

Pump and Valve Compression Packing:

Klinger K55: PTFE with encapsulated graphite providing excellent sealing and reliability in high performance duties. Max Temp 280°C, Max rotary speed 20m/s, pH 0-14.

Klinger K3222: Braided flexible graphite. Suitable for L.P. Steam and non abrasive applications in both pumps and valves. Max Temp 650°C, Max rotary speed 10m/s, pH 0-14.

Style 396: A superior grade of braided flexible graphite with carbon yarn carriers. Suitable for all H.P steam applications and high speed boiler feed water pumps. 396 has excellent thermal conductivity and resilience. Very easy on shafts and sleeves. Max Temp 650°C, Max rotary speed 22m/s. pH 0-14.

Style 396C: Unlike other exfoliated graphite products which offer various other yarn or wire replacements to theoretically address extrusion, blow-out prevention, etc. 396C capable of 400bar alone, to provide a highly sprung internal structure which enables 396C to conform and re-conform through constant thermal cycling to various stem, bore and clearance conditions in various states of degradation. Max Temp 650°C, Max pressure 345bar (subject to operating conditions), Max rotary speed 22m/s. Max rotary pressure 56bar, pH 0-14.

Gasketing:

Klingersil C4403: A general purpose non-asbestos gasket for use on oils, water and gases. An excellent alternative to traditional compressed asbestos fibre. 3XA Anti-Stick coating on both sides aids flange separation. This removes the need for application of grease, or sealants which may cause gasket failure. Max temperature 300°C, Max pressure 50bar.

Klingersil C4430: Premium quality, high pressure gasket with outstanding stress relaxation and outstanding resistance to hot water and steam. Optimum combination of synthetic and glass fibres bonded with NBR. Resistant to steam and water at high temperature as well as to oils and hydrocarbons. Fire Safe according to BS5146 Max temperature 430°C, Max pressure 100bar.

	PACKING				GASKET	
APPLICATION	K55	K3222	396	396C	C4403	C4430
Steam Valves L.P.	A	A	A	A	A	A
Steam Valves H.P.	B	B	A	A	A	A
Boiler Feed Water pumps	B	B	A	A	A	A
Condensate pumps	B	B	A	A	A	A
Vacuum pumps	A	B	A	A	A	A
Process pumps	A	A	A	A	A	A
Water service pumps	A	A	A	A	A	A
Soot Blower seals	C	C	A	A	C	C
Medium oil flanges	C	C	C	C	A	A
L.P. Steam flanges	C	C	C	C	A	A
H.P. Steam flanges	C	C	C	C	A	A

Selection Guide:

A = Suitable, subject to temperature and pressure capabilities of Klinger product.
 B = If temperatures and pressures are within field, a technical examination is required.
 C = Not suitable



KLINGERSil® C-4400

Type

Universal high pressure gasket suitable for use in many branches of the chemical industry, the food industry and the water supply industry. Very high standard of performance.

Applications

Aramid fibres bonded with NBR. Resistant to oils, water, steam, gases, salt solutions, fuels. Alcohol, organic, inorganic acids, hydrocarbon, lubricant and refrigerants



KLINGERSil® C-4430

Premium quality, high pressure gasket with outstanding stress relaxation and outstanding resistance to hot water and steam

Optimum combination of synthetic and glass fibres bonded with NBR. Resistant to steam and water at high temperatures as well as to oils and hydrocarbons. Fire Safe according to BS 5146



KLINGERSil® C-4403

A general purpose non-asbestos sheet for use on oils, water and gases. An excellent alternative to traditional compressed asbestos fibre.

3XA Anti-Stick coating on both sides aids flange separation. This removes the need for application of grease, or sealants which may cause gasket failure

Technical Data

	Max operating temperature	400 °C	Max operating temperature	430°C	Max operating temperature	300°C
	Max operating pressure	100 bar	Max operating pressure	100 bar	Max operating pressure	50 bar
Compressibility ASTM F 36 A		11 %		9 %		8 %
Recovery ASTM F 36 A min		55 %		50 %		50 %
Stress relaxation DIN 52913	50 MPa, 16h/300°C	25 MPa	50 MPa, 16h/300°C	35 MPa		
Stress relaxation BS 7531		23 MPa		31 MPa		
Klinger cold/hot compression 50MPa	Thickness decrease at 23 °C	10 %	Thickness decrease at 23 °C	8 %	Thickness decrease at 23 °C	10 %
	Thickness decrease at 300 °C	22 %	Thickness decrease at 300 °C	11 %	Thickness decrease at 300 °C	25 %
Gas leakage according to DIN3535/6		0.2 ml/min		<1.0 ml/ min	Tensile strength ASTM F152 across gain	18 MPa
Soluble Chloride Content	Chlorides (Soluble)	150 ppm	Chlorides (Soluble)	150ppm	Thickness increase ASTM F146 after immersion in	
Thickness increase after fluid immersion ASTM F 146	Oil JRM 903: 5h/150°C	3 %	Oil JRM 903: 5h/150°C	3 %	ASTM Oil IRM 903	0-10 %
	Fuel B: 5h/23°C	5 %	Fuel B: 5h/23°C	5 %	ASTM Fuel B	0-10 %
Density		1.6 g/cm ³		1.55 g/cm ³	ASTM Water	0-10 %
Colour		Green both sides		Green one side, white one side		Both sides light green

The Complete Non- Asbestos Sealing Solution for the Palm Oil Mill

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