

Score-TRICENTRIC® Valve - Material Pressure and Temperature Ratings

Component		Material	Temperature range (°F)	Maximum body pressure rating at 100 °F (psig)			Note
				CL150	CL300	CL600	
BODY & DISC	STANDARD	WCB - ASTM A216 (carbon steel)	-20 to 1000	285	740	1480	(1)
		CF8M - ASTM A351 (316SST)	-425 to 1500	275	720	1440	(3)(4)
	OPTIONAL	LCB - ASTM A352 (carbon steel low temp.)	-50 to 650	265	695	1390	
		LCC - ASTM A352(carbon steel low temp.)	-50 to 650	290	750	1500	
		LC3 - ASTM A352 (carbon steel low temp.)	-150 to 650	290	750	1500	
		WC6 - ASTM A217 (Cr-Mo steel)	-20 to 1050	290	750	1500	(2)(3)
		WC9- ASTM A217 (Cr-Mo steel)	-20 to 1100	290	750	1500	(2)(3)
		CF8 - ASTM A351 (304SST)	-425 to 1500	275	720	1440	(3)(4)
		CF8C - ASTM A35 (347SST)	-325 to 1500	275	720	1440	(3)(4)
		CG8M - ASTM A351 (317 SST)	-425 to 1000	275	720	1440	(3)
		CN7M - ASTM A351 (ALLOY 20)	-325 to 600	230	600	1200	(5)
		CD4MCu - ASTM A351 (Duplex)	-425 to 600	290	750	1500	
		CZ100 - ASTM A494 (Nickel)	-325 to 600	140	360	720	(6)
		CY40 - ASTM A494 (Inconel 600)	-325 to 1200	290	750	1500	(6)(3)
		M30C - ASTM A494 (Monel 400)	-325 to 900	230	600	1200	(6)
		CW12MW - ASTM A494 (Hastelloy C)	-325 to 1000	230	600	1200	(5)
		C95500 - ASTM B148 (Ni-Al-Bz)	-425 to 600	Contact Score Sales Rep.			
		GRADE 3 TITANIUM	-75 to 600	Contact Score Sales Rep.			
SEAT	STANDARD	316L SST overlay on carbon steel	per body material				
		Integral cast on stainless and exotic	per body material				
	OPTIONAL	ALLOY 6	-425 to 1500				
		ALLOY 21	-425 to 800				
		INCOLLOY 825	-20 to 1200				
SHAFT	STANDARD	S17400 (17.4 PH DH1150) - Full Rated	-325 to 850			(7)	
	OPTIONAL	316SST- Reduced Rated	-425 to 600			(8) (11)	
		ALLOY 20- Reduced Rated	-325 to 800			(8) (11)	
		INCONEL 600- Reduced Rated	-325 to 900			(8) (11)	
		INCONEL 625- Reduced Rated	-325 to 1200			(8) (11)	
		MONEL K500 - Full Rated	-325 to 900			(11)	
		INCONEL 718/750 - Full Rated	-20 to 1500			(11)	
		Stainless or Exotic equal to body grade	per body material			(8) (11)	

Component		Material	Temperature range (°F)	Maximum body pressure rating at 100 °F (psig)			Note
				CL150	CL300	CL600	
SEAL STACK	STANDARD	316SST Laminated w/Grafoil	-400 to 1200				(9)
	OPTIONAL	316SST Laminated w/Klinger C4401	-100 to 750				
		316SST Solid	-400 to 1200				
		316SST Solid w/Stellite overlay	-400 to 1500				
		INCONEL 600 Laminated w/Grafoil	-20 to 1200				(9)
		INCONEL 625 Laminated w/Grafoil	-20 to 1000				
		MONEL 400 Laminated w/Grafoil	-400 to 900				(9)
		MONEL 400 Laminated w/Klinger C4401	-100 to 750				
BEARING	STANDARD	CL150 - Graphite	-400 to 1700				(10)
		CL300 and CL600 - Nitronic 60	-325 to 1500				
	OPTIONAL	Nitronic 60 (CL150)	-325 to 1500				
		Graphite (CL300 and CL600)	-400 to 1700				(10)(8)
		PTFE composition	-425 to 325				(8)
		Stellite #6	-425 to 1500				
		Bronze	-425 to 600				(8)
		Ceramic composition	-20 to 2500				(8)
PACKING	STANDARD	J.C. 3871 and Grafoil	-400 to 1200				(9)
	OPTIONAL	PTFE Chevron	-425 to 450				
		PTFE Braided	-425 to 450				

NOTE:

- Per ASME B16.34 - Permissible but not recommended for prolonged use above 800°F.
- Per ASME B16.34 - Use normalized and tempered material only.
- Per ASME B16.34 - Use of a flanged valve in CL150 ANSI above 1000°F not recommended.
- Per ASME B16.34 - At temperatures over 1000°F, use only when the carbon content is 0.04% or higher.
- Per ASME B16.34 - Use solution annealed material only.
- Per ASME B16.34 - Use annealed material only.
- Long exposure above 600°F may cause embrittlement.
- Use of this material may result in a reduced differential pressure rating. Contact Score sales representative.
- Upper temperature limit reduced to 850°F in oxidizing media.
- Upper temperature limit reduced to 650°F in oxidizing atmosphere.
- Upper temperature limit is specified as a general guide based on code, specification and minimum torsional seating requirements. Use of material above this limit may violate these requirements. Contact a Score Sales or Engineering representative for specific application material evaluation.