Mounting instruction

Valves

Lindab®

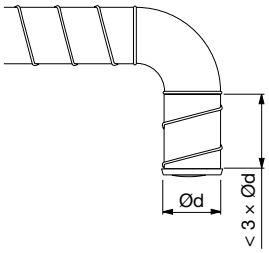
Overview diffusers, valves and cover

Unit				Connects to						
				Socket with thread for units with bayonet holder			Socket with groove for units with spring holder		Cover socket with groove for units with wire spring holder	Smooth socket for units with plate spring holder	Duct/ Fitting
Supply air	**VVTK**	Dif-fuser					**VRFU** 	**VRFM** 	**VRR**		
	VTTB	Dif-fuser					**VRFU** 	**VRFM** 	**VRR**		
	SHH	Dif-fuser									Duct
	KPT	Valve								**IL** 	Duct/ Fittings
	KI	Valve		**VRGU** 	**VRGL** 	**VRGM** 					
	KIR	Valve		**VRGU** 	**VRGL** 	**VRGM** 					
Supply and exhaust air	**TAV**	Valve									Duct

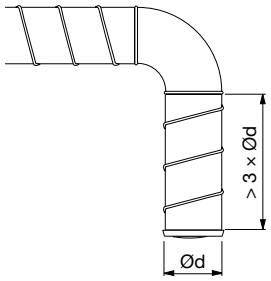
Unit				Connects to								
				Socket with thread for units with bayonet holder			Socket with groove for units with spring holder		Cover socket with groove for units with wire spring holder	Smooth socket for units with plate spring holder	Duct/ Fitting
Exhaust air	**KVB**	Valve					**VRFU** 	**VRFM** 	**VRR**		
	KDPF	Valve		**VRGU** 	**VRGL** 	**VRGM** 	**VRFU** 	**VRFM** 	**VRR**		
	KVG Ø 100–160	Valve					**VRFU** 	**VRFM** 	**VRR**		
	KVG Ø 200	Valve		**VRGU** 	**VRGL** 	**VRGM** 					
	KU	Valve		**VRGU** 	**VRGL** 	**VRGM** 					
	KSU	Valve		**VRGU** 	**VRGL** 	**VRGM** 					
	KSUB	Valve and fire damp-er		**VRGU** 	**VRGL** 	**VRGM** 					
	KPF	Valve								**IL** 	Duct/ Fitting
No air	**TLO**	Cover					**VRFU** 	**VRFM** 	**VRR**		

When to use the different k-factor types

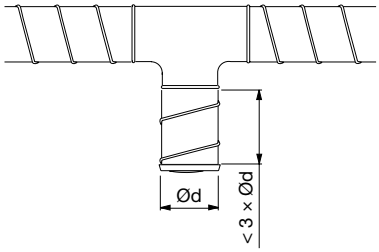
k-factor type: B (Bend 90°)



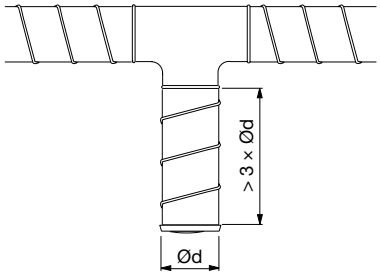
k-factor type: D (Duct)



k-factor type: T (T-piece)



k-factor type: D (Duct)



Explanations

Measurement of air flow

$$q = k \cdot \sqrt{\Delta p_m} \qquad \Delta p_m = \left(\frac{q}{k}\right)^2$$

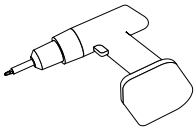
where

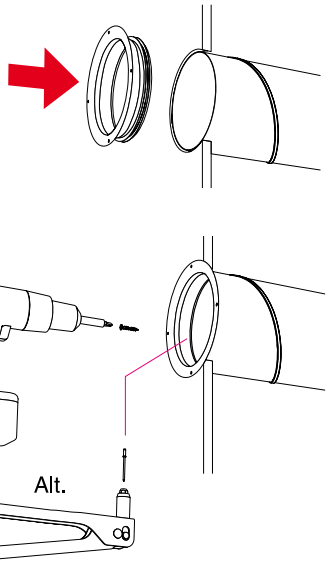
q	is	air flow	[l/s]
Δp_m	is	measuring pressure difference	[Pa]
k	is	correction factor, see table	[–]

Tables

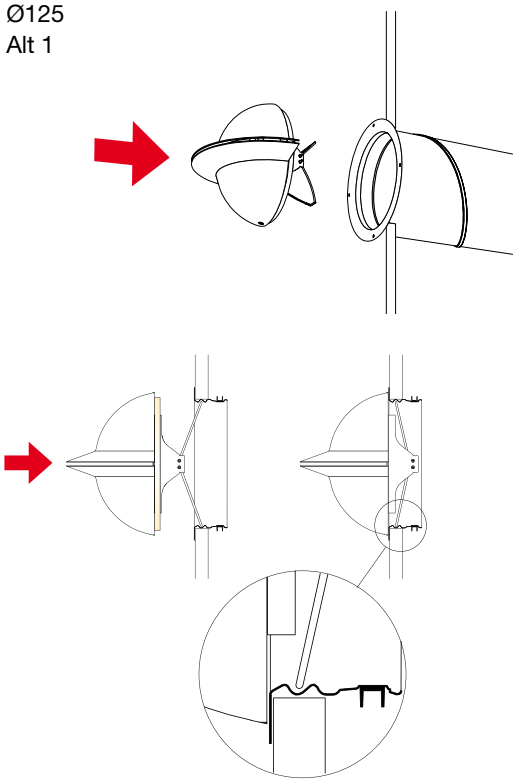
a	is	setting of valve disc or cone	[mm]
n	is	setting of valve disc or cone	[number of opening turns]
D	is	valve mounted in a duct	
B	is	valve mounted in a bend 90°	
T	is	valve mounted in a T-piece	
WOSP	is	without sector plate	
WSP	is	with sector plate	
👍	is	recommended method	
👎	is	not recommended method	

Diffuser
VVTK

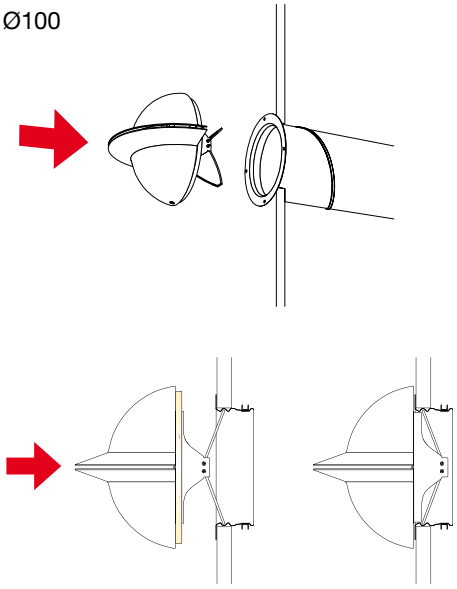




Ø125
Alt 1



Ø100



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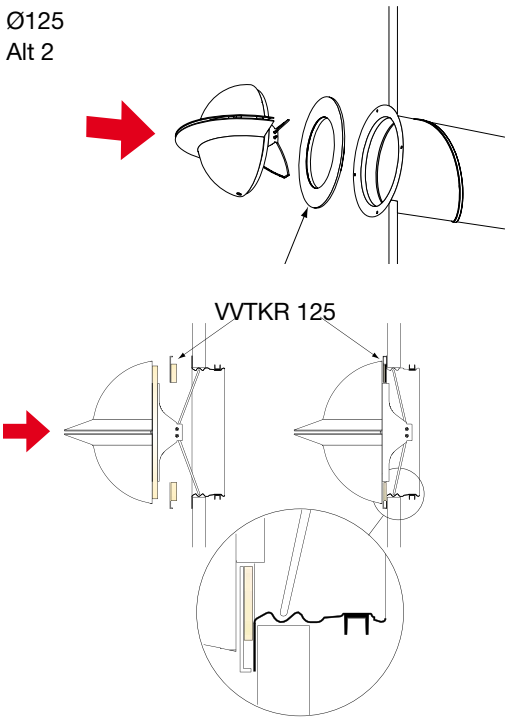
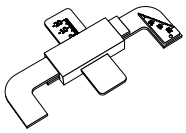
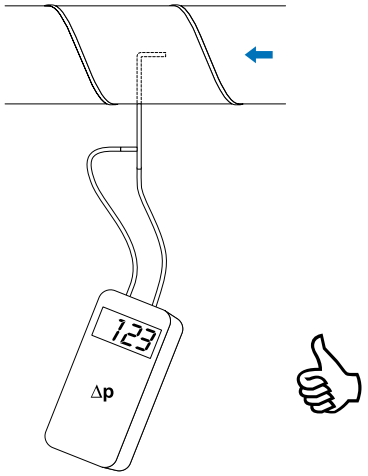
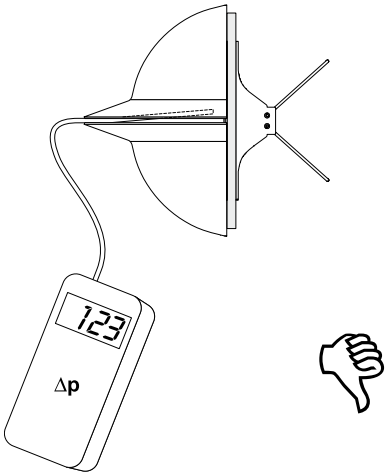
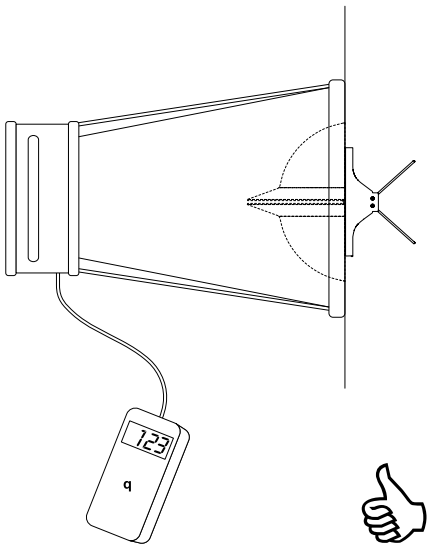


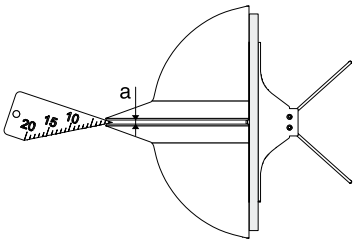
Diffuser
VVTK





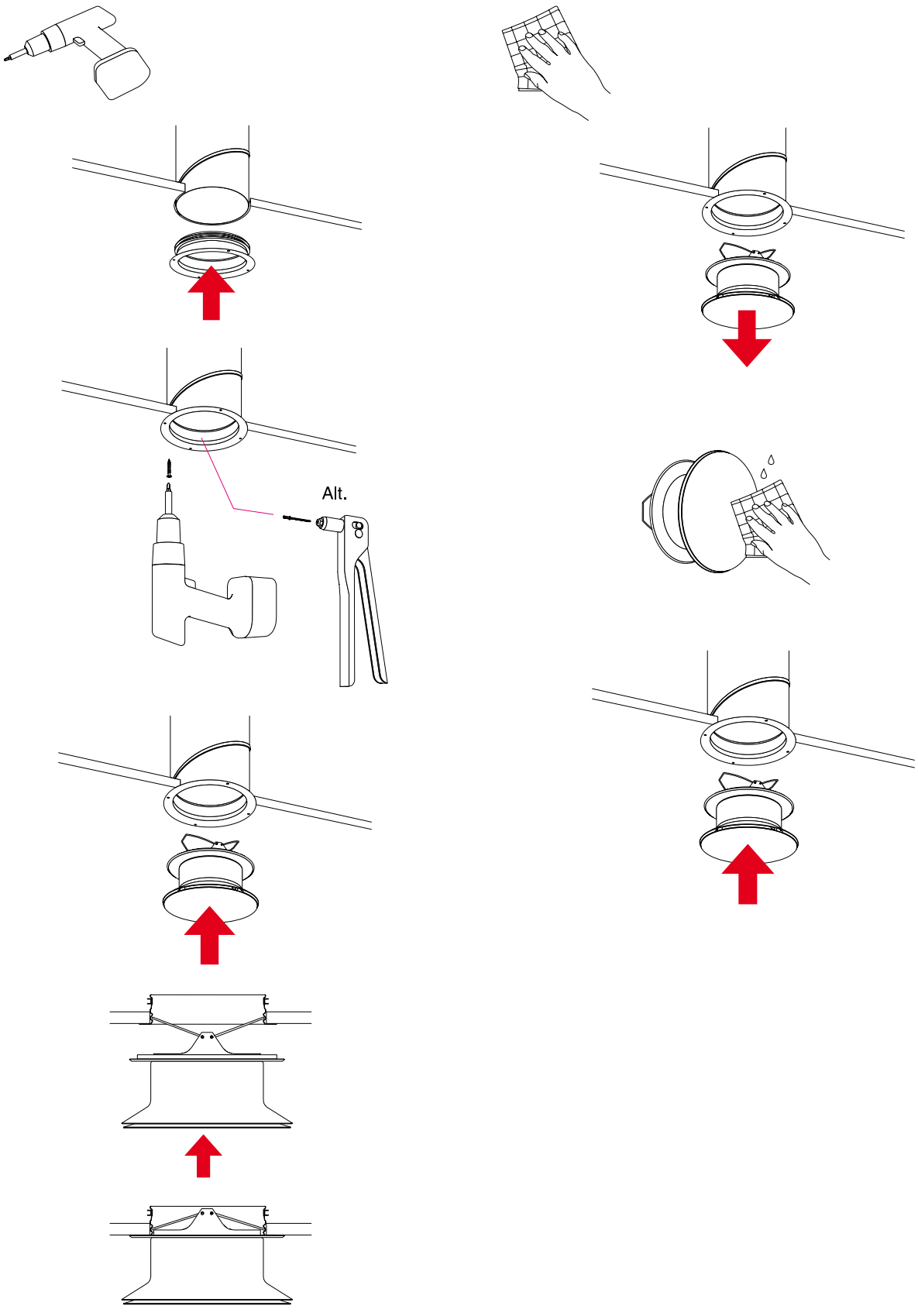






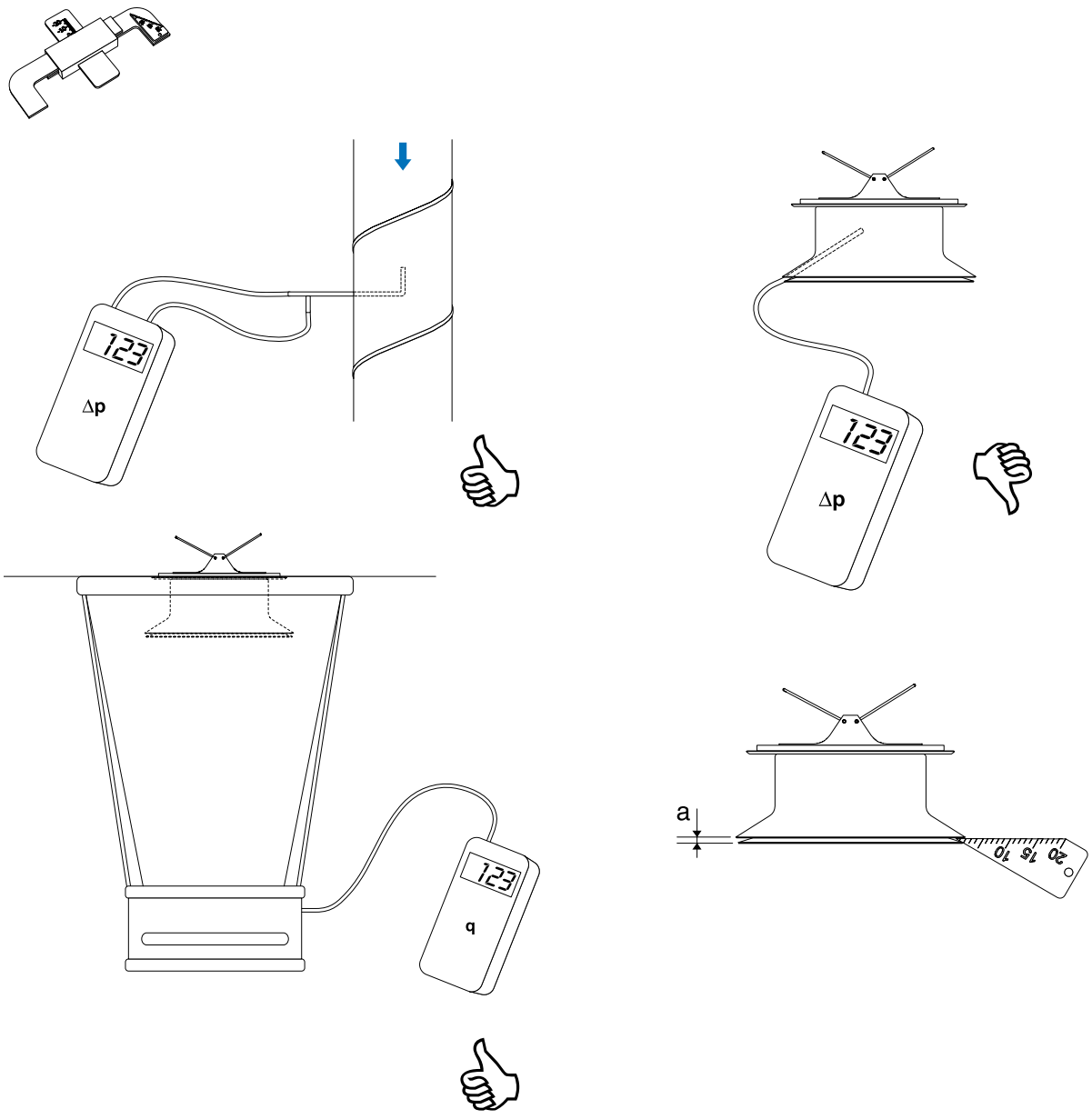
Ø mm	Valve mounted in	Setting a [mm]						
100	Duct	**a**	**6**	**8**	**10**	**12**		
		k	1,14	1,44	1,85	2,48		
125	Duct	**a**	**6**	**7**	**8**	**10**	**12**	**16**
		k	1,25	1,51	1,87	2,16	2,73	3,61

Diffuser
VTTB



Diffuser

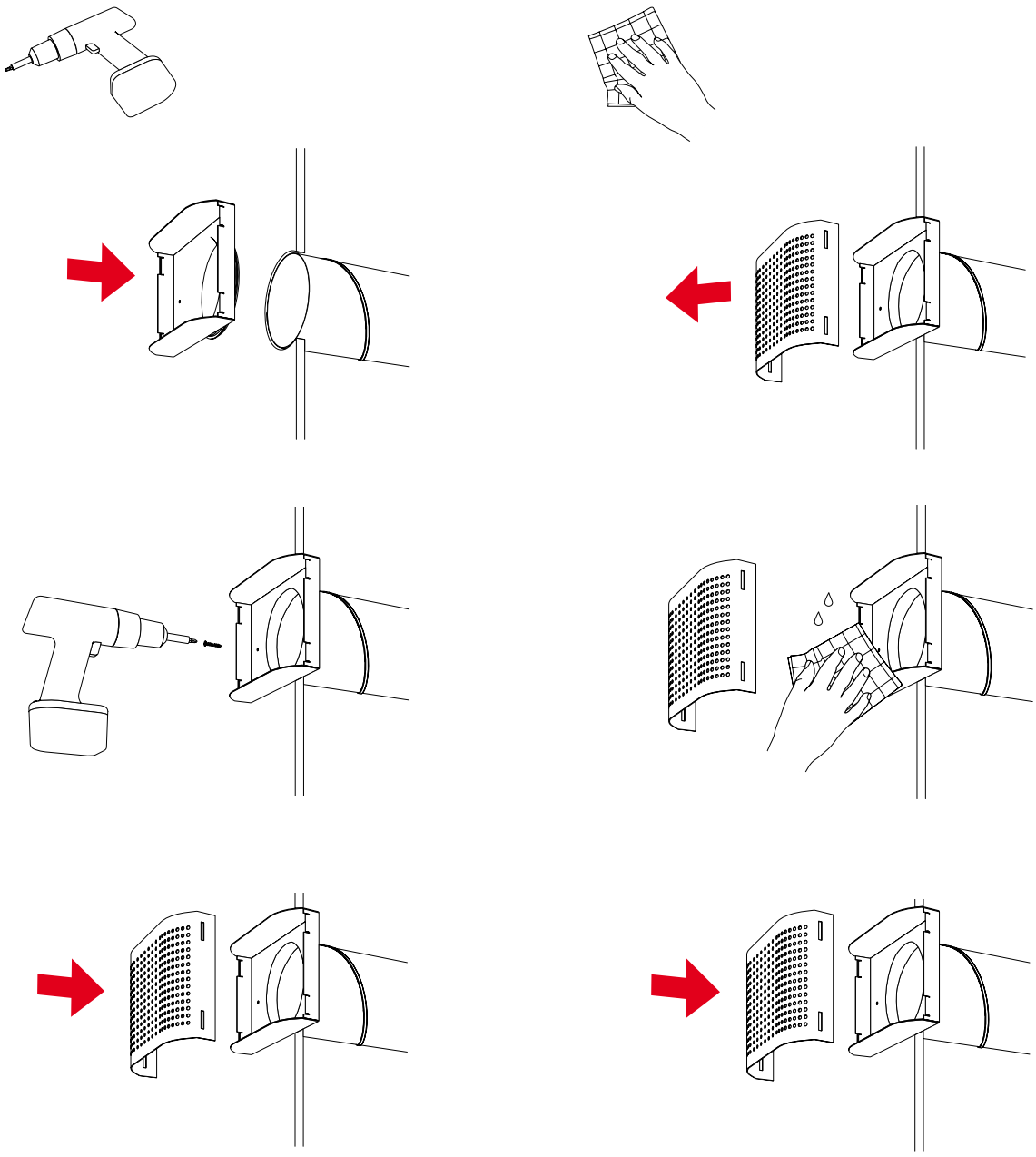
VTTB



Ø mm	Valve mounted in	Setting a [mm]							
		a	**4**	**5**	**6**	**7**	**8**	**10**	**12**	**16**
100	Duct	k	0,919	0,967	1,17	1,45	1,58	1,89	2,00	3,24
		a	**4**	**5**	**6**	**7**	**8**	**10**	**12**	**16**
125	Duct	k	1,11	1,47	1,69	2,01	2,21	2,72	3,46	4,54
		a	**5**	**8**	**10**	**12**	**16**	**20**		
160	Duct	k	2,05	2,93	3,51	3,92	5,19	7,20		

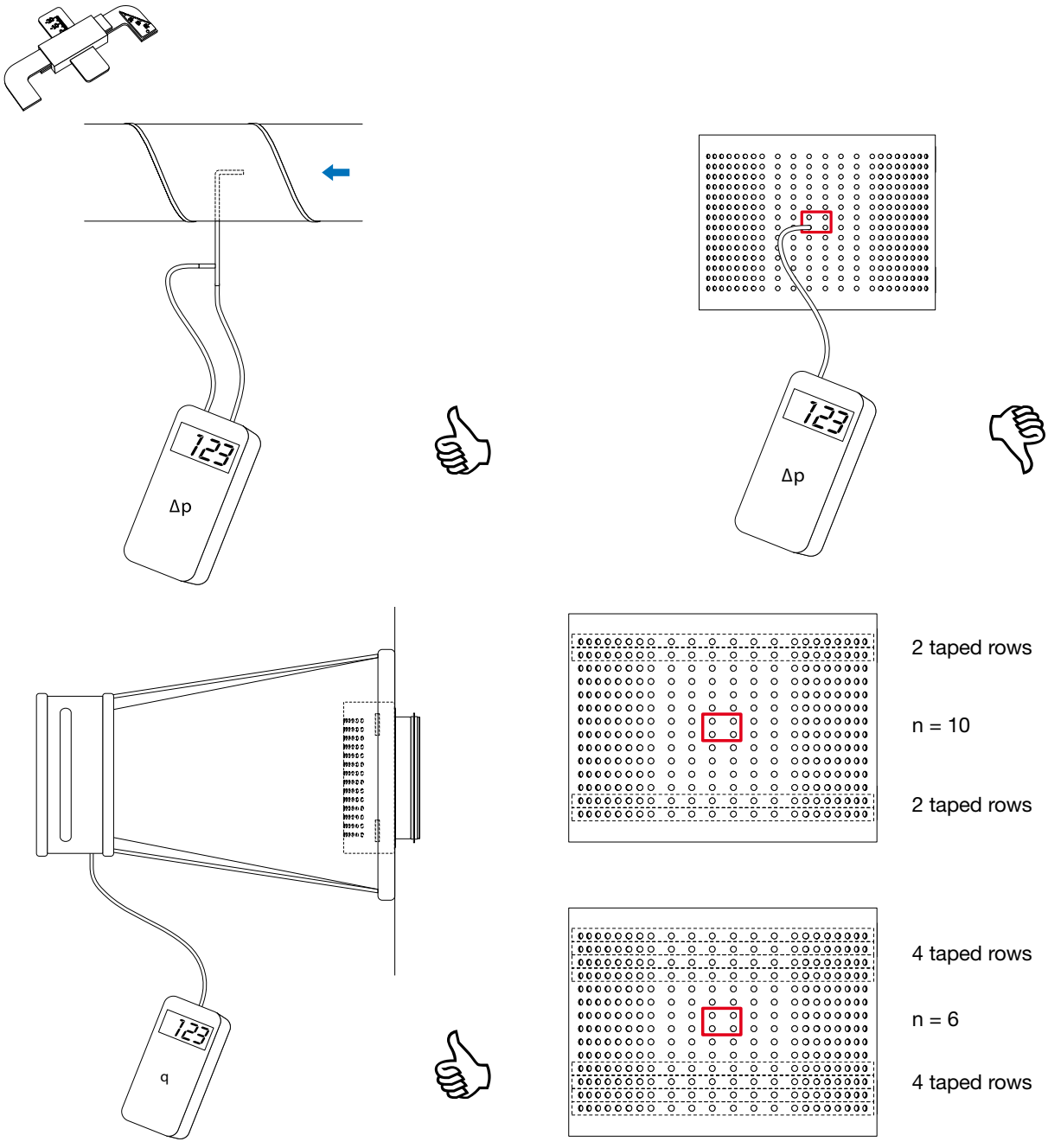
Diffuser

SHH



Diffuser

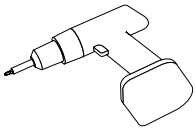
SHH

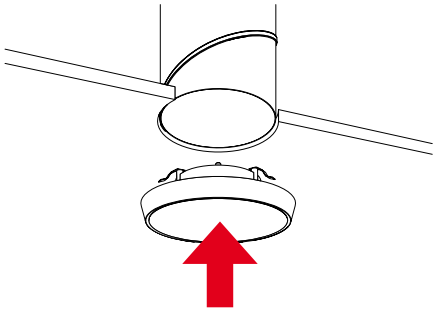


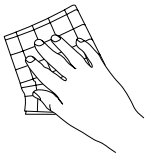
Ø mm	Diffuser mounted in	Setting n [number of open rows]							
100	Duct	**n**	**2**	**4**	**6**	**8**	**10**	**12**	**14**
		k	0,7	1,2	1,7	2,3	2,7	3,1	3,6
125	Duct	**n**	**2**	**4**	**6**	**8**	**10**	**12**	**14**
		k	0,7	1,2	1,8	2,3	2,8	3,3	3,9

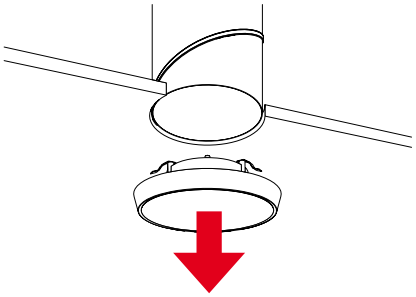
Valve

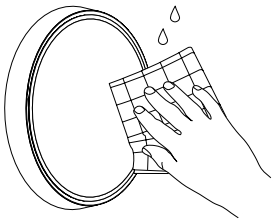
KPT

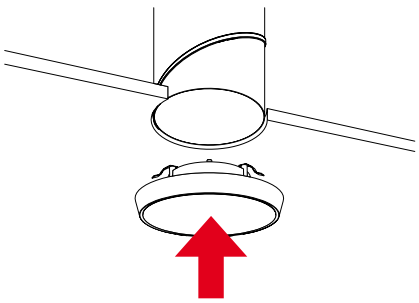






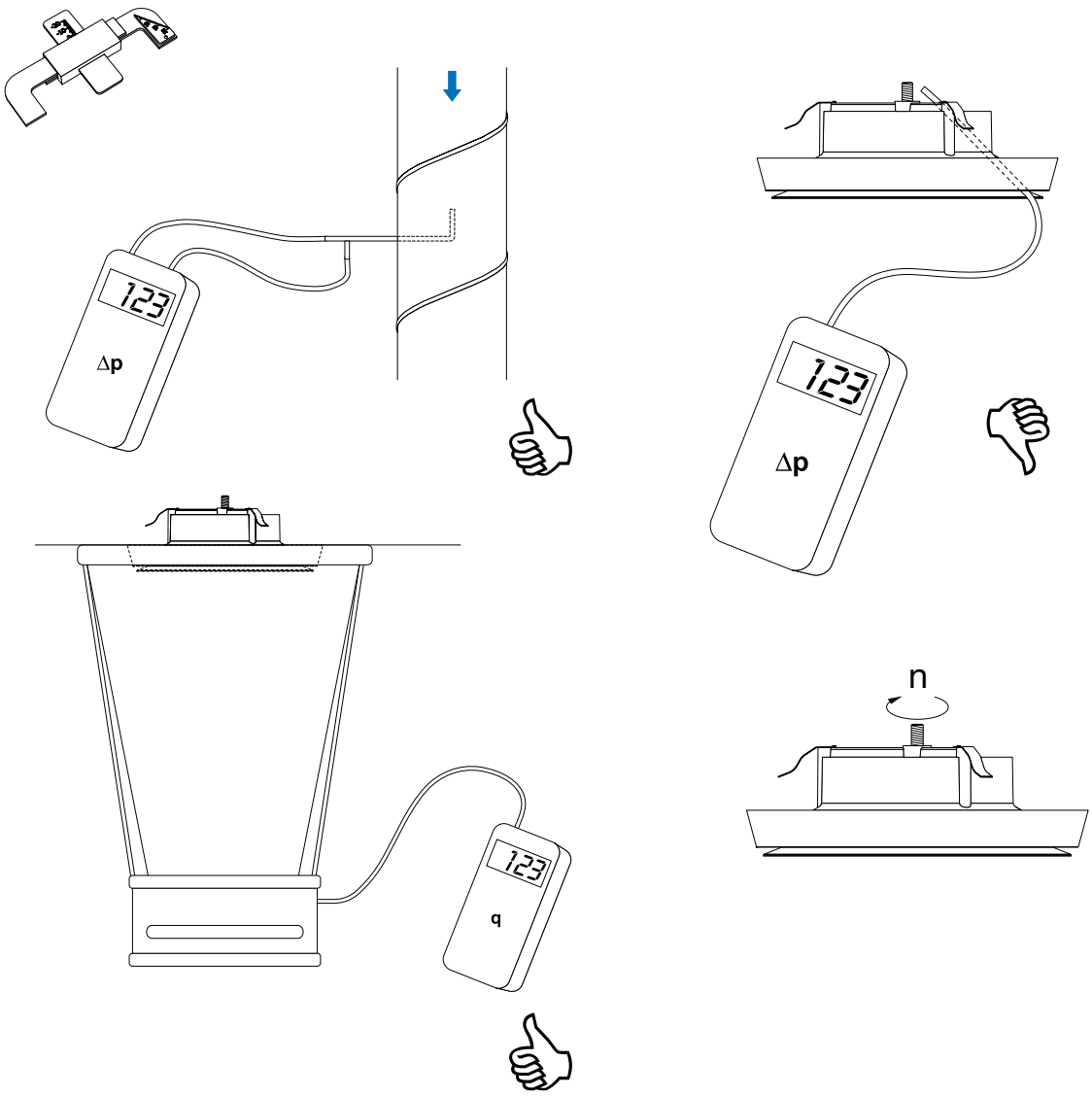






Valve

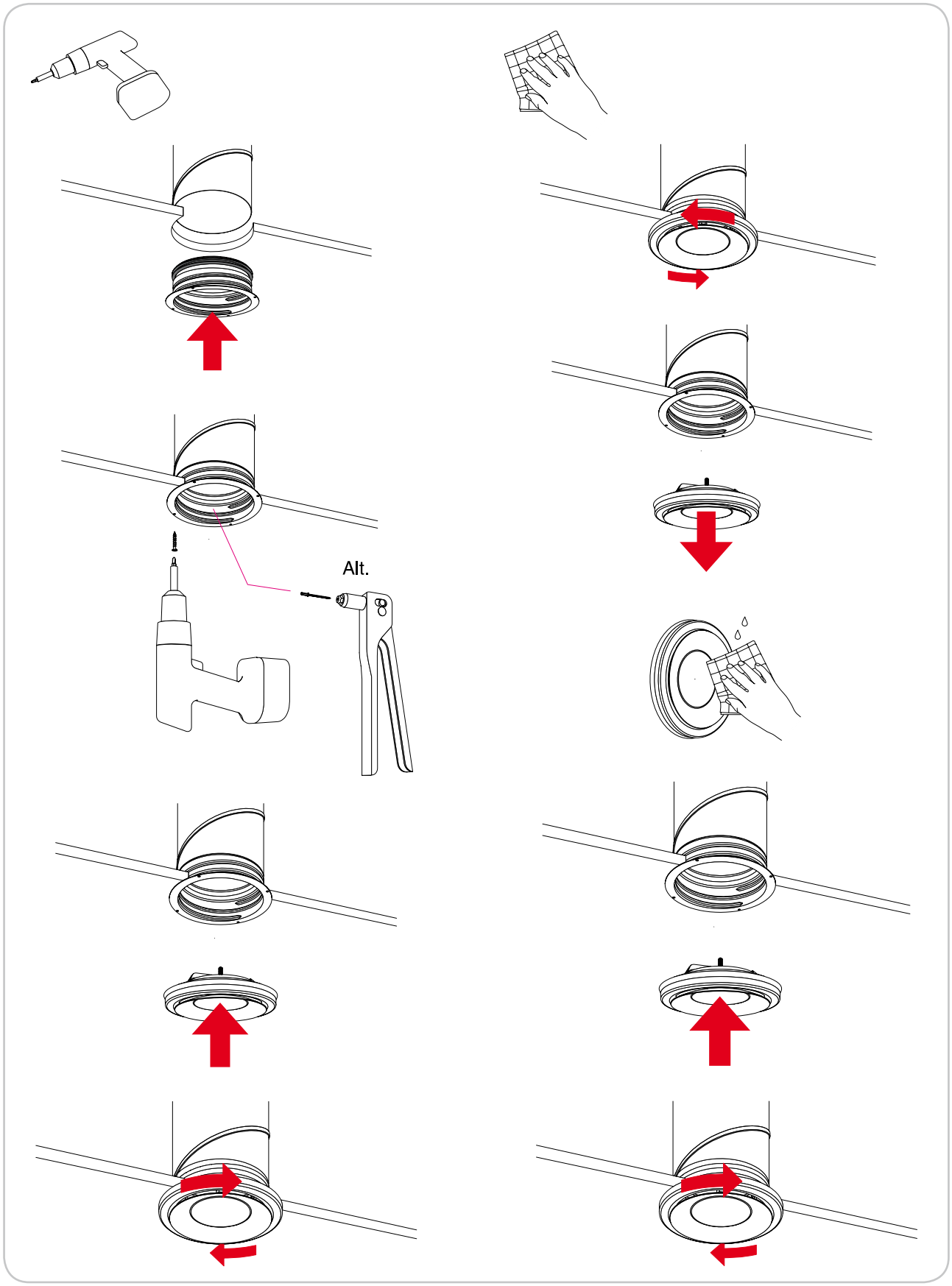
KPT



Ø mm	Valve mounted in	Setting n [number of opening turns]						
80	Duct	**n**	**1**	**2**	**3**	**4**	**6**	**8**
		k	1,08	1,42	1,83	2,30	2,92	3,77
100	Duct	**n**	**2**	**3**	**4**	**6**	**8**	**10**
		k	1,12	1,69	2,20	3,36	4,21	4,86
125	Duct	**n**	**4**	**5**	**6**	**7**	**8**	**9**
		k	1,23	1,50	1,79	2,09	2,30	2,66
160	Duct	**n**	**6**	**8**	**10**	**12**		
		k	2,34	3,06	3,73	4,35		
200	Duct	**n**	**7**	**9**	**11**	**13**	**15**	
		k	4,55	5,47	6,35	7,39	8,37	

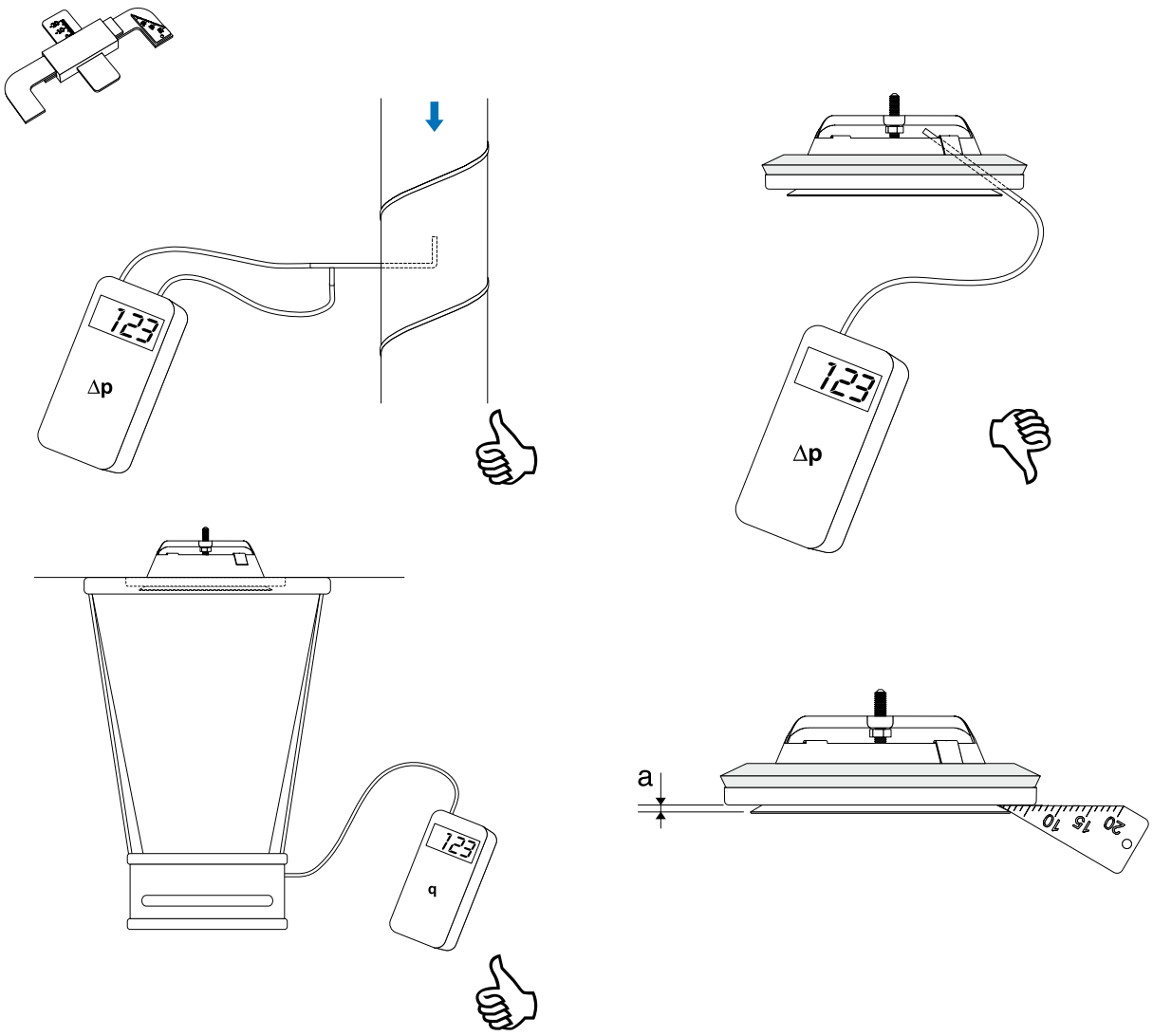
Valve

KI



Valve

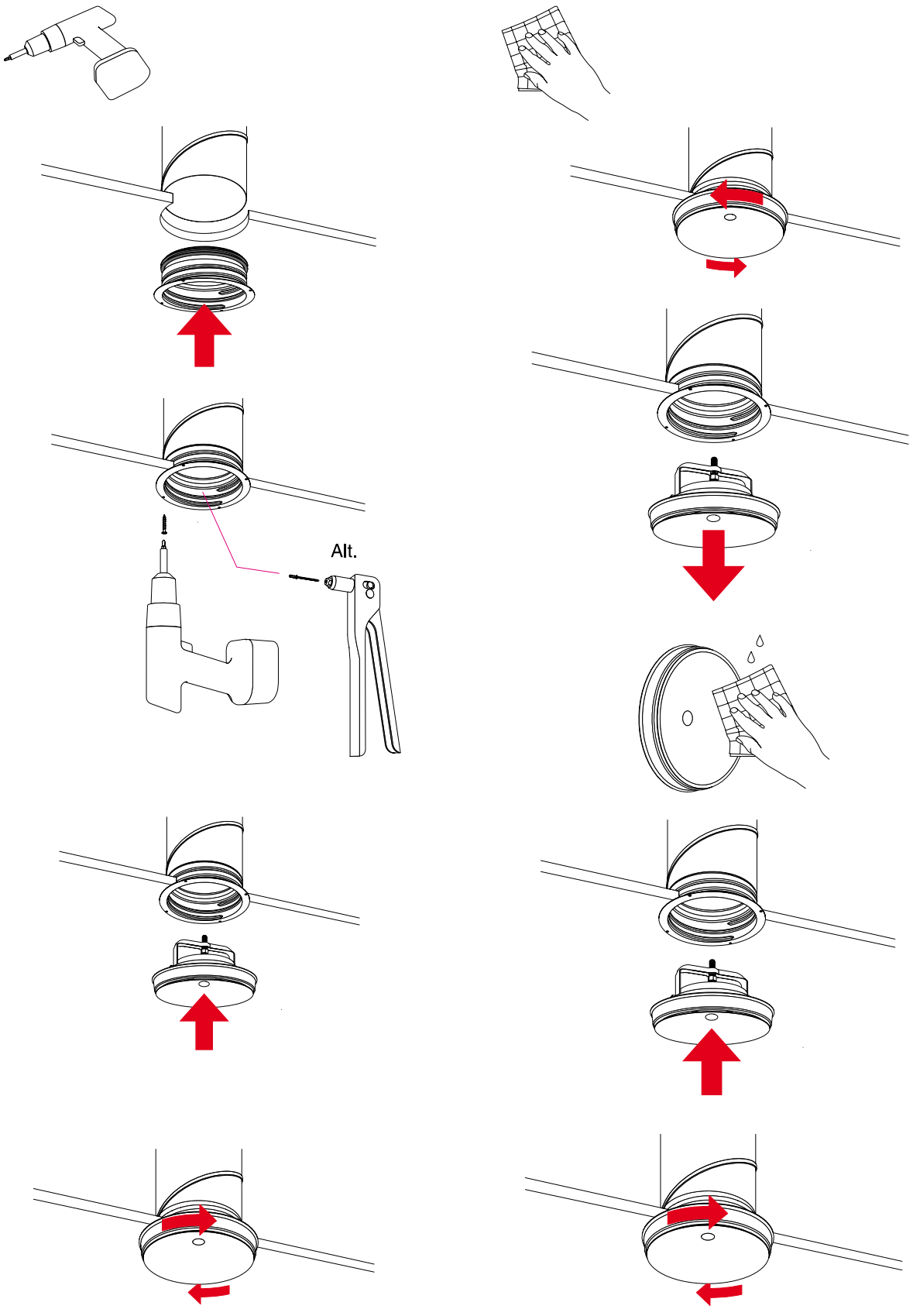
KI



Ø mm	Valve mounted in	Setting a [mm]						
80	Duct	**a**	**2**	**4**	**6**	**9**	**12**	
		k	0,779	1,36	2,05	2,65	2,80	
100	Duct	**a**	**2**	**4**	**6**	**9**	**12**	
		k	1,00	1,10	2,31	3,19	4,12	
125	Duct	**a**	**3**	**5**	**7**	**9**	**12**	**15**
		k	1,23	1,85	2,83	3,74	5,08	6,21
150	Duct	**a**	**4**	**6**	**9**	**12**	**15**	**20**
		k	2,35	3,37	4,50	5,74	7,40	10,3
160	Duct	**a**	**4**	**6**	**9**	**12**	**15**	**20**
		k	1,66	3,10	4,31	6,04	7,34	10,3
200	Duct	**a**	**5**	**6**	**9**	**12**	**15**	**20**
		k	3,66	5,17	7,05	8,00	10,4	12,9

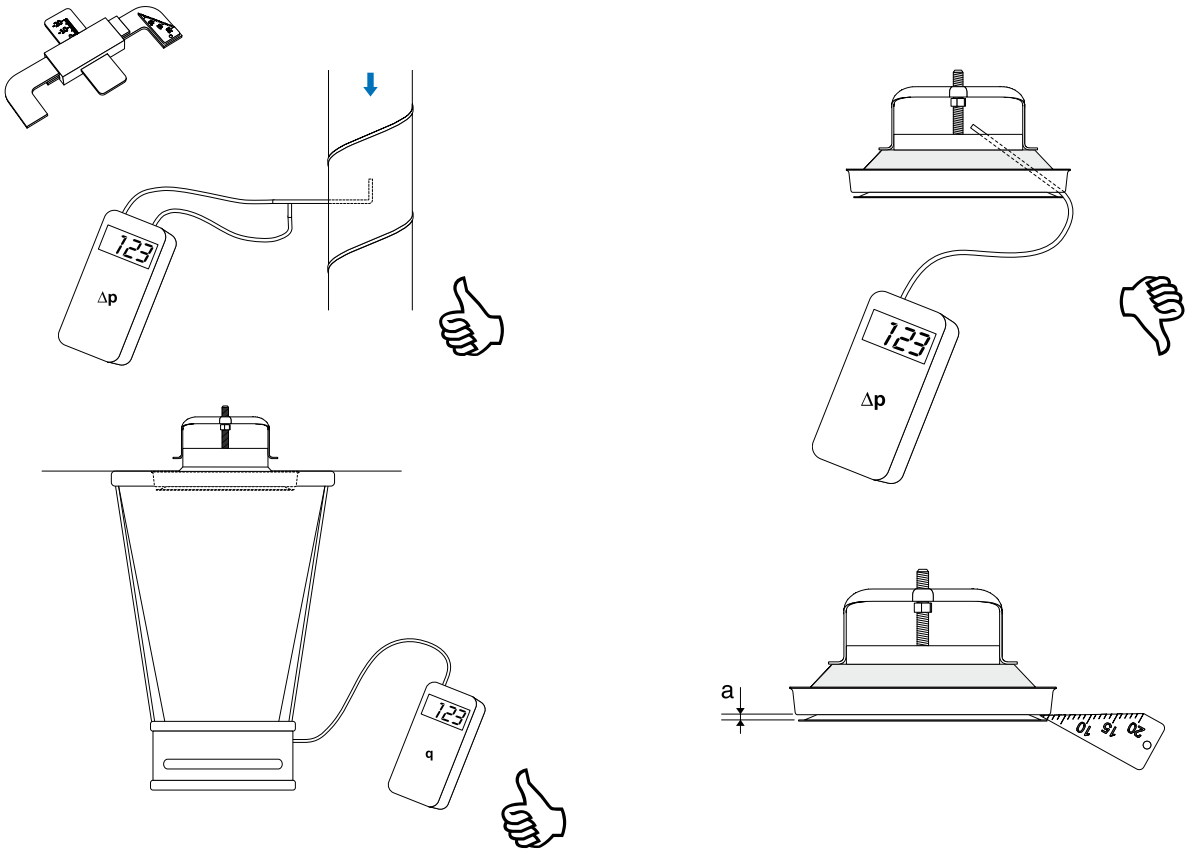
Valve

KIR



Valve

KIR



Without sector plate

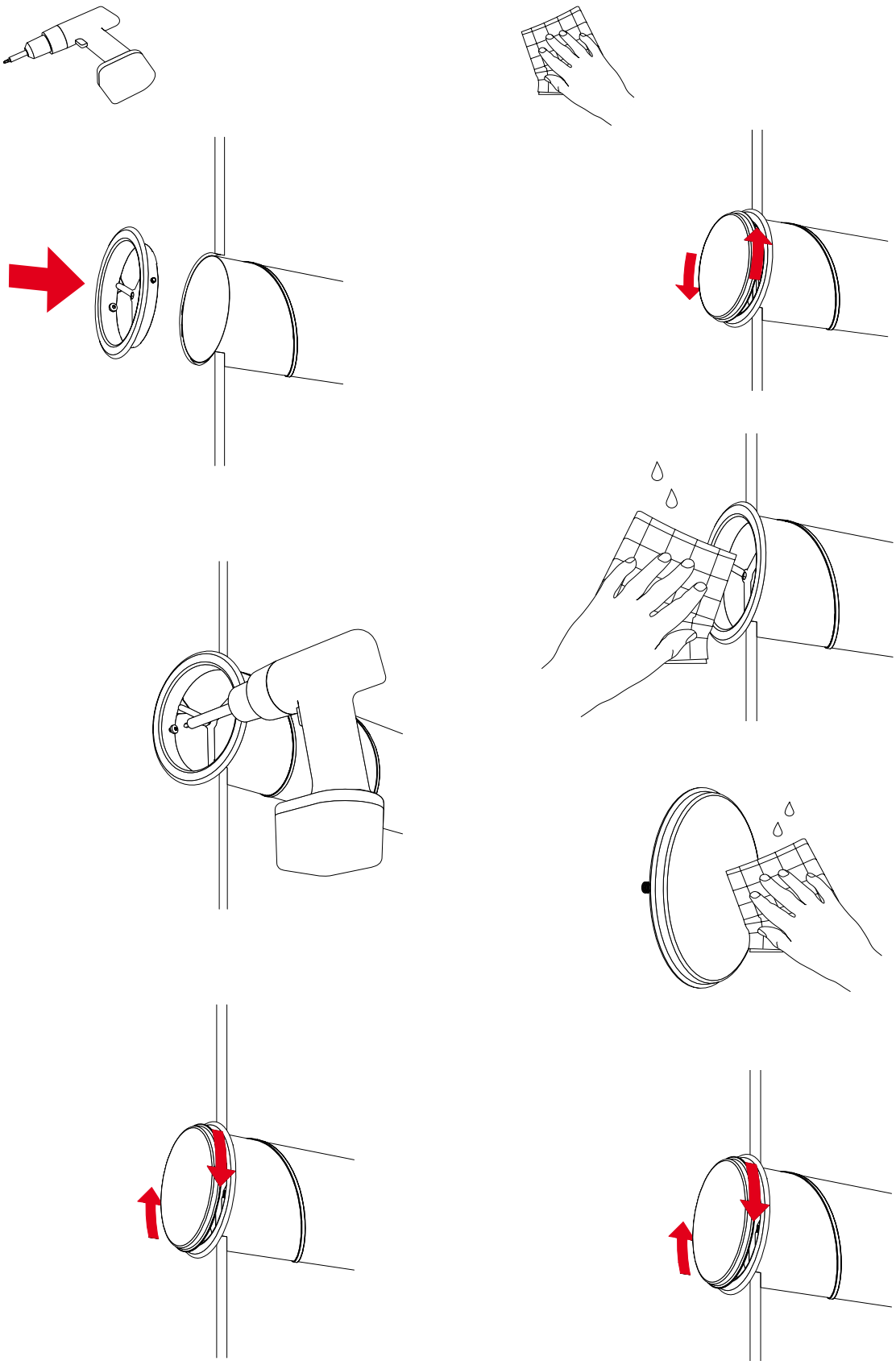
Ø mm	Valve mounted in		Setting a [mm]				
100	Duct	**a**	**2**	**4**	**6**	**9**	**12**
		k	1,09	1,56	2,11	2,81	4,31
125	Duct	**a**	**4**	**6**	**9**	**12**	**15**
		k	1,95	2,99	4,41	5,72	7,41
160	Duct	**a**	**4**	**6**	**10**	**15**	**20**
		k	2,10	3,74	5,83	9,66	12,8

With sector plate

Ø mm	Valve mounted in		Setting a [mm]				
100	Duct	**a**	**2**	**4**	**6**	**9**	**12**
		k	0,882	1,45	1,75	2,49	2,89
125	Duct	**a**	**4**	**6**	**9**	**12**	**15**
		k	1,97	2,65	3,40	4,23	4,77
160	Duct	**a**	**4**	**6**	**10**	**15**	**20**
		k	1,69	2,73	4,39	5,91	7,35

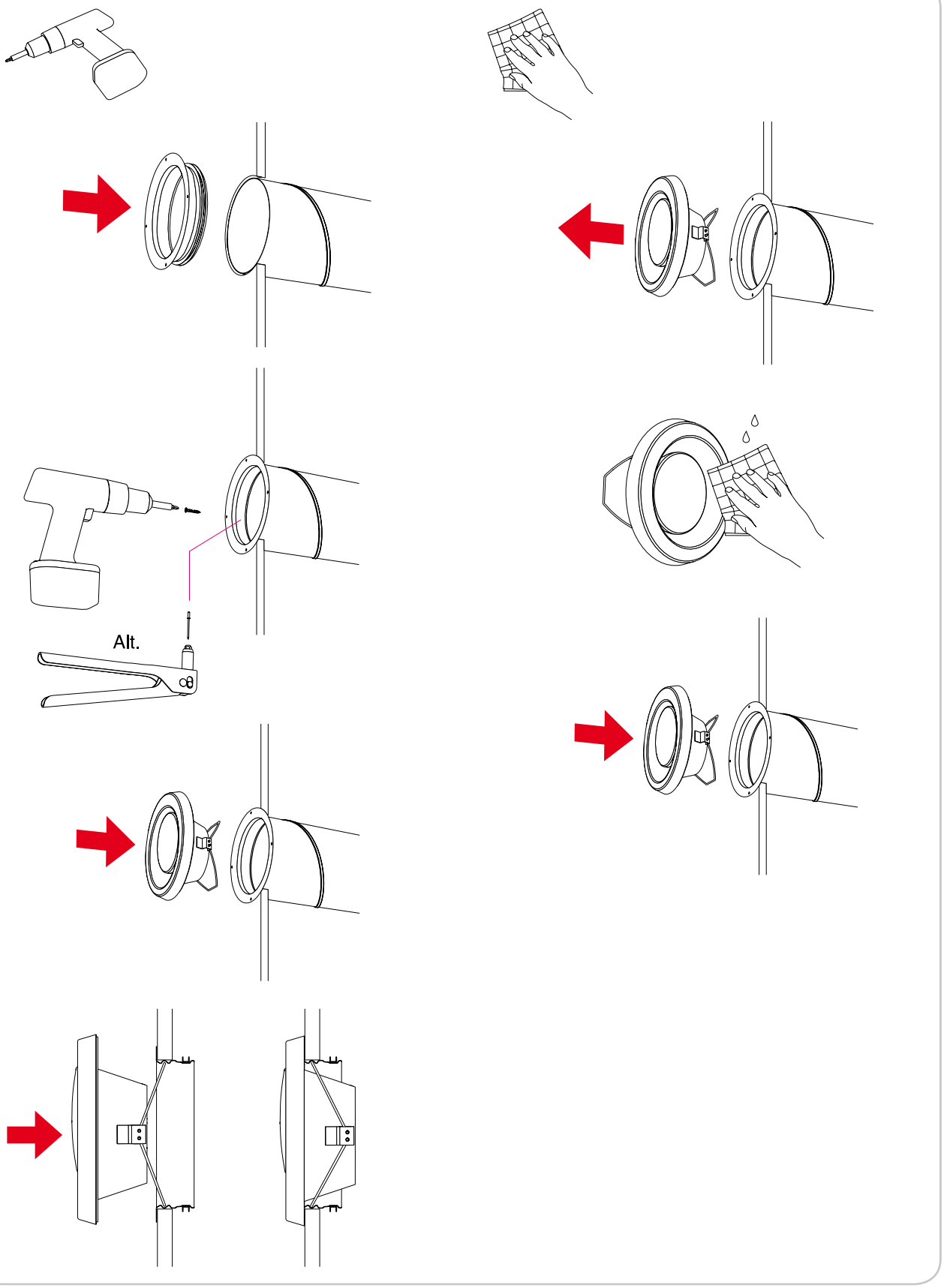
Valve

TAV

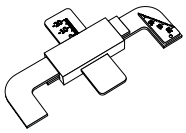


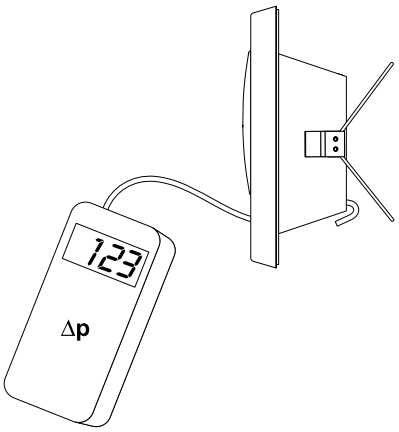
Valve

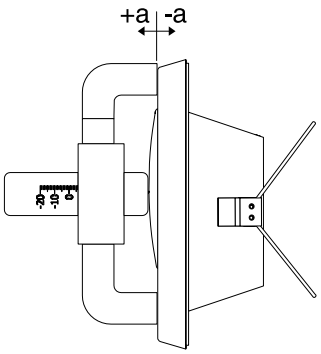
KVB



Valve
KVB



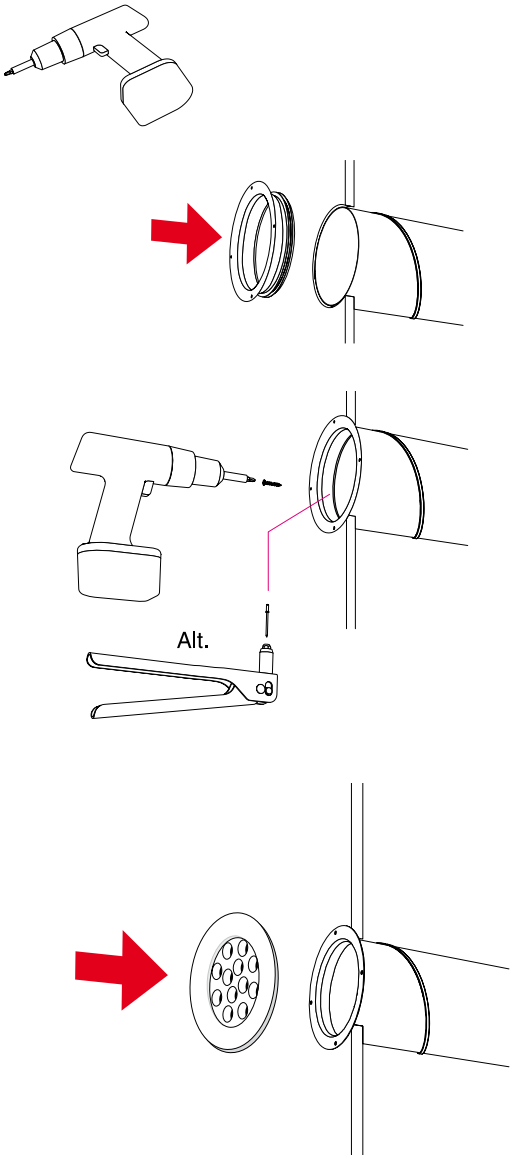




Ø mm	Valve mounted in	Setting a [mm]						
100	Duct Bend 90° T-piece	**a**	**-11**	**-9**	**-6**	**0**	**6**	**9**
		k	0,600 0,590 0,606	0,693 0,655 0,707	1,29 1,01 1,04	1,42 1,53 1,55	2,16 2,12 2,01	2,38 2,24 –
125	Duct Bend 90° T-piece	**a**	**-18**	**-12**	**-6**	**0**	**6**	
		k	1,32 1,26 1,40	1,88 1,80 1,81	2,47 2,46 2,63	3,01 2,90 3,11	3,46 3,46 3,72	
160	Duct Bend 90° T-piece	**a**	**-24**	**-18**	**-12**	**-6**	**0**	**6**
		k	2,05 1,76 –	2,50 2,33 2,80	3,31 3,15 3,29	4,23 3,93 4,04	5,11 4, 72 4,88	5,73 5,29 5,41

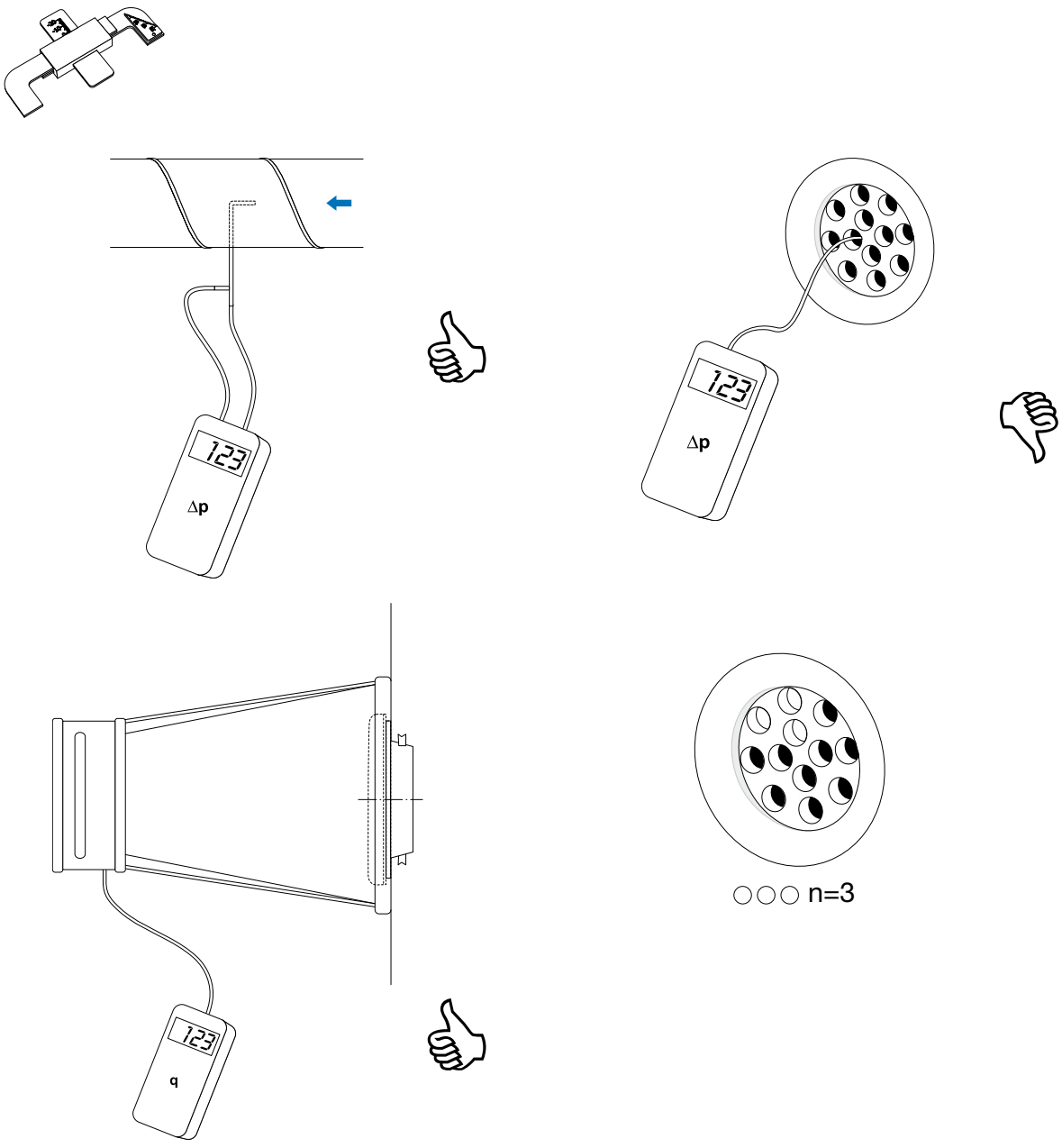
Valve

KDPF



Valve

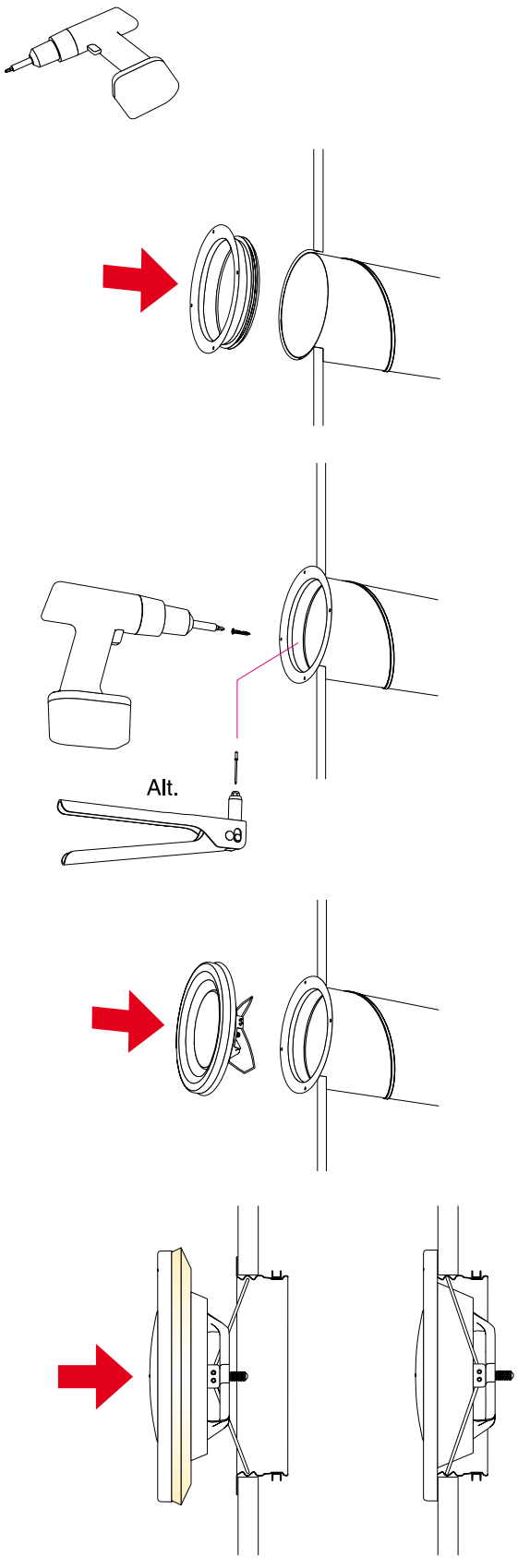
KDPF



Ø mm	Valve mounted in	Setting n [number of open holes]						
100	Duct	**n**	**1**	**2**	**3**	**4**	**5**	**6**
		k	0,24	0,42	0,59	0,80	0,98	1,20
	Duct	**n**	**7**	**8**	**9**	**10**	**11**	**12**
		k	1,50	1,60	1,80	2,10	2,30	2,50

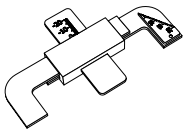
Valve

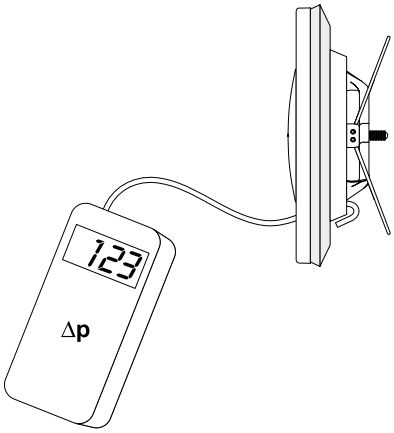
KVG Ø100–160

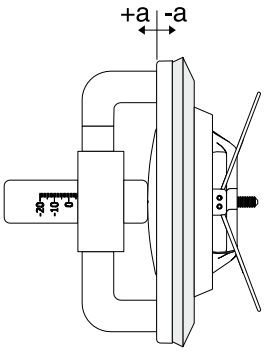


Valve

KVG Ø100–160



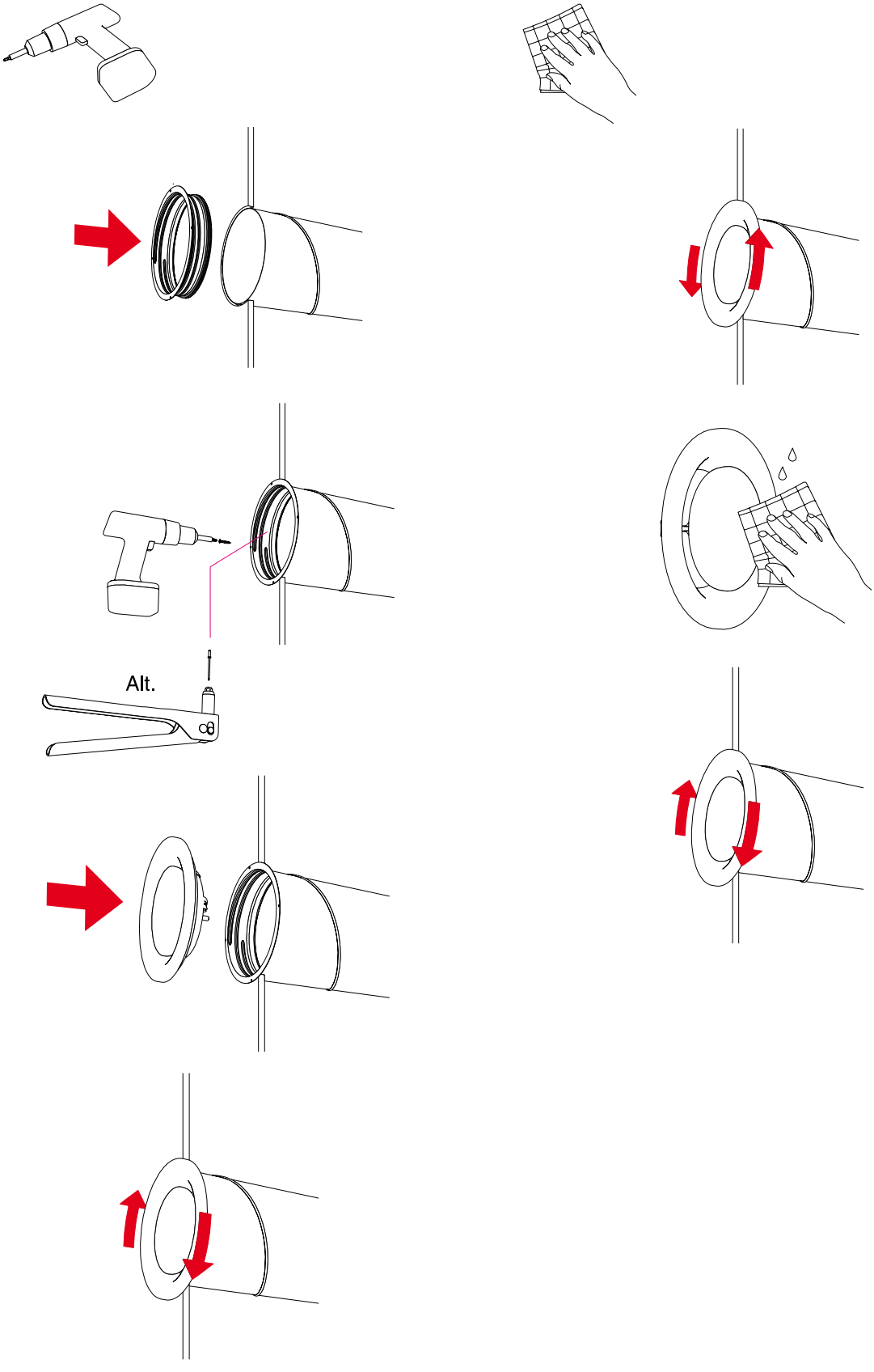




Ø mm	Valve mounted in	Setting a [mm]								
100	Duct Bend 90° T-piece	**a**	**-9**	**-5**	**0**	**5**	**8**	**12**		
		k	0,577 0,549 0,788	1,25 1,15 1,34	1,85 1,87 1,78	2,39 2,53 2,37	2,75 2,86 2,89	3,07 3,27 2,99		
125	Duct Bend 90° T-piece	**a**	**-17**	**-13**	**-9**	**-6**	**-3**	**0**	**5**	**10**	**15**
		k	0,736 0,651 1,12	1,27 1,31 1,94	1,96 2,06 2,64	2,41 2,49 2,89	2,93 3,35 3,06	3,36 3,62 3,54	3,96 5,03 4,07	4,79 5,43 4,97	5,85 7,05 5,61
160	Duct Bend 90° T-piece	**a**	**-18**	**-14**	**-10**	**-5**	**0**	**6**	**12**	**18**	
		k	1,05 1,05 –	1,68 1,71 1,91	2,33 2,48 2,68	3,50 3,43 3,54	4,60 4,35 4,40	5,62 5,25 5,60	6,58 6,33 6,80	7,70 7,49 7,49	

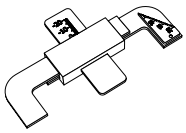
Valve

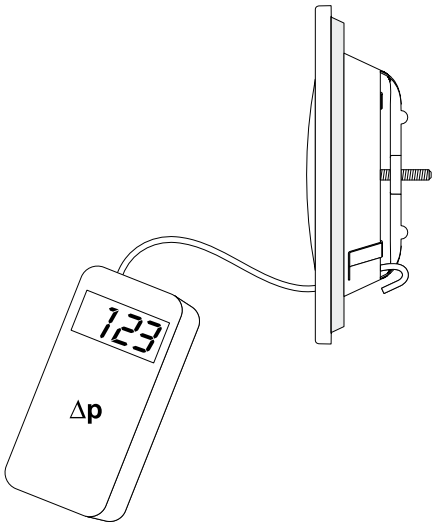
KVG Ø200

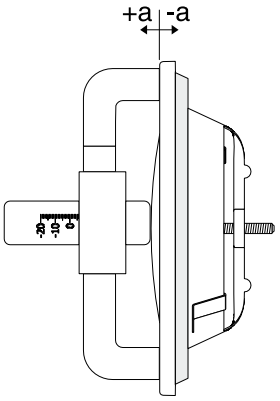


Valve

KVG Ø200



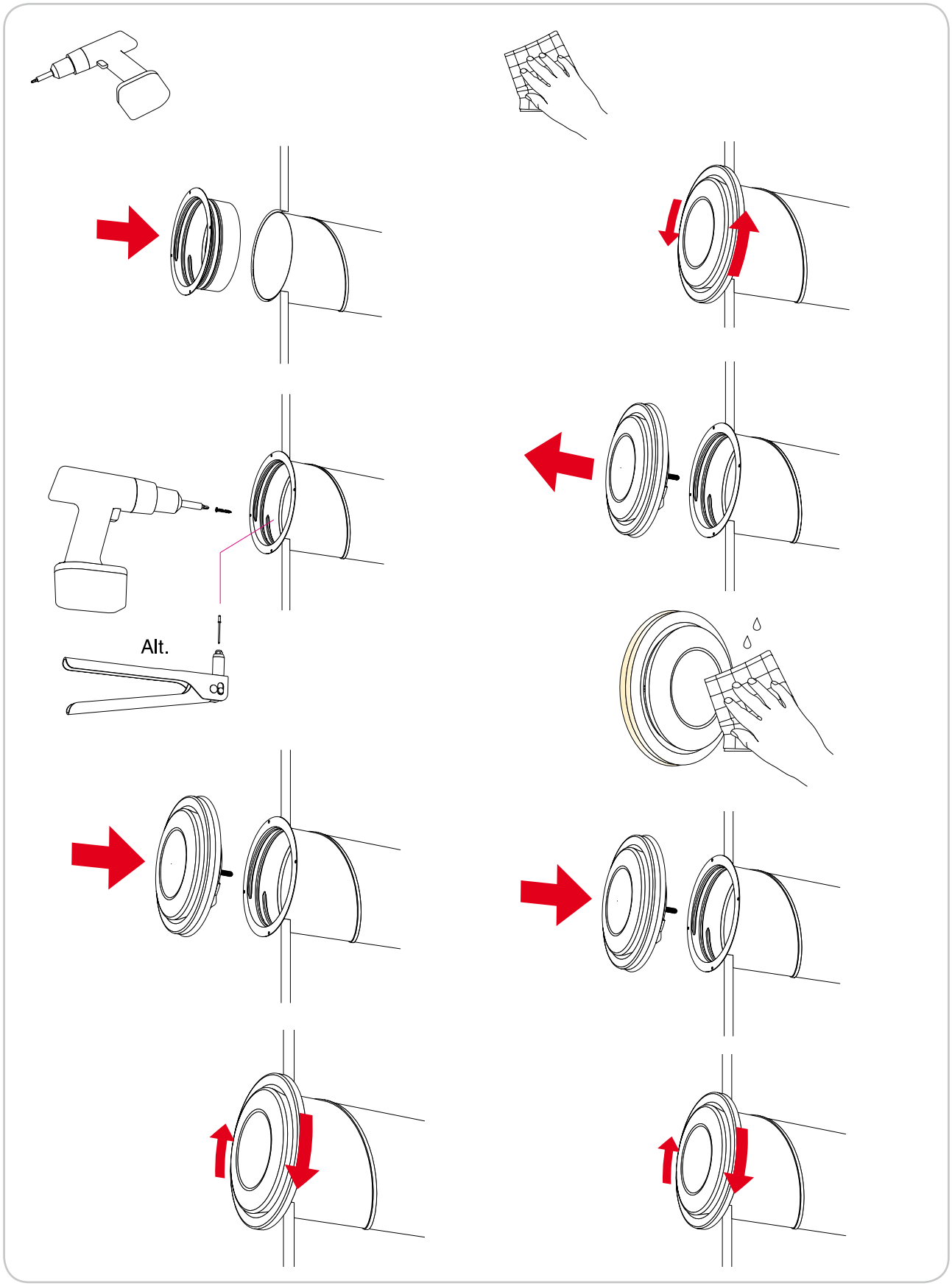




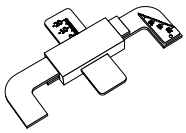
Ø mm	Valve mounted in	Setting a [mm]							
		a	**-23**	**-18**	**-15**	**-10**	**-5**	**0**	**10**	**20**
200	Duct Bend 90° T-piece	k	1,94 1,86 –	3,23 2,99 3,28	3,94 3,95 4,02	4,94 5,08 5,36	6,32 6,14 6,75	7,80 7,62 7,57	10,0 10,1 10,5	12,6 11,2 12,5

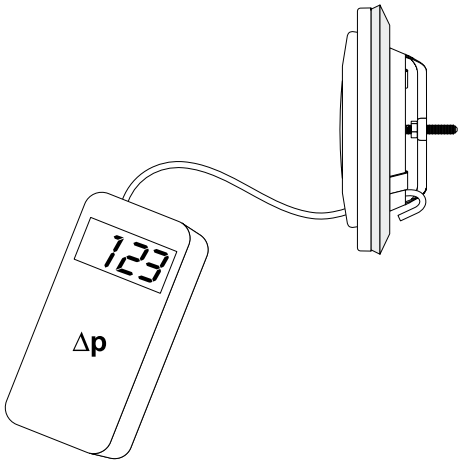
Valve

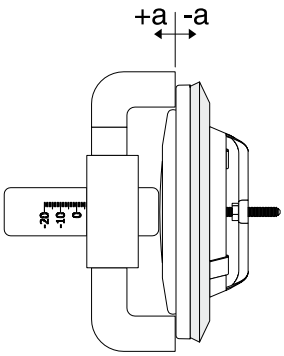
KU



Valve
KU



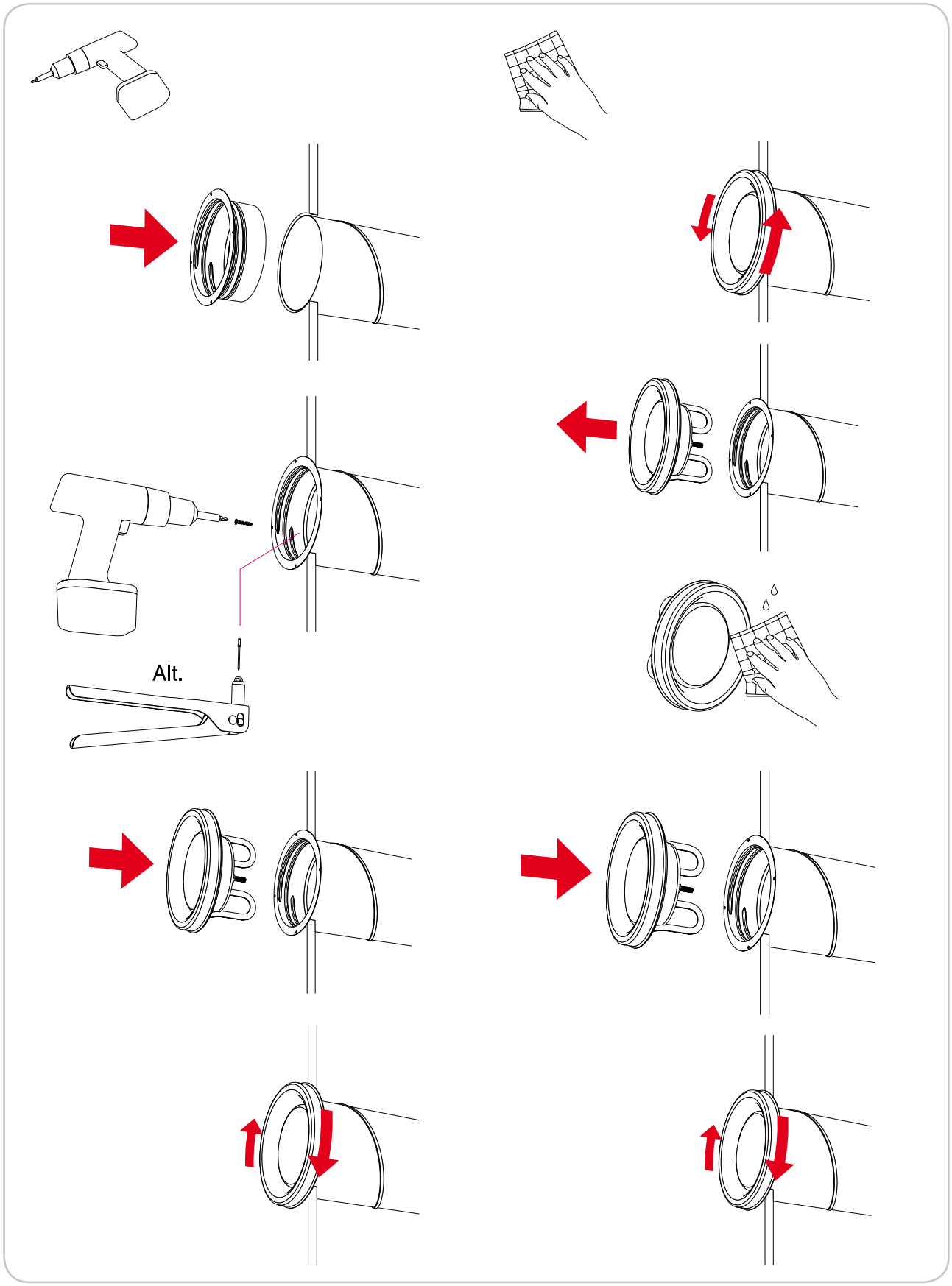




Ø mm	Valve mounted in	Setting a [mm]								
80	Duct Bend 90° T-piece	**a**	**-9**	**-6**	**-3**	**0**	**3**	**6**		
		k	0,679 0,715 0,732	0,941 1,02 1,00	1,32 1,23 1,35	1,59 1,54 1,54	1,90 1,75 1,79	2,13 2,06 1,95		
100	Duct Bend 90° T-piece	**a**	**-12**	**-9**	**-5**	**0**	**5**			
		k	0,560 0,632 –	0,938 1,02 1,08	1,46 1,44 1,54	2,00 2,20 2,17	2,72 2,78 2,91			
125	Duct Bend 90° T-piece	**a**	**-17**	**-15**	**-12**	**-9**	**-6**	**-3**	**0**	**5**
		k	0,681 0,616 –	0,868 0,854 1,13	1,45 1,40 1,56	1,72 1,86 1,97	2,33 2,35 2,39	2,73 2,75 3,00	3,31 3,11 3,40	3,95 4,01 4,19
150	Duct Bend 90° T-piece	**a**	**-15**	**-12**	**-9**	**-3**	**3**	**9**		
		k	1,47 1,60 1,79	2,12 2,01 2,44	2,62 2,61 3,07	3,83 4,00 4,09	4,82 4,96 5,21	5,96 6,61 6,46		
160	Duct Bend 90° T-piece	**a**	**-20**	**-18**	**-15**	**-10**	**-5**	**0**	**6**	**10**	**12**
		k	0,833 0,879 –	1,00 1,09 1,58	1,79 1,71 2,11	2,66 2,62 3,09	3,68 3,63 3,90	4,66 4,59 4,90	5,92 5,68 6,10	6,57 6,61 6,86	7,04 6,90 7,11
200	Duct Bend 90° T-piece	**a**	**-25**	**-20**	**-15**	**-10**	**-5**	**0**	**10**	**20**	
		k	2,39 2,39 2,39	3,65 3,54 4,04	5,02 4,87 5,15	5,77 5,70 6,33	7,18 7,01 7,58	8,39 8,51 8,45	11,4 11,1 10,9	13,7 13,6 14,3	

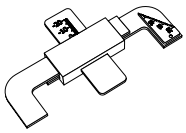
Valve

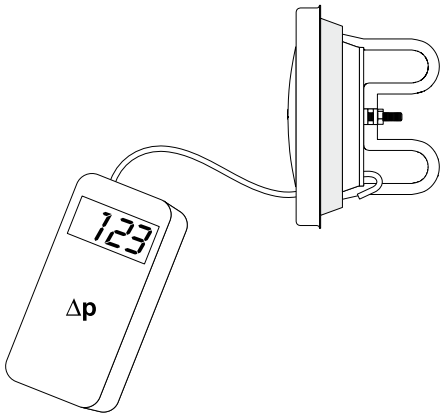
KSU

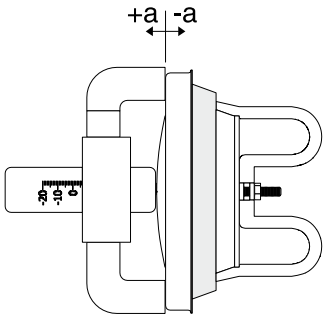


Valve

KSU



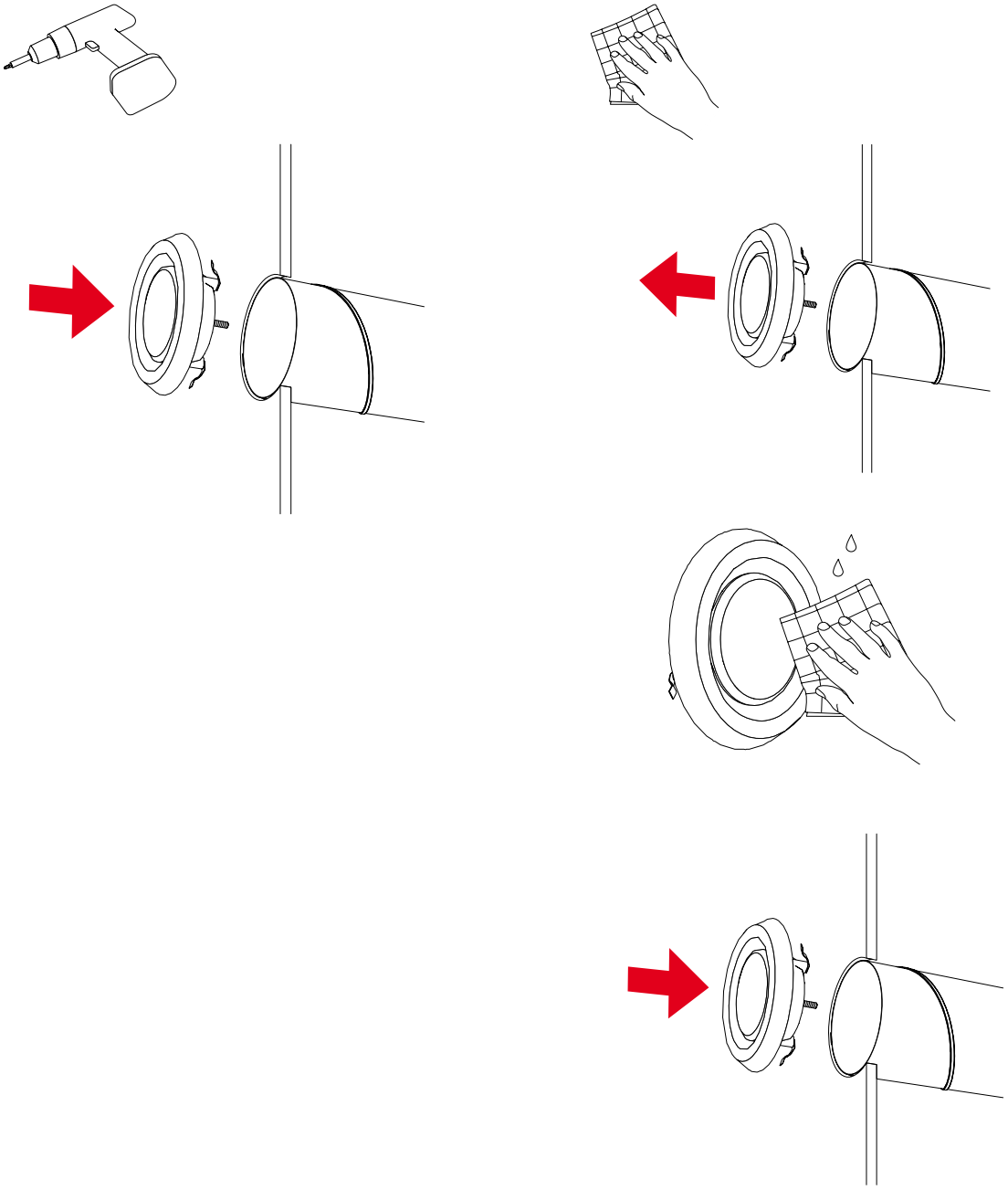




ø mm	Valve mounted in	Setting a [mm]							
100	Duct Bend 90° T-piece	**a**	**-15**	**-12**	**-10**	**-5**	**0**	**5**	**10**
		k	0,459 0,505 0,576	0,676 0,841 0,850	0,861 1,00 1,01	1,36 1,40 1,42	1,82 1,86 1,89	2,32 2,35 2,35	2,75 2,77 2,66
125	Duct Bend 90° T-piece	**a**	**-10**	**-5**	**0**	**5**	**10**		
		k	1,29 1,24 1,53	1,93 1,90 2,20	2,59 2,61 2,88	3,29 3,33 3,41	3,91 3,90 4,27		
150	Duct Bend 90° T-piece	**a**	**-10**	**-5**	**0**	**5**	**10**	**15**	
		k	1,81 2,01 1,98	2,69 2,75 2,89	3,42 3,47 3,84	4,48 4,37 4,64	5,17 5,29 5,61	6,09 6,21 6,43	
160	Duct Bend 90° T-piece	**a**	**-10**	**-5**	**0**	**5**	**10**	**15**	
		k	1,80 1,50 2,04	2,62 2,50 2,92	3,62 3,48 4,00	4,57 4,50 4,81	5,58 5,39 5,87	6,46 6,52 6,57	
200	Duct Bend 90° T-piece	**a**	**-3**	**0**	**5**	**10**	**15**	**20**	**25**
		k	2,02 1,65 2,11	2,72 2,62 3,00	3,85 3,71 3,90	5,19 5,21 5,46	6,32 6,07 6,54	7,63 7,40 7,80	8,72 8,60 8,90

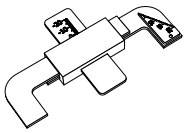
Valve

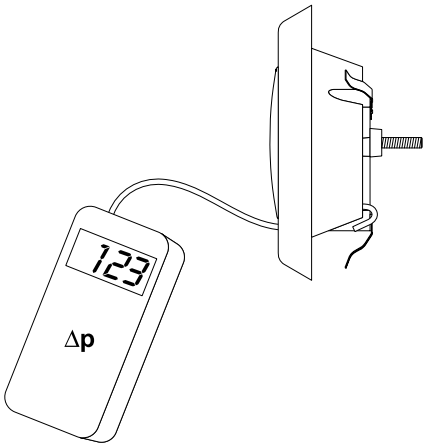
KPF

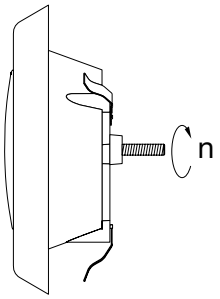


Valve

KPF



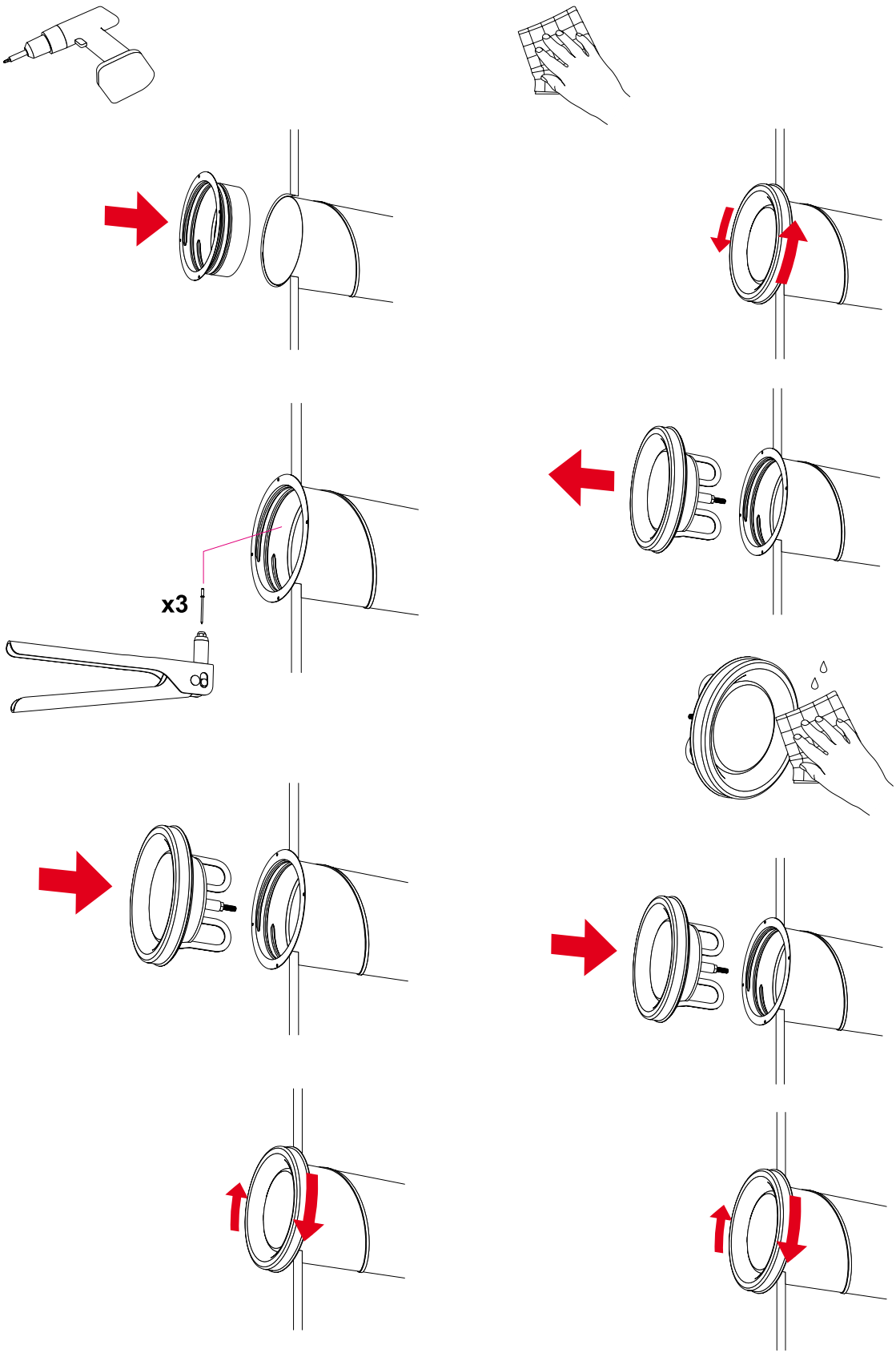




ø mm	Valve mounted in	Setting n [number of opening turns]						
80	Duct Bend 90° T-piece	**n**	**0**	**3**	**6**	**9**	**12**	**15**
		k	0,489 0,517 –	0,675 0,621 0,715	1,08 0,867 0,915	1,07 1,10 1,14	1,55 1,31 1,18	1,42 1,42 1,41
100	Duct Bend 90° T-piece	**n**	**0**	**3**	**6**	**9**	**15**	**18**
		k	1,54 1,58 1,68	1,71 1,89 1,76	1,96 2,20 2,17	2,48 2,62 2,52	2,91 2,94 2,91	3,17 3,39 3,23
125	Duct Bend 90° T-piece	**n**	**0**	**3**	**6**	**9**	**12**	**15**
		k	1,76 1,82 –	1,99 1,95 2,07	2,44 2,42 2,66	2,89 2,74 2,90	3,31 3,21 3,47	3,67 3,56 5,26
160	Duct Bend 90° T-piece	**n**	**3**	**6**	**9**	**12**	**15**	**18**
		k	1,54 1,41 1,57	2,19 1,97 2,22	2,78 2,52 2,84	3,20 3,04 3,43	3,94 3,63 4,05	4,46 4,23 4,63
200	Duct Bend 90° T-piece	**n**	**3**	**6**	**9**	**12**	**15**	**18**
		k	1,77 1,78 –	2,57 2,45 2,53	3,26 3,26 3,03	4,23 3,48 3,79	4,93 4,89 4,55	5,84 5,14 5,04

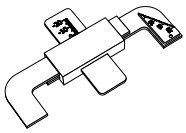
Valve and fire damper

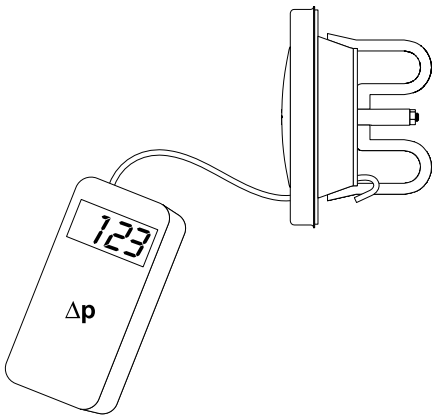
KSUB

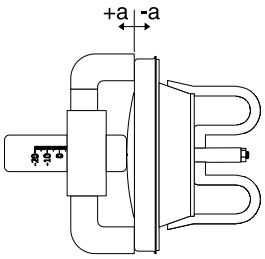


Valve and fire damper

KSUB







Ø mm	Valve mounted in	Setting a [mm]							
100	Duct Bend 90° T-piece	**a**	**-15**	**-12**	**-10**	**-5**	**0**	**5**	**10**
		k	0,459 0,505 0,576	0,676 0,841 0,850	0,861 1,00 1,01	1,36 1,40 1,42	1,82 1,86 1,89	2,32 2,35 2,35	2,75 2,77 2,66
125	Duct Bend 90° T-piece	**a**	**-10**	**-5**	**0**	**5**	**10**		
		k	1,29 1,24 1,53	1,93 1,90 2,20	2,59 2,61 2,88	3,29 3,33 3,41	3,91 3,90 4,27		
150	Duct Bend 90° T-piece	**a**	**-10**	**-5**	**0**	**5**	**10**	**15**	
		k	1,81 2,01 1,98	2,69 2,75 2,89	3,42 3,47 3,84	4,48 4,37 4,64	5,17 5,29 5,61	6,09 6,21 6,43	
160	Duct Bend 90° T-piece	**a**	**-10**	**-5**	**0**	**5**	**10**	**15**	
		k	1,80 1,50 2,04	2,62 2,50 2,92	3,62 3,48 4,00	4,57 4,50 4,81	5,58 5,39 5,87	6,46 6,52 6,57	
200	Duct Bend 90° T-piece	**a**	**-3**	**0**	**5**	**10**	**15**		
		k	2,02 1,65 2,11	2,72 2,62 3,00	3,85 3,71 3,90	5,19 5,21 5,46	6,32 6,07 6,54		

Valve and fire damper
KSUB

Fire mounting instruction
Fire class is shown in the tables below. In some cases the fire class means that the valve must have a certain protective distance.

At demand for a certain fire class for the ventilation system the valve shall have at least the same class as the the connected system or part of the system.

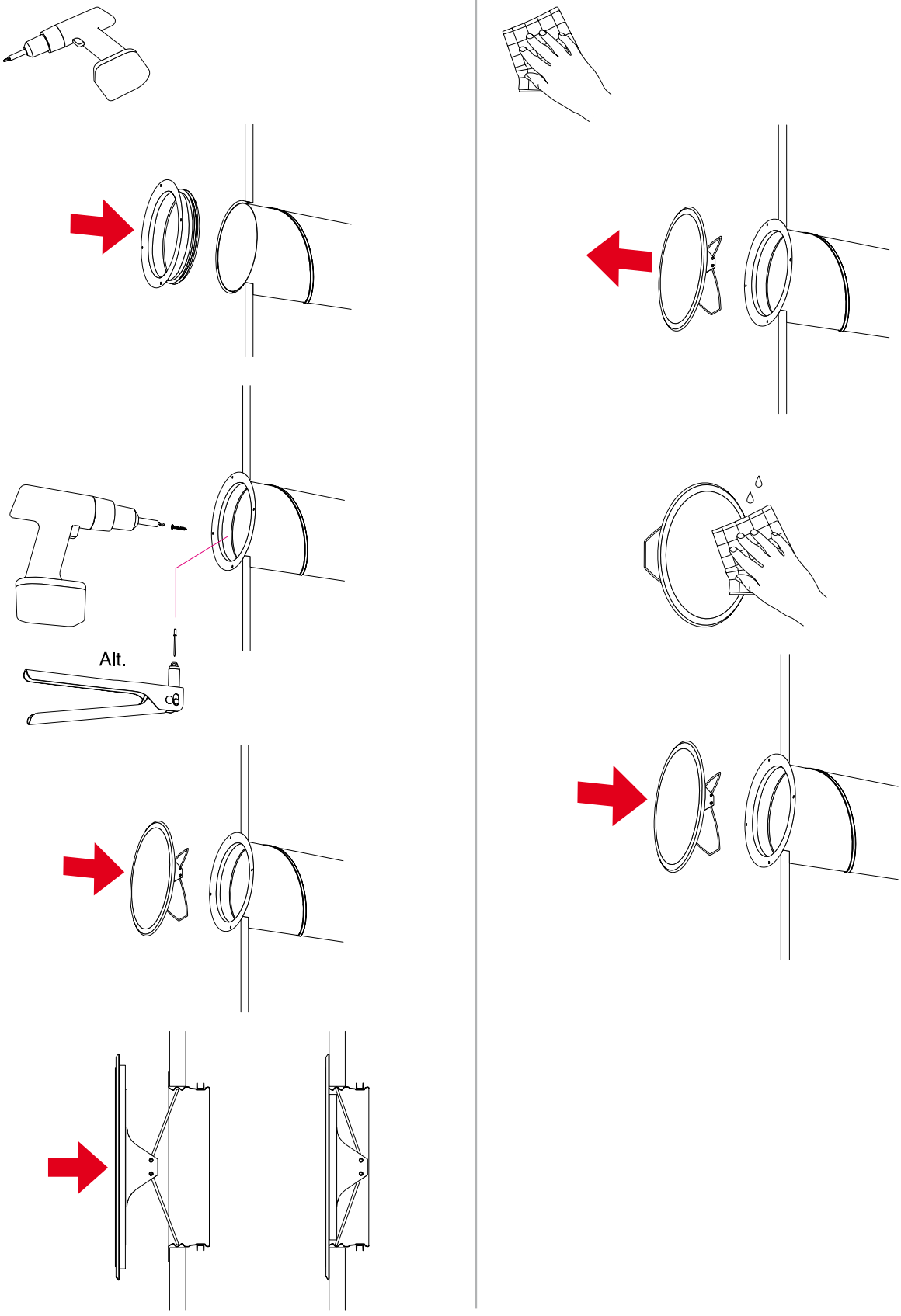
Fire class without protective distance

Ød nom	Fire class
100–200	E 30

Fire class with protective distance
The valve´s surface may not be altered, e.g. by painting.

Ød nom	Fire class	Protective distance to:		
		Evacuating person	Combustible materials	
		3 kW/m² mm	10 kW/m² mm	30 kW/m² mm
100	EI 15	100	10	10
	EI 30	150	40	10
125	EI 15	150	10	10
	EI 30	150	50	10
150	EI 15	150	10	10
	EI 30	200	60	10
160	EI 15	150	10	10
	EI 30	200	60	10
200	EI 15	200	20	10
	EI 30	250	70	10

Cover
TLO



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