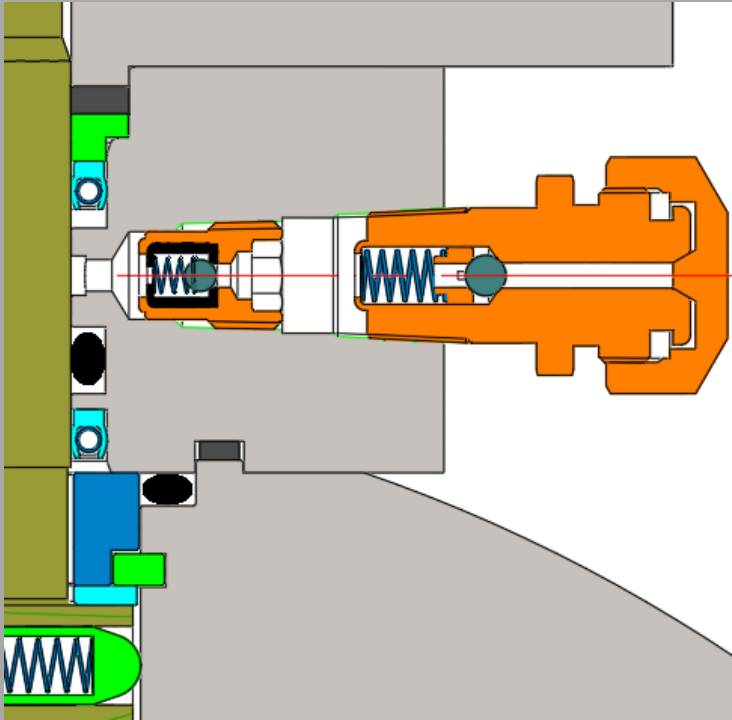
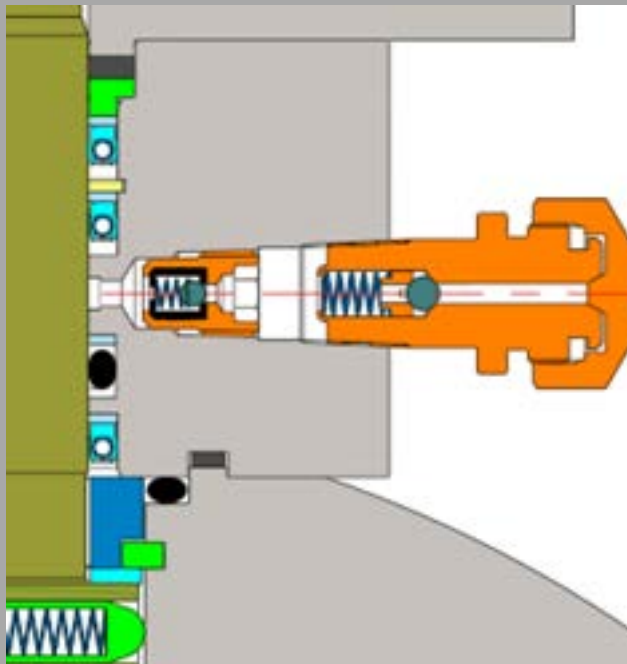
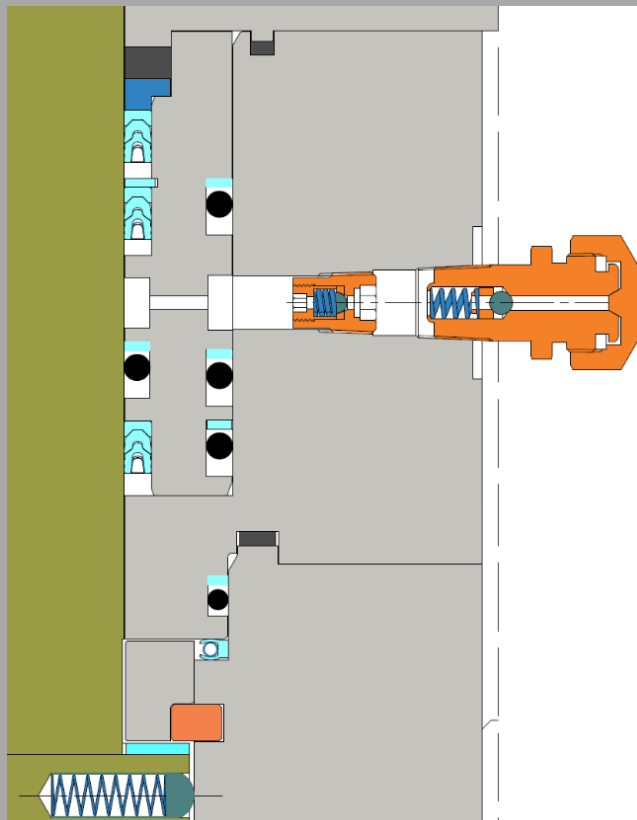
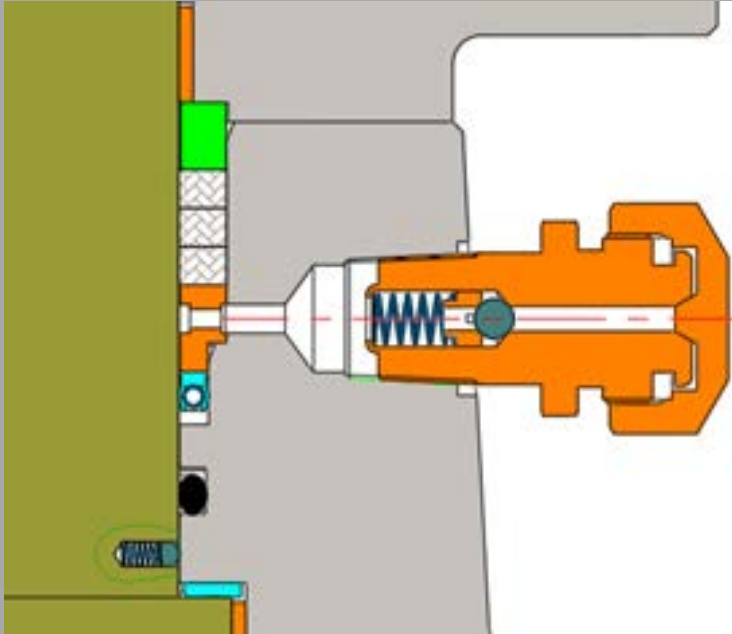
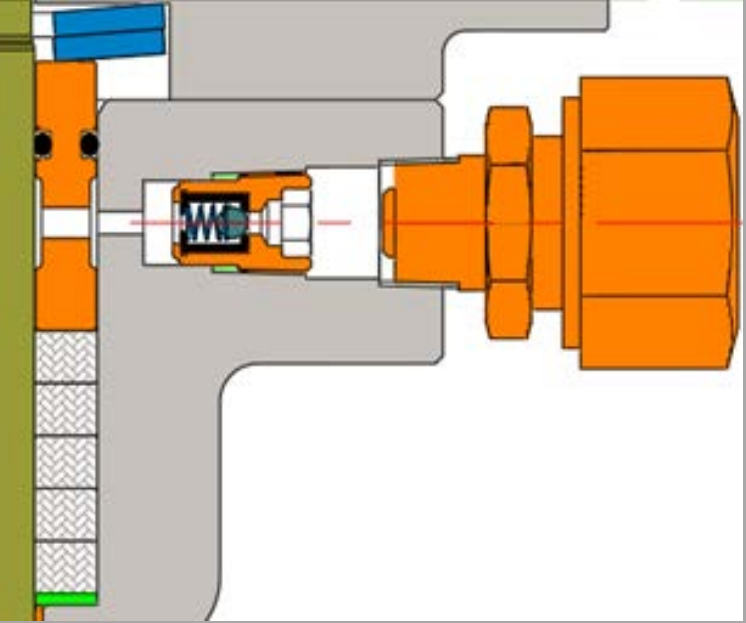
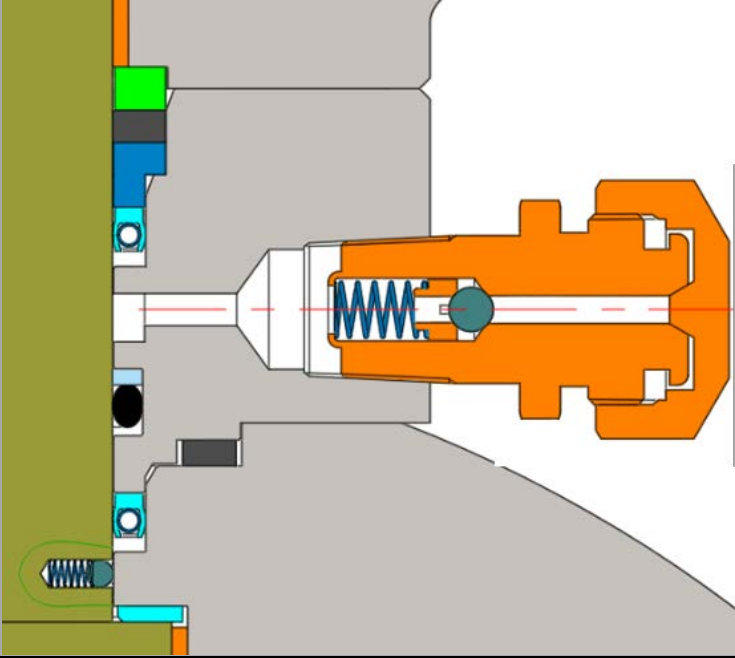


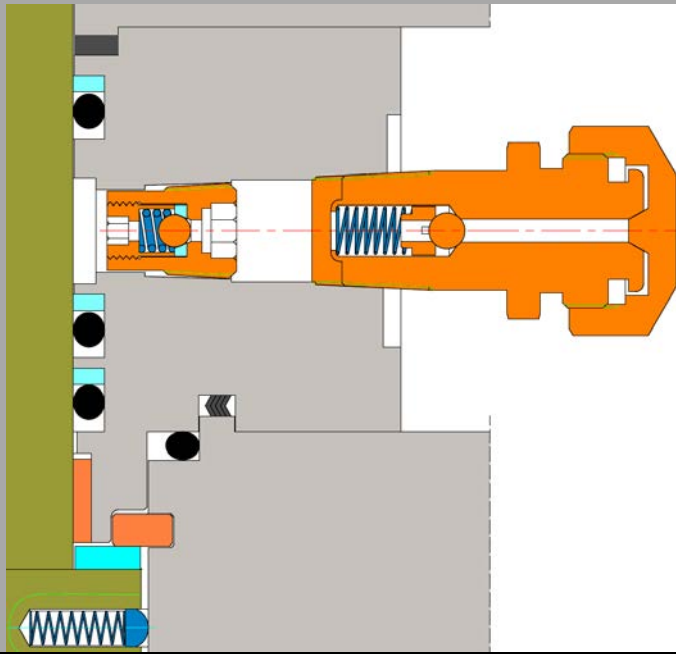
No.	Test Valve / Stem Design Sketch	Stem Seal Design	Body Seal Design	Certified Temperature	Standard(s)	Qualified ANSI Class	Certificate Number
#1	Tested valve size: 10" ANSI 900 	Stem sealing design is consisted of lower lip seal, middle Elastomer O-ring, upper lip seal and fire safe graphite seal.	The body seals are Elastomer O-rings + graphite seal.	Fugitive emission certified to +200°C (+392°F)	ISO 15848-1 endurance class CO3 tightness class AM	ANSI 150 to ANSI 900	ISO 15848-1 certificate 219322 dated: Jul 22, 2019
		Standardization (unless quoted otherwise): This design is standardized on bolted body valve model GB2 trim codes 04, 15, 60, 62, 70 and 72, sizes 6" and larger, ANSI classes 150 to 900 (Qualified Stem diameter range: 37.5 mm to 150 mm.) ➤ Certified range codes 04, 60, 62, 70 and 72: ANSI 150: Size 6" to 30" ANSI 300: Size 6" to 30" ANSI 600: Size 6" to 30" ANSI 900: Size 6" to 24" ➤ Certified range code 15: ANSI 150: Size 6" to 24" ANSI 300: Size 6" to 24" ANSI 600: Size 6" to 24" ANSI 900: Size 6" to 16" Note: This valve was additionally continued for cycle testing to 25,000 after fugitive emission certification was accomplished upon 2,500 cycles with tightness class AM.					

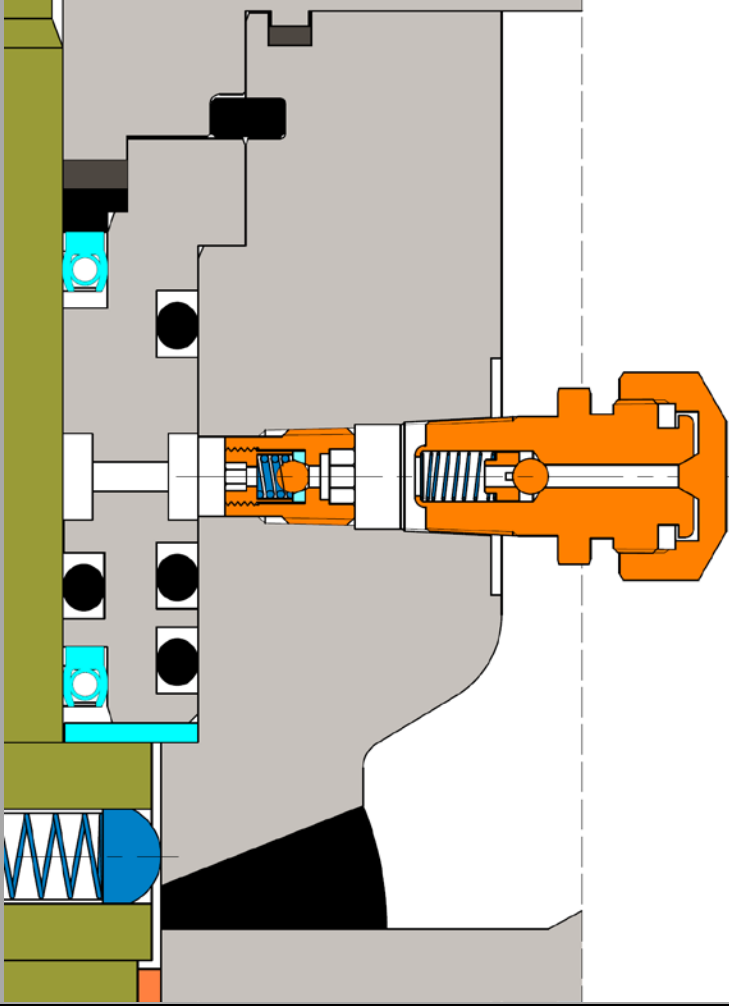
No.	Test Valve / Stem Design Sketch	Stem Seal Design	Body Seal Design	Certified Temperature	Standard(s)	Qualified ANSI Class	Certificate Number
#2	Tested valve size: 4” ANSI 2500 	Stem sealing design is consisted of lower lip seal, two upper lip seals and top fire safe graphite seal. The 8” ANSI 1500 valve has been certified with stem seals carrier with three Oring seals to stem bonnet. This design is certified without the middle O-ring so if required by service conditions, the Oring could be removed.	The body seals are spiral wound graphite filled gaskets.	4” ANSI 2500: Fugitive emission certified to +240°C (+464°F) 8” ANSI 1500: Fugitive emission certified according to ISO 15848-1 at +120°C (+248°F) And according to API 641-2nd at +120°C (+248°F)	4” ANSI 2500: API 641-1st 8” ANSI 1500: ISO 15848-1 endurance class CO3 tightness class BH and API 641-2nd	ANSI 150 to ANSI 2500	4” ANSI 2500: API 641 certificate: 220106 dated March 12, 020 8” ANSI 1500: API certificate: 316341 dated Dec 21, 2024 ISO certificate: 316272 Dec 21, 2024
	And Tested valve size: 8” ANSI 1500 	Standardization (unless quoted otherwise): These designs are standardized on bolted body valve model B2 trim codes 04, 15, 60, 62, 70 and 72, sizes 2” to 4” ANSI classes 900 to 1500, Model GB2 sizes 2” and larger ANSI 2500, and Model GB2 sizes 6” and larger ANSI 1500 and 2500. Note: the standardization of the 8” ANSI 1500 certified design is with solid stem bonnet design without the stem bushing O-rings. (4” ANSI 2500: Qualified Stem diameter range 28.5 mm to 114 mm.) (8” ANSI 1500: Qualified Stem diameter range 63.5 mm to 254 mm.) ➤ Certified range codes 04, 60, 62, 70 and 72: ANSI 900: Size 3” to 4” ANSI 1500: Size 3” to 36” ANSI 2500: Size 2” to 16” ➤ Certified range code 15: ANSI 900: Size 3” to 4” ANSI 1500: Size 3” to 20” ANSI 2500: Size 2” to 8”					

No.	Test Valve / Stem Design Sketch	Stem Seal Design	Body Seal Design	Certified Temperature	Standard(s)	Qualified ANSI Class	Certificate Number
#3	Tested valve size: 2” ANSI 600 	Stem sealing design is consisted of lip seal and one set of compression graphite packings.	The body seals are spiral wound graphite filled gaskets.	Fugitive emission certified according to ISO 15848-1 at +200°C (+392°F) And according to API 641 at +177°C (+350°F)	ISO 15848-1 endurance class CO3 tightness class AM and API 641-1 st	ANSI 150 to 600	API 641 certificate: 221233 dated March 11, 2022 ISO 15848-1 certificate: 221232 dated March 17, 2022
		Standardization (unless quoted otherwise): This design is standardized on bolted body valve model B2 with code 04 sizes 2” to 4” ANSI 300 & 600 and on welded body valves model GW 2” to 4” ANSI 150 to 600 (2-piece body valves) (Qualified Stem diameter range: 12 mm to 48 mm.) ➤ Certified range bolted body model B2 codes 04 : ANSI 300 to 600: Size 2” to 4” ➤ Certified range welded body model GW codes 04 : ANSI 150 to 600: Size 2” to 4”					

No.	Test Valve / Stem Design Sketch	Stem Seal Design	Body Seal Design	Certified Temperature	Standard(s)	Qualified ANSI Class	Certificate Number
#4	Tested valve size: 3" ANSI 600, 8" ANSI 1500 Pending 	Stem sealing design is consisted of multi-layer compression graphite packings live loaded with spring discs.	The body seals are spiral wound graphite filled gaskets only.	Fugitive emission certified to +350°C (+662°F) According to both API 641-1st and ISO 15848-1	API 641-1 st And ISO 15848-1 endurance class CO2 tightness class CH	ANSI 150 to ANSI 600 And to ANSI 1500 Pending	API certificate: 219548 dated Jan 07, 2020 ISO certificate: 219547 dated Jan 10, 2019
		Standardization (unless quoted otherwise): This design is standardized on bolted body valve model B1 and GB1 code 14 sizes 2" and larger ANSI classes 150 to 2500 (Qualified Stem diameter range: 16.4 mm to 65.6 mm, and to 189.6 mm Pending) ➤ Certified range model B1 codes 14: ANSI 150: Size 2" to 10" (up to 24" pending) ANSI 300: Size 2" to 10" (up to 24" pending) ANSI 600: Size 2" to 10" (up to 24" pending) ANSI 900: Size 2" to 16" (pending) ANSI 1500: Size 2" to 16" (pending)					

No.	Test Valve / Stem Design Sketch	Stem Seal Design	Body Seal Design	Certified Temperature	Standard(s)	Qualified ANSI Class	Certificate Number
#5	Tested valve size: 2" ANSI 1500 	Stem sealing design is consisted of lower lip seal ¹ , upper lip seal and graphite seal.	The body seals are spiral wound graphite filled gasket.	Fugitive emission certified according to ISO 15848-1 at +120°C (+248°F) And according to API 641-2 nd at +121°C (+250°F)	ISO 15848-1 endurance class CO3 tightness class AM and API 641-2 nd	ANSI 150 to ANSI 1500	API certificate: M 3242451 dated Oct 08, 2024 ISO certificate: M 324 246 1 dated Oct 14, 2024
		Standardization (unless quoted otherwise): This design is standardized on bolted body model B2 code 04 sizes 2" to 4" ANSI 150, and sizes 2" to 4" reduced port ANSI 300 and 600 and sizes 2" to 4" ANSI 300 and 600 codes 15, 60, 62, 70, 72 sizes 2" to 4" ANSI 150 to 600, and. (3-pc body design) (Qualified Stem diameter range: 15 mm to 60 mm.) ➤ Certified range model B2 and B3 codes 04, 15, 60, 62, 70, 72: ANSI 150 to 600: Sizes 2" to 4"					

No.	Test Valve / Stem Design Sketch	Stem Seal Design	Body Seal Design	Certified Temperature	Standard(s)	Qualified ANSI Class	Certificate Number
#6	Tested valve size: 8” ANSI 1500 and 3” ANSI 1500 	Stem sealing design is consisted of three O-rings and fire safe graphite seal.	The body seals are Oring + spiral wound graphite filled gasket.	Fugitive emission certified according to API 641-2 nd at +121°C (+250°F)	API 641-2 nd	ANSI 150 to ANSI 1500	IN-SUZ-5805-25016 dated Dec 01, 2025
		Standardization (unless quoted otherwise): This design is standardized on bolted body model B2 code 00 sizes 2” to 4” ANSI 150 to 1500 and model GB2 code 00 sizes 6” to 24” ANSI 150 to 600. (Qualified Stem diameter range: 17.5 mm to 150 mm.) ➤ Certified range model B2 codes 00 : ANSI 150 to 1500: Sizes 2” to 4” ANSI 150 to 600: Sizes 6” to 24”					

No.	Test Valve / Stem Design Sketch	Stem Seal Design	Body Seal Design	Certified Temperature	Standard(s)	Qualified ANSI Class	Certificate Number
#7		Stem sealing design is consisted of three O-rings and fire safe graphite seal. This design utilizes a stem seals carrier with three Oring seals to stem bonnet.	Not applicable, fully welded body design.	Pending	API 641-2 nd And ISO15848-1	ANSI 150 to 600	Pending
		Standardization (unless quoted otherwise): This design is standardized on fully welded body valves model GW code 04 or 04_9 sizes 6” and larger all ANSI classes. (Qualified Stem diameter range: 45 mm to 180 mm. Pending) ➤ Certified range model GW codes 04 and 04_9: - ANSI 150: Sizes 6” to 42” - ANSI 300: Sizes 6” to 42” - ANSI 600: Sizes 6” to 42”					

Notes:

- 1-The Lip seals materials are PTFE, RTFE, PEEK, PHB Filled PTFE, + Elgiloy, depending on the pressure, temperature and service conditions.
- 2-The elastomeric material selection must respect the temperature range as specified in fugitive emission certification. Example for line 1 FKM with minimum +200C temperature range.
- 3- the lower temperature limit of the elastomeric seals must be defined at valve design and material selection. Example for western Canadian ambient the upper elastomeric seal must be suitable for -51°C.