

2-Stage-Metering Valve Model 590 DN 15 bis 50

Operation and maintenance instructions – angle seat and flange design

1. Assembly: Please first compare and check the technical data of the armature with the operating data. Before installation and initial operation the valves and conduits are to be cleared of any impurities (Packing material, welding beads, rust etc.). A dirt pan, mounted in front of the valve, increases the reliability. It is expedient to only drive the pneumatical actuation with purified air.
2. Mounting position: Any
3. Mounting nature of the armature: at customer's option; no special regulations
4. Actuation- und control-modes: The drive of the metering valve is normally controlled by two 3/2-way electromagnetic pilot valves.
5. Functional description: In the rest position the valve is closed. Through the force effect of the integrated springs in the actuation the valve head in the valve casing is pressed on the valve seat and the valve closed.
6. Opening procedure: Through actuation of the control ports "full stroke" and "adjustable stroke" with pressurized air the valve is fully opened.
7. Metering procedure: Through venting of the control port "full stroke" only the actuation "adjustable stroke" stays active and this stroke can be continuously adjusted externally by the stroke limitation built in to the upper drive.
8. Closing procedure: After the venting of the con-

trol cavity "adjustable stroke" the valve closes through spring tension. A functional test should be conducted before the initiation of the equipment.

9. Maintenance: The metering valve does not need any special maintenance in normal operational circumstances.

Warning: Only skilled staff is permitted to dismantle the metering valve, as it stands under spring tension and therefore there is a risk of injury in improper disassembling of the actuation.



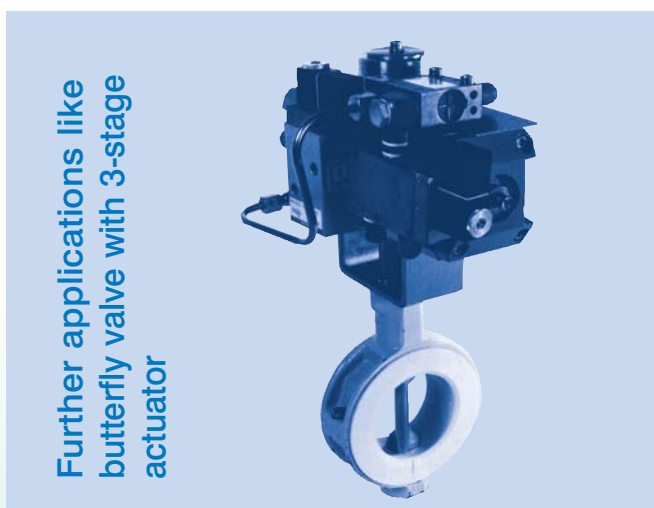
10. Model code:

For example model 590.32.7.40.3.170
590 Metering valve with 2-Step-Actuation
32 Nominal diameter DN 32
7 Casing material waste wax casting VA 1.4581;
6 = Casting material gunmetal RG 5
401 SO-welded hexagon nipple;
1 = Thread socket IG
3 PTFE-Sealing; 2 = Sealing VITON
170 normal under spring tension closed actuation, 70 mm diameter
270 like 170 through open under spring tension

11. Kvs Value

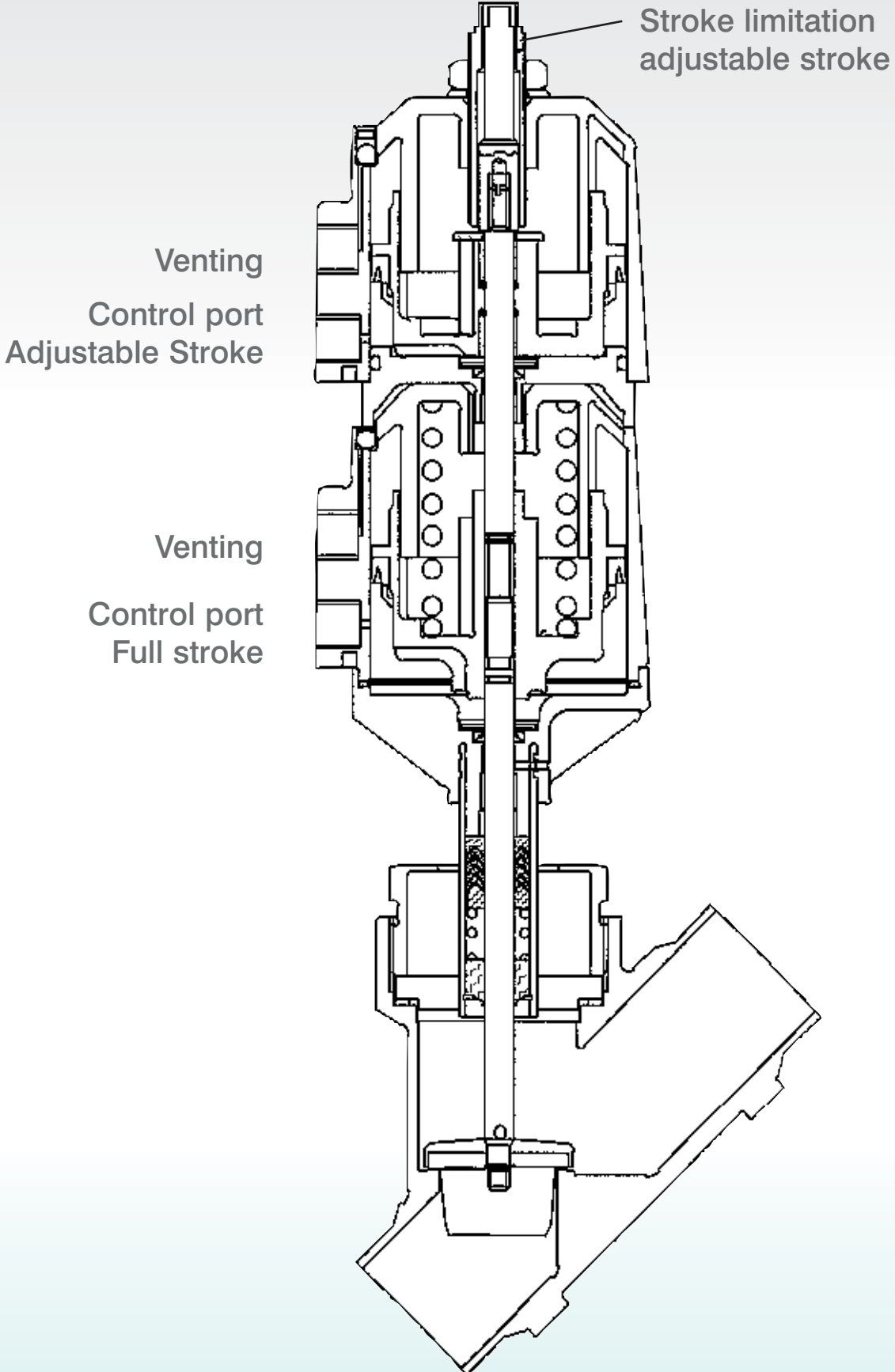
DN 15: 4,8 m³/h
DN 20: 7,6 m³/h
DN 25: 14 m³/h
DN 32: 20 m³/h
DN 40: 35 m³/h
DN 50: 64 m³/h

Miscellaneous data according to data specification Model 584 ...



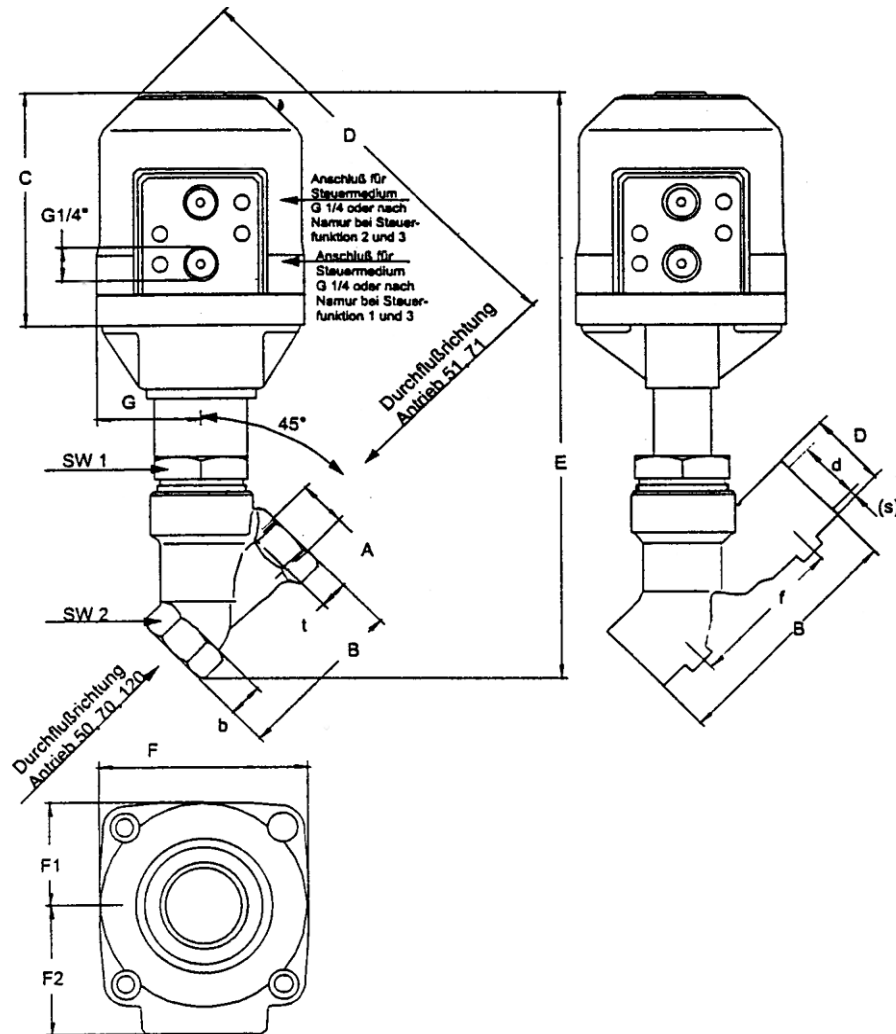
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Operation and maintenance instructions – oblique-seated and flange design



2-Stage-Metering Valve Model 590 DN 15 bis 50

Dimensions model 584/590



model 590

DN	583/584 - actuator 70							585-actuator 50/51				585-actuator 70/71				585-actuator 120/121			
	C	D	F	F1	F2	G	C	D	F	G	C	D	F	G	C	D	F	G	
15	95	163	82	41	50	41	85,5	151	70	34,5	102	163	96	48					
20	95	169	82	41	50	41	85,5	156	70	34,5	102	169	96	48	147	231	164	62	
25	95	173	82	41	50	41	85,5	163	70	34,5	102	173	96	48	147	236	164	62	
32	95	180	82	41	50	41					102	180	96	48	147	258	164	62	
40	95	187	82	41	50	41					102	187	96	48	147	260	164	62	
50	95	195	82	41	50	41					102	195	96	48	147	268	164	62	
65															147	275	164	62	
80															147	288	164	62	

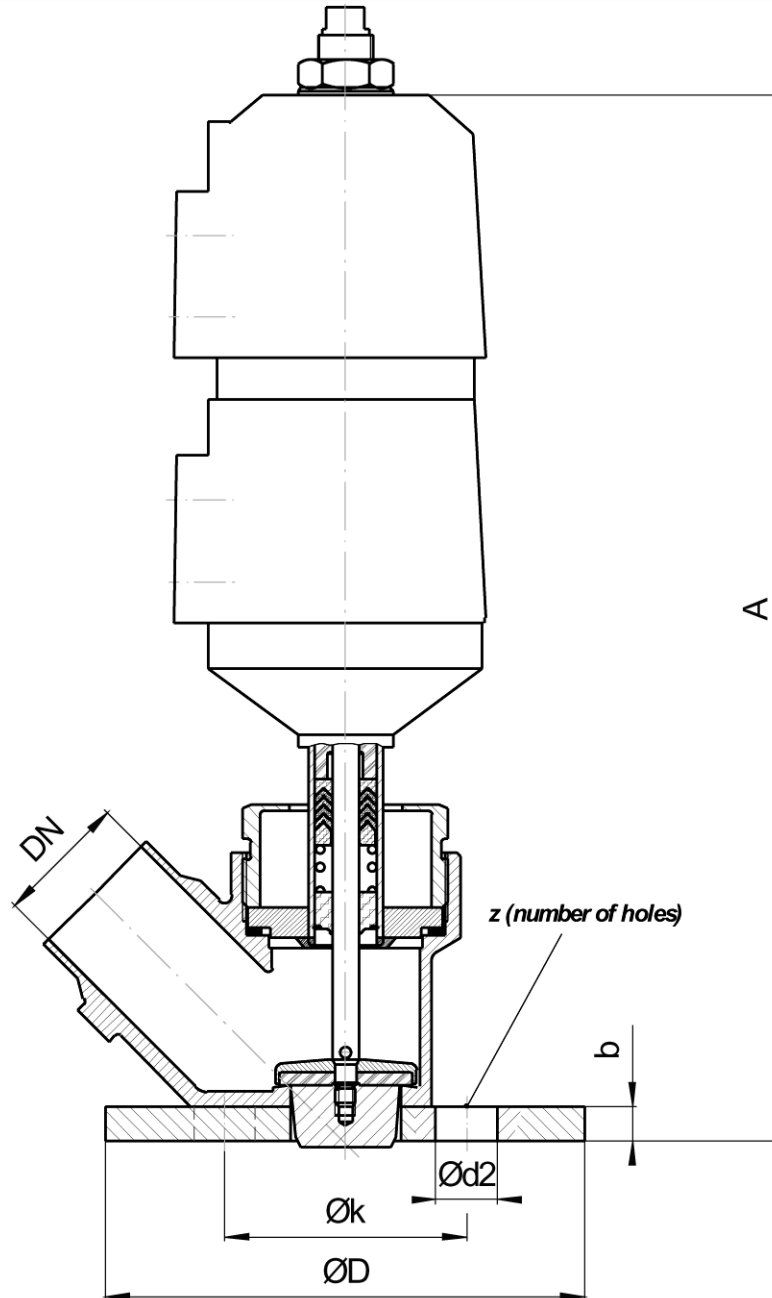
model 590

DN	valve body threaded socket BSP * stainless steel body only up to DN 50							valve body threaded socket NPT							valve body ISO butt welding spigots						
	A	B	SW1	SW2	t	b	E	B	SW1	SW2	t	b	E	B	SW1	D	d	(s)	f		
15	R1/2"	65	36	27	15	19,5	297	81	36	27	20	21	231	100	36	21,3	18,1	1,6	46		
20	R 3/4"	75	46	32	16,3	18	304	87	46	32	22	23	239	108	46	26,9	23,7	1,6	50		
25	R1"	90	46	41	19	26,5	315	104	46	41	22	23	250	112	46	33,7	29,7	2	56		
32	R 1 1/4"	110	60	50	21,4	30	335	115	60	50	23	23	270	137	60	42,4	38,4	2	83		
40	R1 1/2"	120	60	55	21,4	30,5	342	136	60	55	25	26	278	146	60	48,3	44,3	2	86		
50*	R2"	150	75	70	25,7	41	366	165	75	70	26	26	303	160	75	60,3	55,1	2,6	100		
65	R2 1/2"	185	60	85	30	31															
80	R3"	220	60	100	30	31															

2-Stage-Metering Valve Model 590 DN 15 bis 50

Dimensions model 584/590 – outlet with flange

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Valve type 590 with special valve body						
DN	ØD	Øk	Ød2	z	b	A
15	95	65	14	4	10	275
25	115	85	14	4	10	287
32	140	100	18	4	10	305
40	150	110	18	4	10	315