



BLACKFIVE VALVES



***LOW CONTAMINATION
FILTER AND DRIER
SAMPLE VALVES***



BLACKFIVE ENGINEERING

FILTER/DRIER POWDER SAMPLE VALVES

INTRODUCTION

The Blackfive Series 7 valves have been developed to provide a simple safe means of sampling powders and slurries from Horizontal driers and Vertical filter / driers, a characteristic of which these machines often operate under vacuum. At the same time the valve can also be used for safely sampling the solvent washes often needed when changing products. For handling hazardous powders a Zero leakage to atmosphere can be provided to secure the operation between product campaigns.

OPERATION

On the valve there is a main side handle for operating the valve together with a rear de-coring tool operated by a handle for drawing the sample into the collection outlet. To operate the valve the de-coring tool is pulled backwards to clear the valve internals and then the side handle can be rotated by 180° from the normal downward rest position, towards the operator to the upward position. A sample can then enter the cup within the ball. Having taken a sample into the cup the side handle is then returned back to the downward rest position and the operator can then operate the de-coring tool to remove the sample horizontally until it falls into the sample collection outlet..

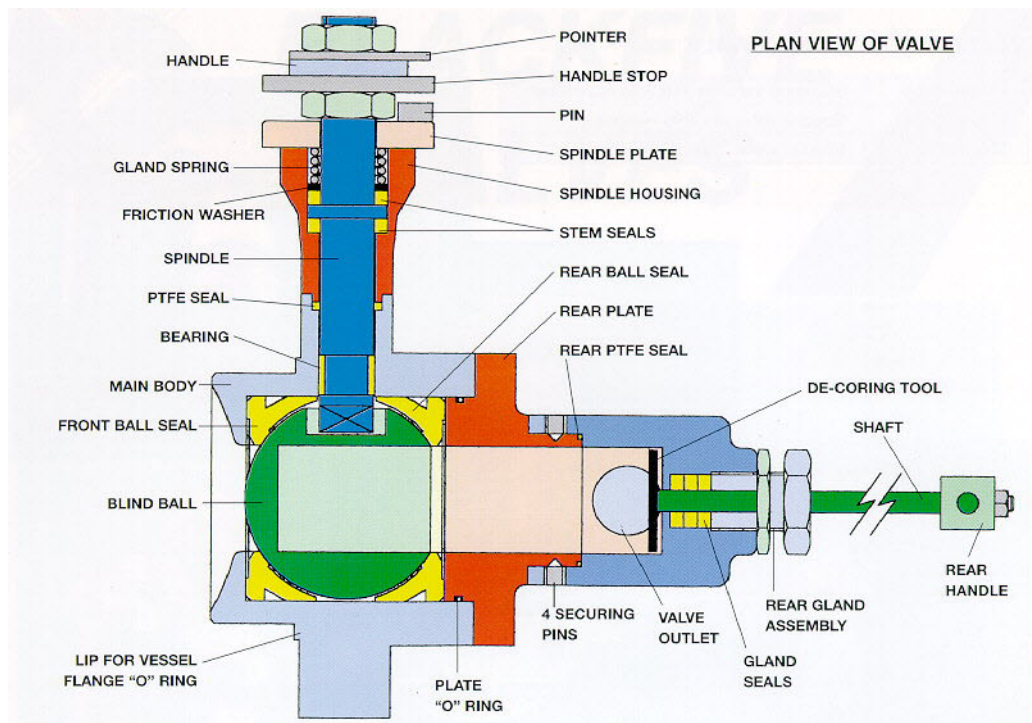


MAIN FEATURES

- **LOW CONTAMINATION** - Design of valve ensures that contamination between samples is very low providing the valve is operated correctly. Each time the valve is operated a representative sample of the product being processed at any point in time is obtained without the need to discharge a quantity to waste.
- **VACUUM / PRESSURE USE** - Valve can be used to sample under full vacuum or pressure safely.
- **LOW MAINTENANCE** - Very low maintenance attention is required due to the substantial design and high tolerance components.
- **SEALS** -All seals in contact with product are low friction virgin PTFE for long life and freedom from chemical attack. Seals are suitable for working up to 200°C.
- **SECURE GLAND** - Design of the valve and the gland eliminates air being drawn into the process when operating under full vacuum.
- **OPERATOR PROTECTION** - Zero leakage of powders to atmosphere can be provided as an option.
- **CLEAN CONSTRUCTION** - All of the product contact parts are machined from solid 316 grade stainless steel with no castings giving a high hygienic surface finish to both the interior and exterior of the valve to minimise contamination in plants and environments where clean working is necessary.
- **SPECIALS** - As a primary manufacturer of valves Blackfive Engineering can offer these valves as specials in Hastelloy or Titanium construction for all contact parts. Also any modifications can be accommodated to suit the clients specific process.

SPECIAL FLANGES - Suitable flanges can be provided for the client to weld either to a dished end on a horizontal drier or onto the side of a vertical filter / drier. Alternatively Blackfive Engineering will supply a drawing of the flange basics for a fabricator to incorporate into the design and fabrication of new vessels.

DESIGN FEATURES



SAMPLE COLLECTION

Glass sample collection bottles can be provided with outlet caps to suit the bottles ranging from simple 8oz Soda glass laboratory bottles up to 100ml and 250ml uncoated or plastic coated Boro-silicate glass containers which can be used at temperatures up to either 135°C or 200°C. Also available are 100ml metal sample collection cups and extension tubes to accommodate continuous layflat polyethylene tubing which can be double heat sealed between samples to give zero leakage to atmosphere on the outlet



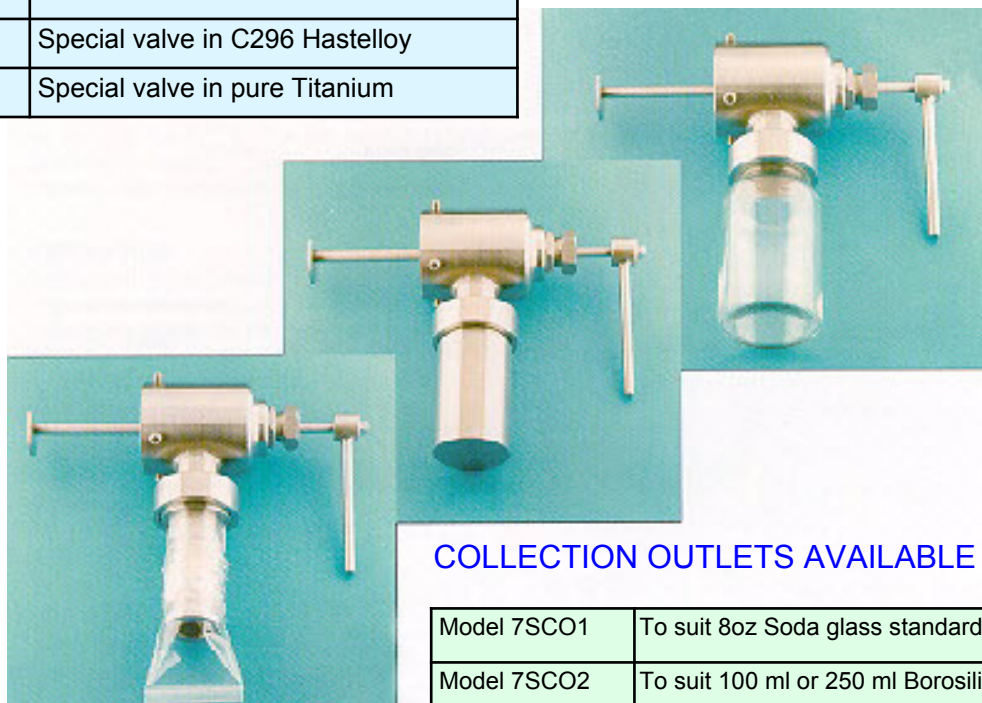
QUALITY ASSURANCE

All Blackfive Filter and Drier Powder Sample Valves are fully assembled and hydrostatically tested in our works to 30 Bar (435 lbf/in²) at room temperature before despatch. All Blackfive Safety Sample Valves are designed and manufactured in the UK. A system of quality assurance is in operation at works in Runcorn and materials used in manufacture of these valves are fully traceable. Complete pressure test certification is available with the valves upon request.

VALVES & ACCESSORIES

VALVE MODELS AVAILABLE

Model 7S2A	Standard valve in 316 Stainless Steel
Model 7H2A	Special valve in C296 Hastelloy
Model 7T2A	Special valve in pure Titanium



COLLECTION OUTLETS AVAILABLE

Model 7SCO1	To suit 8oz Soda glass standard bottles
Model 7SCO2	To suit 100 ml or 250 ml Borosilicate bottles
Model 7S CO3	To suit 100 ml stainless steel collection cups
Model 7SCO4	Stainless outlet to suit continuous polythene tube

ADDITIONAL OPTIONS

- Option 1.** Solvent inlet at an angle to wash the whole of the sampling cup and rear outlet
- Option 2.** Nitrogen or air inlet with valve to dry the sample cup and rear outlet after washing with solvent.
- Option 3.** Nitrogen purge to clear any blockages in front of the valve. This option takes the form of a BSPT tapping into the main body of the valve. It is the responsibility of the customer to subsequently pipe up this connection with nitrogen and a flowmeter at a suitable working pressure.
- Option 4.** Facility to fit suitable plastic bonnets to the valve to give zero powder emissions to atmosphere.

Information given in this leaflet is made in good faith but does not constitute a guarantee. Due to future developments we reserve the right to alter the dimensions and information contained in this leaflet as required.

FOR FURTHER INFORMATION ON SIZES AND MODEL NUMBERS, PLEASE REQUEST SPECIFIC DATA SHEETS OR A QUOTATION



Blackfive Engineering Limited

16 Beeston Court, Manor Park,
Runcorn, Cheshire, WA7 1SS, UK

Tel: 01928 579140
Fax: 01928 579514