



## KTM RICHARDS BALL VALVES

### MATERIAL SPECIFICATIONS

Material specifications for cantilever design seats

#### TECHNICAL SPECIFICATIONS FOR KTM RICHARDS TRIM CODES C, D AND F

	C	D	F
Description:	Carbon/glass reinforced PTFE	Filled acetal resin	Tefzel*
Common name:	Filled teflon	Acetal, Delrin AF, Lubetal	Tefzel*
Standard:	BS6564		
Color of seat:	Black	Brown	Milky white
Chemical name:	Carbon/glass reinforced polytetrafluoroethylene		Fluoropolymer
Temperature rating:	-50°C to 260°C (refer to pressure/temperature graph for full details).	-10°C to 80°C (refer to pressure/temperature graph for full details).	-30°C to 180°C (refer to pressure/temperature graph sheet for full details).
Suitable for:	This is an excellent seat material for steam and high temperature fluids, and a good material for difficult applications.	This is an excellent high pressure seat material suitable for most hydrocarbons.	This is an excellent high pressure seat material which has extended temperature limits above nylon and delrin. The material is suitable for most hydrocarbon services.
Not suitable for:	Hot/strong caustic solutions.	Oxygen service.	Tobacco industries.
Product usage guide:	Seat material for: R382, R384, R392 and R394.	Seat material for: R382, R384, R392 and R394, DN 8 - 50 sizes only.	Seat material for: R548, R545.

#### NOTE

\* Tefzel® is the registered Trademark of Dupont.

#### TECHNICAL SPECIFICATIONS FOR KTM RICHARDS TRIM CODES G, T AND U

	G	T	U
Description:	15% Glass reinforced PTFE	Virgin teflon	UHMWPE
Common name:	Glass filled teflon	Teflon	UHMWPE
Color of seat:	Off white	White	Translucent
Chemical name:	15% Glass reinforced polytetrafluoroethylene.	Polytetrafluoroethylene.	Ultra high molecular weight polyethylene.
Temperature rating:	-50°C to 232°C (refer to pressure/temperature graph for full details).	-30°C to 232°C (refer to pressure/temperature graph for full details).	-50°C to 65°C (refer to pressure/temperature graph sheet for full details).
Suitable for:	Typically exhibits the same chemical resistant qualities as Virgin PTFE but has better mechanical properties.	PTFE is the most common sealing material and has excellent chemical resistance for most mediums.	Abrasive applications, and where Fluorocarbons cannot be tolerated.
Not suitable for:	Hot/strong caustic solutions. Abrasive applications can be detrimental to PTFE seats, molten sodium, flourine and irradiated mediums.	Abrasive applications can be detrimental to PTFE seats, molten sodium, flourine and irradiated mediums.	Most chlorine, ethers and petroleum fuels.
Product usage guide:	Seat material for: R382, R384, R392 and R394. Body seal material for: R382, R392.	Seat material for: R382, R384, R392 and R394. Body seal material for: R382, R392.	Seat material for: R382, R384, R392 and R394. Body seal material for: R382, R392.

# KTM RICHARDS BALL VALVES

## MATERIAL SPECIFICATIONS

Material specifications for cantilever design seats.

### TECHNICAL SPECIFICATIONS FOR KTM RICHARDS TRIM CODE V

V	
Description:	Delvon V®
Common name:	Delvon V®
Color of seat:	Yellow
Chemical name:	Modified polyamide
Temperature rating:	Minus 50°C to 175°C (refer to pressure/temperature graph for full details).
Suitable for:	This is an excellent seat material for high pressure applications in the oil and gas industry and pressure/temperature applications above the limits of reinforced PTFE. Suitable for explosive decompression applications.
Not suitable for:	Chlorine and some chemical applications.
Product usage guide:	Seat material for: high pressure applications R384, R394, R382 and R392.

#### NOTE

®Devlon V is the registered trademark of Devol Engineering Ltd.

Material specifications for energized design seats.

### TECHNICAL SPECIFICATIONS FOR KTM RICHARDS TRIM CODES 2, 4 AND 5

	2	4	5
Description:	Carbon filled PTFE	Reinforced PEEK	Kel-F®
Common name:	Carbon reinforced PTFE	Carbon reinforced PEEK	PCTFE
Standard:	BS6564		
Color of seat:	Black	Black	Translucent
Chemical name:	Electrographitised carbon reinforced polytetrafluoroethylene	Carbon filled polyetheretherketone	Polytetrachlorotrifluoroethylene
Temperature rating:	-80°C to 260°C (refer to pressure/temperature graph for full details).	-50°C to 300°C (refer to pressure/temperature graph for full details).	-196°C to 200°C (refer to pressure/temperature graph sheet for full details).
Suitable for:	This is an excellent seat material for valves used in the oil and gas industry, petrochemical and refinery, chemical and general applications. The material has a good temperature range and is used in the seat designs up to class 900.	This is an excellent seat material for high pressure applications in the oil and gas industry and pressure/temperature applications above the limits of reinforced PTFE.	Cryogenic valve seat applications requiring tight shut-off and suitable for LPG, LNG and Oxygen services. Additionally, Kel-F plastic is a highly fluorinated resin which offers the unique combination of chemical and mechanical properties necessary for many critical applications in the chemical and mechanical equipment fields. Kel-F plastic is unaffected by a wide variety of chemicals, including concentrated acids, strong caustics, organic solutions and oxidants.
Not suitable for:	Hot/strong caustic solutions.	Some chemical applications, Dowtherm Q or equal, steam applications.	Highly halogenated and aromatic materials as some swelling occurs.
Product usage guide:	Seat material for R43, R44.	Seat material for: R435, R445, R515 and R925.	Seat material for R43, R44.

#### NOTE

Kel-F® is a registered Trademark.

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