



**Ranhill
SAJ**

SPECIFICATIONS FOR DUCTILE IRON AIR VALVE

SPECIFICATION SAJ VL / AV / 001

(Rev. 5.0 / 12.2018)

QUALITY ASSURANCE DEPARTMENT
RANHILL SAJ SDN. BHD.

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Ass General Manager Quality Management

SAJ SPECIFICATION FOR DUCTILE IRON AIR VALVE

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SAJ SPECIFICATION FOR DUCTILE IRON AIR VALVES

1. GENERAL DESCRIPTION

- a) Features required are as follows or otherwise the Spesifikasi JKR 20200-0043-99, JKR Standard Specification for Ductile Iron Air Valves (revised edition 2002) shall be used.

2. FEATURES REQUIRED

- a) Working pressure of 16 bar.
- b) Capable of withstanding a hydrostatic test pressure of 24 bar without any sign of leakage.
- c) The classification and nominal diameters of air valves shall be as follows:

| CLASSIFICATION | | NOMINAL DIAMETER (MM) |
|--------------------------------------|-------------|------------------------------|
| Single Large Orifice (SLO & SLOa) | Flanged end | 50, 80, 100, 150, 200 |
| Double Orifice Standard (DOS) | Flanged end | 50, 80, 100, 150, 200 |
| Double Orifice Kinetic (DOK) | Flanged end | 50, 80, 100, 150, 200 |

- d) Flanged end - Flanged inlet drilled to BS 4504

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3. MATERIALS

- (a) Ductile iron conforming to BS 2789 with Grade of 420/12 or superior material grade, for
 - i) Single orifice's body, plate and cover
 - ii) Single orifice's to be supplied with approved butterfly valve.
 - iii) Double orifice's bodies, plate, cover; cover guard, gland, ball float guide, valve spindle guide and valve cover.
- (b) Gunmetal conforming to BS 1400 LG2 for double orifice's spindle nut and valve seat ring
- (c) ABS for air release nut and plug.
- (d) Stainless Steel conforming to BS970 Part 4 304S31 for the double orifice spindle nut and valve seat ring
- (e) EPDM rubber for gasket and seal ring with 66-75 IRHD.
- (f) Bolts, nuts, cap set screws and gland studs used in the air valves shall stainless steel 304S31 conforming to BS 970 and shall be coated between 75µm - 125µm thickness.
- (g) The threads on bolts, stud bolt and nut shall be as specified in BS 3643: 1981 Part 2
- (h) Ball float for small orifice shall be made from ABS or EPDM rubber with Grade 66 - 75 IRHD.
- (i) Ball float for large orifice shall be made from ABS or EPDM rubber with Grade 85 - 95 IRHD.
- (j) For double orifice standard air valve, gland packing for spindle shall be of asbestos free Teflon braided packing.
- (k) All internal and external parts of the air valves made of ductile iron components shall be fusion-bonded epoxy powder (FBE) not less than 350µm
- (l) Ductile Iron surfaces of Air Valves shall be prepared by abrasive blast cleaning to Sa 2 1/2 qualify of BS 7090
- (m) Washer shall be spun galvanized to BS 729: 1986

4. TESTS AND INSPECTION

All air valves shall comply with tests in accordance with the requirements of specification.

5. MANDATORY MARKING

All air valves shall have the following information cast on the body: -

- (a) Manufacturer's name or distinguished trade mark;
- (b) The designation of size;
- (c) Nominal pressure designation;
- (d) Year of manufacture (last two digit);
- (e) Air valve type (Kinetic, Single/Double Orifice).
- (f) Body material designation (i.e. SG or DI for Ductile Iron).

6. PACKING

- a) All valves shall be individually packed in card-board boxes.
- b) Wooden discs secured in position by strapping shall protect the flanges of valves.

7. PRE-DELIVERY INSPECTION AND EVALUATION

- a) It is the responsibility of the tendered to inform SAJ for inspection purposes during manufacturing and before delivery.
- b) SAJ reserve the right to inspect and witness the testing of product offered.
- c) At any time, when requested, the supplier is to provide SAJ a sample of the product offered for evaluation purposes. All costs shall be borne by the supplier.
- d) If at any time the supplier fails to deliver the required sample, the product is deemed fail to meet the specifications.

8. CERTIFICATION

- a) Manufacturer of supplier are required to provide a copy of the certificate and testing report from SIRIM, IKRAM or other recognized certification body.
- b) Tests report required should be those tests conducted within a year period.
- c) SAJ have the right to refuse offer or reject supply if the documents required are not enclosed.



SCHEDULE OF STORES

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**SCHEDULE OF STORES Supply And Delivery Of Ductile Iron Air Valves To Specification SAJ
 VL/AV/001 (Rev. 4.0 / 07.2018)
 For The Period OfYear(s).**

| NO. | DESCRIPTION | Prov. Qty | RATE (RM) | AMOUNT (RM) |
|----------|--|--------------|--------------|----------------|
| A | Single Small Orifice Air Valve (Screwed End Size) | | | |
| 1 | 20mm | | | |
| 2 | 25mm | | | |
| B | Single Large Orifice Air Valve (Flange End Size) | | | |
| 1 | 50mm | | | |
| 2 | 80mm | | | |
| 3 | 100mm | | | |
| 4 | 150mm | | | |
| 5 | 200mm | | | |
| C | Double Orifice Standard Air Valve | | | |
| 1 | 50mm | | | |
| 2 | 80mm | | | |
| 3 | 100mm | | | |
| 4 | 150mm | | | |
| 5 | 200mm | | | |
| D | Double Orifice Kinetic Air Valve | | | |
| 1 | 50mm | | | |
| 2 | 80mm | | | |
| 3 | 100mm | | | |
| 4 | 150mm | | | |
| 5 | 200mm | | | |

(Ringgit :)

Signature of Tenderer :
 Name :
 In the capacity of :
 Tenderer's Seal or chop :
 Date :

Signature of witness :
 Name :
 Address :
 Date :