



## Gate valve specification

### VALVE MODELS -

- W-K-M – Pow-R-Seal
- SPX - M&J Model EG
- **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 – 6"-16" / CLASS 150 –CLASS 600 / R.F – acc to bill of quantities
- Type – parallel expanding
- Design Standard – API 6D (DB&B), API Monogram required.
- 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)
- Ends – flange raised face (ASME B 16.5)
- Port – full bore
- Operation – Rotork + Gear
- With Lift lugs
- Documentation –
  - hydro test report
  - MTRs (include trim materials)
  - Certificate of compliance
  - Material certification ER 10204 – 3.1
  - IOM
  - 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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## אגף הנדסה

### 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
- **Service –**
  - **Liquid** - Different types of distillate fuel, Temp. max 60°C.
  - **Installation** – valve will be installed next to sea (environment with high corrosion)
- **TRIM –**
  - suitable for service conditions
  - gate/seats/stem plating coating – 3 MIL ENP
- **End connection** – Flange to ASME B 16.5 - #150 - #600 R.f – acc to bill of quantities
- **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.





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## אגף הנדסה

- ❖ 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
  - Body pressure relief valve – Ball NPT
  - Stem packing - NPT
  - upstream relief piping for thermal expansion - 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, 90 sec max ,400V, 50Hz. Valve will be supplied with gear & rotork installed and calibrated at the **valve manufacturer factory** .

