



Straight-way check valve

Project number EE-15-3002	PSP-No. 5780	DTI CT	Document identification number:		
Project Title Krško SFP Alternative Cooling Design			WEG-0122-09148372	Rev. 00	1 3
Power plant / unit KRK - KRSKO 1	Number of Modification/ Action 1028-SF-L		Tag number .SF.10100001		

General Data			
Valve model (funct.)	non return valve	Related specification	ASME Sect. III, ND
Valve type (constr.)	check valve	Additional specification *2	
Manufacturer - type *1		Component class / performance level	SC3
Supplier *1		Load level *5	
Building	FHB	Seismic class	Category I
Floor/level	ca. 113 m	Test Group *6	
Room number	01	Test category	-
Related cover sheet	not applicable	Nominal width DN *3	8"
Related P&ID	WEG- 0180-23754883	Nominal pressure PN	150
Related drawing *1		Nominal width DN Exit *3	8"
Related system	SFP Alternate Cooling System	Nominal pressure PN Exit	150
Safety Requirement	Yes	Actuator model	-
Safety devices *1		Type of drive	-

Design Data			
Design Pressure	145	psi (g)	Design against External impact *7
Design temperature	212	°F	Design against Internal impact *8
Ambient temperature min.	61	°F	Design against LOCA
Ambient temperature max.	212		Design against cutoff failure
Design mass flow	66.7	kg/s	Proof: Stability
Test Pressure	181.3	psi (g)	Proof: Integrity
Test Temperature	RT	°F	Proof: Functionality *9

Operating Data			
Operating pressure (gauge)	1.45	psi (g)	Function at Δp / basic position
Operating temperature min.	33.1	°F	Pressure below / above cones *10
Operating temperature max.	176		Safety valve opening pressure
Operating mass flow	66.7	kg/s	Pressure (gauge) supply of compressed air for actuator
Max. differential pressure Δp	14.5	psi (g)	

Technical Data			
Weight excluding actuator *1		kg	Dimensions (L/H/W) *1
Weight including actuator *1		kg	in in in
Valve stiffness	-		Seat hard facing available *1

Material Data			
Housing *11		Spindle seal *12	
Housing coating internal	-	Obturator *13	
Housing coating external	-	Shutoff element / armor plate *1	
Vessel head *11		Seat hard facing *14	
Gasket ring (body/cover) *1		Weld-on / shoed butt weld ends	-
Spindle *1		Actuator housing	-
Spindle nut	-		



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Medium Data							
Medium	*15			Dynamic viscosity	1	mPa*s	
Activity	-	Bq/m3		Density	972	kg/m³	
Solids content	-	%		Hazard class	-		
Steam content	-	%		Water hazard class	-		
Conductivity	-	S/m		Additive	Boric Acid		
Test medium	Water			Resistance value (Zeta-Value)	-		
Acceptance							
Acceptance test according to		*2 Sec. 6.0					
Accessory							
Additional accessories		*1		Housing rupture protection	*1		
Construction Data							
Connection inlet	*16			Permitted leakage to the outside	*17	mbar*U/s	
Connection outlet	*16			Seating tightness	*18		
Installation position	vertical			Middle seat diameter / seat width	*1	in	
Suspension	-			Spindle diameter/pitch/number of gears	*1		
Spindle seal / shaft seal	*1 *4			Insulation type	-		
Spindle stroke	*1	in		Insulation thickness	-	in	
Gland leak off	-			Coating inside	-	µm	
Locking	No			Coating on the outside	-	µm	
Limit switch	No			Safety devices-version	-		
Actuator							
Manufacturer	-			Voltage	-	V	
Manufacturer - type	-			Frequency	-	Hz	
Connection type	-			Nominal power	-	hp	
Installation position (motor shaft)	-			Nominal current	-	A	
Output shaft version	-			Starting current	-	A	
Adjustment range OPEN min. /max.	-	-	N*m	Start-up suppression OPEN	-	%	
Adjustment range CLOSE min. /max.	-	-	N*m	Start-up suppression CLOSE	-	%	
Set torque OPEN	-		N*m	Revolutions per stroke (stroke)	-	in	
Set torque CLOSE	-		N*m	Revolutions per stroke (rotation angle)	-	°	
Shut off OPEN	-			Torque tolerance	-	%	
Shut off CLOSE	-			Actuating time	-	s	
Shutdown failure moment OPEN	-		N*m	Speed of drive	-	1/min	
Shutdown failure moment CLOSE	-		N*m	Remote drive parts available	-		
Cut-off delay	-		ms	Slip clutch	-		
Self-locking	-						
Gearing							
Manufacturer	-			Permitted torque (input)	-	N*m	
Manufacturer - type	-			Permitted torque (output)	-	N*m	
Gear ratio (i)	-			Remote drive angle	-	°	
Transmission efficiency	-			Remote drive (construction)	-		



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Reference to calculations and applicable codes and/or standards

Annotations

- *1 - To be provided by supplier /
- *2 - WEG-0122-60669672 valve specification /
- *3 - Connected Piping: Material ASTM A312 Grade TP304, Dimensions ASME B36.19, Sch. 40S, 219.1 x 8.18 mm (8.625 x 0.322 in) /
- *4 - Sections 5.1.1 - 5.1.10 shall be considered as applicable /
- *5 - acc. to *2 App. C /
- *6 - Active (acc. to *2 Section 3.4.2.2; 3.4.3.5) /
- *7 - Yes (see *2 Sec. 3.4.3) /
- *8 - Yes (see *2 Sec. 3.3) /
- *9 - Yes (during/after earthquake) /
- *10 - 0.1 / 0 bar /
- *11 - SS, *2 Sec. 5.2 /
- *12 - *1 consider *2 Sec. 3.2.11; 5.1.4 b. /
- *13 - SS *1 /
- *14 - *2 Sec. 5.2.1.3 /
- *15 - WF-1/WF-2/WF-3 (acc. to *2 App. D) /
- *16 - But weld (see *2 Sec. 5.1.1.1/2) /
- *17 - *2 Sec. 6.3.1.1 /
- *18 - *2 Sec. 6.3.1.2 /

Creator				Reviewed WEG			Release / Certification mark
Rev.	Prepared	Review QA	Reason for revision				WEG
00	EEC F. Steiner 22.09.2015	ZQ E. Mauermann 25.09.2015	Revision object for workflow-based revis ioning	EEC T. Schuler 22.09.2015			EEP M. Postleb 28.09.2015