

Steam Conditioning Station



ARTES Valve & Service GmbH
Parkallee 7 16727 Velten
GERMANY

A MEMBER OF THE ARCA FLOW GROUP

1	Customer:	Armteko s.r.o.	ARTES-Ref.-No.:					5505173	
2	Plant:	DUS Kralupy	Pos.:					1	
3	Location:		Qty.:					1	
4	TAG No.:		S/N:					3194885.1	
5	Pipe - Connection Data		Inlet		Outlet		Cooling Water		
6	Dimensions	Ø D [mm] x s [mm]	139,7	x	16	273,7	x	10	
7	Material		1.7380 (10CrMo9-10)		1.7383 (11CrMo9-10)		48,3 x 3,6		
8	Buttwelds	Ø D [mm] x s [mm]	139,7	x	16	273,7	x	10	
9	Flange Connection		--		--		--		
10	Valve-Design		Inlet		Outlet		Cooling Water		
11	Nominal Size	DN / NPS	125		250		40		
12	Nominal Pressure	PN / class	--		--		--		
13	Design Pressure	bar(g)	96		20		50		
14	Design Temp.	°C	548		520		520		
15	Material		1.7380/1.7383 (10CrMo9-10/11CrMo9-10)		1.7380/1.7383 (10CrMo9-10/11CrMo9-10)		1.7380/1.7383 (10CrMo9-10/11CrMo9-10)		
16	Operation Data		Case	Case	Case	Case	Case	Case	
17	Medium:	Water/Steam							
18	Phase		steam	steam					
19	Flowrate	t/h	50	5					
20	Temp.Inlet	°C	548	540					
21	Pressure Inlet	barG	88,00	93,50					
22	Pressure Outlet	barG	13,80	13,80					
23	kv	m³/h	70,41	5,94					
24	Temp.cooled	°C	225,0	225,0					
25	t-sat. p2	°C	198	198					
26	Water Temp.	°C	185	185					
27	Water-Press.	barG	27,0	40,0					
28	Water-Flow	t/h	15	1,49	--	--	--	--	
29	Water-Velocity	m/s	3,25	0,31	--	--	--	--	
30	Steam-Velocity	m/s Inlet	61,4	5,7	--	--	--	--	
31	Steam-Velocity	m/s Outlet	52,1	5,2	--	--	--	--	
32	Sound Level	dB(A)	87	77	--	--	--	--	
33	Min. straight-run distance:	7,0 m	Min. distance to temperature sensor:			9,0 m			
34	Type of Valve		Angle-Form With Integrated Motive Steam Nozzle						
35	Valve Parameter		Material			Add. Equipment			
36	Seat Diameter	80 mm	Body	1.7380/1.7383 (10CrMo9-10/11CrMo9-10)		Dirt Strainer	without		
37	Pressure Reduction Steps, controlled	4	Seat	1.7380/1.7383 (10CrMo9-10/11CrMo9-10)		Drainage Port	without		
38	Pressure Reduction Steps, fix	1	Perforated Cone	1.4923 (X22CrMoV12-1), plasma nitrided		Valve Support	without		
39	kvs	85 m³/h	Motive Steam Nozzle	1.4923 (X22CrMoV12-1)		Installation Dimensions Leg Length, Inlet 270 mm Leg Length, Outlet 380 mm			
40	Control Characteristic	linear	Seals	Graphite					
41	max. dp for actuator	96 bar							
42	Stroke	50 mm							
43									
44	Design / Inspection					Final Inspection Confirmation			
45	Pressure Equipment Directive 2014/68/EU					acc. to DIN EN 10204 3.1			
46	Requirements acc. to: EN 12952								
47	Leakage Class: 0,01% of kvs-Value								
48									
49	Actuator	electric						3194752	
50	Type	auma SAR14.6 with AC01.2							
51		terminal plan TPC A-1B1-1C2-A000; TPA 00R1AA-0A1-000, seperate Matic with cable set (wire/6m) and wall bracket WH01.1							
52		U= 400V / 50Hz / 3ph, Thyristors, position controller 4–20 mA, position feedback 4–20 mA							
53		operating time: ca. 55 sec./stroke							
54									
55	Actuator Adaptation								
56	Remarks								
57	Sound pressure level with combined sound/heat insulation > 150 mm thickness								
58									
59									
60									
61									
62	Revision	0	1	2	3	4	5	6	
63	Datum	05.05.2025	21.05.2025	21.05.2025	24.11.2025				
64	Bearbeitet	M. Bechly	H. Rossmann	H. Jäkel	P. Schüler				
65	Geprüft	J. Neufeld	J. Neufeld	J. Neufeld	J. Neufeld				

Control Ball Valve



ARTES Valve & Service GmbH
Parkallee 7 - 16727 Velten
GERMANY

A MEMBER OF THE ARCA FLOW GROUP

1	Customer:	Armteko s.r.o.	ARTES-Ref.-no.:		5505173		
2	Plant:	Kralupy	Pos.:		1.1		
3	Location:	cooling water CV	Qty.:		1		
4	TAG No.:		S/N:		3194889.1		
5	Pipe - Connection Data		Inlet			Outlet	
6	Dimensions	Ø D [mm] x s [mm]	48,3	x	3,6	48,3	x 3,6
7	Material		--		--		
8	Welding Connection	Ø D [mm] x s [mm]	48,3	x	3,6	48,3	x 3,6
9	Flange Connection		--		--		
10	Valve - Design		Inlet			Outlet	
11	Nominal Size	DN / NPS	40			40	
12	Nominal Pressure	PN / class	--			--	
13	Design Pressure	bar(g)	50			50	
14	Design Temperature	°C	200			200	
15	Material		1.0460 (P250GH, C22.8)			1.5415 (16Mo3, 15Mo3)	
16	Operation Data		Loading Case	Loading Case	Loading Case	Loading Case	Loading Case
17	Medium :	Water/Steam	1	2	3	4	5
18	Phase		water	water			
19	Flowrate	t/h	15,36	1,48			
20	Temperature, Inlet	°C	185,00	185,00			
21	Pressure, Inlet	barA	27,00	40,00			
22	Pressure, Outlet	barA	18,80	13,85			
23	t-sat. p1	°C	228,09	250,36			
24	t-sat. p2	°C	209,28	194,55			
25	kv	m³/h					
26	Flow Speed, Outlet	m/s					
27	Type Of Valve Control Ball Valve Type W						
28	Valve Parameter			Material			
29	Seat Diameter:	40	mm	Body:	1.0460 (P250GH, C22.8)		
30	Pressure Reduction Steps, controlled:	1		Seating:	1.4122 (X39CrMo17-1), metal sealing		
31	Pressure Reduction Steps, fix:			Ball:	1.4122 (X39CrMo17-1), metal sealing		
32	kvs	7,0	m³/h	Control disc:	1.4122 (X39CrMo17-1), hardened		
33	Control Characteristic:	modified		Seals:	Graphite		
34	max. Dp für Actuator:	50	bar				
35	Installation Length:	230	mm				
36							
37	Design / Inspection					Final Inspection Confirmation	
38	Preussure Equipment Directive 2014/68/EU					3.1	
39	Requirements acc. to: EN 12952					acc. to DIN EN 10204	
40	Leakage Class: 0,01% of kvs-Value						
41							
42	Actuator	electric					3194767
43	Type:	auma SAR07.6 with AC01.2 and GS63.3					
44		terminal plan TPC A-1B1-1C2-A000; TPA 00R1AA-0A1-000, seperate Matic with cable set (wire/6m) and wall bracket WH01.1					
45		U= 400V / 50Hz / 3ph, Thyristors, position controller 4–20 mA, position feedback 4–20 mA					
46		operating time: ca. 35 sec./90°					
47							
48	Actuatoradaption:						
49	Remarks						
50	- incipient cavitation in Loading Case 2						
51							
52							
53							
54							
55	Revision	0	1	2	3	4	5
56	Date:	05.05.2025					
57	Prepared:	M. Bechly					
58	Checked:	T. Langanke					