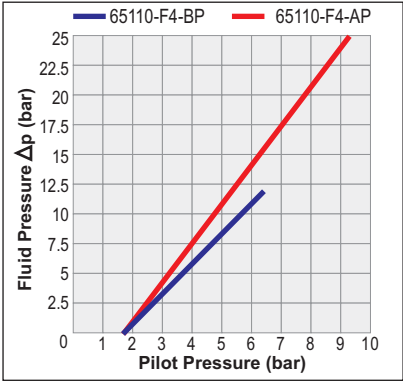
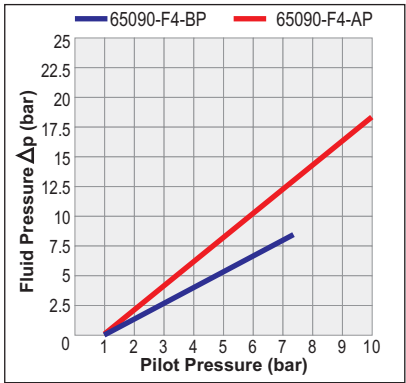
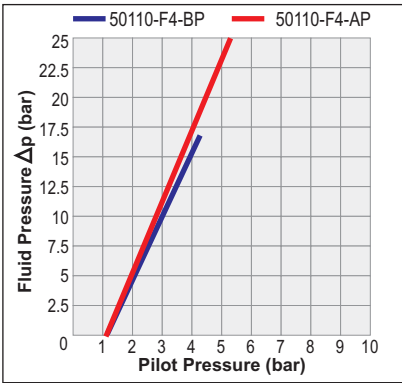
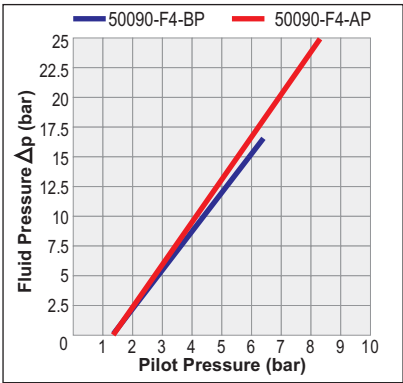
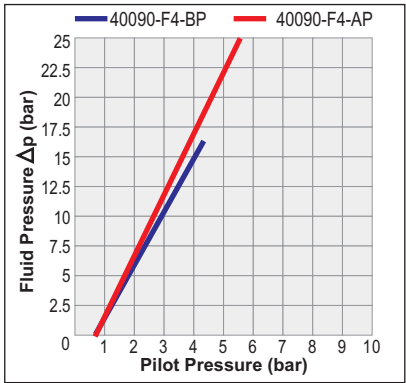
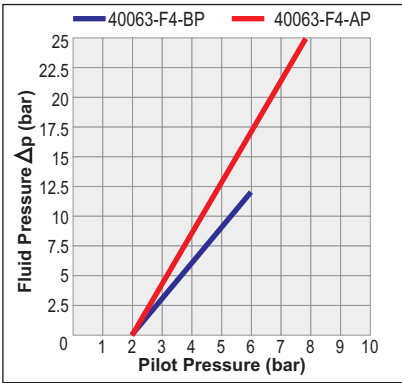
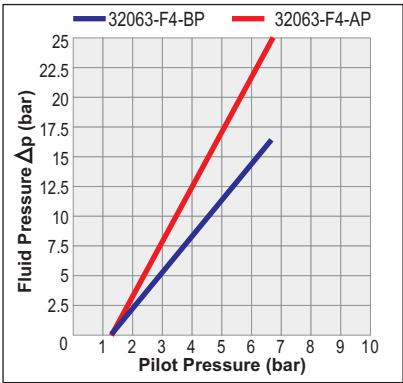
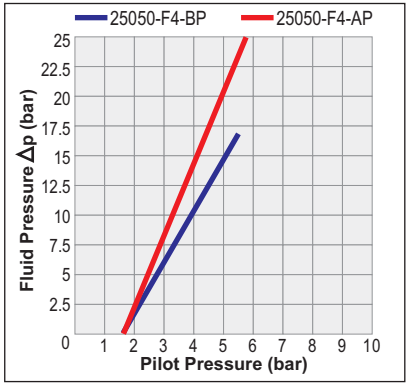
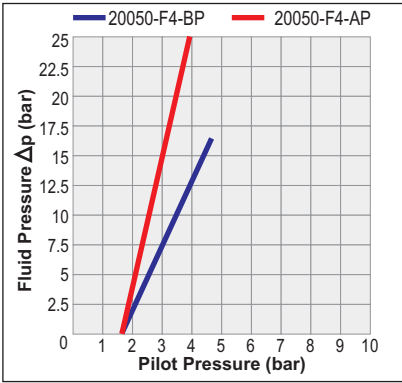
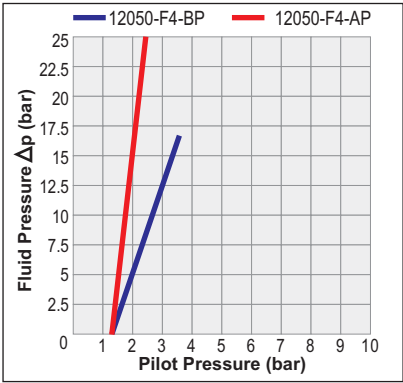
DN Operator	DN	Actuator Ø	Connection	Kv m³/h	Double Acting Bi-Directional Universal					
					Pressure Above Plug			Pressure Below Plug		
					Pilot Pressure	Fluid Pressure		Pilot Pressure	Fluid Pressure	
					Up to 10 bar	AV, AW, AP, AF #300	AK, AF #150	Up to 10 bar	AV, AW, AP, AF #300	AK, AF #150
12050V01	12	50	1/2"	5.8	1.2	0	0	1.2	0	0
					2	16	16	3.4	16	16
					2.5	25				
20050V01	20	50	3/4"	10.8	1.8	0	0	1.8	0	0
					3.2	16	16	4.6	16	16
					4	25				
25050V01	25	50	1"	21	1.8	0	0	1.8	0	0
					4.4	16	16	5.2	16	16
					5.8	25				
32063V01	32	63	1 1/4"	31	1.2	0	0	1.2	0	0
					4.8	16	16	6.6	16	16
					6.8	25				
40063V01	40	63	1 1/2"	49	2	0	0	2.0	0	0
					5.8	16	16	6.0	12	12
					7.9	25				
40090V02	40	90	1 1/2"	49	0.8	0	0	0.8	0	0
					3.8	16	16	4.2	16	16
					5.5	25				
50090V02	50	90	2"	68	1.4	0	0	1.4	0	0
					5.8	16	16	6.2	16	16
					8.3	25				
50110V02	50	110	2"	68	1.1	0	0	1.1	0	0
					3.8	16	16	4.0	16	16
65090V02	65	90	2 1/2"	120	1	0	0	1.0	0	0
					7	12	12	7.2	8	2
					10	18	12	12.0		
65110V02	65	110	2 1/2"	120	1.8	0	0	1.8	0	0
					6	14	14	6.6	12	12
					9.2	25				
80110V02	80	110	3"	185	2	0	0	2	0	0
					7.5	12	12	8	12	12
					9	16		10	16	

Note : For PED certified valves, maximum fluid pressure is limited to minimum value specified in pressure temperature chart on page 8 or table above

ANGLE SEAT VALVE

F4 DOUBLE ACTING BI-DIRECTIONAL UNIVERSAL

OPERATING PARAMETERS



ANGLE SEAT VALVE

DOUBLE ACTING BI-DIRECTIONAL UNIVERSAL F4

ORDERING CODE

1	2	3	4	5	6	7	8	9	10
PORT TYPE	DN-OPERATOR	FUNCTION	PILOT	SEAL SEAT	PORT SIZE	BODY	SOLENOID VALVE	ACCESSORIES	MEDIA
AV	12050V01	F4	P2	S17	4G	B14	12 - 67NS - E	LS21	×

1	2	3
PORT TYPE	DN-OPERATOR	FUNCTION
CODE DESCRIPTION	CODE DN OPERATOR	CODE DESCRIPTION
③ AV Threaded Port	12050V01 12 Ø50	F4 DOUBLE ACTING UNIVERSAL
③ AF Flanged ANSI # 150	20050V01 20 Ø50	
③ AF300 Flanged ANSI # 300	25050V01 25 Ø50	
③ AW Weld Neck	32063V01 32 Ø63	
③ AP Pipe Weld	40063V01 40 Ø63	
③ APM Pipe Weld ISO1127	40090V02 40 Ø90	
③ AK Tri Clamp		
② IV Inline Threaded		
② IF Inline Flanged # 150		
② IF300 Inline Flanged # 300		

4	5	6	7
PILOT	SEAL/ SEAT	PORT SIZE	BODY (INTERNAL)
CODE DESCRIPTION	CODE SEAL SEAT	SIZE BSP NPT	CODE DESCRIPTION
P1 Clean Port	① × NBR PTFE	1/2" 4G 4R 11/2" 12G 12R	B13 CF8 (SS 304)
P2 NAMUR	S17 VITON PEEK	3/4" 6G 6R 2" 16G 16R	B14 CF3M (SS 316L)
		1" 8G 8R 21/2" 20G 20R	
		11/4" 10G 10R 3" 24G 24R	

8

SOLENOID VALVE (A B C) Refer to page 11 for more details

A		B		C	
CODE	VALVE MODEL	CODE	COIL CODE	CODE	VOLTAGE
① ✖	Solenoid Valve Not Required	① ✖	Solenoid Valve Not Required	✖ ①	Solenoid Valve Not Required
02	5/2 3/2 Convertible Single Solenoid NAMUR Type 51424	Weather Proof IP67		A	24V DC, 8 WATT
03	5/2 3/2 Convertible Double Solenoid NAMUR Type 57450	22	Plug In as per DIN 43650B	A-01	24V DC, 8 WATT, ATEX
⑦ 08	5/2 3/2 Convertible Single Solenoid NAMUR Low Power Type 51424LW2	25	Plug In as per DIN 43650A	A-01B	24V DC, 8 WATT, INDIAN+ATEX
⑦ 09	5/2 3/2 Convertible Double Solenoid Low Power NAMUR Type 57450LW2	22S	Plug In as per DIN 43650B	B	230V 50Hz, 6 WATT
⑧ 10	5/2 3/2 Convertible Single Solenoid NAMUR Valve With Intrinsically Safe Coil Type 51424IS	⑥ 19	Coil With Integral Terminal Box, Cable Entry M20 X1.5	C	110V 50Hz, 6 WATT
⑧ 11	5/2 3/2 Convertible Double Solenoid NAMUR Valve With Intrinsically Safe Coil Type 57450IS	Flame Proof IP67		C-01	110V 50Hz, 6 WATT, ATEX
		39	Ex d, IIC, T4, Cable Entry M20 X 1.5	D ⑦	24V DC, 2 WATT
		37	Ex d, IIC, T4, Cable Entry 1/2" NPT (F)	E ⑧	24V DC Ex ia
		⑥ 87MS	Ex d, IIC, T6, IIC, T6, Cable Entry M20X1.5	E-01⑧	24V DC, Ex ia, IEC Ex,ATEX
		⑥ 58MS	Ex e mb, IIC, T6, Cable Entry M20X1.5	F	24V 50Hz, 6 WATT
		⑧ 65CR	Ex ia IIC, T6, Plug In as per DIN 43650A	G	24V DC, 8 WATT, SIZE III
		⑥ 67MS	Ex ia, Integral Terminal Box, IIC, T6, Cable Entry M20 X 1.5	H	24V DC, 1 WATT
		⑥ 66MS	Ex ia, IIC, T6, With Booster Circuit, Integral Terminal Box, Cable Entry M20 X 1.5	H-01	24V DC, 1 WATT, ATEX
		⑧			

ORDERING EXAMPLE (Solenoid Valve)

- 02 22 B >>> 5/2 Convertible NAMUR valve type 02 (basic model 51424) Aluminium Body, 1/4" BSP, 230V 50Hz with DIN plug IP67 coil
- 12 67NS E >>> 5/2, 3/2 Convertible Double Solenoid NAMUR valve type 12 (basic model 57450IS) Aluminium Body, 1/4" Port, with Intrinsically Safe, Ex ia IIC T6, IP67 Solenoid
- 08 37 D >>> 5/2 3/2 Convertible Single Solenoid NAMUR valve type 08 (basic model 51424) Aluminium Body, 1/4" BSP, with Explosion Proof Ex d IIC T6, IP67 Coil

ANGLE SEAT VALVE

F4 DOUBLE ACTING BI-DIRECTIONAL UNIVERSAL

ORDERING CODE

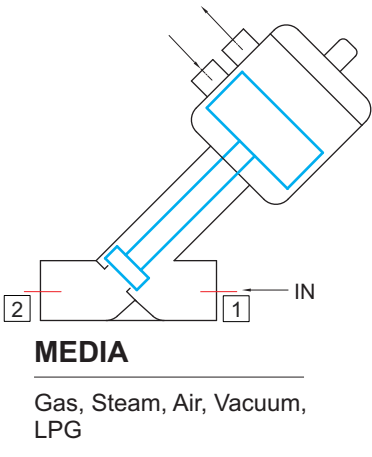
9				10	
ACCESSORIES (refer to page 9 & 10 for more details)			Sensing Element Qty.		① MEDIA
CODE	DESCRIPTION		OPEN	CLOSE	CODE DESCRIPTION
① ×	Transparent Indicating Dome				× Above Plug- Air, Inert Gas
SL50	Stroke Limiter for Operator Ø50				× Below Plug- Air, Inert Gas, Oil, Water
SL63	Stroke Limiter for Operator Ø63				
SL90	Stroke Limiter for Operator Ø90				
SL110	Stroke Limiter for Operator Ø110				
LS21	Microswitch, 5 Amp 250V AC, 0.1 A 48V DC, SPDT, Make : Honeywell		One	One	
LS41	Microswitch, 5 Amp 250V AC, 0.1 A 48V DC, SPDT, Make : Honeywell		Two	Two	
LS22	Proximity Switch EEx ia, Type NJ2-V3-N, 8V DC, 3 mA, NC, Make: PEPPERL + FUCHS		One	One	
LS42	Proximity Switch EEx ia, Type NJ2-V3-N, 8V DC, 3 mA, NC, Make: PEPPERL + FUCHS		Two	Two	
LS23	Proximity Switch Weather Proof, 10V - 60V, 100 mA, NO		One	One	
LS43	Proximity Switch Weather Proof, 10V - 60V, 100 mA, NO		Two	Two	
⑨ VL16D	Intelligent Positioner, with feedback, double acting valve				
⑨ VL161D	Intelligent Positioner, with feedback and process control Analog Input double acting valve				

- Note

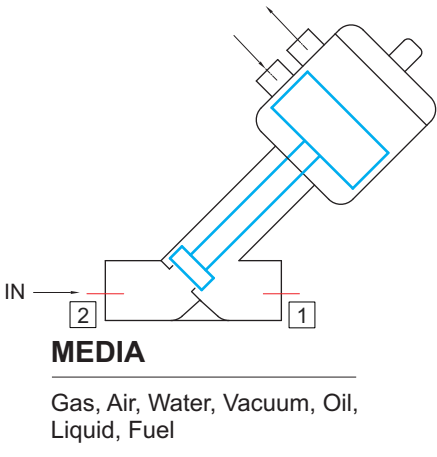
 - ① Do not specify when opted
 - ② DN Operator can be 65090/ 65110/ 80110
 - ③ DN Operator can be other than 65090/ 65110/ 80110
 - ④ Should be opted only for port type AV & IV
 - ⑤ Solenoid valve type 31119/ 51400 cannot be fitted on Valve
 - ⑥ For 1/2" NPT Cable Entry, replace 19/ 87MS/ 58MS/ 67MS/ 66MS with 16/ 87NS/ 58NS/ 67NS/ 66NS
- ⑦ Valve type 08 & 09 can be supplied with coil voltage type D only
 - ⑧ Valve type 11 & 12 can be supplied with coil code 65CR/ 67MS/ 67NS only
 - ⑨ Solenoid valve should not be opted
 - ⑩ Pilot P1 not available.
 - ⑪ Select media code other than default Media.
 - ⑫ Port types Can be supplied with Port Size Suffix "F" for AF/IF, Suffix "P" for AP/APM, suffix "T" for AK

CONNECTION DETAIL/ RECOMMENDED INSTALLATION

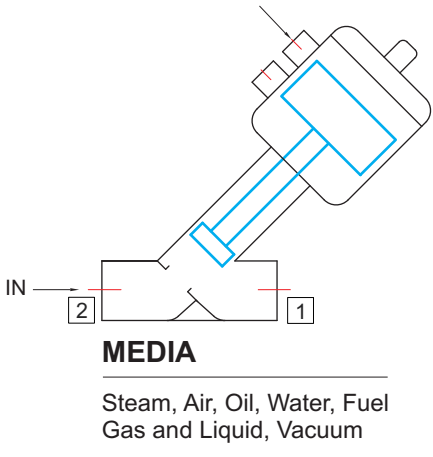
Normally close
Pressure Above Seat



Normally close
Pressure Below Seat



Normally open
Pressure Below Seat



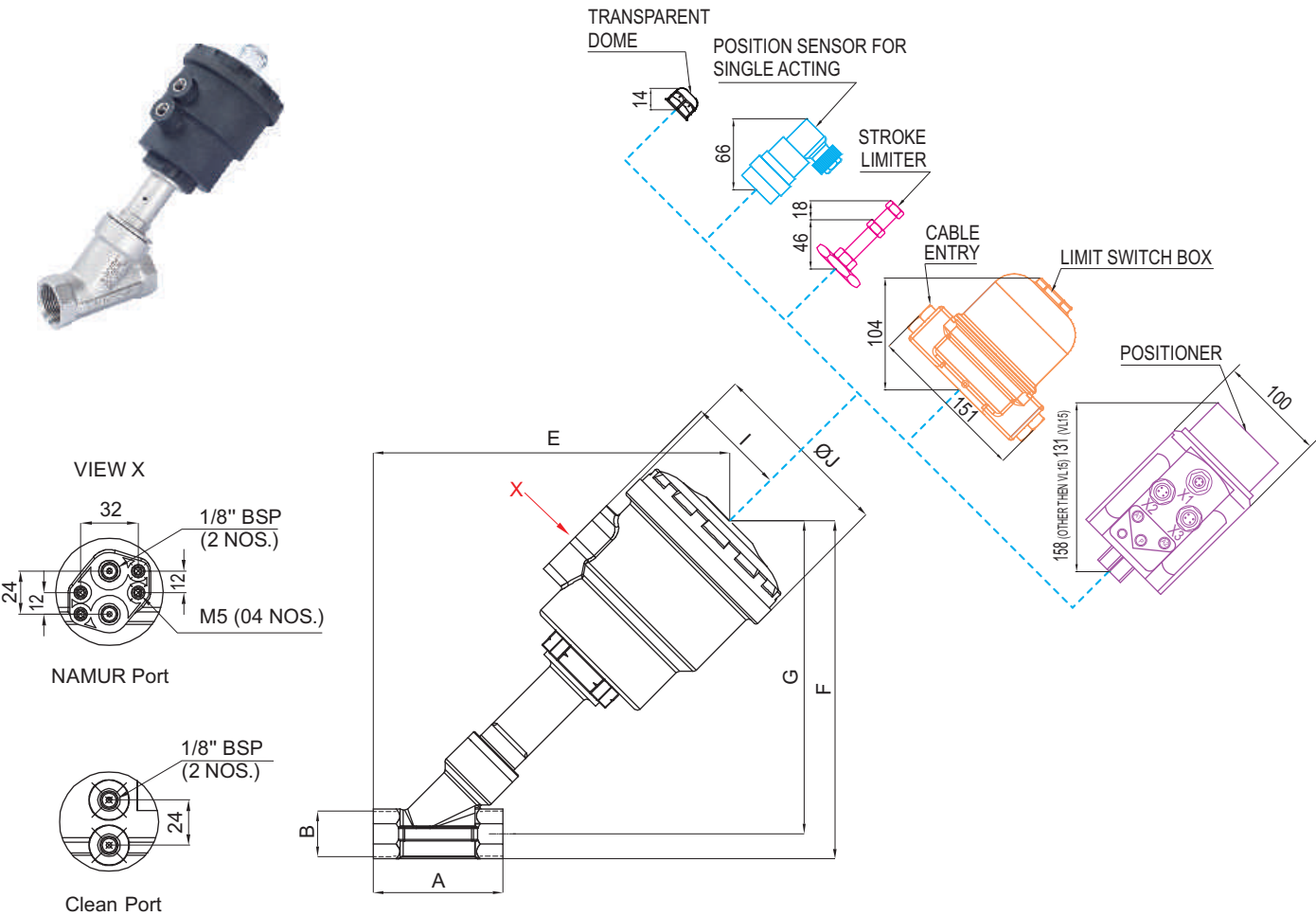
ORDERING EXAMPLE

AV32063V01-F4-P1-16G-B13
 32NB Double Acting Bi-Directional Universal Angle Seat valve having 11/4" BSP port connection, PTFE seat, Body and wetted part CF8, SS 304 and Operator 63, Clean port, seals and O ring NBR

AF25050V01-F4-P2-S17-B14-11-67NS-E-LS22
 25NB Double Acting Bi-Directional Universal Angle Seat Valve having 25NB RF #150 flanged port connection, PEEK Seat, Body and wetted parts CF3M, SS 316L, Operator diameter 50 mm having NAMUR Ports, Seals and O ring VITON, along with position sensor box having Powder coated Aluminium Cast enclosure, One number each Micro Switch, SPDT, 5AMP for AC, 0.5 AMP for DC, to sense Open and Close position of the valve, Cable Entry 2 Number M25 X 1.5 mm Type LS21 with 5/2 3/2 Convertible NAMUR Solenoid Valve with Intrinsically safe Solenoid, Body Material Aluminium Hard Anodised, fitted with, Explosion proof solenoid Ex ia IIC T6, having cable entry 1/2" NPT, Voltage 24V DC, Type 11-67NS-E

DIMENSIONS

TYPE AV : Threaded ports as per ISO 228/1 and ISO 7/1



(All dimensions are in mm)

Type	DN	Actuator Ø	A	B BSP/ NPT	E	F	G	ØJ	I	kg.
AV12050V01	12	50	65	1/2"	167	158	146	75	42	1
AV20050V01	20	50	75	3/4"	171	161	145	75	42	1.1
AV20063V01	10	63	75	3/4"	185	174	158	93	49	1.3
AV25050V01	25	50	90	1"	177	165	145	75	42	1.4
AV25063V01	25	63	90	1"	190	179	158	93	49	1.6
AV32063V01	32	63	110	1 1/4"	200	188	162	93	49	2.1
AV32090V02	32	90	110	1 1/4"	233	220	196	124	67	3.2
AV40063V01	40	63	120	1 1/2"	205	199	169	93	49	2.9
AV40090V02	40	90	120	1 1/2"	235	229	199	124	67	3.9
AV50063V01	50	63	150	2"	233	218	183	93	49	3.6
AV50090V02	50	90	150	2"	263	248	213	124	67	4.3
AV50110V02	50	110	150	2"	283	248	232	148	75	6.3

TYPE IV

TYPE IV : Threaded ports as per ISO 228/1 and ISO 7/1

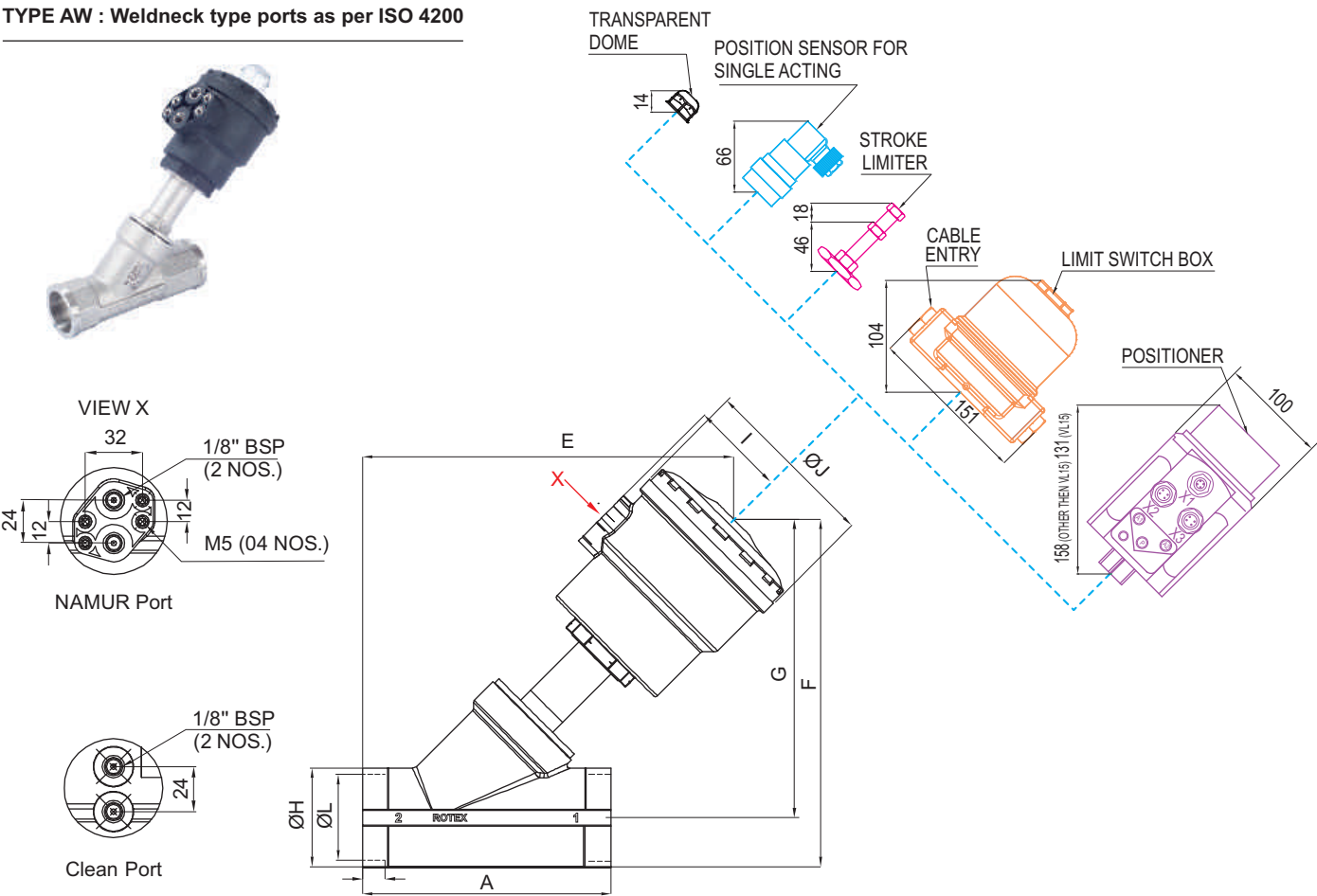


(All dimensions are in mm)

Type	DN	Actuator Ø	A	B BSP/ NPT	F	G	ØJ	I	 kg.
IV65090V02	65	90	200	2 1/2"	361	316	124	67	9.1
IV65110V02	65	110	200	2 1/2"	391	316	148	75	10.0
IV80110V02	80	110	235	3"	415	363	148	75	15.3

DIMENSIONS

TYPE AW : Weldneck type ports as per ISO 4200



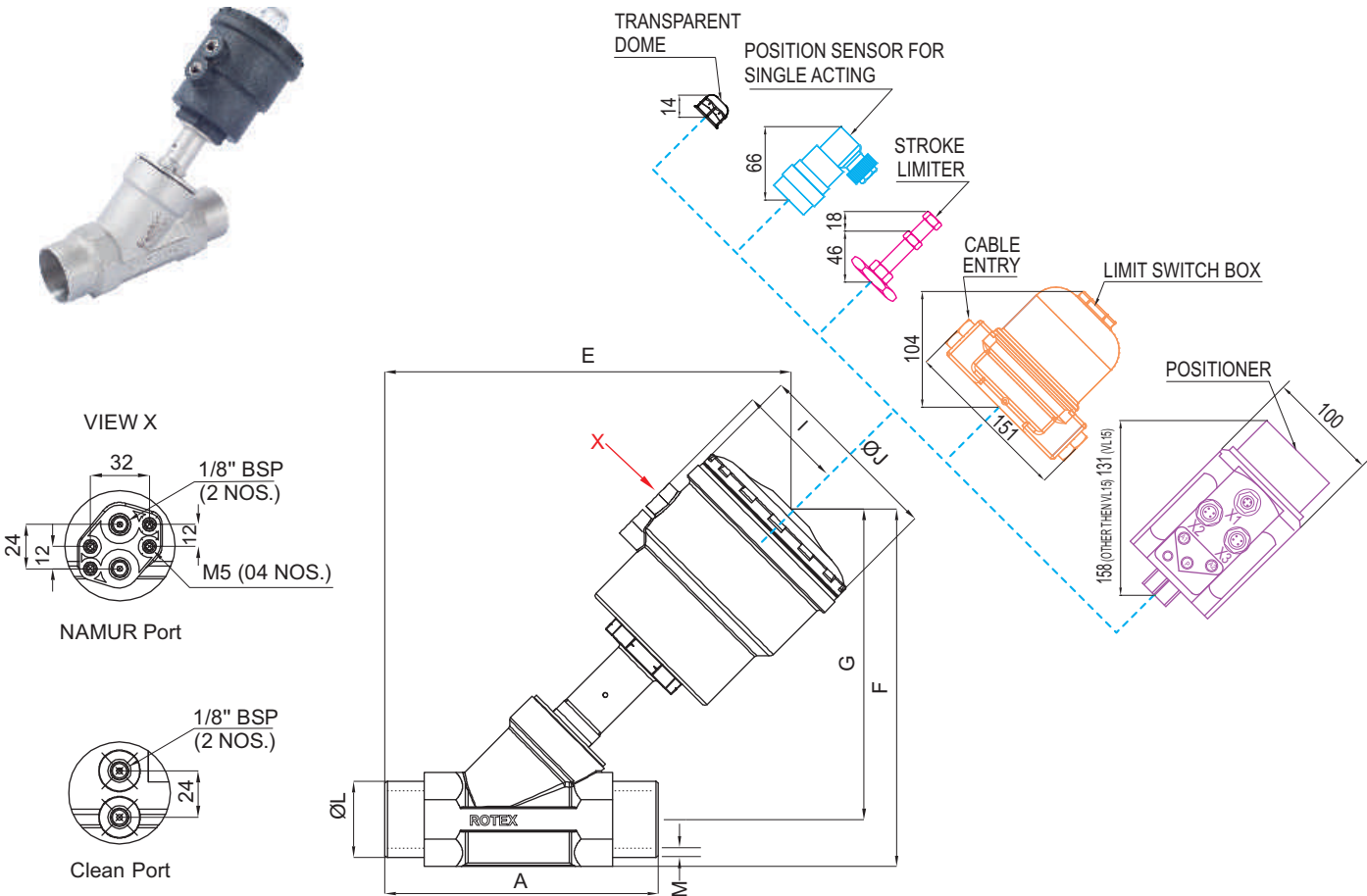
(All dimensions are in mm)

Type	DN	Actuator Ø	A	E	F	G	ØJ	I	ØH	ØL	kg.
AW12050V01	12	50	100	167	158	146	75	42	24	21.3	1
AW20050V01	20	50	115	171	161	145	75	42	31	26.9	1.1
AW20063V01	20	63	115	185	174	158	93	49	31	26.9	1.5
AW25050V01	25	50	130	177	165	145	75	42	39	33.7	1.4
AW25063V01	25	63	130	190	179	158	93	49	39	33.7	1.6
AW32063V01	32	63	145	200	188	162	93	49	49	42.4	2.1
AW32090V02	32	90	145	233	220	196	124	67	49	42.4	4
AW40063V01	40	63	160	205	199	169	93	49	57	48.3	2.9
AW40090V02	40	90	160	235	229	199	124	67	57	48.3	4.3
AW50063V01	50	63	175	233	218	183	93	49	69	60.3	3.8
AW50090V02	50	90	175	263	248	213	124	67	69	60.3	5.5
AW50110V02	50	110	175	283	248	232	148	75	69	60.3	6.7
IW65090V02	65	90	CONTACT ROTEX								
IW65110V02	65	110									
IW80110V02	80	110									

ANGLE SEAT VALVE
TYPE AP/ APM

DIMENSIONS

TYPE AP : Butt weld for pipe as per ANSI 36.1, B 36.19 Sch 40
TYPE APM : Butt weld for pipe as per ISO 1127

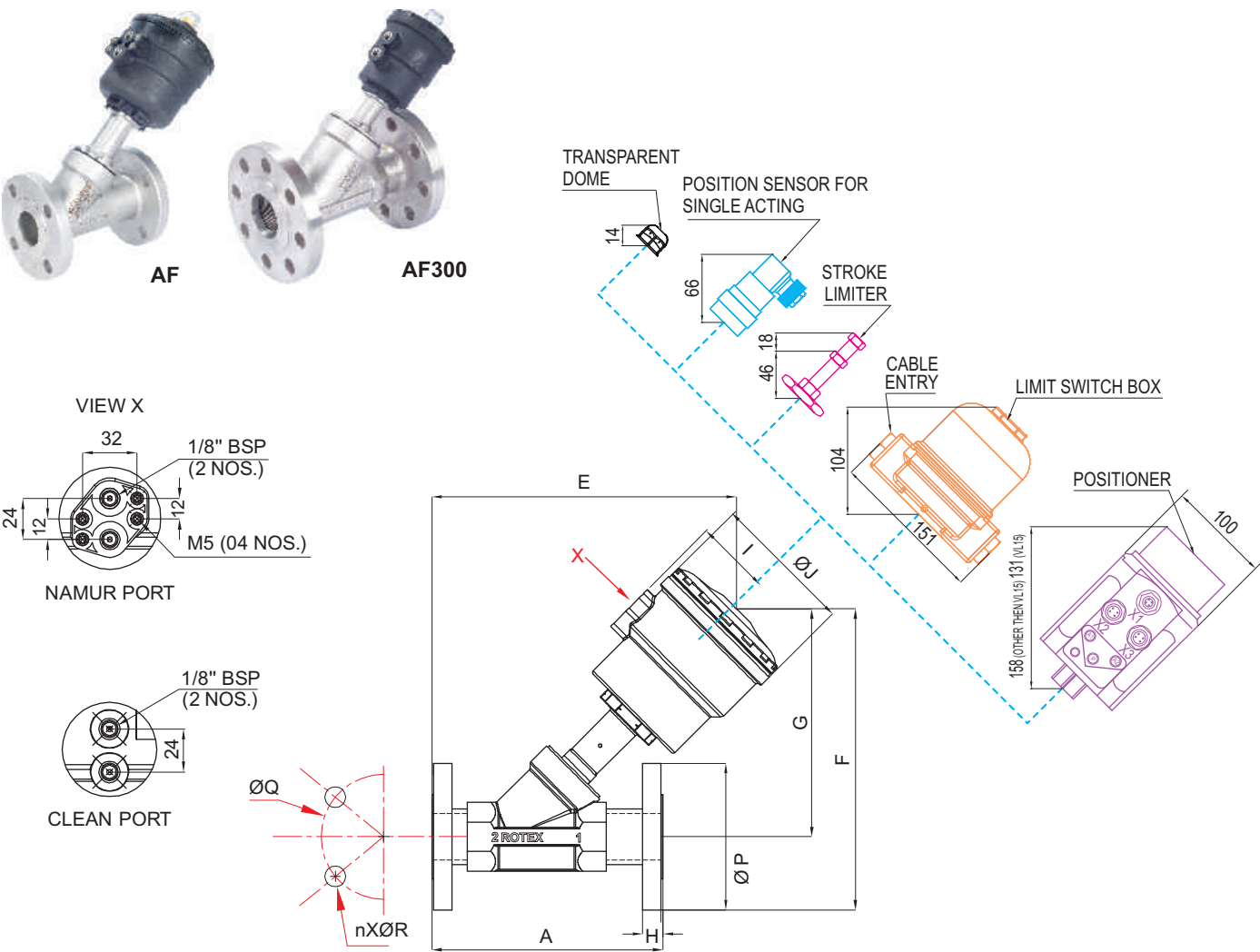


(All dimensions are in mm)

Type	DN	Actuator Ø	A	E	F	G	ØJ	I	 kg.	AP		APM	
										ØL	M	ØL	M
AP/APM12050V01	12	50	115	192	158	146	75	42	1	21.3	5.5	21.3	2.7
AP/APM20050V01	20	50	125	196	161	145	75	42	1.2	26.6	5.7	26.7	2.8
AP/APM20063V01	20	63	125	210	174	158	93	49	1.5	26.6	5.7	26.7	2.8
AP/APM25050V01	25	50	140	202	165	145	75	42	1.6	33.4	6.8	33.4	3.3
AP/APM25063V01	25	63	140	215	179	158	93	49	1.8	33.4	6.8	33.4	3.3
AP/APM32063V01	32	63	160	225	188	162	93	49	2.3	42.1	7.1	42.1	3.5
AP/APM32090V02	32	90	160	258	220	196	124	67	3.3	42.1	7.1	42.1	3.5
AP/APM40063V01	40	63	170	230	199	169	93	49	3	48.2	7.4	48.2	3.6
AP/APM40090V02	40	90	170	260	229	199	124	67	3.2	48.2	7.4	48.2	3.6
AP/APM50063V01	50	63	200	258	218	183	93	49	3.8	60.3	7.8	60.3	3.9
AP/APM50090V02	50	90	200	288	248	213	124	67	4.8	60.3	7.8	60.3	3.9
AP/APM50110V02	50	110	200	308	248	232	148	75	6.6	60.3	7.8	60.3	3.9
IP/IPM65090V02	65	90	CONTACT ROTEX										
IP/IPM65110V02	65	110											
IP/IPM80110V02	80	110											

DIMENSIONS

TYPE AF : Flange connection as per ASME 16.5 (#150-RF), Face to Face distance as per ASME 16.5
TYPE AF300: Flange connection as per ASME 16.5 (#300-RF), Face to Face distance as per ASME 16.5



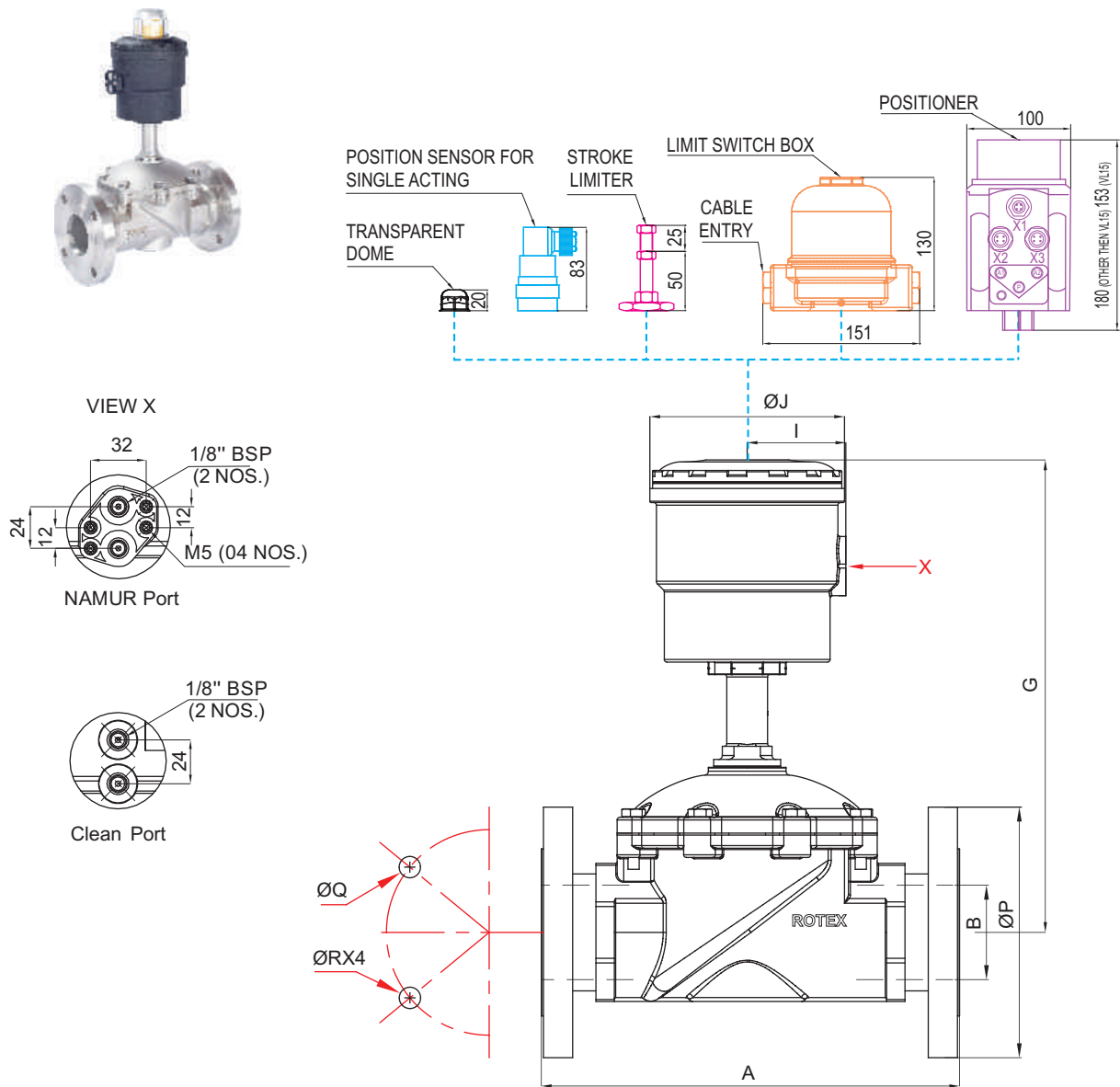
(All dimensions are in mm)

Type	DN	Actuator Ø	G	ØJ	I	AF							AF300						
						A	E	ØP	ØQ	nxØR	H	 kg.	A	E	ØP	ØQ	nxØR	H	 kg.
AF/AF300 12050V01	12	50	140	75	42	140	192	88.9	60.3	4x15.8	11.1	1.8	CONTACT ROTEX						
AF/AF300 20050V01	20	50	140	75	42	152	202	98.4	69.8	4x15.8	12.7	3							
AF/AF300 20063V01	20	63	155	93	49	152	220	98.4	69.8	4x15.8	12.7	2.9							
AF/AF300 25050V01	25	50	140	75	42	165	215	107.9	79.4	4x15.8	14.3	3	203	220	124.0	88.9	4x19.0	17.5	3.5
AF/AF300 25063V01	25	63	155	93	49	165	228	107.9	79.4	4x15.8	14.3	4.2	203	235	124.0	88.9	4x19.0	17.5	4.2
AF/AF300 32063V01	32	63	158	93	49	184	244	117.5	88.9	4x15.8	15.9	4.7	178	230	134.0	98.4	4x19.0	19.0	4.8
AF/AF300 32090V02	32	90	192	112	67	184	280	117.5	88.9	4x15.8	15.9	5.8	178	265	134.0	98.4	4x19.0	19.0	5.9
AF/AF300 40063V01	40	63	188	93	49	165	225	125	98.4	4x15.8	16.4	5.5	240	235	156.0	114.3	4x22.3	20.6	6.6
AF/AF300 40090V02	40	90	204	112	67	165	240	125	98.4	4x15.8	16.4	6.5	240	248	156.0	114.3	4x22.3	20.6	7.5
AF/AF300 50063V01	50	63	197	93	49	214	246	152	120.6	4x19	19.1	8.2	CONTACT ROTEX						
AF/AF300 50090V02	50	90	213	112	67	214	263	152	120.6	4x19	19.1	9.1							
AF/AF300 50110V02	50	110	232	152	77	214	282	152	120.6	4x19	19.1	10.1							

ANGLE SEAT VALVE
TYPE IF/ IF300

DIMENSIONS

TYPE IF : Flange connection as per ASME #150RF
TYPE IF300 : Flange connection as per ASME #300RF



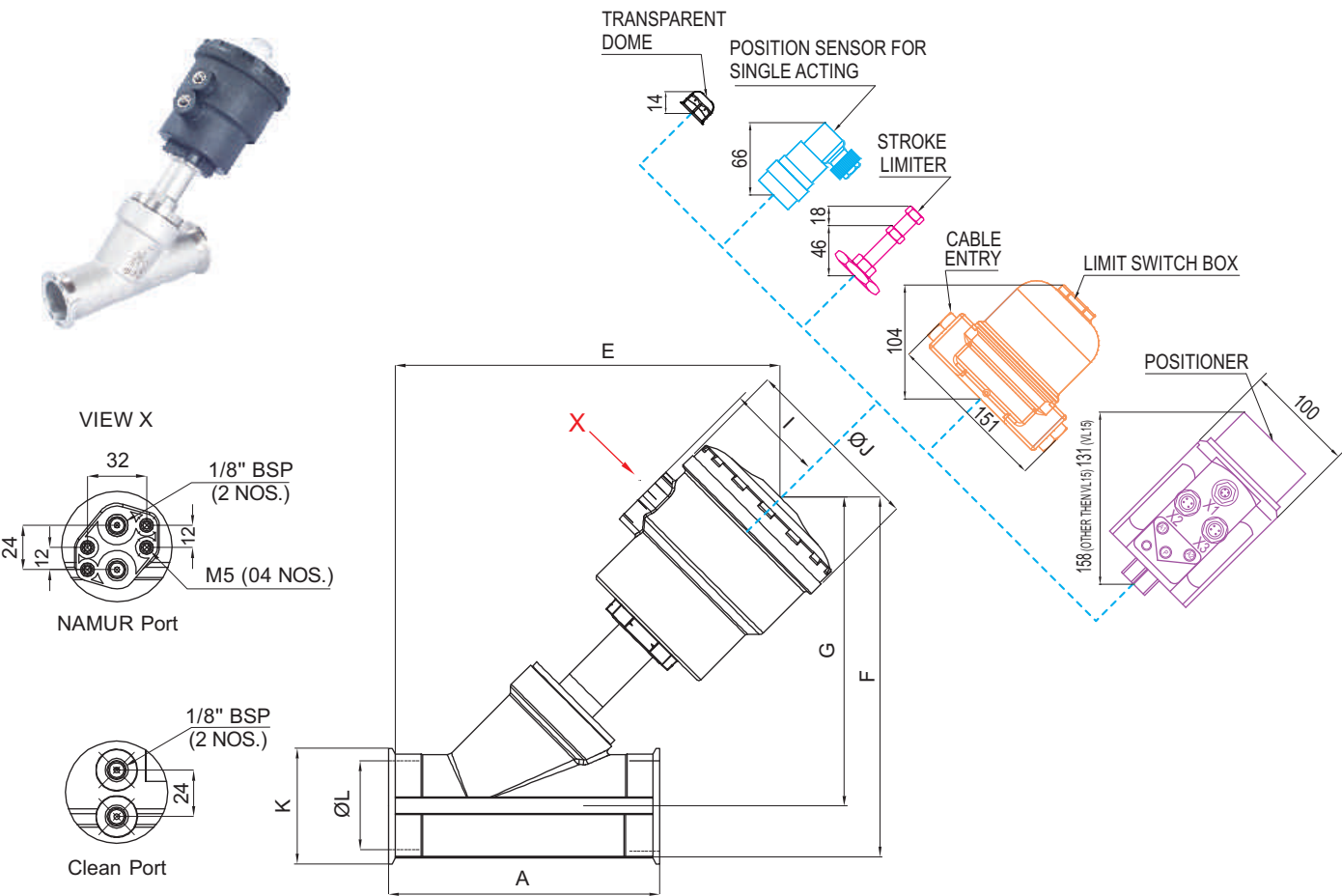
(All dimensions are in mm)

Type	DN	Actuator Ø	B	G	ØJ	I	IF						IF300						
							A	H	ØP	ØQ	n x ØR	 kg.	A	H	ØP	ØQ	n x ØR	 kg.	
IF/IF300 65090V02	65	90	62.7	307	112	67	295	22.7	180	139.7	4x19	14		CONTACT ROTEX					
IF/IF300 65110V02	65	110	62.7	333	152	77	295	22.7	180	139.7	4x19	16.0							
IF/IF300 80110V02	80	110	76.2	348	152	77	335	23.8	190.5	152.4	4x19	20.5							

ANGLE SEAT VALVE
TYPE AK

DIMENSIONS

TYPE AK : Triclamp end as per ISO 2852



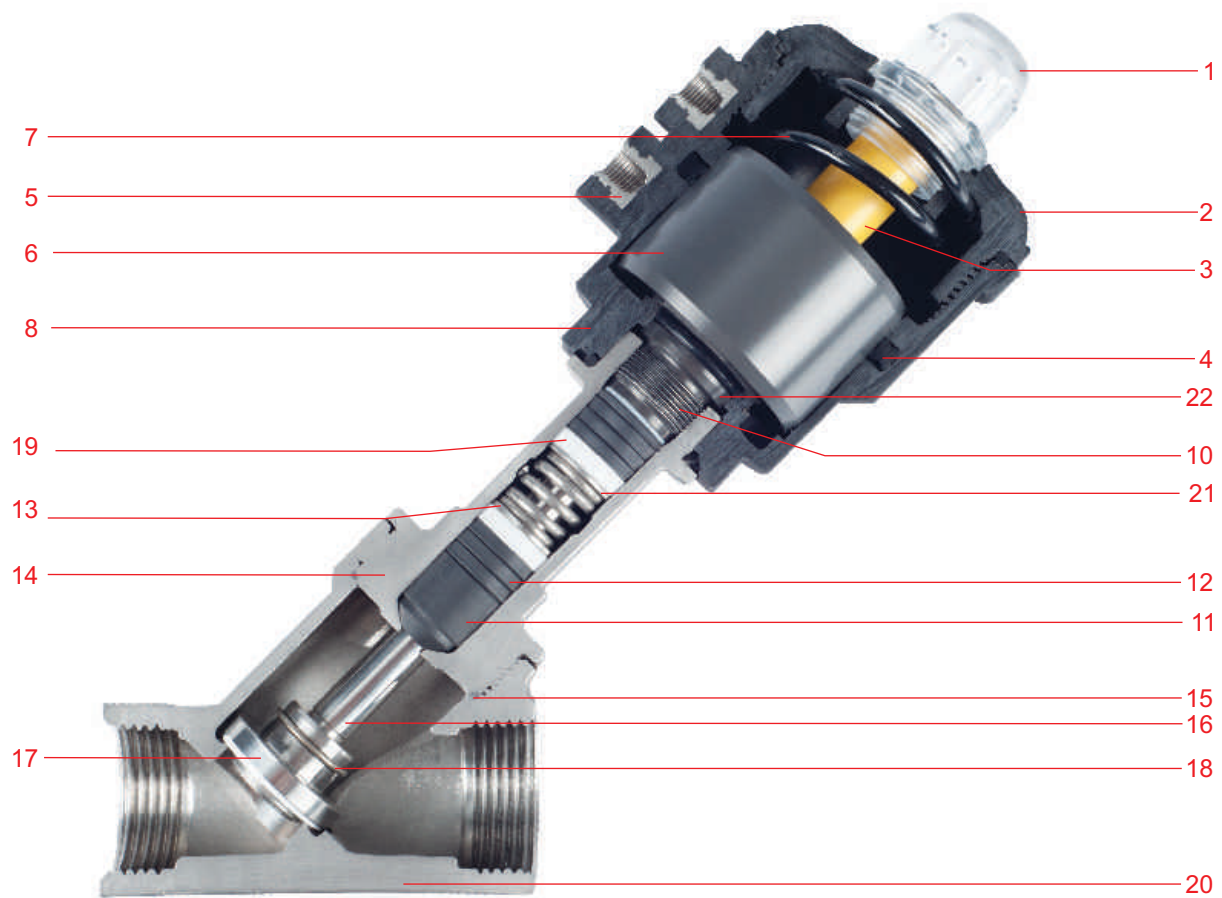
(All dimensions are in mm)

Type	DN	Actuator Ø	A	E	F	G	ØJ	I	ØL	ØK	 kg.
AK12050V01	12	50	100	168	163	146	75	42	18.1	34	1
AK20050V01	20	50	115	174	171	145	75	42	23.7	50.5	1.3
AK20063V01	20	63	115	183	184	158	93	49	23.7	50.5	1.5
AK25050V01	25	50	130	177	171	145	75	42	29.7	50.5	1.5
AK25063V01	25	63	130	197	184	158	93	49	29.7	50.5	1.7
AK32063V01	32	63	145	205	188	162	93	49	33.6	53.6	2.1
AK32090V02	32	90	145	248	222	196	124	67	33.6	53.6	3.2
AK40063V01	40	63	160	212	201	169	93	49	44.3	64	3
AK40090V02	40	90	160	250	231	199	124	67	44.3	64	4.1
AK50063V01	50	63	190	240	222	183	93	49	55.7	77.5	3.7
AK50090V02	50	90	190	278	252	213	124	67	55.7	77.5	5.3
AK50110V02	50	110	190	316	271	232	148	75	55.7	77.5	6.5
IK65090V02	65	90	CONTACT ROTEX								
IK65110V02	65	110									
IK80110V02	80	110									

ANGLE SEAT VALVE
SPECIAL

		
Valve with Proximity Sensor suitable for Single/ Double Acting	Valve with Flanged end & Position Sensor box, IP67	Valve with Metallic Operator, Media and Pilot 32 bar Hydraulic Oil
		
Valve with Weld Neck Port as per ANSI/ ASME B 36.10 and B 36.19	MS flange with lock nut adopted to Threaded Port Valve	Valve with mechanical Stroke Limiter

And Many More...



ORDERING CODE

CODE	TOOL
T50	For opening Ø50 operator
T63	For opening Ø63 operator
① T90	For opening Ø90 operator
T110	For opening Ø110 operator

Note :
① Not required for DN-Operator 32090V02,
40090V02, 50090V02, 65090V02

ORDERING EXAMPLE

T50
Cover opening tool for operator Ø50

TOOL KIT



Note :
To avoid damage, held operator in soft Jaw
vice, and open Cover using special tool

ROTEX
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*(Where applicable)

1		2			3		4		
SPARE KIT		DN-OPERATOR - VERSION ①			FUNCTION		PILOT CONNECTION		
Operator + Seal Kit + Seat + Sleeve Assembly	97	12050	40090	#	Normally Closed, Pressure above plug, Single acting	F1	Clean Port	P1	
Seat + Seal Kit	96	12063	50063	V01	Normally Open, Pressure below plug, Single acting	F2	NAMUR	P2	
		20050	50090	V02	Normally Closed/ Normally Open, Bi-Directional, Double acting	F4			
		20063	50110		Normally Closed, Pressure below plug, Single acting	F6			
		25050	65090						
		25063	65110						
		32063	80110						
		32090							
		40063							

- ① Some Components of the valves having different version number will not interchange, hence while ordering spares it is compulsory to mention MM/ YY or Sr. No. of the Valve

63 Ø Operator assembly having clean pilot ports, NBR seals and O rings suitable for 32 NB Normally Closed, Single Acting Angle Seat Valve, insert pressure below plug



Engineering For The Future

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