

## Operating Guide

# AB-QM 4.0 ChangeOver<sup>6</sup> Flexo DN 15, PN16



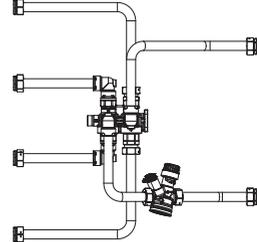
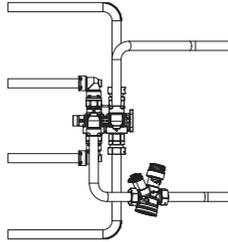
MAINTENANCE  
FREE  
WARTUNGSFREI



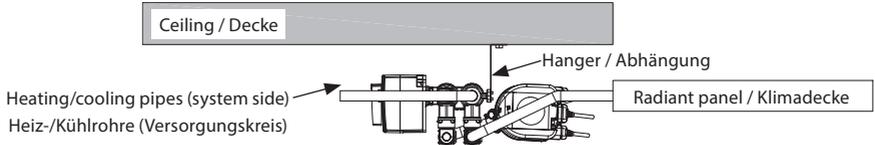
0 ... 90°C



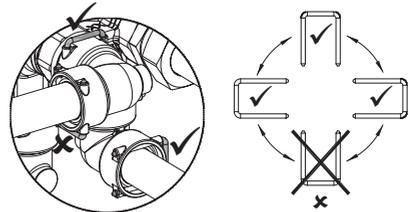
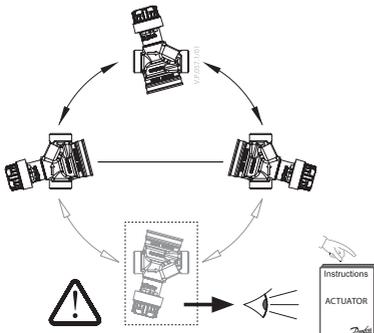
PN 16



## Recommended installing position / Empfohlene Einbaulage



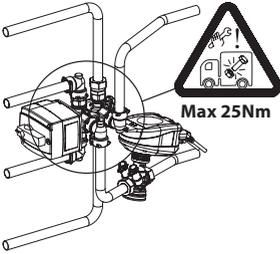
The recommended installing position is as shown in the picture. Hairpins from factory setting are inserted based on this position.  
Die empfohlene Einbauposition ist wie in der Abbildung dargestellt. Die Haarnadeln (Click-fit) werden in der Werkseinstellung auf der Grundlage dieser Position eingesetzt.



In any installed position of the set, assure that hairpins must be inserted sideways or from top to bottom (do not insert the hairpins from bottom side of click fits).

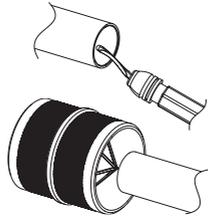
In jeder Einbaulage des Sets ist darauf zu achten, dass die Haarnadeln (Click-fit) von den Seiten oder von oben nach unten eingesetzt werden müssen (die Haarnadeln dürfen nicht von der Unterseite eingesetzt werden).

## AB-QM 4.0 ChangeOver6 Flexo, DN 15



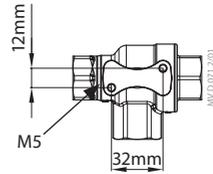
All the connections, fittings and hairpins must be re-tightened after transportation.

Alle Verbindungen, Armaturen und Haarnadeln müssen nach dem Transport nachgezogen werden.



For the 18mm straight pipe variant, deburring must be done by customer before installation and it must be ensured that metal chips do not get into the pipe system.

Bei der Version mit geradem Rohr (18mm) müssen die Rohrenden innen- sowie außenseitig entgratet werden. Es ist zu gewährleisten, dass dabei keine Späne in das Rohrleitungssystem gelangen.



The AB-QM 4.0 CO6 Flexo Set valve must be properly supported. The holes with M5 thread at ChangeOver6 valve can be used for fixing/hanging.

Das Ventil AB-QM 4.0 CO6 Flexo Set muss befestigt werden. Die Bohrungen mit M5-Gewinde am ChangeOver6-Ventil können zur Befestigung/ Aufhängung verwendet werden.

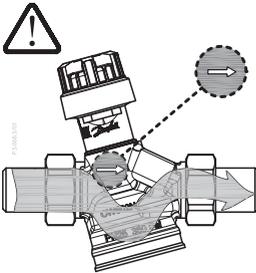
## Installation



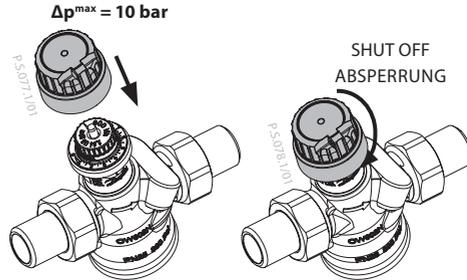
Ensure the system can compensate for thermal expansion in the pipes without deformation or twisting of the set.

Bei der Installation sind geeignete Vorrichtungen zum Ausgleich der Wärmeausdehnung in den Rohren zu berücksichtigen, um Verformungen und Verdrehungen des Sets zu vermeiden.

### Installation



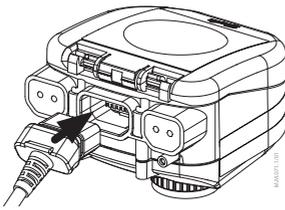
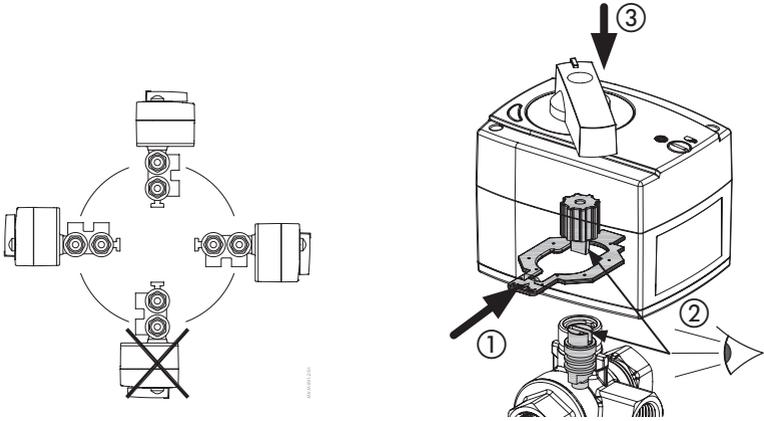
### Shut-off / Absperrung



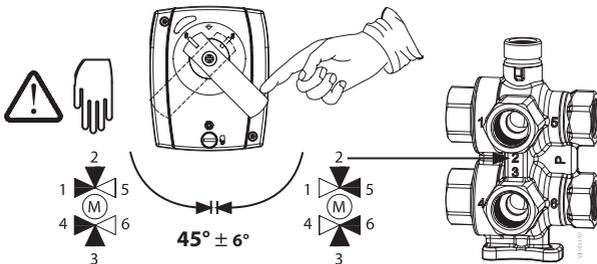
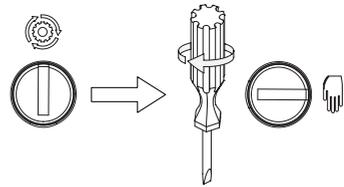
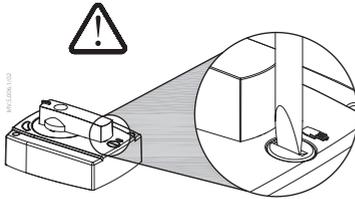
### Setting / Einstellung



# AB-QM 4.0 ChangeOver6 Flexo, DN 15



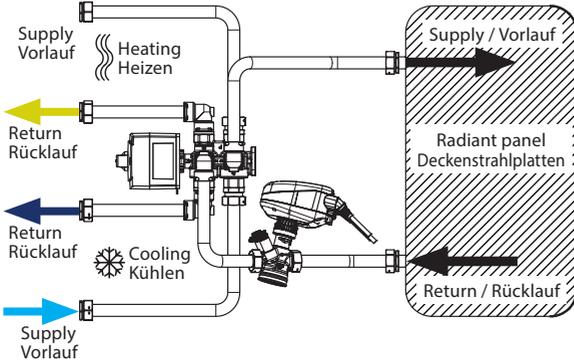
- |  |         |                   |
|--|---------|-------------------|
|  | Red     | Power 24V         |
|  | Black   | GND               |
|  | White   | Control signal Y  |
|  | Grey    | Feedback signal X |
|  | Rot     | Spannung 24V      |
|  | Schwarz | GND               |
|  | Weiß    | Regelsignal Y     |
|  | Grau    | Rückmeldung X     |



## AB-QM 4.0 ChangeOver6 Flexo, DN 15

The 6 ports of the ChangeOver<sup>6</sup> valve allow the following flow directions.

Die 6 Anschlüsse des ChangeOver<sup>6</sup>-Ventils ermöglichen die folgenden Durchflussrichtungen.



	<b>Control Signal from NovoCon: Cooling</b> Steuersignal von NovoCon: Kühlung
	Port 1 to port 2 and port 3 to port 4 Tor 1 zu Tor 2 und Tor 3 zu Tor 4

	<b>Control Signal from NovoCon: Heating</b> Steuersignal von NovoCon: Heizung
	Port 5 to port 2 and port 3 to port 6 Tor 5 zu Tor 2 und Tor 3 zu Tor 6

	<b>Heating or cooling distribution pipes</b> Anschluss für Heizung oder Kühlung
	Ports 1, 4, 5 and 6 Tore 1, 4, 5 und 6

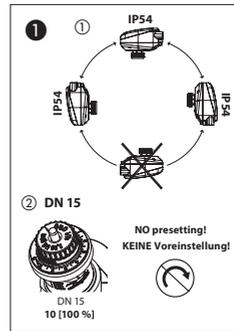
	<b>Terminal unit pipes</b> Anschluss Rohre Klimadecke
	Ports 2 and 3 Tore 2 und 3

## Sizing / Auslegung

Setting Einstellung	DN15 LF			DN 15		
	L/h	L/s	GPM	L/h	L/s	GPM
10%	20	0.006	0.09	65	0.018	0.29
15%	30	0.008	0.13	98	0.027	0.43
20%	40	0.011	0.18	130	0.036	0.57
25%	50	0.014	0.22	163	0.045	0.72
30%	60	0.017	0.26	195	0.054	0.86
35%	70	0.019	0.31	228	0.063	1.00
40%	80	0.022	0.35	260	0.072	1.14
45%	90	0.025	0.40	293	0.081	1.29
50%	100	0.028	0.44	325	0.090	1.43
55%	110	0.031	0.48	358	0.099	1.57
60%	120	0.033	0.53	390	0.108	1.72
65%	130	0.036	0.57	423	0.117	1.86
70%	140	0.039	0.62	455	0.126	2.00
75%	150	0.042	0.66	488	0.135	2.15
80%	160	0.044	0.70	520	0.144	2.29
85%	170	0.047	0.75	553	0.154	2.43
90%	180	0.050	0.79	585	0.163	2.58
95%	190	0.053	0.84	618	0.172	2.72
100%	200	0.056	0.88	650	0.181	2.86

### Operating Guide

## NovoCon® S



When using NovoCon S - no presetting of AB-QM 4.0 valve is needed.

Bei Verwendung von NovoCon S ist die Voreinstellung des AB-QM 4.0-Ventils nicht erforderlich und wird nicht empfohlen.

### Danfoss A/S

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