Desuperheater Type 3

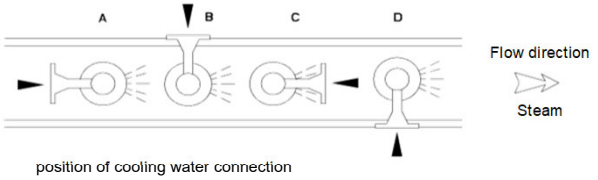
ARTES Valve & Service GmbH
Parkallee 7 - 16727 Velten
GERMANY

A MEMBER OF THE ARCA FLOW GROUP

1	Customer:	Standardkessel Baumgarte GmbH				ARTES-ref.-no.:	5504578
2	Plant:	Oldhall				Pos.:	8
3	Location:	spray attemperator 2 left / right				Qty.:	2
4	TAG No.:	DH-4C002A / DH-4C002B				S/N:	3178391.1 & 3178391.2
5	**Pipedesign**						
6	Steam Pipe	Ø D *[mm]* x s *[mm]*		219,10	x	14,20	
7	Thermoshock Pipe	Ø D *[mm]* x s *[mm]*		177,80	x	5,00	
8	Cooling Water Pipe	Ø D *[mm]* x s *[mm]*		33,70	x	3,20	

9	**Valve Design**				
10			steamside	waterside	
11			EN 1092-1/B	EN 1092-1/B	
12	Nominal Size	DN | DN	80	25	
13	Nominal Pressure	PN | PN	160	160	
14	Pressure	*[bar(g)]*	78	135	
15	Temperature	*[°C]*	415	150	
16					

position of cooling water connection **C**



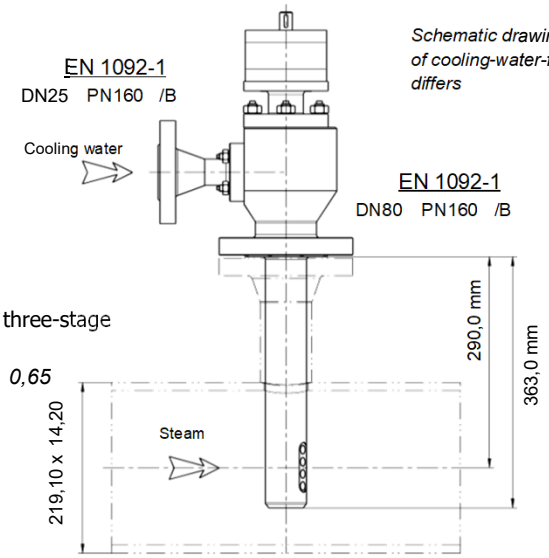
position of cooling water connection

17	**Operation Data**		**Loading Case 1**		**Loading Case 2**		**Loading Case 3**		**Loading Case 4**		**Loading Case 5**		**Loading Case 6**	
18	Medium:		steam	water	steam	water	steam	water	steam	water	steam	water	steam	water
19	Flow Rate	*[t/h]*	29,00	*0,15*	41,30	*0,44*	44,20	*1,67*		--		--		--
20	Temp. Inlet	*[°C]*	390,00	130,00	390,00	130,00	400,00	130,00						
21	Temp. Outlet	*[°C]*	385,00		380,00		365,00							
22	Pressure	*[bar(a)]*	65,70	75,90	65,70	75,90	65,70	75,90						
23	Flow Speed	*[m/s]*	*15,19*	*0,08*	*21,50*	*0,22*	*22,79*	*0,84*	--	--	--	--	--	--
24	K_v - Value	*[m³/h]*		*0,05*		*0,14*		*0,54*		--		--		--

25	**Type Of Valve**	Desuperheater metallic sealing
26		

27	**Material**	
28	Body:	1.7380 (10CrMo9-10)
29	Cooling Water Flange:	1.5415 (16Mo3, 15Mo3)
30	Stem:	1.4122 (X39CrMo17-1), hardened
31	Nozzle Stem:	1.4301 (X5CrNi18-10), hardened
32	Seatring	1.4122 (X39CrMo17-1), hardened
33	Nozzle:	1.4122 (X39CrMo17-1), hardened
34	Seal:	Graphite
35		

Schematic drawing - location of cooling-water-flange differs



36	**Valveparameter**					
37	Seat Diameter:	*[mm]*	25			
38	Pressure Reduction Steps:	◉ single-stage	○ double-stage	○ three-stage		
39	Number Of Nozzles:		9			
40	K_{VS} Valve / Stage2 / Stage3 / Nozzles:	*[m³/h]*	**0,65** | --	-- | *0,65*		
41	Characteristic Curve:		modified			
42	x-Length:	*[mm]*	290,0			
43	Offset Δx:	*[mm]*	3,0			
44	LL-Length:	*[mm]*	363,0			
45	max. Δp for actuator:	*[bar]*	135,0			
46	Lance Diameter:	*[mm]*	71			

47	**Inspection acc. to**	Pressure Equipment (Safety) Regulations 2016 & Preussure	**Final Inspection**	**3.1**
48		Requirements acc. to: EN 12952	**Confirmation Acc. To DIN**	
49		Leakage Rate: 0,01% of K_{VS}-Value	**EN 10204**	
50	**Mounting Instruction**	Length of straight outflow pipe	6,0 m	
51		Min-Distance to the temperature sensor	8,0 m	
52	**Actuator**	pneumatic		3178389
53	Type:	ProtACT PR134D, double-acting "rack&pinion"; signal/air failure: Fail-in-Place; Manual gear box		
54		MOG.088…134, handwheel Ø350; Positioner Siemens Sipart PS2 6DR5120-0NG31-0AF0, 2-wire connection &		
55		HART-interface, Iy-module (6DR4004-8J) for position feedback (4…20mA), Iy-module (6DR4004-8K)		
56		mechanic limit switches; Filter/Regulator G1/4" Norgren B82G-2GK-AD3-RMG; Positioning Time: ≤ 30 sec/90°		
57		min. air supply pressure: 4,5 bar(g)		

58	**Remarks**
59	
60	
61	
62	We recommend the use of a strainer!

63	Revision	0	1	2	3	4	5	6
64	Date:	12.12.2022	22.12.2022					
65	Prepared:	H. Roßmann	P. Schüler					
66	Checked:	P. Schüler	R. Feldmann					