

SEMPELL

Before installation these instructions must be fully read and understood.

These instructions summarise the main warnings concerning the routine operations as per the related Installation and Maintenance Manual.

Storage



WARNING!

Storage in an open area for a limited period can be considered only in case the valves have appropriate packing (packed incases lined with tarred paper, and contents well protected with barrier sacks).

- Do not place consignment packages directly on the ground.
- Do not expose consignment packages to the weather or directly to the sun.
- Check the packages every two months.

Handling



WARNING!

- Before lifting or handling the valve or the valve/actuator assembly, make sure you have no limitations to do it.
- Check if there are some safety messages attached to the lifting points of the valve or to the actuator (RED RIGID LABEL) and, if any, find the proper document in the user manual which describes how you can operate under safety conditions.
- For valve handling and/or lifting, the lifting equipment (fasteners, hooks, etc.) must be sized and selected while taking into account the valve weight indicated in the packing list and/or delivery note. Lifting and handling must be made only by qualified personnel. Do not use the lifting points located on the actuator, if any, to lift the valve. These lifting points are for the actuator only.
- Caution must be taken during the handling to avoid that this equipment passes over the workers or over any other place where a possible fall could cause damage. In any case, the local safety regulations must be respected.

Installation

In case the valve is equipped with electric actuator, please refer to the following warnings:



WARNING!

- See the actuator user manual for the actuator preparation.
- In the open direction, only the stop has to be set with the limit switch. In case the limit switch is not adjusted, the backseat will be destroyed by the high torque.
- In the close direction, the end-stop also has to be set with the limit switch as the first stop. The torque switch in the close position has to be set as a second stop.
- The adjustment of the limit switches in both end-stop positions has to be handled when the actuator is assembled to the valve according to the operation instructions.

Important

- Gate valves must be closed only by way and not by torque!
- Before welding, make sure the valve is completely open.
- Verify that the direction of the flow of the line corresponds to the arrow indicated on the valve body.
- Valves without the arrow are bi-directional.
- It is recommended to perform piping flushing before the valve installation. If this is not possible, the valves must be set with the disc in full open position before starting with flushing.
- If piping system is pressurized with water for testing, and in case the piping system has been shut down after testing for a long time, the following recommendations should be adopted:
 - a. Use corrosion inhibitor with water to pressurize the piping system
 - b. After testing, the piping system should be depressurized and the test water completely drained.
- For operating temperatures above 200°C (392°F) a thermal insulation of the body is recommended.

Maintenance



WARNING!

- Depressurize the line before starting any maintenance. Failure to do so may cause serious personal injury and/or damage to the valve.
- In case of valve removal, depressurize the line before starting any operation with the valve in open position, to avoid any remaining pressure in the body cavity. Then, close manually the valve by way and not by torque.

Operating and Safety Instructions

Forged Steel Gate Valves

Important

- To ensure tightness of P.S. gasket, pull up bolts must be tightened when the valve is under fully hydrostatic pressure test or twenty-four hours in operation.
- Yearly checking of bolt torque is recommended (See Tables 1 & 2).
- The segment ring has to be fixed by the safety ring. Ensure that the segment ring is in the correct position.

Table I: Bolt Torque for Packing Bolts

Stem		Bolt	
Diameter	Diameter	Torque	
in	mm	mm	Nm
1	25,4	M16	14
1,25	31,75	M16	14
1,375	34,92	M20	18
1,75	44,45	M20	18
2	50,8	M24	20
2,25	57,15	M24	20
2,5	63,5	M27	23
2,75	69,85	M27	23
3	76,2	M27	23
3,25	82,55	M30	28
3,75	95,25	M33	35

Table II: Bolt Torque for Bonnet Bolts

Diameter		Torque
in	mm	Nm
3/8	M10	30
1/2	M12	70
5/8	M16	140
3/4	M20	260
1	M24	580
1 1/8	M27	760
1 1/4	M30	1350

Service limitations

According to PED-ESR, par. 3.3 and related, the design pressure and temperature are indicated on the nameplate.

TYPE	CLASS	NPS/DN	FAB. Y/M
BODY	SEAT	OBTURATOR	
STEM	SEAL	END TO END	
Pmax	bar AT Tmin	° C FIRE SAFE	☐
Pmax	bar AT Tmax	° C NACE	☐
PED CATEG.	FLUID:		
SHELL TEST PRESS.	Bar.	☐ DOUBLE B.&B.	
PO/N°			
TAG	☐ DOUBLE P.	☐ SELF REL.	
S/N°	MANUFACTURER :		
	RAIMONDI MFG PLANT	RESCALDINA - (MI) - ITALY	

CE-0496

Sempell

Installation of the safety device (when present) on site at customer care

To avoid any danger to people, it is mandatory to perform the safety device installation by following these instructions. The connection pipe between the nozzle and the safety globe valve, and that between the valve and the rupture disc are not at our care.

- The safety device has to be installed to the side of the valve with the outlet downwards.
- In case of gate valves for steam service, it is necessary to use a condensate filling pipe piece.