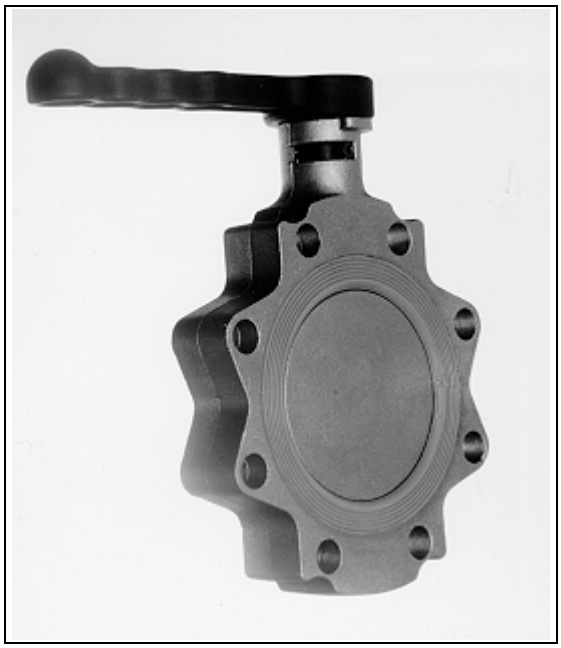
Tech Talk No.35

LBV100 - 100mm Bore Liquip Butterfly Valve



Above: The LBV100

Description: **LBV100**

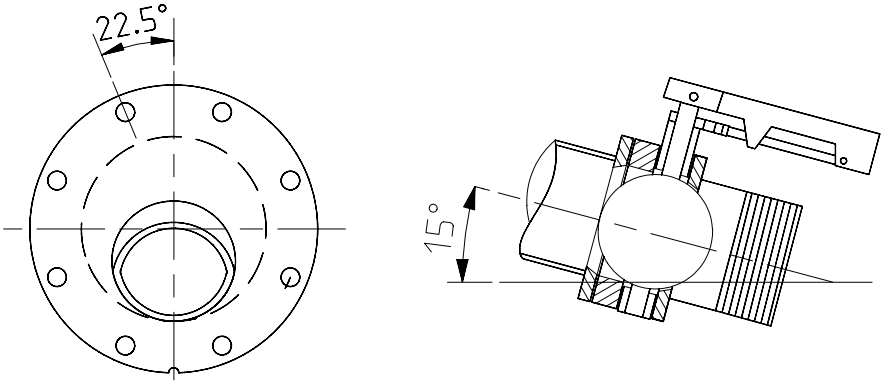
The LBV100 is a Liquip 100mm Butterfly Valve. The standard LBV100 is produced of all aluminium construction with viton seals. It is produced as P/N: LBV100AAVZ, this part number includes the Butterfly Valve (LBV100AAV) and also the gasket to suit, P/N: 0657 made of Neo-Cork.

Technical Data:

- Maximum Working Pressure of 1500 kPa on pressure side.
- Maximum Working Pressure of 600 kPa on non-pressure side.
- Test Pressure of 1200 kPa.
- Operating torque to open / close valve is 5 Nm.

Weight: 1.5 kg

Mounting: When a butterfly valve is to be used, check the direction the nosecone will be and alter the flange position as required, before welding.



Benefits:

- Able to fit directly in line with either ANSI, TTMA or DIN standard flange mounting (100mm).
- World's easiest butterfly valve to dismantle and repair. Simply remove one pin.
- Light weight yet sturdy construction.
- The LBV100 is 0.3 kg lighter than the LBV4.

Drawbacks:

- The LBV100 should be installed with the higher pressure on the seal side (as is cast in on the disc). The consequences of installing it on the wrong side would mean the valve will only work at a maximum pressure of 600 kPa.
- The thickness of the LBV100 is approximately 9 mm thicker than that of the LBV4, however this means that it eliminates the use of an internal chamfered flange as the valve body creates enough clearance for the disc to rotate freely.

Design Changes between the LBV4 and the new LBV100 Butterfly Valves:

- Operating Handle Material is now Zytel (Glass Reinforced Nylon), whereas previously in the LBV4 it had been Aluminium.
- The one piece operating handle is also the drive mechanism and seal holder.
- Pin-less disc eliminates leak points.
- The LBV100 will now accept DIN, TTMA and ANSI flange mountings.

Dismantle: Simply remove item 9, roll pin and the valve pulls apart.

Application: The LBV100 would be best suited for use on a Road Tanker, given it was designed specifically for Petroleum products, and its relative light weight. However, other applications should not be dismissed.

Competitors: The LBV100's main competitor would be seen to be Emco Wheaton with the Betts Butterfly Valve Model F360, however this butterfly valve is heavier, more complex, and more expensive (at $220.00) than that of the LBV100.

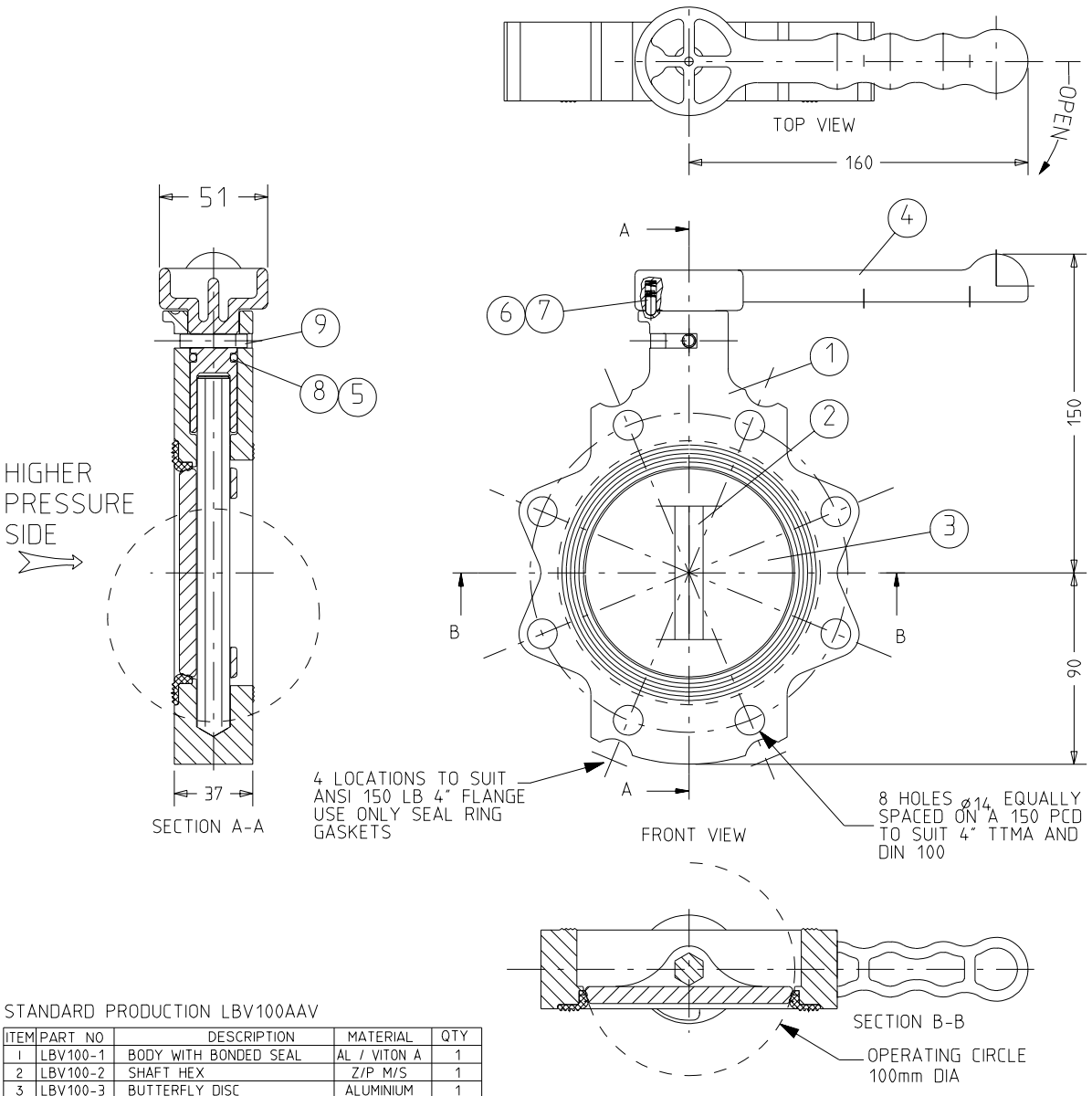
Overall Dimensions:

MODEL	THICKNESS	PCD	NO OF HOLES	HOLE SIZE	MAX WIDTH ACROSS HANDLE (A)	BORE (B)	FLANGE OD (C)	OVERALL HEIGHT (D)
LBV100	37	150	8	14	160	98	160.6	240

The page following is a full dimensional and parts listed drawing of the LBV100AAV Liquip Butterfly Valve.

LIQUIP

LBV100AAV BUTTERFLY VALVE



STANDARD PRODUCTION LBV100AAV

ITEM	PART NO	DESCRIPTION	MATERIAL	QTY
1	LBV100-1	BODY WITH BONDED SEAL	AL / VITON A	1
2	LBV100-2	SHAFT HEX	Z/P M/S	1
3	LBV100-3	BUTTERFLY DISC	ALUMINIUM	1
4	5754	HANDLE	ZYTEL	1
5	4619	BACKING RING	NITRILE	1
6	LBV100-6	KNOB LOCKING DETENT	NYLON	1
7	6115	SPRING	ST STEEL	1
8	4603	O RING	VITON	1
9	0923	ROLL PIN	Z/P M/S	1

NOTES:
1.LBV100 SHOULD PREFERABLY BE INSTALLED WITH THE HIGHER PRESSURE ON THE SEAL SIDE AS SHOWN.
2. CENTRALISE THE VALVE BEFORE TIGHTENING THE FLANGE BOLTS.

X750597
Issue: E

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