

Slab Gate valve specification

VALVE MODELS -

- W-K-M – SAF-T-SEAL
- SPX - M-303
- Other models are allowed provided they are equivalent to the models in this specification and meet the minimum threshold condition of the tender.
- In any case, the manufacture of the valve shall be only OECD country (including manufacturing processing, assembly & testing).

General Features -

- Size – 4"-26" / CLASS 150-600 / R.F (acc to bill of quantity.)
- Type – positive sealing SLAB gate valve
- Design Standard – API 6D (**DB&B**), API Monogram required.
- End connection – Flange to ASME B 16.5 #150 - #600 R.f - acc to bill of quantity
- Testing – in acc to API 6D, including functional test (all tests shall be done at the manufacturer factory with actuator assembled and calibrated on the valve)
- Port – full bore
- Operation – Rotork + Gear
- With Lift lugs
- Documentation shall be supplied in acc to **API 6D Annex J QSL 2** –
 - hydro test report
 - MTRs (include trim materials)
 - Certificate of compliance
 - Material certification ER 10204 – 3.1
 - Installation operation and maintenance
 - Actuator data sheet
 - Operation data (open/close time& torque required)
 - Mill test certification
 - Valve drawings – for approval before manufacture & As-Made after manufacture



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- **Service –**

- **Liquid** - Different types of distillate fuel : crude ,gas oil, kerosene, gasoline, diesel oil acc,
Temp. max. 60°C
- **Installation** – valve will be installed next to sea (environment with high corrosion)

- **Material**

Body	: ASME SA216 GR. WCC
Bonnet	: ASME SA516 GR.70
Gate and segment	: ASME SA216 GR. WCC/003 THICK ENP
Stem	: AISI 4140/ENP
Stem protector	: ASME SA53
Stem protector cap	: MALLEABLE IRON
Indicator rod	: 316 Stainless steel
Stud	: ASME SA193 GR. B7M
Yoke	: ASME SA516 GR. 70/SA 106 GR.B
Check valve	: Stainless steel
Pipe plug	: ASME SA105

- **STEM PACKING DESIGN SHALL INCLUDE–**

- Chevron V rings
- Graphite + PTFE/TFE rings
- Lantern rings
- Stem packing gland shall be threaded or at internal packing box. The stem seal shall be completely contained in the bonnet. **Adjustable outside packing Gland with screw & nut are not allowed**
- Design shall allow emergency injection of stem packing in the event of a stem leak

- **TRIM –**

- Suitable for service conditions **(to be advice by manufacturer)**
- Gate/seats/stem plating coating – 3 MIL ENP

- **INDICATION ROD -**

- Valve will be equipped with indication rode made of stainless Steel 316.

- **Valve Body Pressure Relief**

Valve shall be equipped with a self-relieving mechanism to relief excess pressure from body cavity due to thermal expansion.



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- **Name plate** –
SS 316 (2 mm thickness) – Details acc to API 6D
- **Valve Painting** –
 - ❖ Surface preparation – sa 2.5
 - ❖ Primer - Zinc rich epoxy 70 micron thick SSPC. Primer will contain over 80% zinc by weight of the dry film.
 - ❖ Intermediate - tolerant epoxy mastic surface thick at 150 microns minimum, two layers as needed.
 - ❖ Upper - polyurethane oval white 80 micron thick single layer or two separate layers of 40 microns each Ready Made. Hue of upper layers will be white matte, reflective level of about 84%
 - ❖ Total dry thickness – at least 300 microns
- **FITTINGS** –
 - Secondary grease fitting for upstream& downstream seats - NPT
 - Body drain valve – Ball NPT
 - Body vent valve – Ball NPT
 - Stem packing - NPT
- **OPERATION** –
 - Valves shall be equipped with "ROTORK" electric actuator latest model, series IQ 3, FM explosion proof IP - 68, included WD100000/2000 for connection to "PAKSCAN" including board, **including cable glands** suitable for valve operation under max differential pressure with 25% over sizing of torque, opening/closure time of valve 60 sec min., 100 sec max. ,400V, 50Hz. Valve will be supplied with gear & rotork installed and calibrated at the **valve manufacturer factory** .

Opening/closure time of valve –

For valve size 4"-12" 60 sec min, 90 sec max

For valve size 16"-26" 90 sec min, 120 sec max

