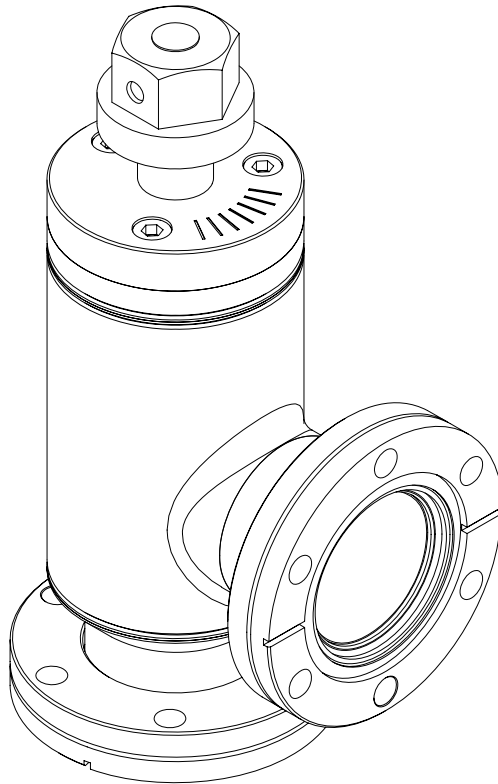
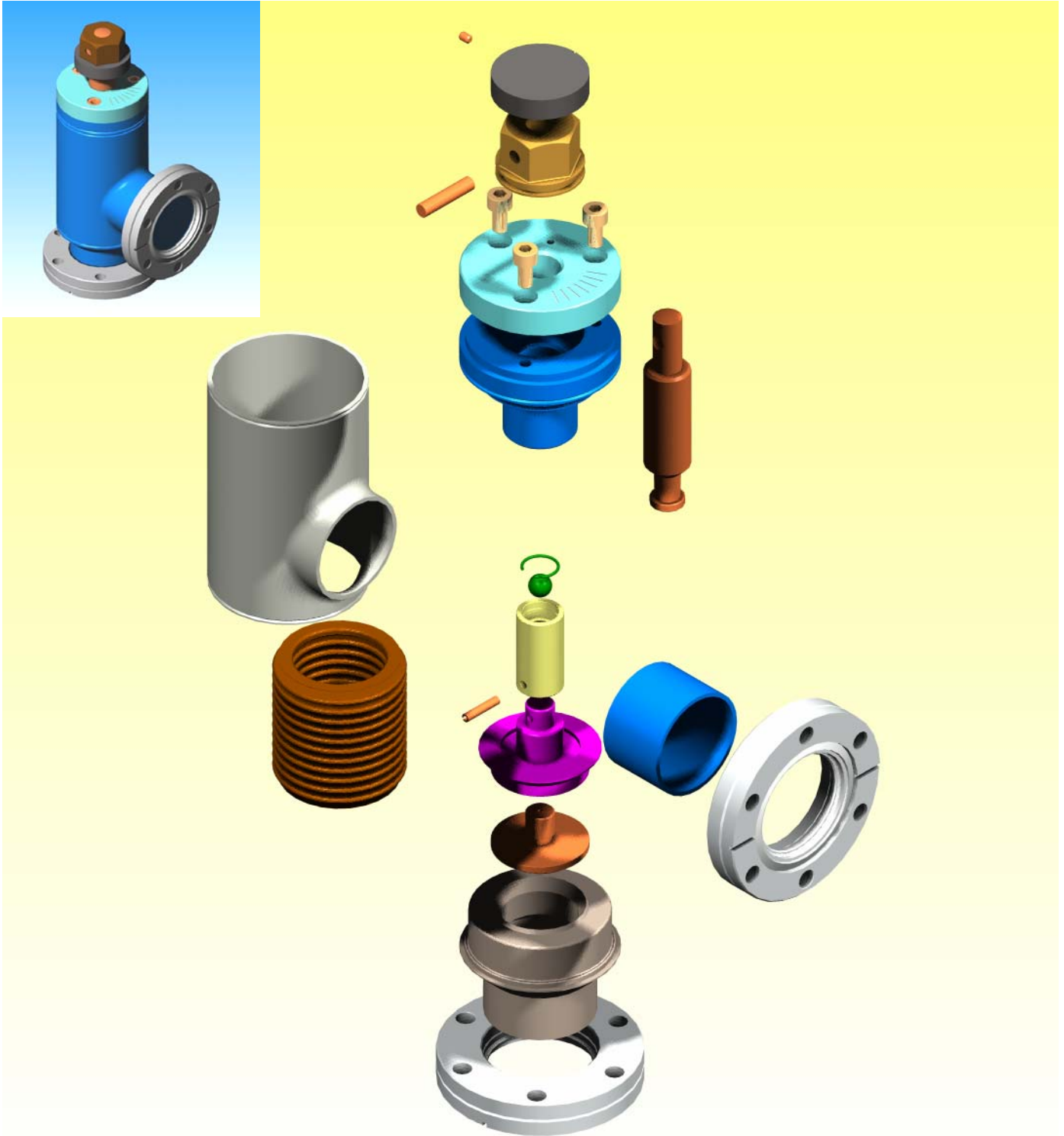


All-Metal Bakeable Valves



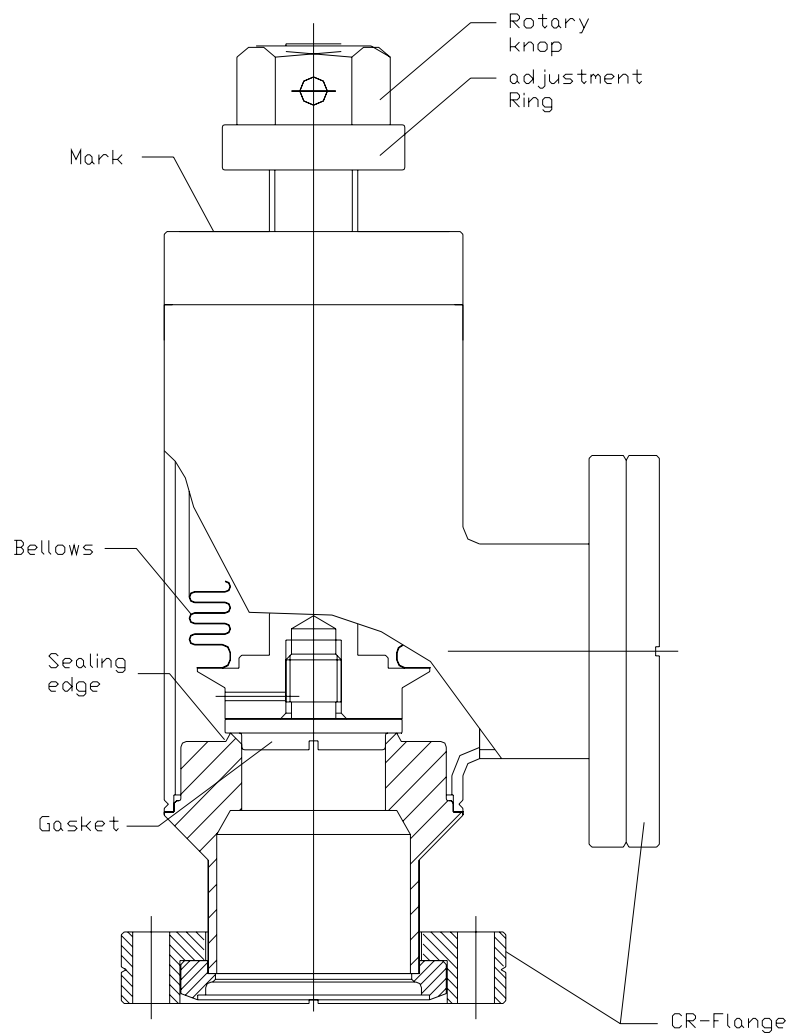
INSTRUCTION MANUAL

All-Metal Bakeable Valves



All-Metal Bakeable Valves

Description



All-Metal Bakeable Valves

Technical Data

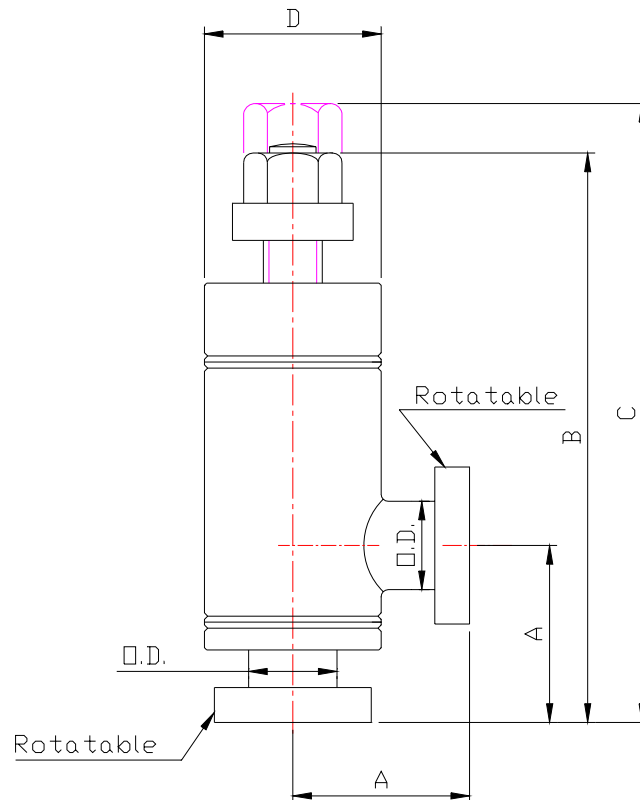
Spec. \ Model.		4-AV-0228	4-AV-0226
Bakeability	Open	400°C	
	Closed	300°C	
Pressure Range		Below 10^{-10} torr	
Leak rate		8.7×10^{-11} Pa. m ³ /sec	
Material	Body	304 S. S. & 316 S. S.	
	Bellows	S. S.	
	Seal	OFHC Copper	
Closure Torque	First	300 kg-cm	150 kg-cm
	Max.	600 kg-cm	250 kg-cm
Port		CR35 Flange	CR16 Flange
Gasket Life		Above 50	
Spare parts		Seal gasket : 1 pc	

Feature and Notice :

1. Bakeability : 400°C (open) , 300°C (closed) .
2. It is easy to replace the seal gasket which can be removed through the side port.
3. All stainless steel construction.
4. Bellows stem seal.
5. 3/4" and 1-1/2" port sizes.
6. A calibrated dial for closure is provided on the top of the valve body for reference, the closing torque is about 150 kg-cm at first time, but the max. torque should not exceed 250 kg-cm
7. Must be lubricated after maximum high temperature bake.
8. Orientation : Any position.

All-Metal Bakeable Valves

Dimensions (mm)



Model No.	O. D.	A	B	C	D	
4-AV-0226	19.05	38.1	122.2	133	38.1	
4-AV-0228	38.1	62.5	169	188	54	

All-Metal Bakeable Valves

Inspection

Each valve is leak-checked in the open and closed positions prior to shipment. The valve is shipped in the closed position.

To inspect the valve:

- 1 Inspect for foreign matter and remove it with a compressed, clean, dry gas such as air, argon, helium, or nitrogen.
- 2 Inspect the flange sealing surfaces for deep nicks or scratches. Nicks in the sealing edge deeper than 0.1 mm or radial scratches across the entire seal surface and edge can degrade the seal at bakeout temperatures.

Installation

Flange connection :

- 1 Use a new copper gasket for each ConFlat[®] , flange seal.
- 2 Apply high temperature lubricant to the bolt threads.
- 3 Tighten each nut gradually and sequentially until the ConFlat flange faces mate together

Safety



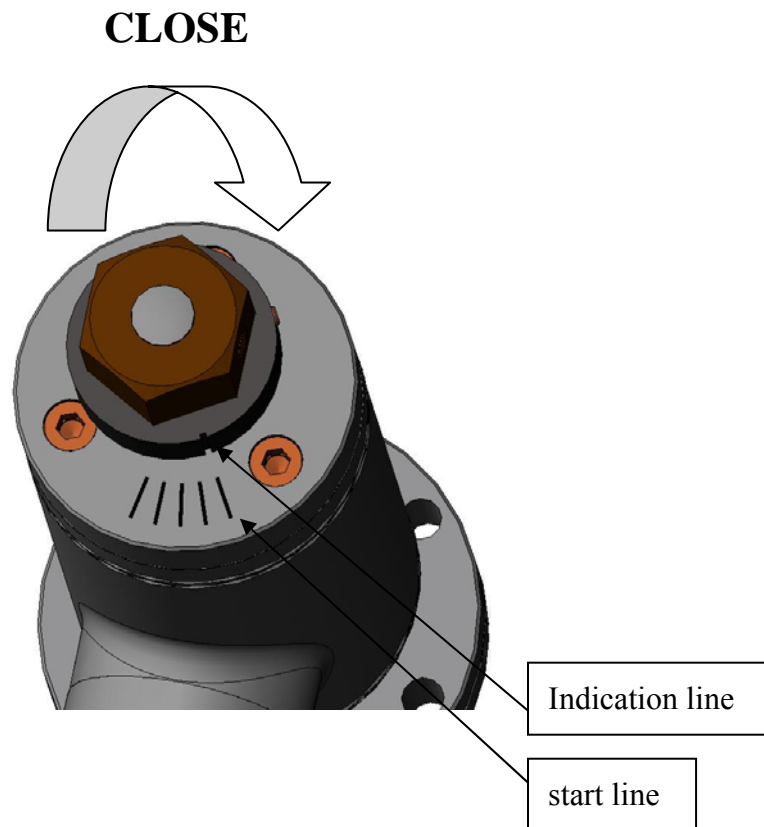
Touch the hot surface must be wear protective gloves

All-Metal Bakeable Valves

Operation

Closing Torques

1. All new metal valves have been given the initial torque and sealed with their proper torque, The Indication line has be setup on the start line , and leak-checked at the factory.
2. After baking and reclosing, an increase in closing torque may be needed to achieve a perfect seal on succeeding cycles. The maximum allowable closing torque may be exceeded after as few as 30~50 cycles, however, and a replacement gasket must be installed.



All-Metal Bakeable Valves

3. Turn the head clockwise to the closed position with torque wrench, setup the torque wrench to the proper torque (see the technical data)



torque wrench



torque wrench setup



All-Metal Bakeable Valves

Gasket unload step

When the sealing force reaches the maximum allowable torque values, replace the copper gasket to avoid overstressing the drive threads.

