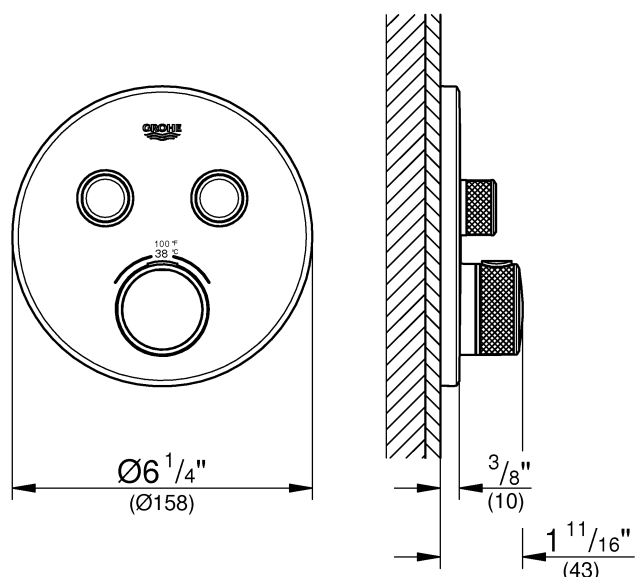
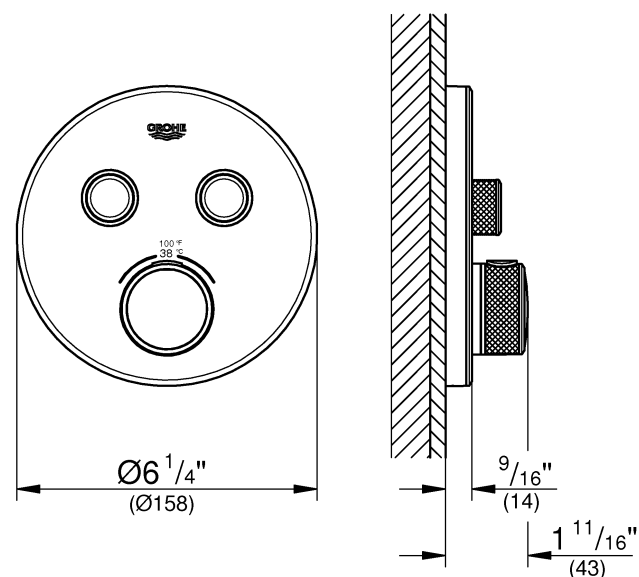


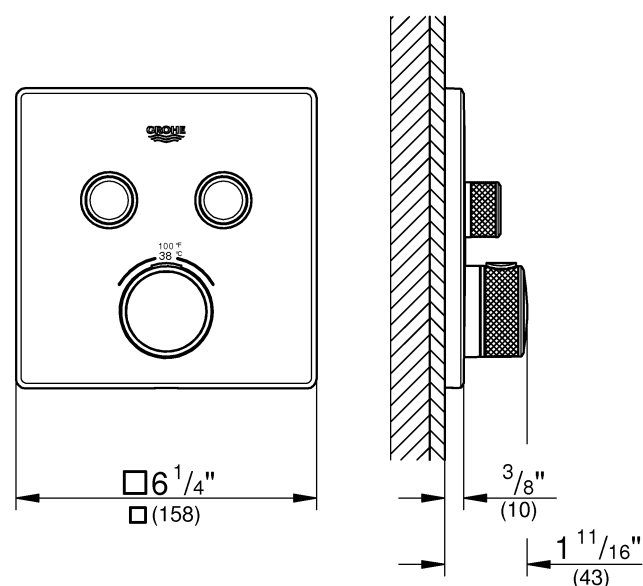
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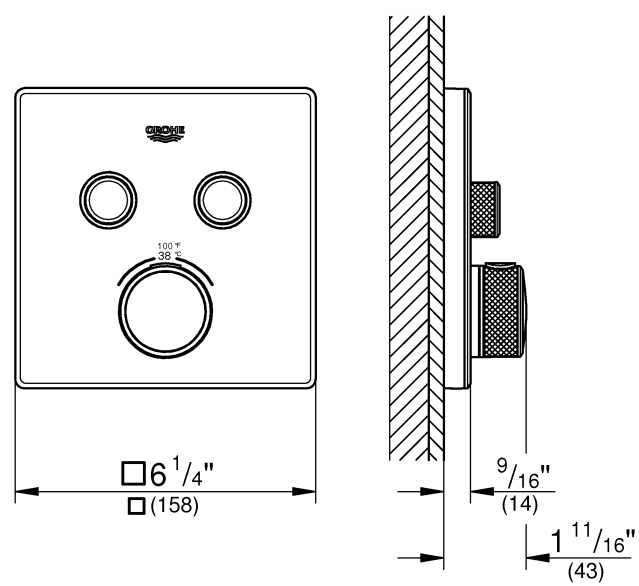
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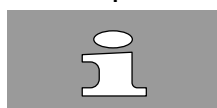
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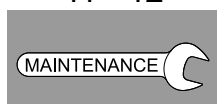
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1



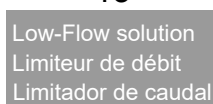
11 - 12



2 - 8



13



9 - 10

English
Français
Español

14



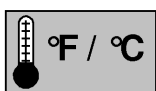
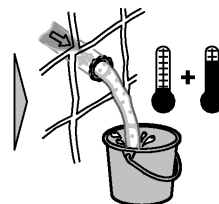


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1053

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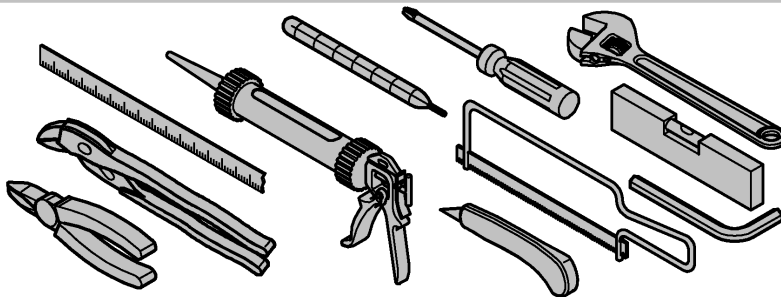
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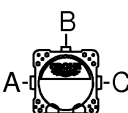
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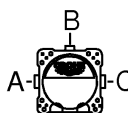


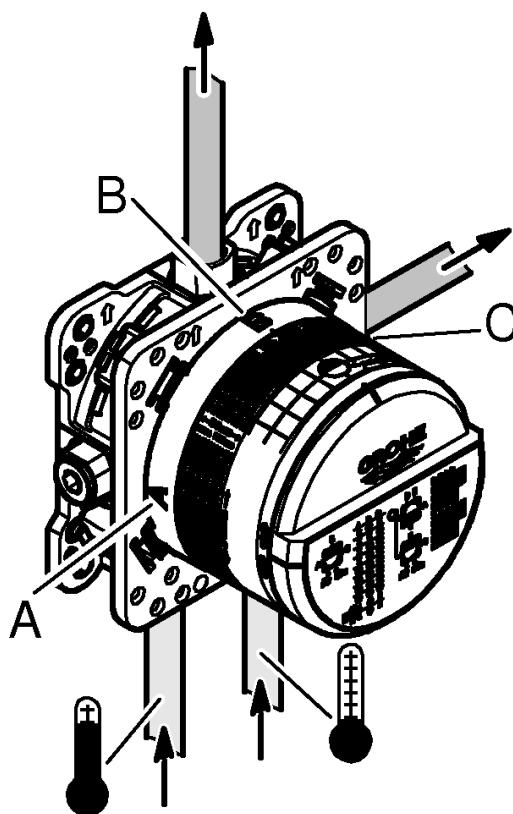
max.
158°F
70°C

140°F
60°C



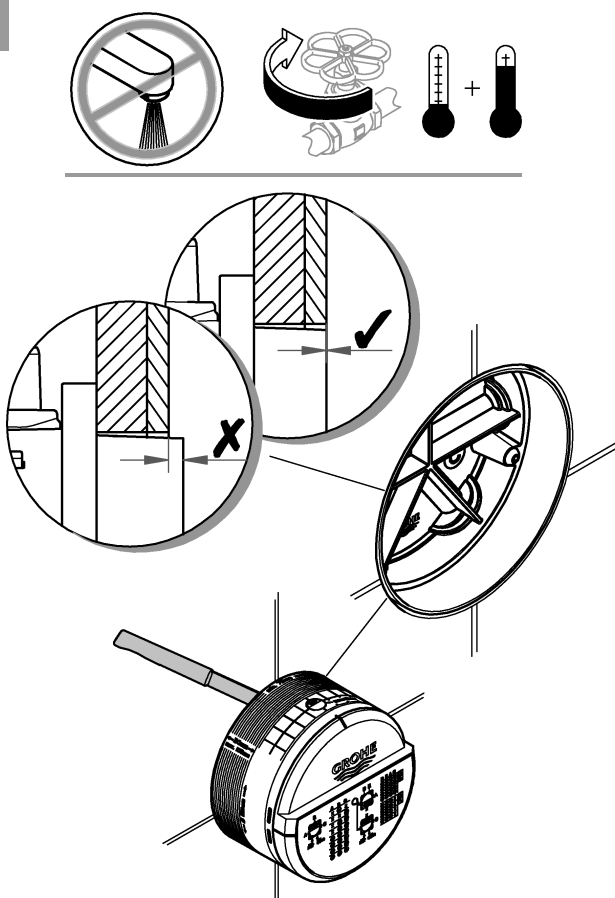
	psi						
	14,5	29	43,5	58	72,5	87	
B	3,7	5,2	6,3	7,3	8,2	9	gpm
C	4	5,6	6,9	7,9	8,9	9,7	
B + C	4,4	6,3	7,7	8,8	9,9	10,8	

	bar						
	1	2	3	4	5	6	
B	13,9	19,6	24	27,7	31	33,9	l/min
C	15	21,2	26	30	33,6	36,8	
B + C	16,7	23,7	29	33,5	37,4	41	

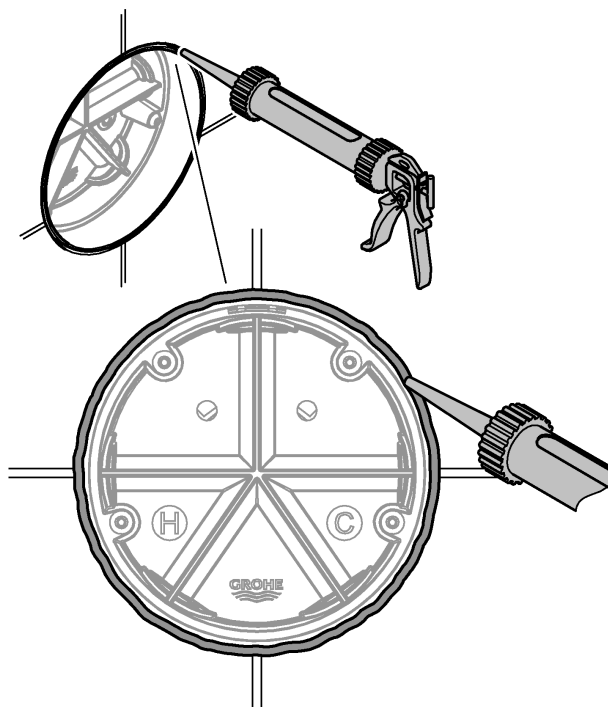




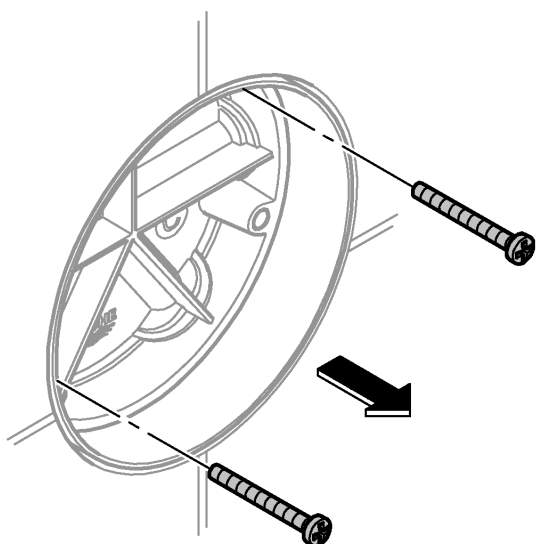
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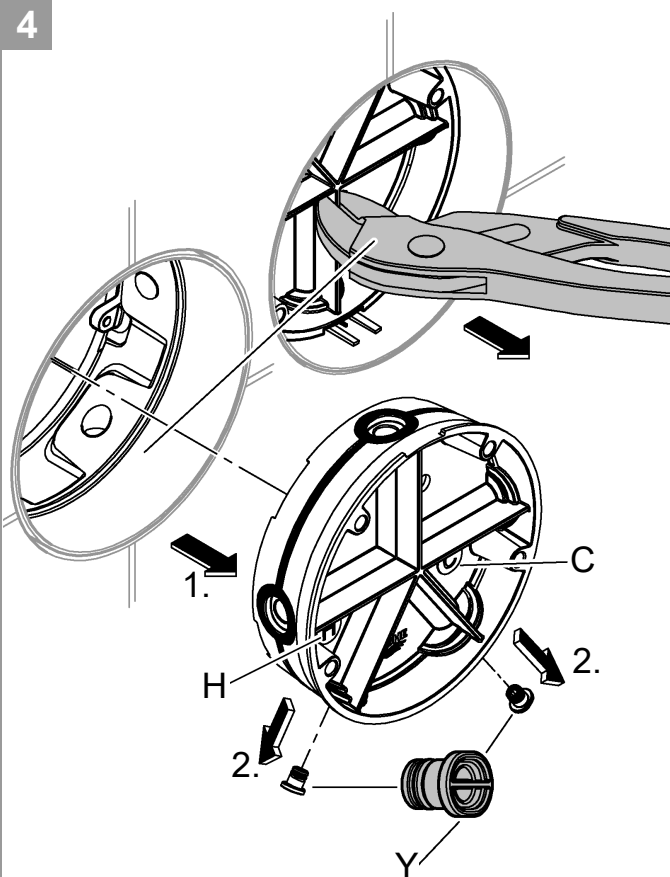
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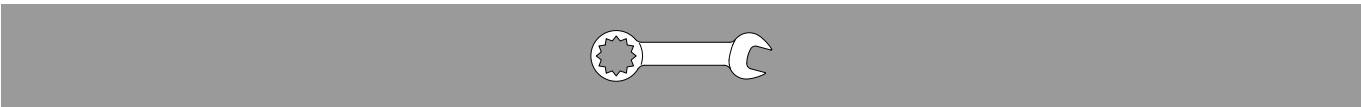


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5

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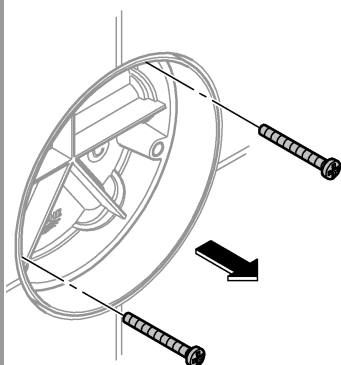
This diagram illustrates the step of attaching the front wheel to the front fork. It shows a side view of the front fork assembly. Two long bolts are shown being inserted into the fork's axle holes. A large black arrow points towards the wheel hub, indicating the direction of assembly. Dashed lines connect the bolts to the wheel hub, showing how they will secure the wheel.

7

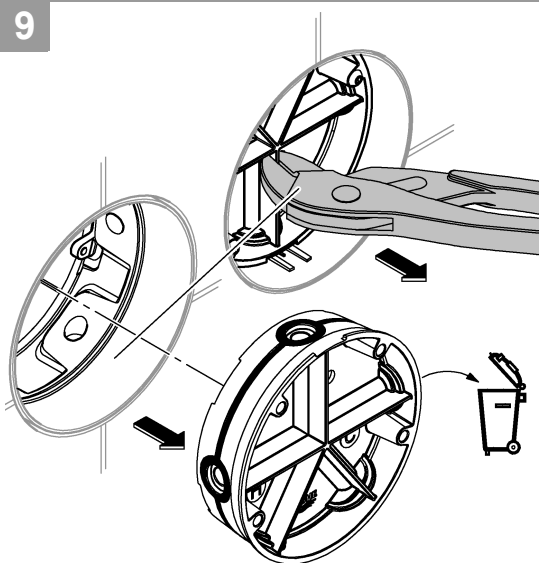
The diagram illustrates the three-step cleaning process for the M-Axle. Step 1 shows the removal of the M-Axle from the vehicle and the application of a cleaning solution, indicated by a thermometer icon and a plus sign. Step 2 shows the M-Axle being sprayed with water, indicated by a water spray icon and the number 2. Step 3 shows the M-Axle being rinsed with water, indicated by a water spray icon and the number 3. The final result is a clean M-Axle, indicated by a thermometer icon and a plus sign.



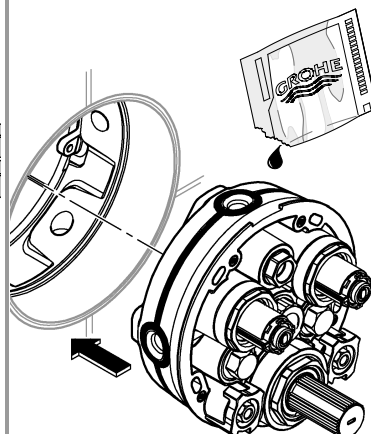
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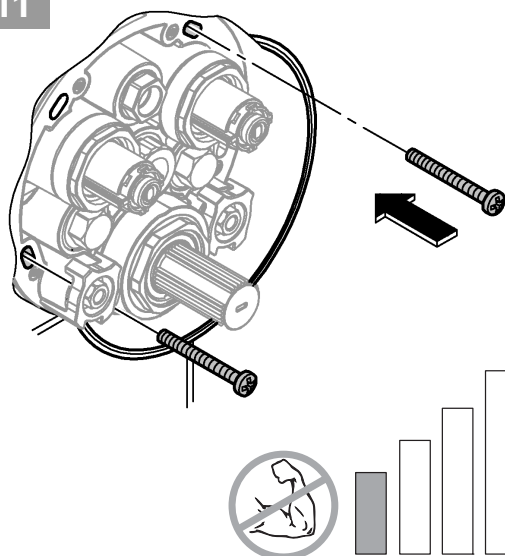
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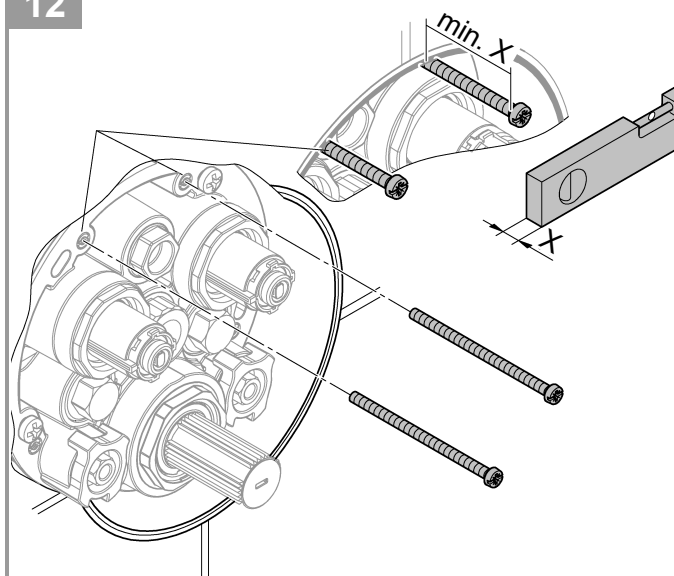
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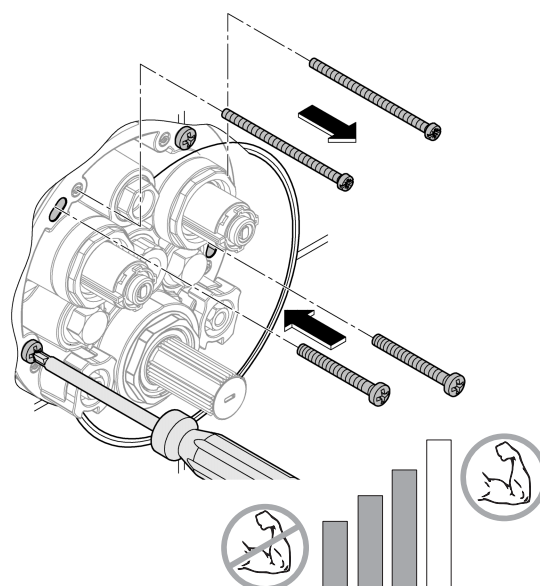
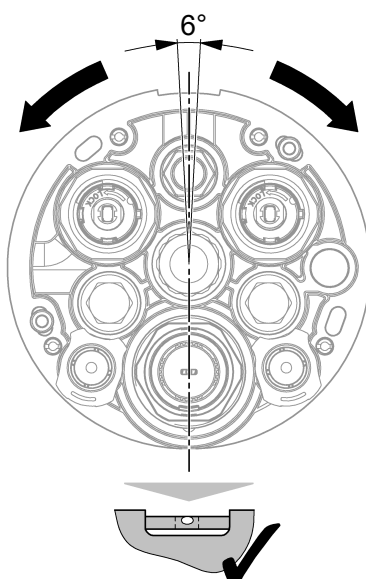
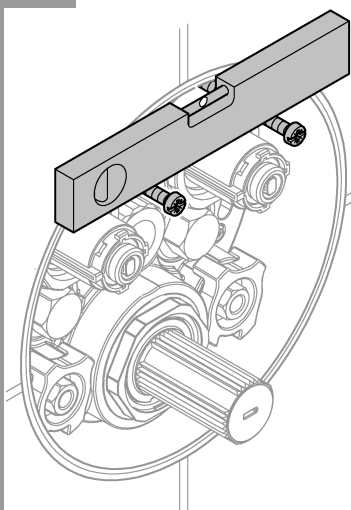
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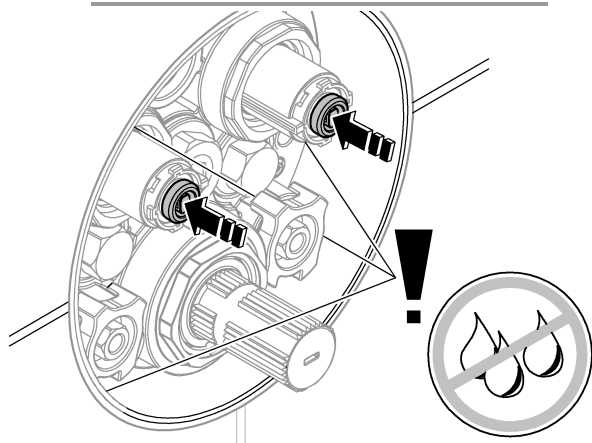
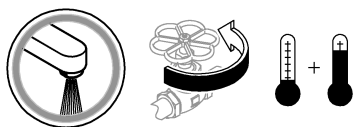


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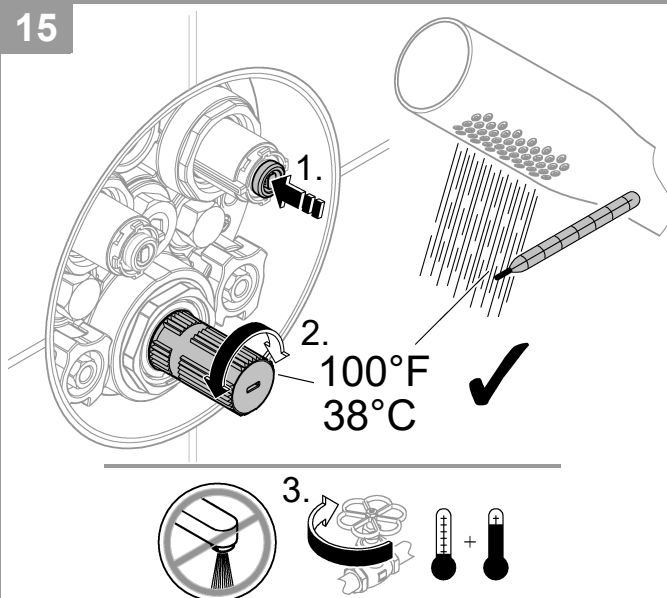




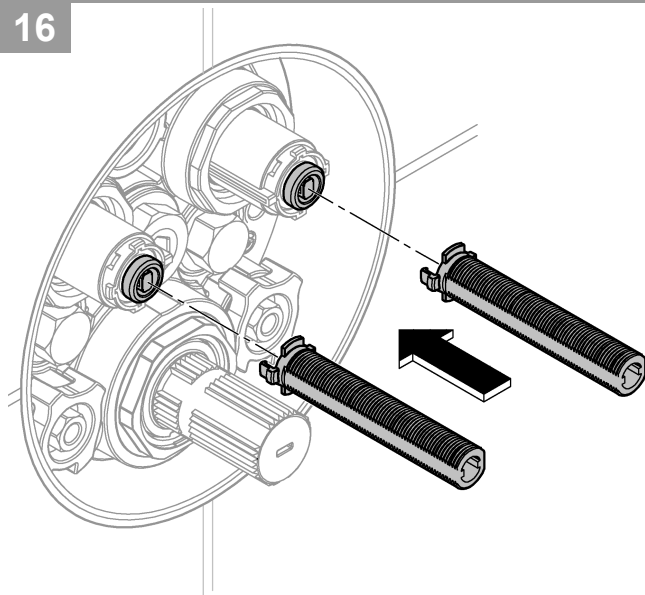
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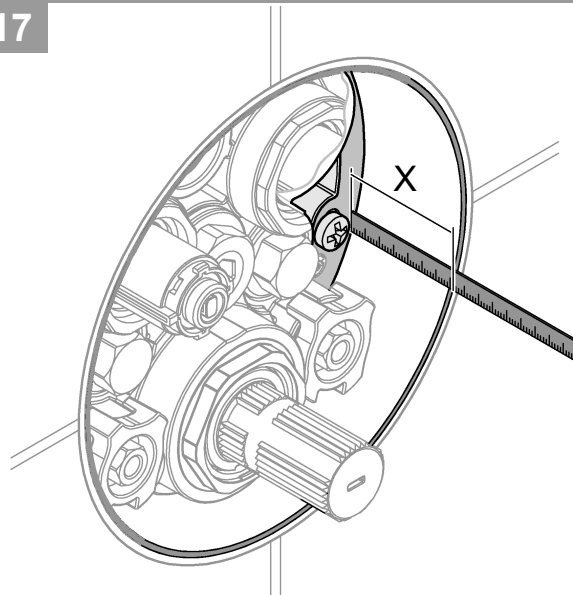
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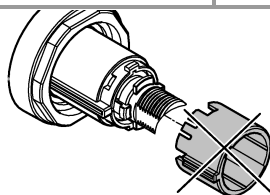


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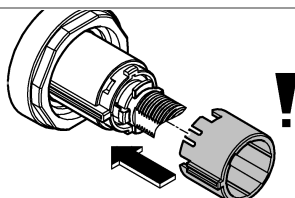


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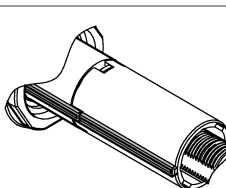
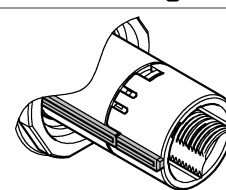
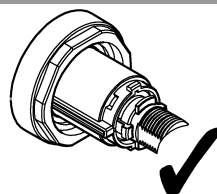
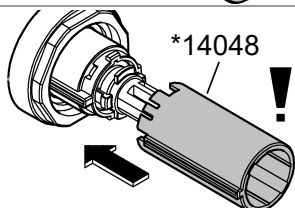
A
 $X < 1\frac{3}{4}"$
(40mm)



B
 $X = 1\frac{3}{4}" - 2\frac{3}{16}"$
(40mm - 55mm)

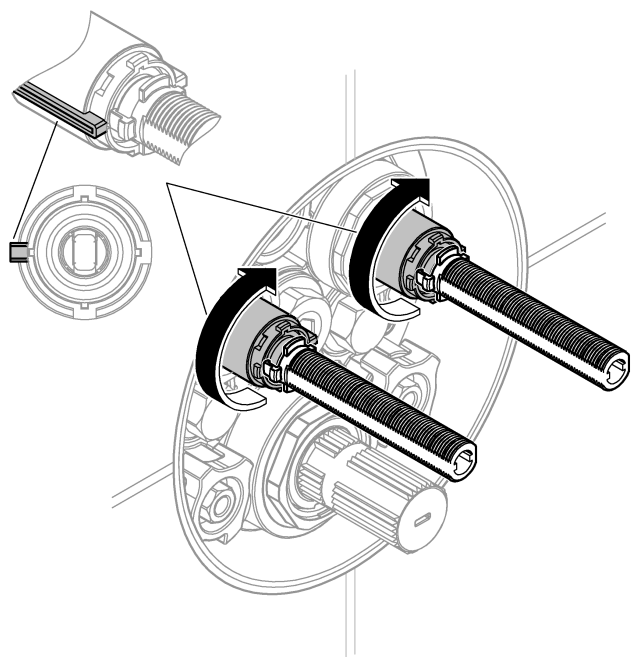


C
 $X > 2\frac{3}{16}"$
(55mm)

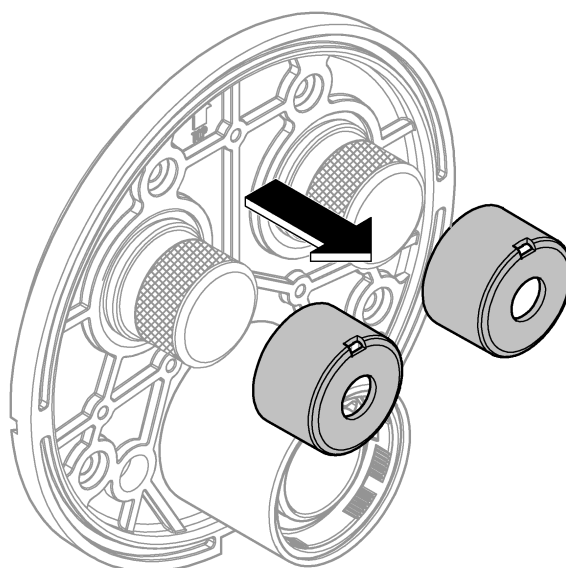




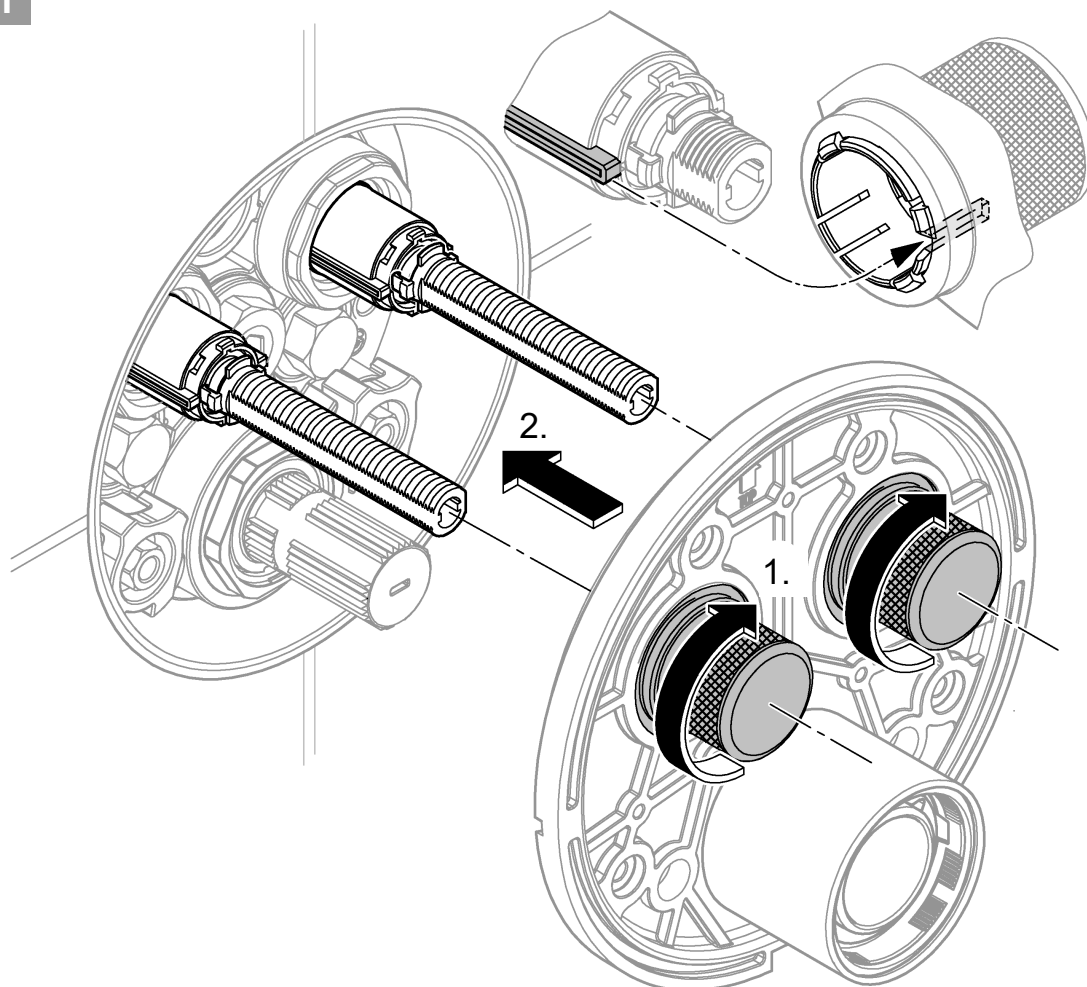
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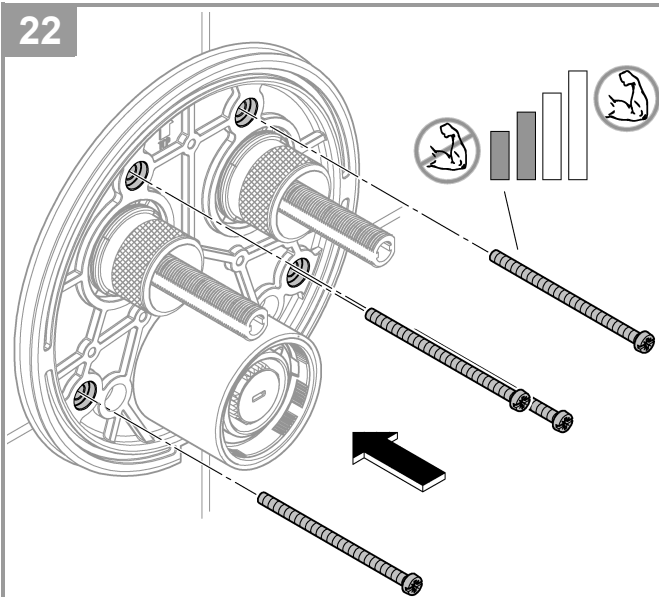


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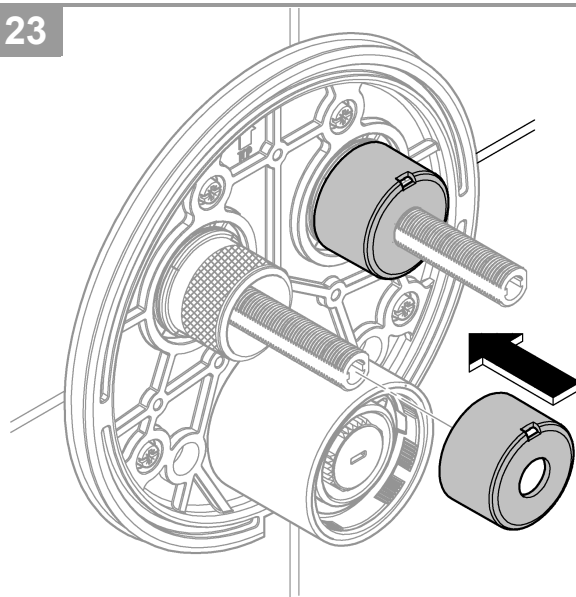




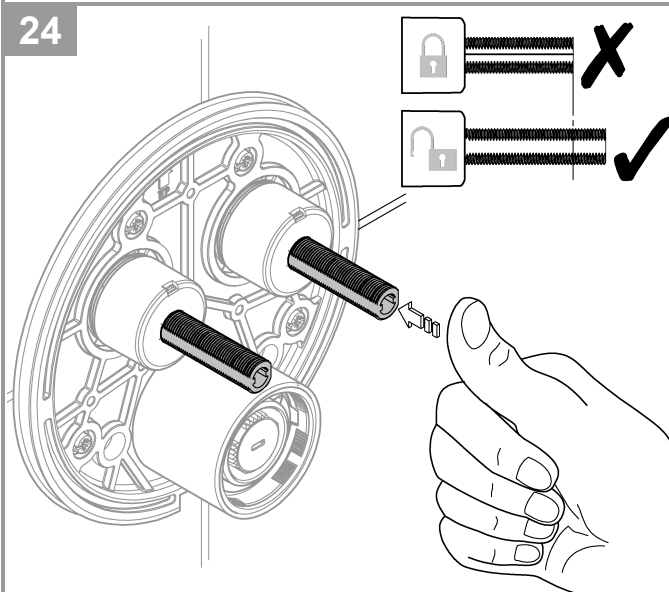
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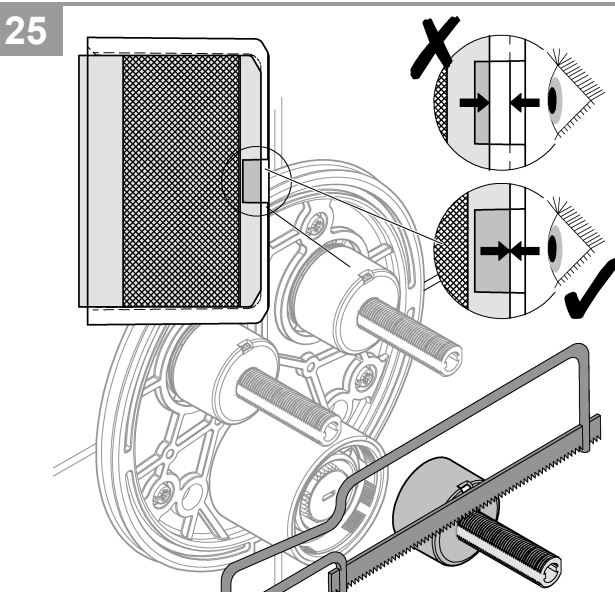
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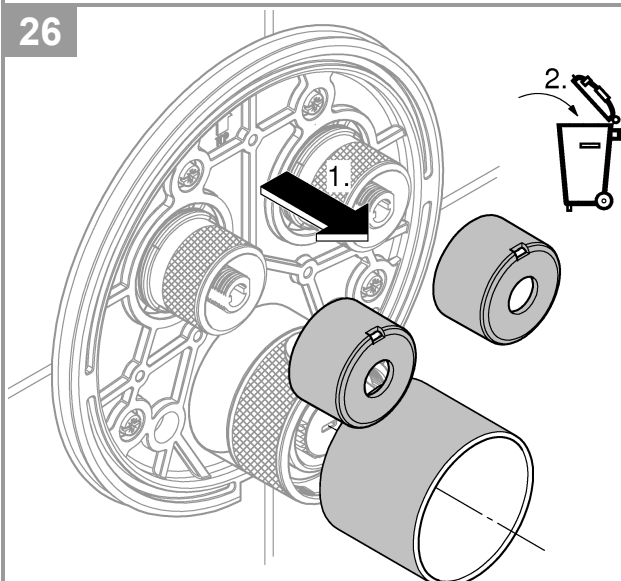
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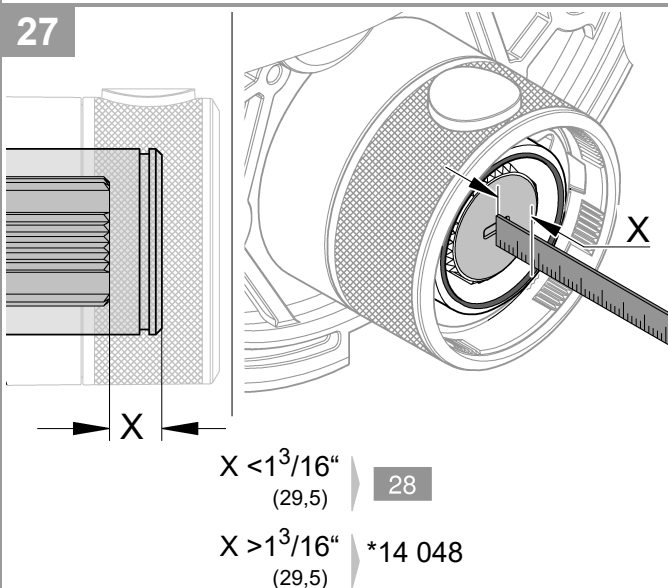
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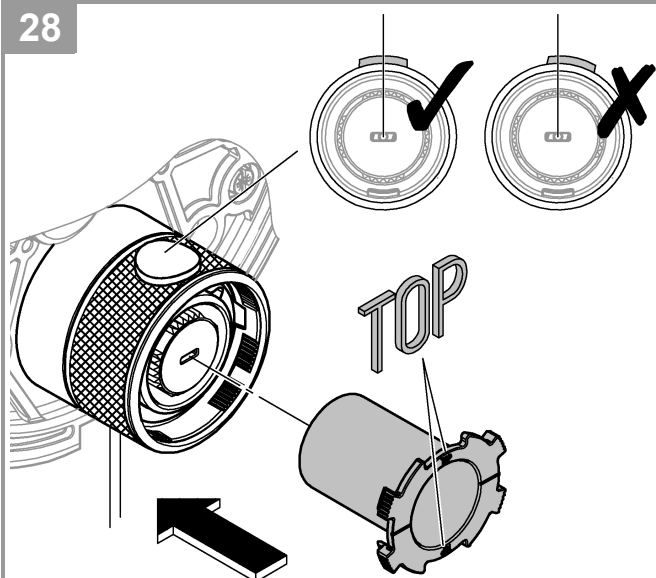


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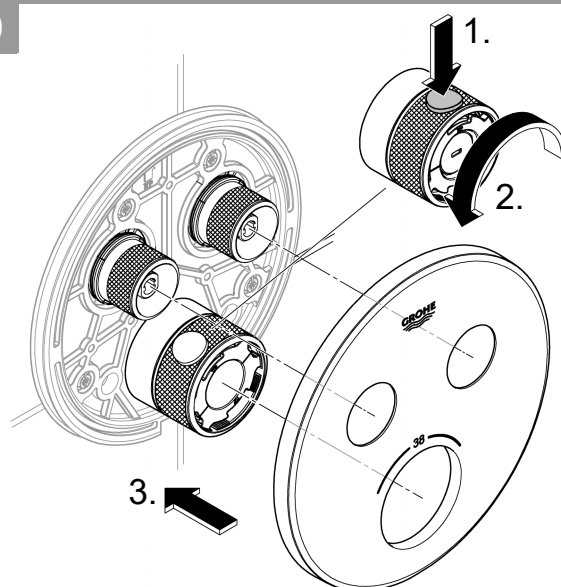




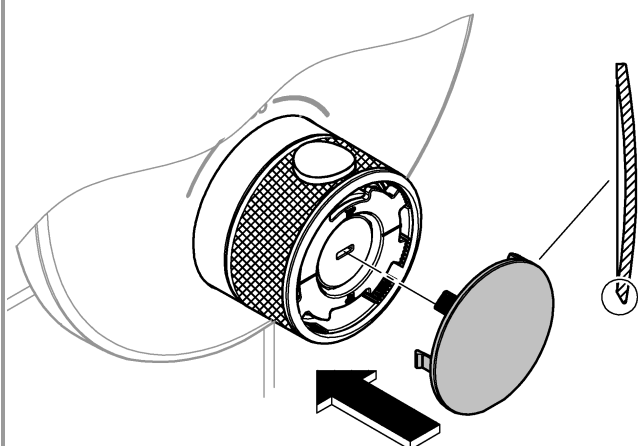
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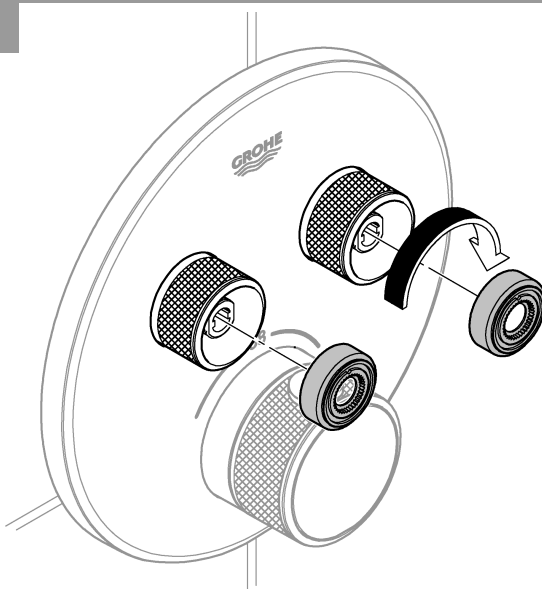
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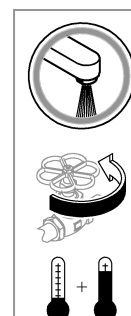
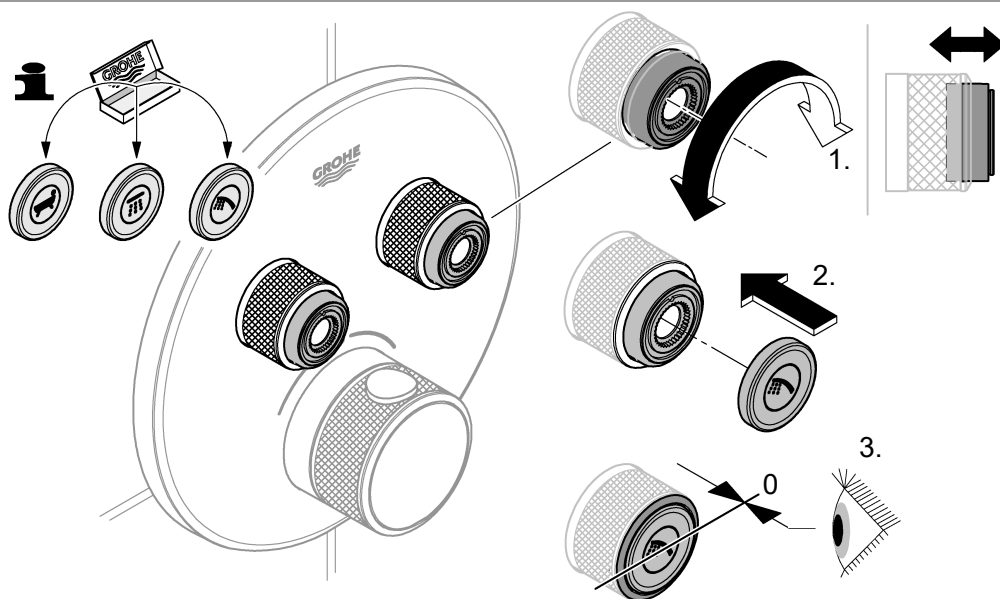
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31



32



Note

Please know and follow all applicable local plumbing codes when setting the temperature on the water heater.

Only for shower application:

If your local plumbing code requires to install the limiter to reduce the total flow of water in the shower to 1.8gpm at 80psi, see page 13.

Technical Data

- Flow pressure
- Minimum flow pressure without downstream resistances 7.25 psi
- Minimum flow pressure with downstream resistances 14.5 psi
- Recommended 21.75–72.5 psi
- Temperature
- Hot water supply max. 158 °F
- Recommended for energy saving 140 °F
- Thermal disinfection possible
- Hot water temperature at supply connection min. 3.6 °F higher than mixed water temperature

Flow rates without downstream resistances, see page 1.

These should be observed when dimensioning the outlet!

The following special accessories are available:

- Extension 1" (25mm) (prod. no.: 14 048)

Thermostat compact cartridge for exchanged water channels: Reversed connections, hot on right and cold on left, replace compact cartridge (prod. no.: 49 003)

Installation

- In order to flush, remove the plugs (Y), see page 2 Fig. [4].
- Open cold and hot water supply and check connections for watertightness!
- Alignment of functional unit by 6° possible.
- Measure valves, see page 5 Fig. [17]. For a dimension larger than $1\frac{1}{16}$ " (18mm), the enclosed extension must be used.

Adjusting to 100 °F

- Before the mixer is put into service if the mixed water temperature measured at the point of discharge varies from the desired temperature set on the thermostat, see page 5 Fig. [15].
- Every time following maintenance on the thermostatic compact cartridge.

Temperature limitation

The safety stop limits the temperature range to 100 °F. If a higher temperature is required, the 100 °F stop can be overridden by pressing the button.

In accordance with local plumbing codes, this thermostat is limited to a maximum temperature of 109 °F.

Danger of frost damage

When the domestic water system is drained, the thermostats must be drained separately since non-return valves are installed in the hot and cold water connections.

Remarque

Vous devez connaître et respecter tous les codes de plomberie locaux applicables pour le réglage de la température du chauffe-eau.

Seulement pour l'application de douche:

Si votre code de plomberie exige, installez le limiteur de débit pour réduire le débit total de l'eau dans la douche à 6,8 l/min à 5,5 bar, voir page 13.

Caractéristiques techniques

- Pression dynamique
- Pression dynamique minimale sans résistances en aval 0,5 bar
- Pression dynamique minimale avec résistances en aval 1 bar
- Recommandée 1,5 à 5 bars
- Débit minimal 5 l/min
- Température
- Entrée d'eau chaude max. 70 °C
- Recommandée pour économie d'énergie 60 °C
- Désinfection thermique possible
- Température de l'eau chaude au raccord d'alimentation au moins 2 °C supérieure à la température de l'eau mitigée

Débits sans résistances en aval, voir page 1. **Respecter les données indiquées lors du dimensionnement de l'évacuation !**

Les accessoires spéciaux suivants sont disponibles :

- Extension de 25mm (réf. : 14 048)

Cartouche compacte de thermostatique pour raccordements inversés : Raccordements inversés (chaud à droite, froid à gauche), remplacer la cartouche compacte (réf. : 49 003)

Installation

- Pour le rinçage, démonter les clapets (Y), voir page 2, fig. [4].
- Ouvrir les arrivées d'eau froide et d'eau chaude et vérifier l'étanchéité des raccordements.
- Possibilité d'orienter l'unité de commande de 6°.
- Mesurer les vannes, voir page 5, fig. [17]. Pour des dimensions supérieures à 18mm, utiliser l'extension fournie.

Réglage sur 38 °C

- Préalablement à la mise en service : si la température de l'eau mitigée mesurée au point de puisage est différente de la température souhaitée réglée au niveau de la poignée graduée du thermostatique, voir page 5, fig. [15].
- Après chaque opération de maintenance sur la cartouche compacte du thermostatique.

Limitation de la température

La température est limitée à 38 °C par la butée de sécurité. Il est possible d'obtenir une température plus élevée (supérieure à 38 °C) en appuyant sur le bouton.

Conformément aux directives locales d'installation, ce thermostatique est limité à une température max. de 43 °C.

Attention en cas de risque de gel

Lors du vidage de l'installation sanitaire, il convient de vider séparément les thermostats dont les raccordements d'eau froide et d'eau chaude sont équipés de clapets anti-retour.

Nota

Debe conocer y cumplir todos los códigos locales aplicables para ajustar la temperatura del calentador de agua.

Solo para la aplicación de ducha:

Si el código de instalación local requiere, instale el limitador de caudal para reducir el caudal total de agua en la ducha

a 1.8gpm a 80psi, véase la página 13.

Datos técnicos

- Presión de trabajo
- Presión mínima de trabajo sin resistencias postacopladas 7.25 psi
- Presión mínima de trabajo con resistencias postacoplada 14.5 psi
- Recomendado 21.75-72.5 psi
- Caudal mínimo 1.3 gpm
- Temperatura
- Entrada de agua caliente máx. 158 °F
- Recomendado para ahorrar energía 140 °F
- Desinfección térmica posible
- La temperatura del agua caliente en la acometida de mín. 3.6 °F es superior a la temperatura del agua mezclada

Caudales sin resistencias postacopladas, véase la página 1.

Tenga en cuenta las dimensiones del desagüe.

Los siguientes accesorios especiales están disponibles:

- Prolongación de 1" (25mm) (n.º de pedido: 14 048)

Cartuchos compactos de termostato para las entradas de agua intercambiadas: Conexión invertida, sustituir los cartuchos compactos, los calientes en el lado derecho y los fríos en el izquierdo (n.º de pedido: 49 003)

Instalación

- Para lavar, desmonte el tapón (Y), véase la página 2 fig. [4].
- Abrir las llaves de paso del agua fría y del agua caliente y comprobar la estanqueidad de las conexiones.
- Es posible alinear la unidad de funcionamiento 6°.
- Medir las válvulas, véase la página 5 fig. [17]. Para una medida más grande de $1\frac{1}{16}$ " (18mm), se debe utilizar la prolongación suministrada.

Ajustar a 100 °F

- Antes de la puesta en servicio, si la temperatura del agua mezclada medida en el punto de consumo difiere de la temperatura teórica ajustada en el termostato, véase la página 5 fig. [15].
- Después de cada operación de mantenimiento en el cartucho compacto del termostato.

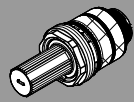
Limitación de la temperatura

La gama de temperaturas está limitada a 100 °F mediante el cierre de seguridad. Si desea seleccionar una temperatura más alta, se puede exceder el límite de 100 °F presionando la tecla.

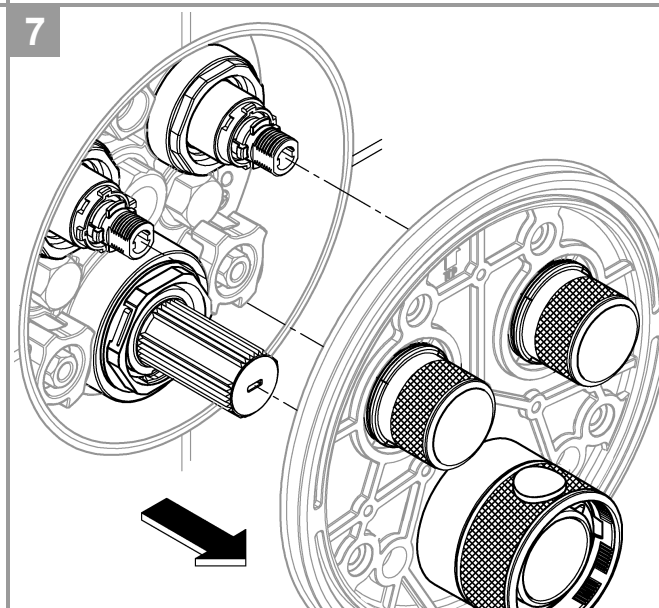
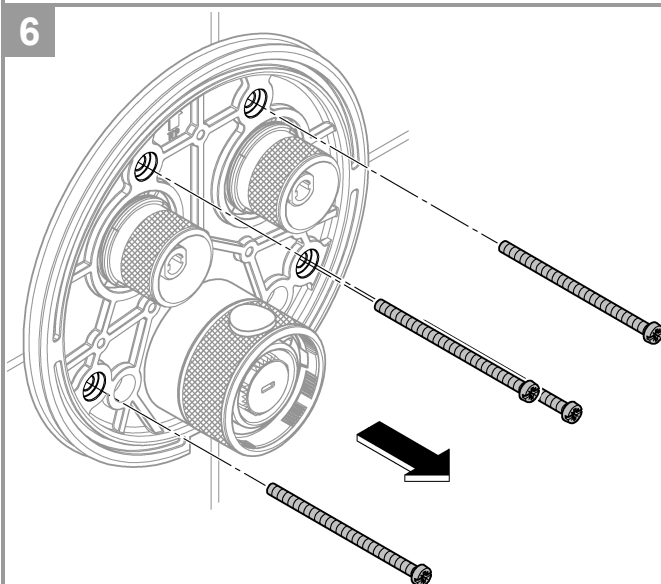
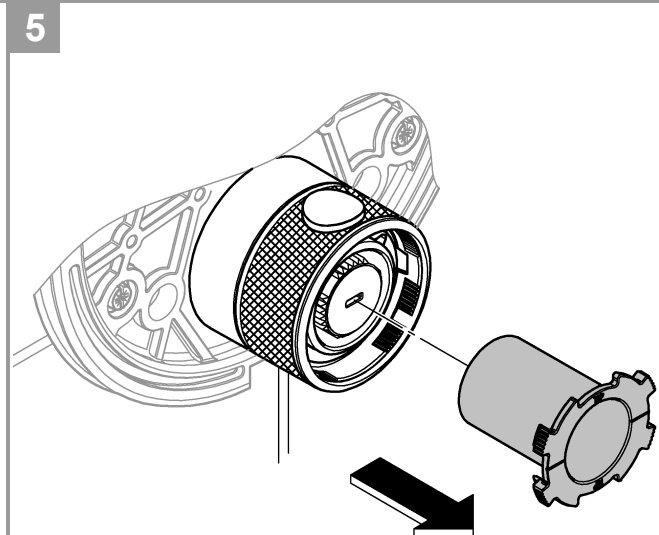
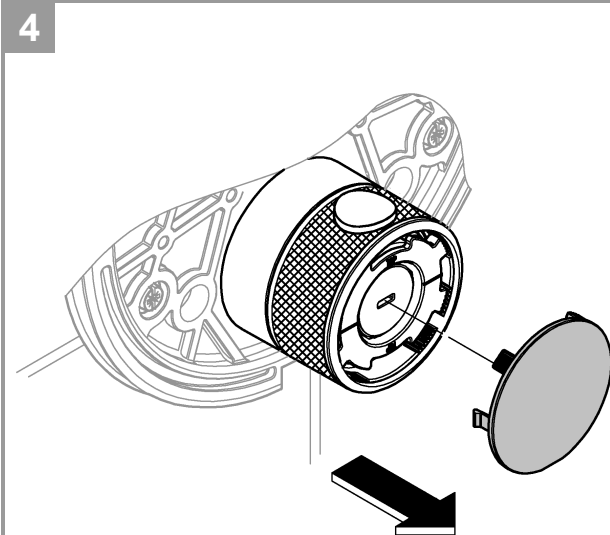
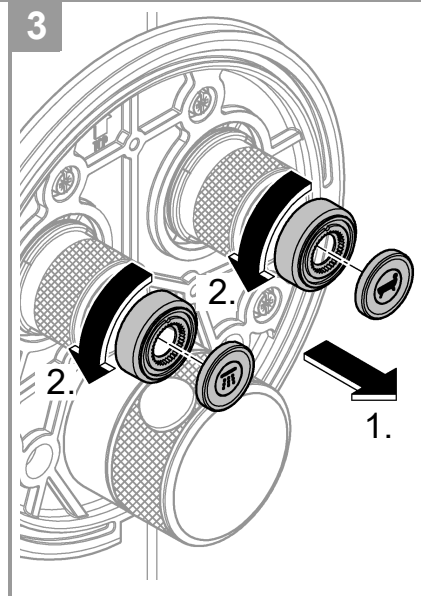
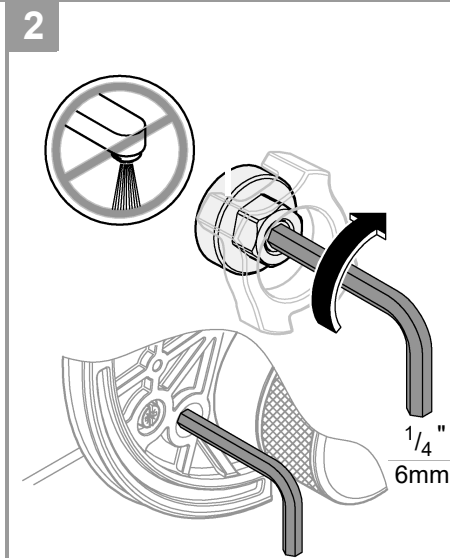
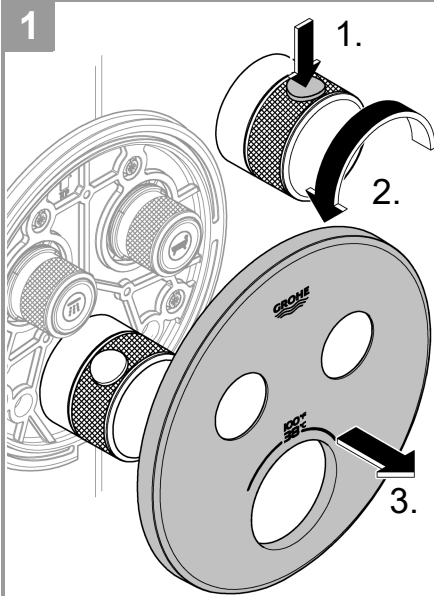
En las normas de instalación locales el termostato tiene una temperatura máxima establecida de 109 °F.

Atención en caso de peligro de helada

Al vaciar la instalación de la casa, los termostatos deberán vaciarse por separado, ya que hay válvulas antirretorno en las conexiones del agua fría y caliente.



MAINTENANCE





max. 3.6ft-lb
max. 5 Nm

A detailed illustration of a spray gun nozzle. The nozzle is shown in profile, with a long, tapered spray pattern emerging from the tip. The spray pattern is depicted with a series of concentric, wavy lines, suggesting a fine mist or spray. The nozzle itself has a textured, knurled section near the tip and a smooth, cylindrical section at the back. The overall design is sleek and professional, typical of a high-quality spray gun.

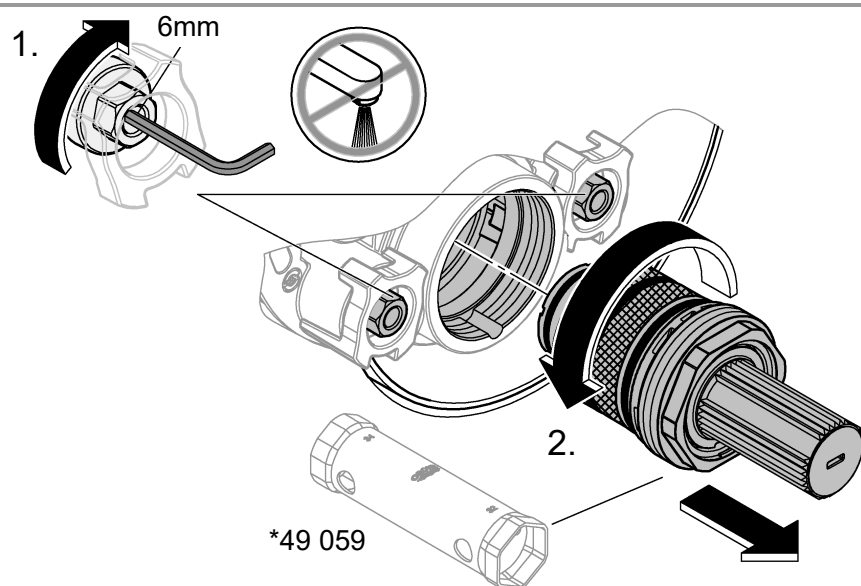
A technical diagram showing the rear of the motor housing with four screws being removed. Dashed lines indicate the screws being loosened. A large black arrow points to the right, indicating the direction of removal.

9b

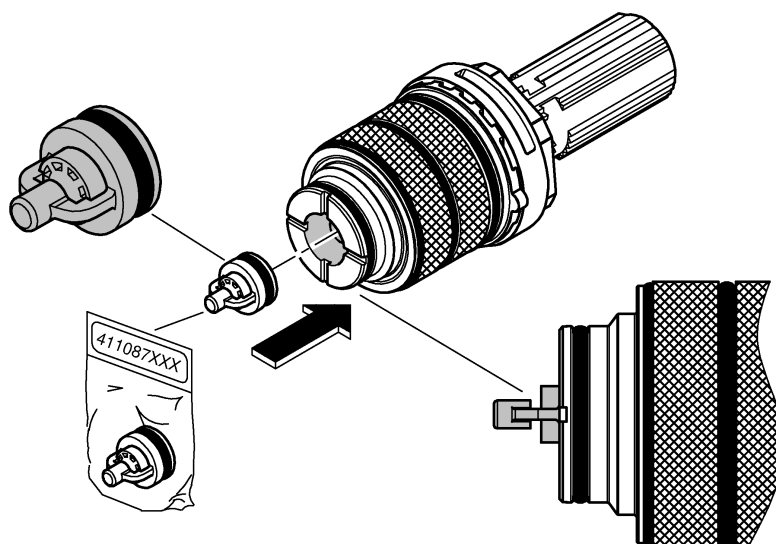
$\frac{3}{8}$ "
0mm

b

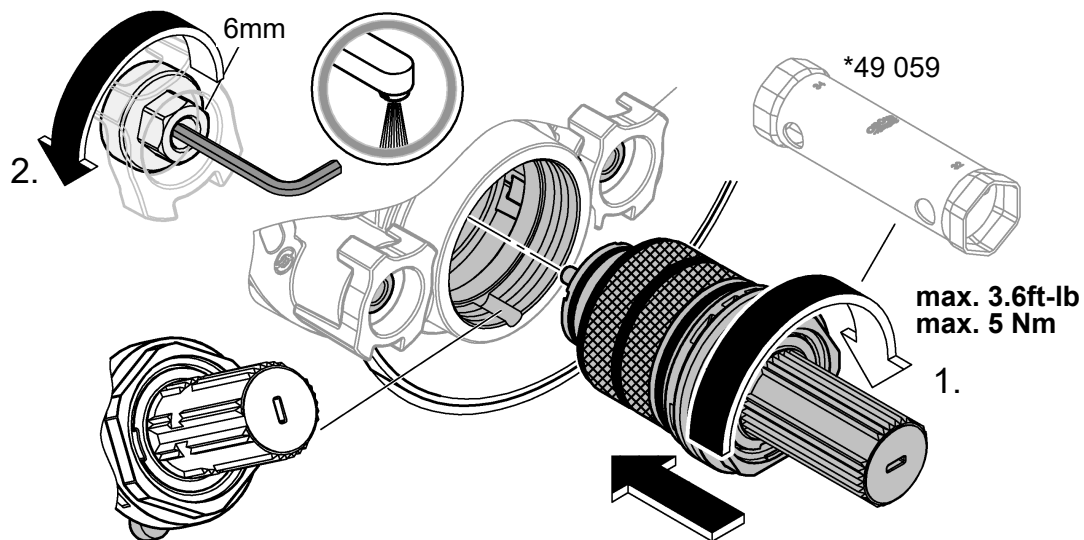
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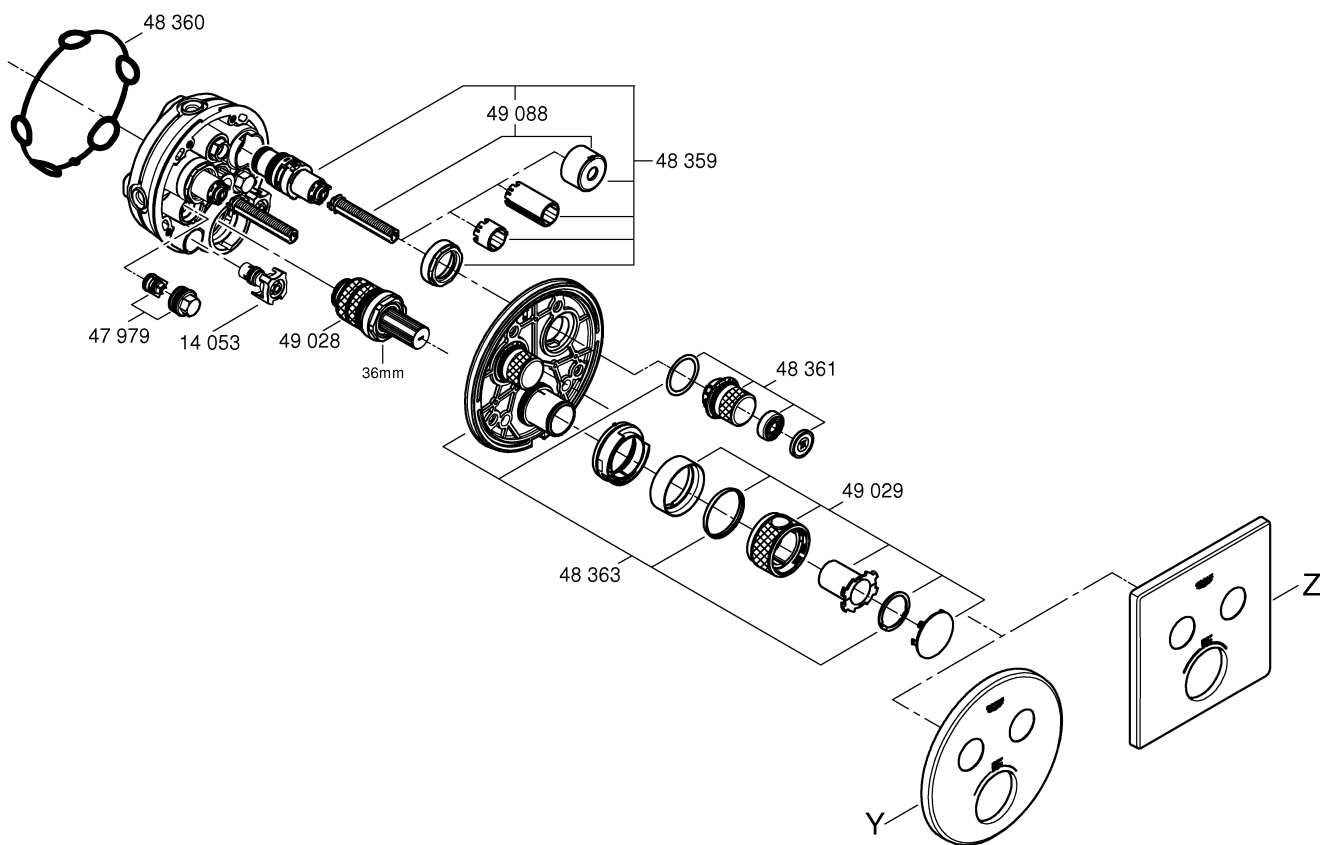


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*49 003		10	10
*14 048	+25	14	14

Pure Freude an Wasser

GROHE

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+971 4 3318070
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Far East Area Sales Office:

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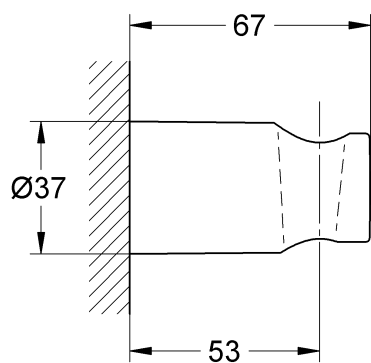
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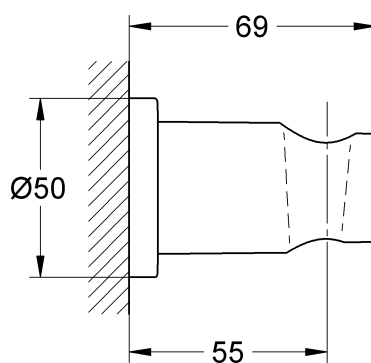


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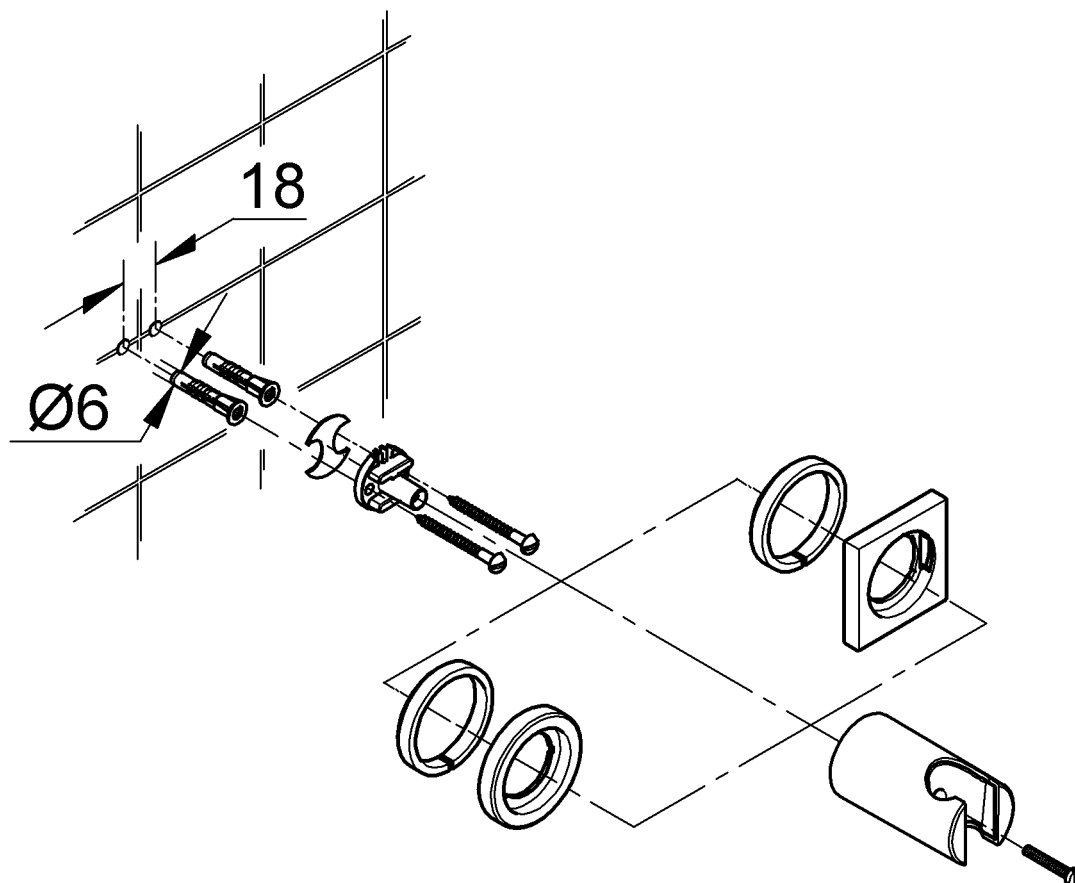
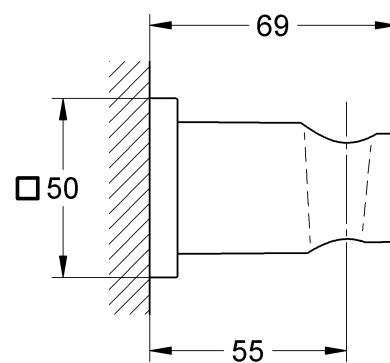
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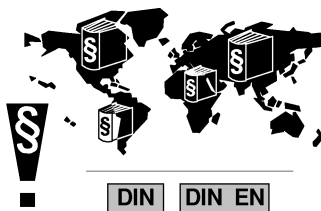


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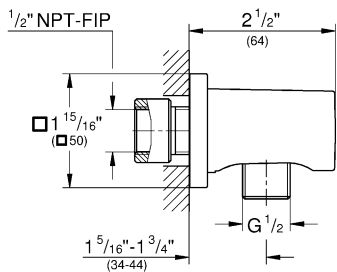
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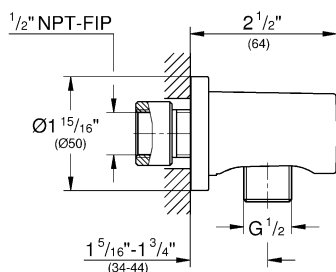
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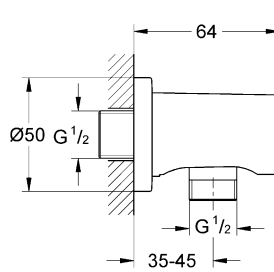
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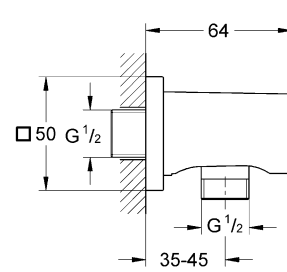
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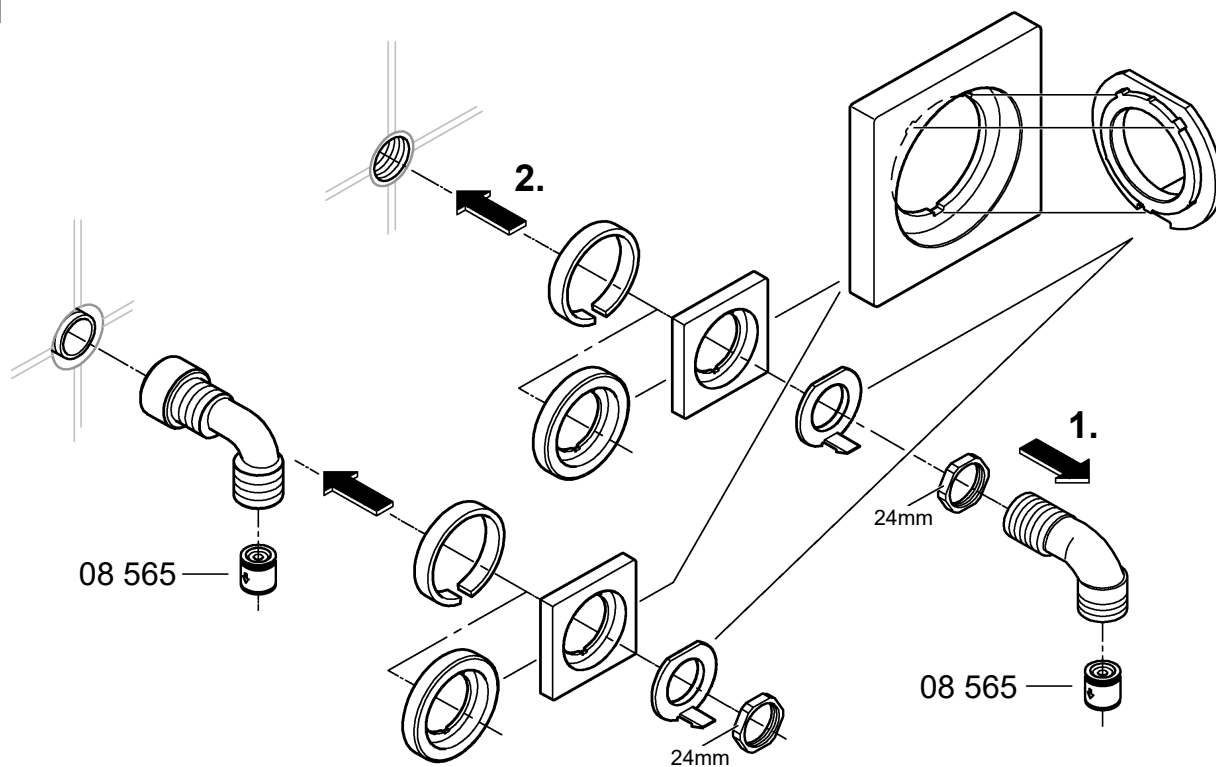
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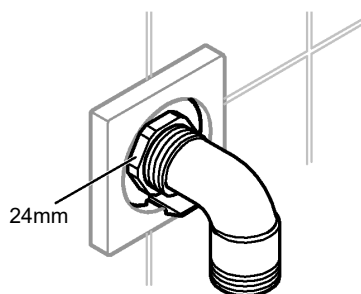
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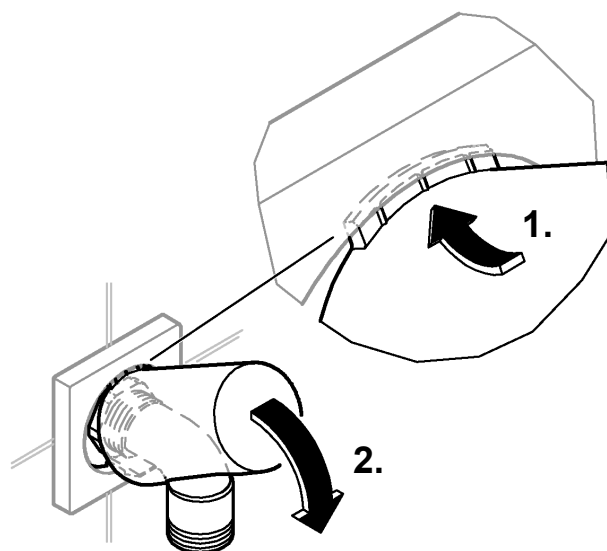
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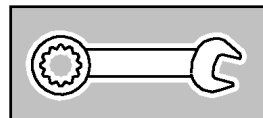
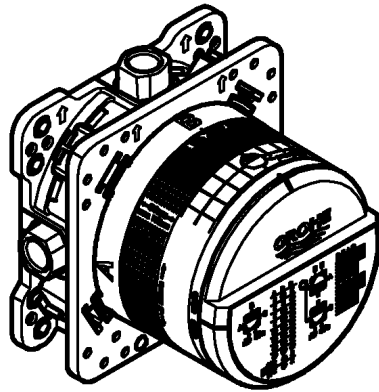
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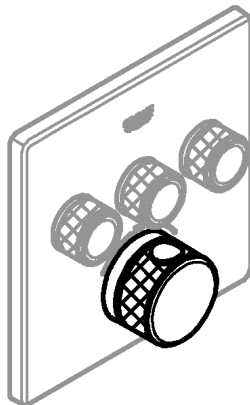


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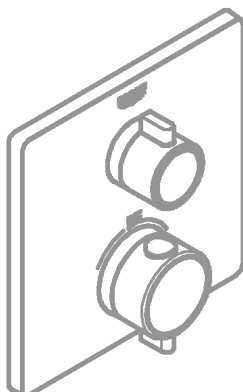
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Grohtherm SmartControl

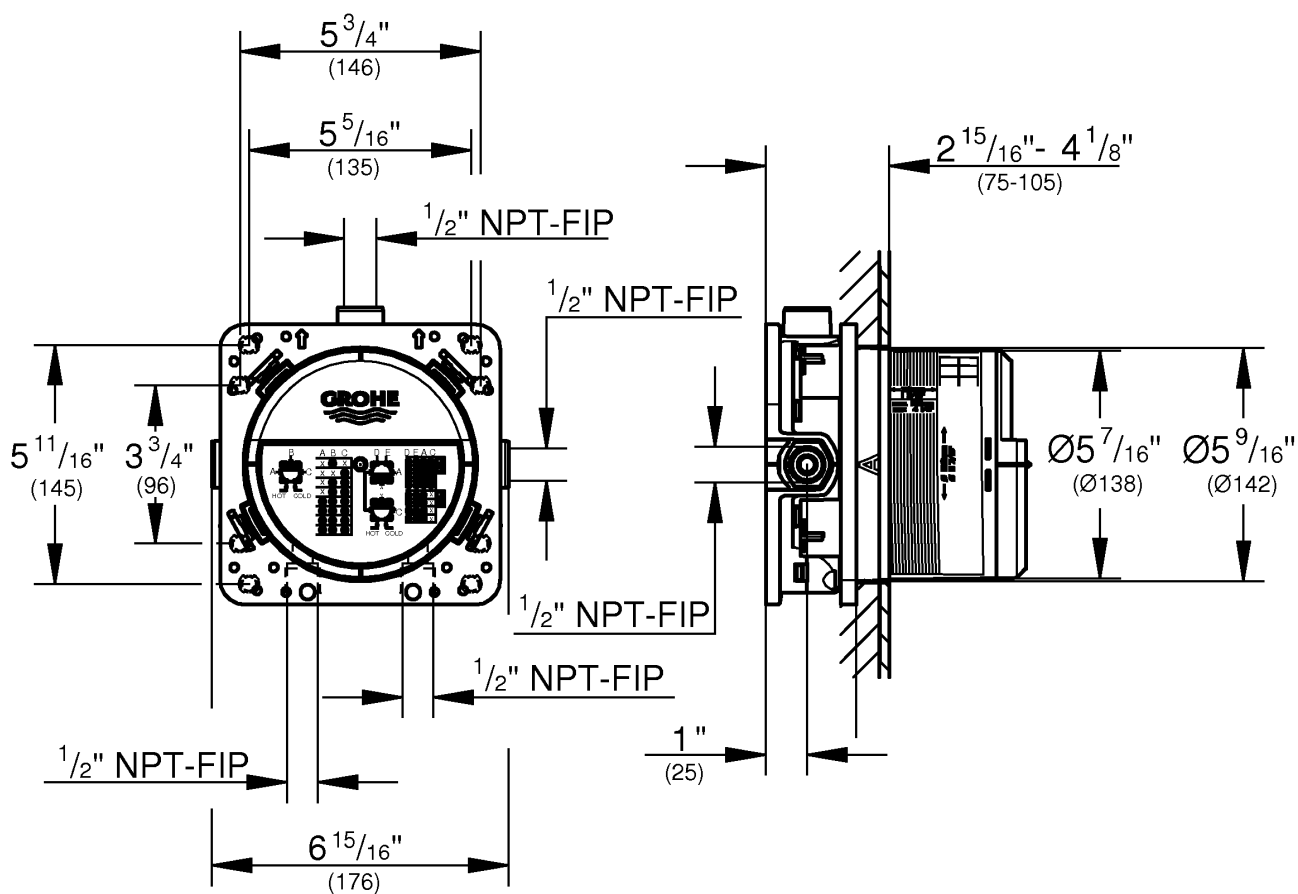
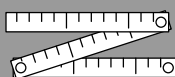
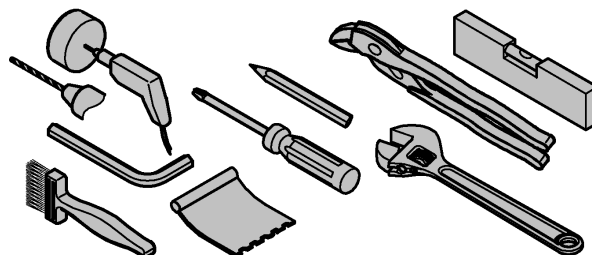
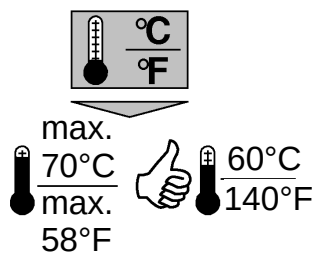
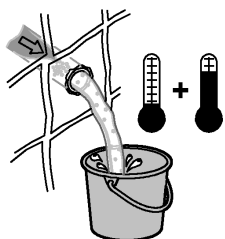


10-24

Grohtherm 2-Handle Thermostat



25-30



Applications

Operation is possible with:

- Pressurised storage heaters
- Thermally/hydraulically controlled instantaneous water heaters

Operation with unpressurised storage heaters (displacement water heaters) is **not** possible!

Technical data

- Operating pressure: max.145 psi
- Test pressure 232 psi

Note:

To comply with noise levels if static pressure exceeds 72.5 psi, a pressure reducing valve must be fitted.

Installation options, see pages 4-9.

- Installation in studding
- Installation with spacers
- Installation directly on the wall
- Installation in the wall
- Installation on prefabricated house assembly plates or prefabricated shells

Installation of the box

- Make drill holes for the box and slots for the pipes.
- Installation depth 2 15/16" - 4 1/8".
- If the box is installed too deeply an extension can be applied.

Connecting the pipes

The outflows intended for this purpose are to be used.

- Recommended configuration options:
 - Grohtherm SmartControl see from page 10-24.
 - Grohtherm 2-Handle Thermostat see from page 25-30.
- Non-binding outflows must be sealed with the accompanying plug (X).
- Check connections for water-tightness.
- **Plugs (Y) must be assembled**, see page 8, Fig. [6].

Apply carrier material as sealant, see page 9, Fig. [9] to [11].

Plaster and tile the wall.

Do **not** cut the fitting template prior to final installation.

Domaine d'application

Utilisation possible avec :

- Réservoirs sous pression
- Chauffe-eau instantanés hydrauliques/thermiques

Le fonctionnement avec des accumulateurs sans pression (chauffe-eau à écoulement libre) **n'est pas** possible !

Caractéristiques techniques

- Pression de service max.10 bars
- Pression d'épreuve 16 bars

Remarque :

Il est recommandé d'installer un réducteur de pression en cas de pressions statiques supérieures à 5 bars.

Possibilités de montage, voir pages 4-9.

- Montage dans un support charpenté
- Montage avec entretoises
- Montage directement sur le mur
- Montage dans le mur
- Montage sur plaques de montage pour préfabriqué ou plaques pré-fabriquées

Installation du boîtier

- Préparer des trous pour le boîtier et des fentes pour les canalisations.
- Profondeur de montage : 75-105mm.
- Si le boîtier est installé trop en profondeur, il est possible d'utiliser une rallonge.

Brancher les canalisations

Il convient d'utiliser les sorties prévues à cet effet.

- Possibilités de configuration recommandées :
 - Grohtherm SmartControl voir à partir de la page 10-24.
 - Grohtherm 2-Handle Thermostat voir à partir de la page 25-30.
- Les sorties non obstruées doivent être étanchéifiées à l'aide des bouchons (X) fournis.
- Vérifier l'étanchéité des raccordements.
- **Les bouchons (Y) doit être monté**, voir page 8, fig. [6].

Monter le support pour le produit d'étanchéité, voir page 9, fig. [9] à [11].

Enduire complètement le mur et le carreler.

Ne pas raccourcir le gabarit de montage avant le montage final.



Campo de aplicación

Es posible el funcionamiento con:

- Acumuladores de presión
- Calentadores instantáneos con control hidráulico/térmico

No es posible el funcionamiento con acumuladores sin presión (calentadores de agua sin presión).

Datos técnicos

- Presión de utilización máx. 145 psi
- Presión de verificación 232 psi

Nota:

Si la presión en reposo es superior a 72.5 psi, se recomienda instalar un reductor de presión para alcanzar los valores de emisión de ruidos.

Posibilidades de montaje, véanse las páginas 4-9.

- Montaje en una pared de tablones
- Montaje con separador
- Montaje directo en la pared
- Montaje en la pared
- Montaje en placas de montaje de viviendas prefabricadas o células acabadas

Instalación de la caja

- Hacer orificios en la caja así como ranuras en las tuberías.
- Profundidad de montaje 2 15/16" - 4 1/8".
- Si la caja se ha montado en un sitio demasiado profundo, se puede introducir una prolongación.

Conectar las tuberías

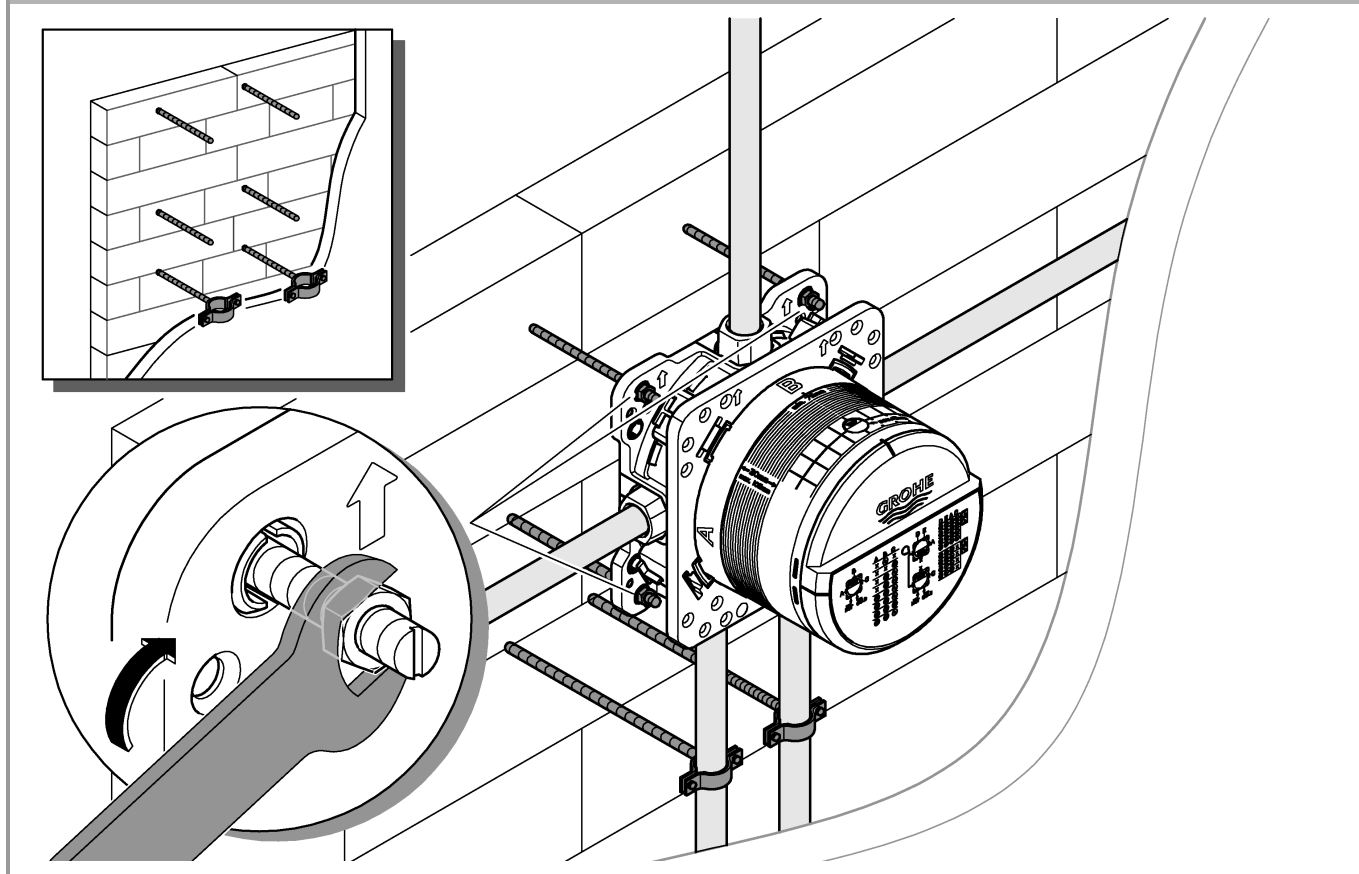
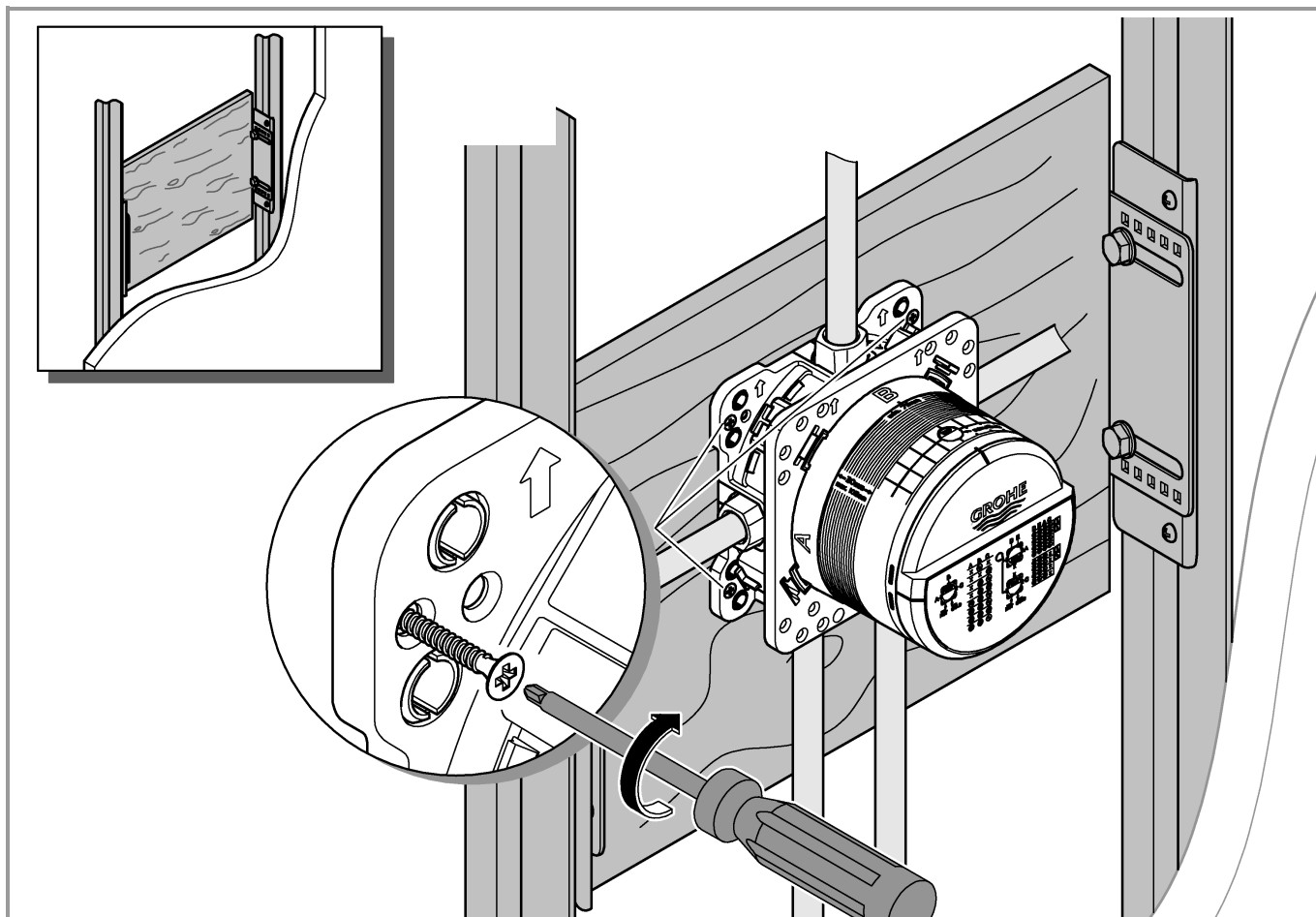
Se deben utilizar las salidas previstas para ello.

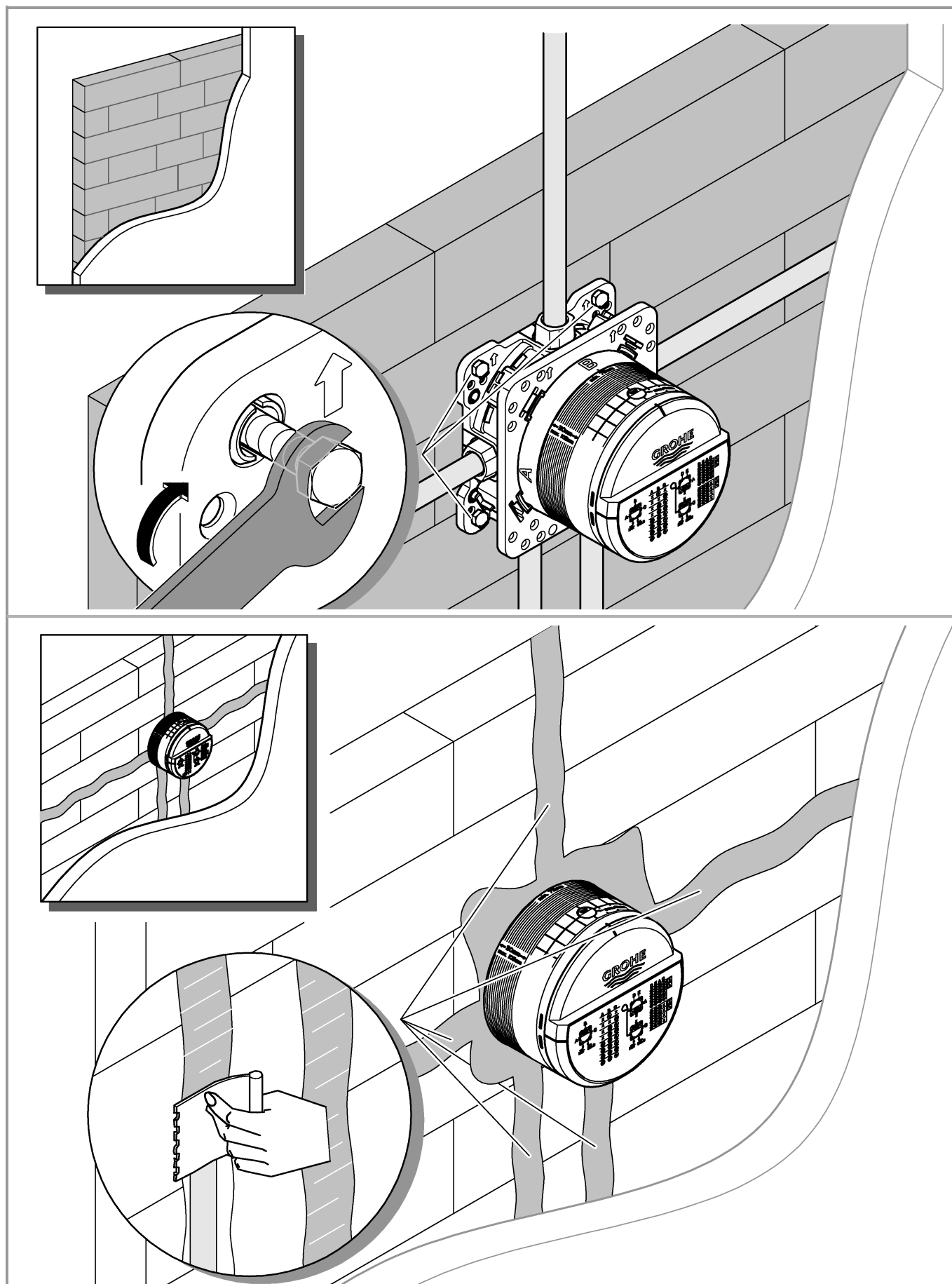
- Posibilidades de configuración recomendadas:
 - Véase Grohtherm SmartControl a partir de la página 10-24.
 - Véase Grohtherm SmartControl a partir de la página 25-30.
- Las salidas libres se deben sellar con el tapón suministrado (X).
- Comprobar la estanqueidad de las conexiones.
- **Los tapones (Y) se debe montar**, véase la página 8, fig. [6].

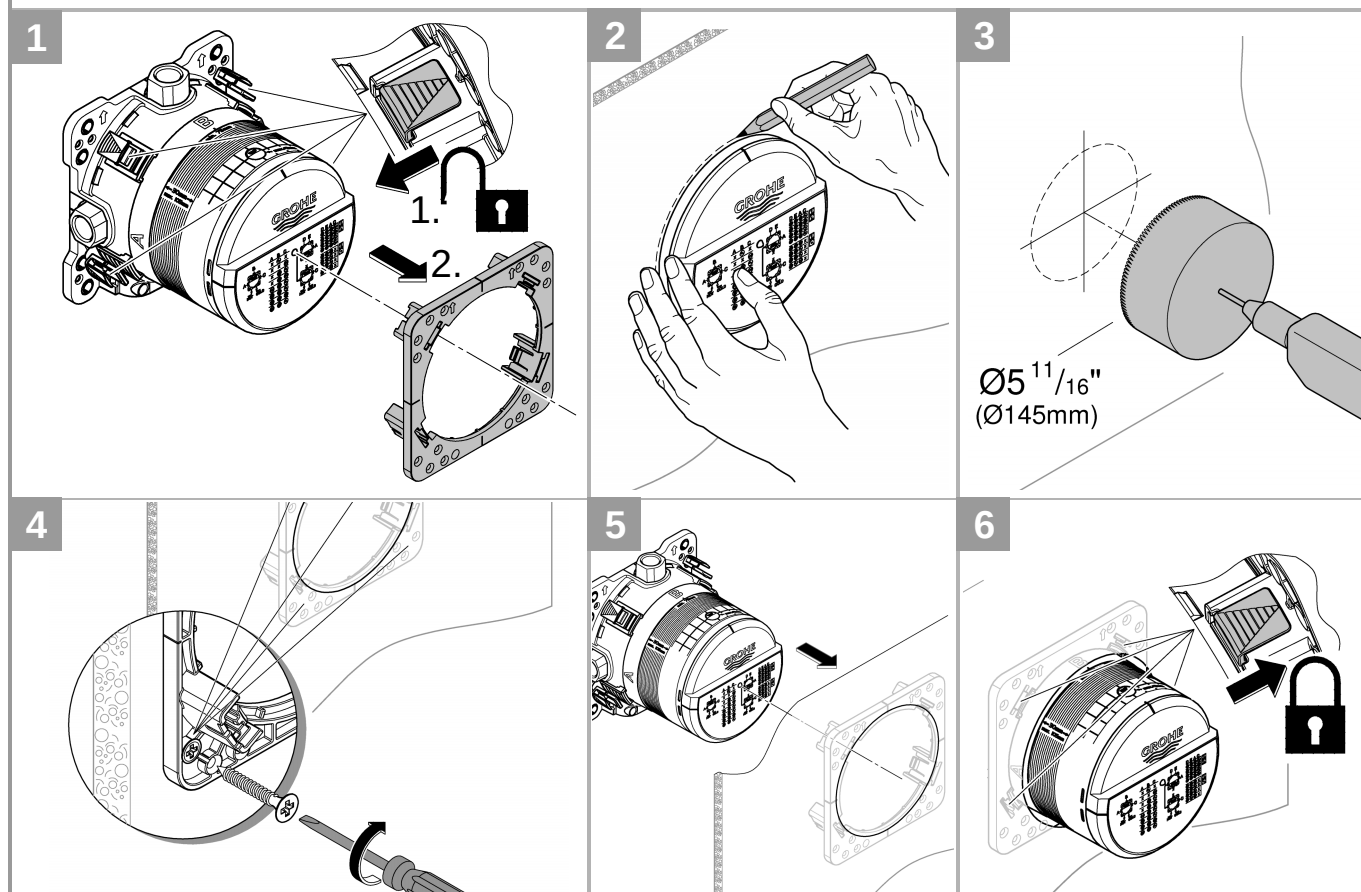
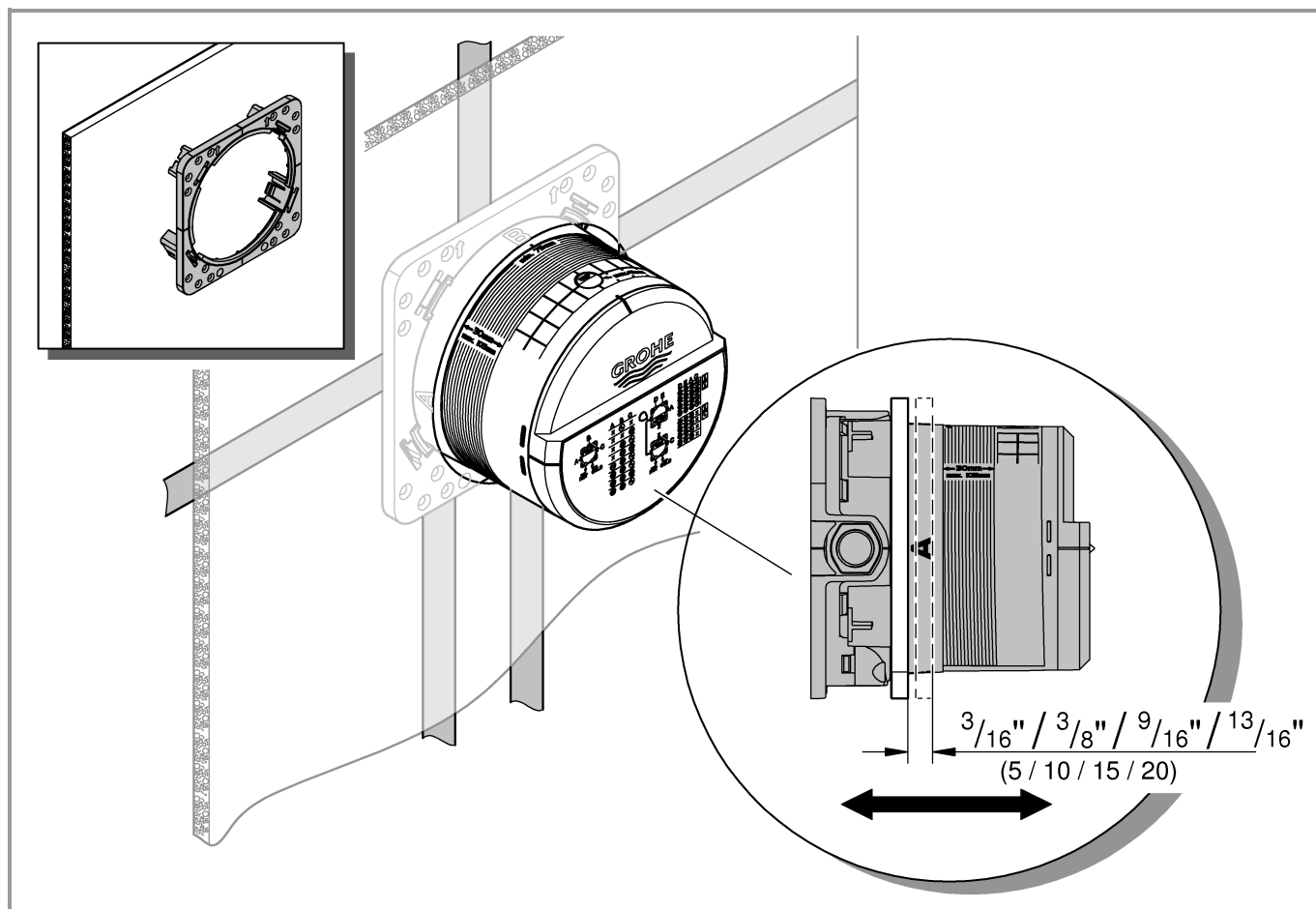
Conseguir material de base para el impermeabilizante, véase la página 9, fig. [9] hasta la [11].

Concluir el enlucido y alicatado de la pared.

No acortar la plantilla de montaje antes de proceder con la instalación de acabado.

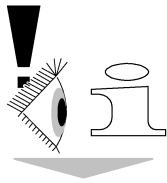








1



Grohtherm Smart Control



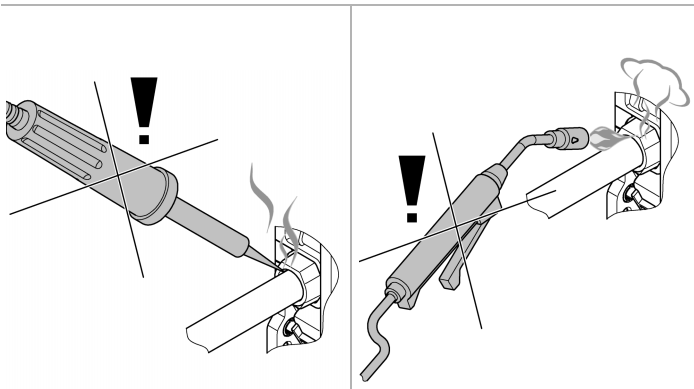
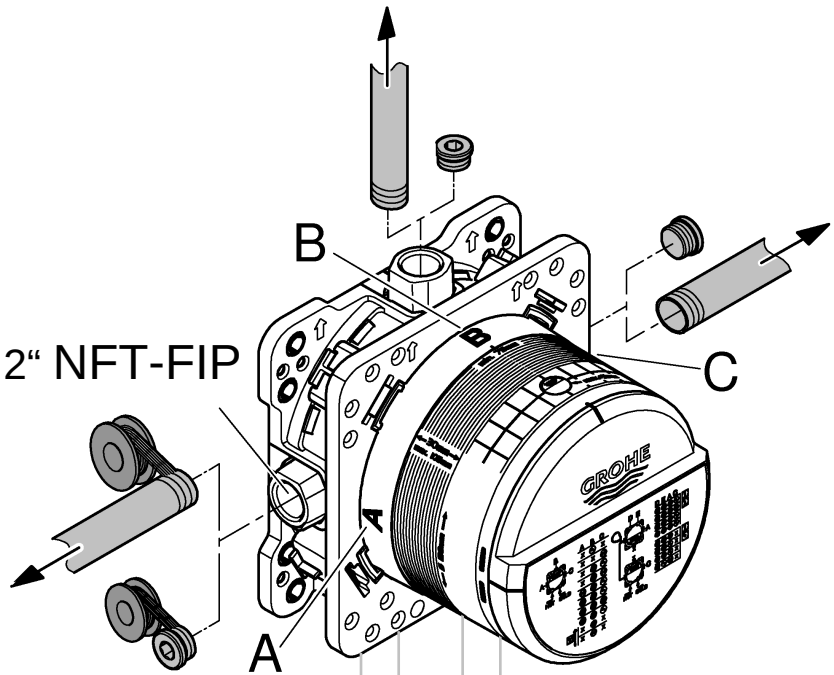
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Grohtherm 2-Handle Thermostat

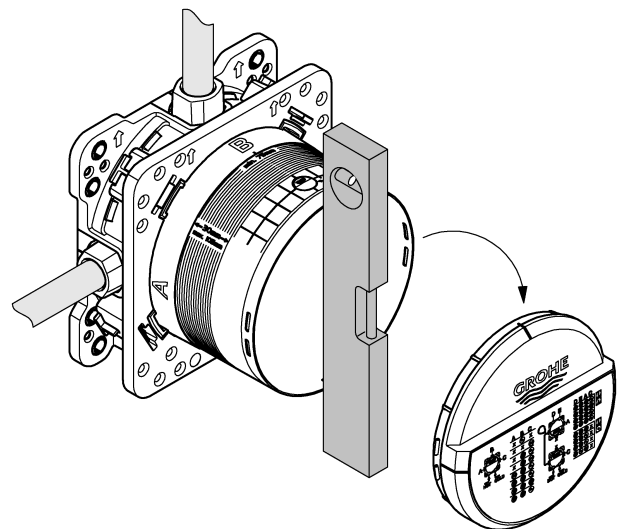
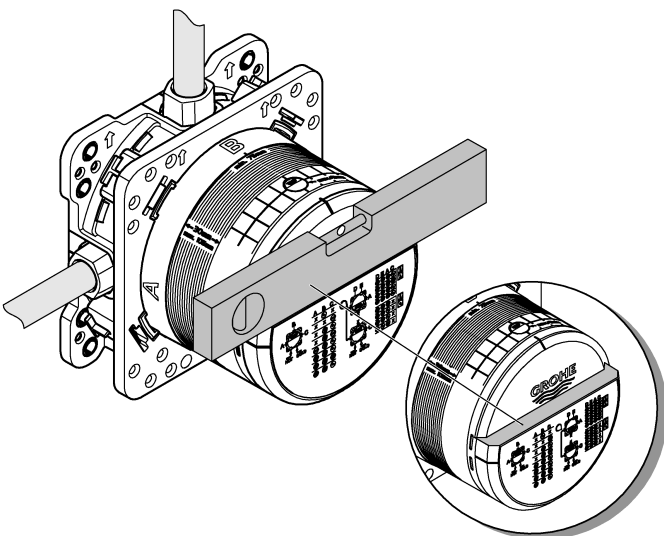


25-30

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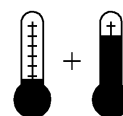
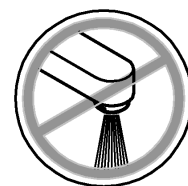
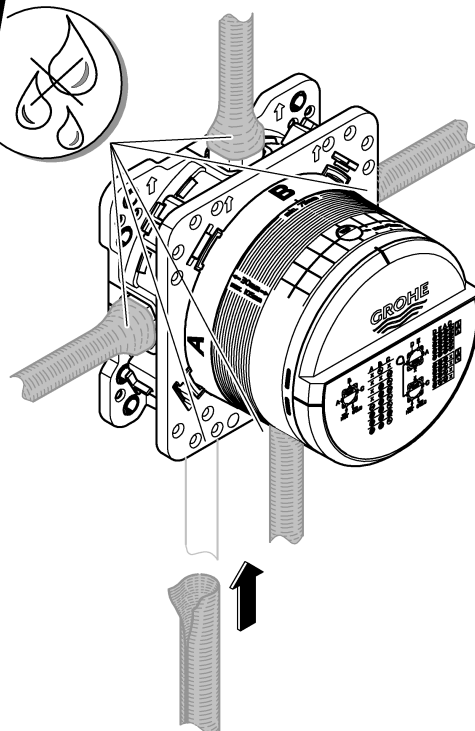
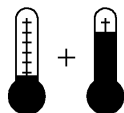
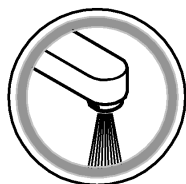


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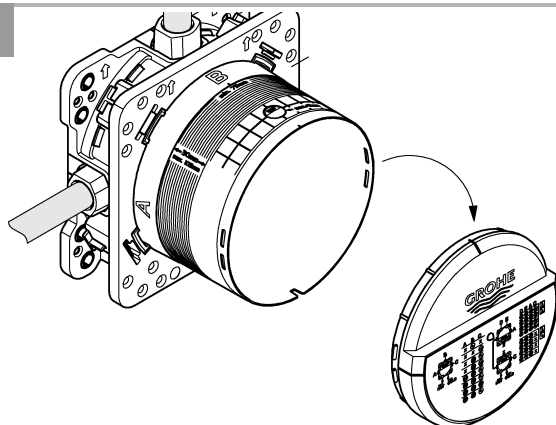




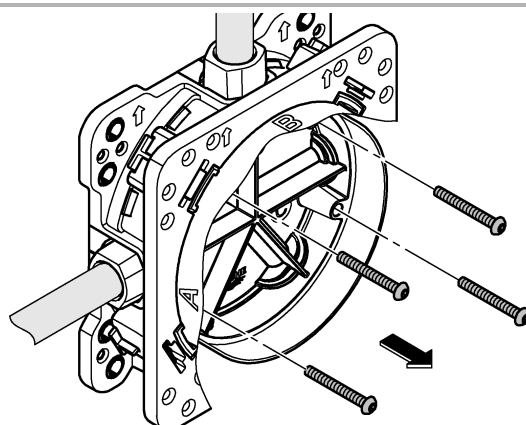
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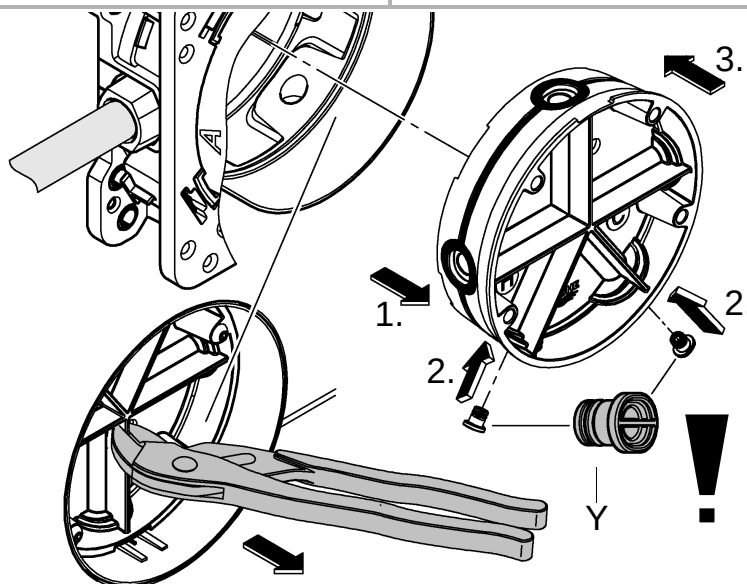
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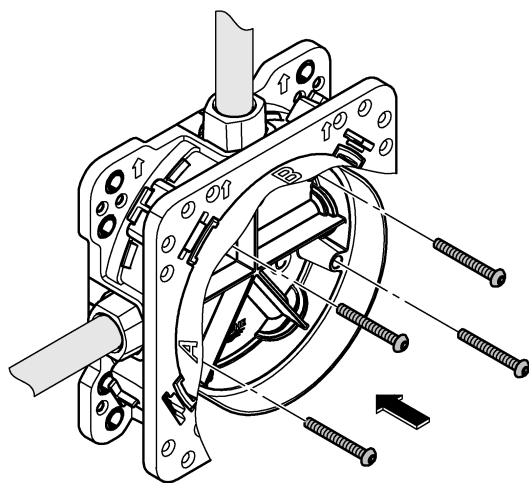


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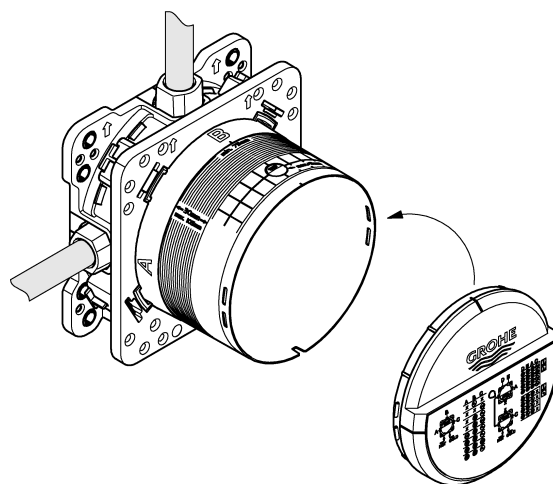




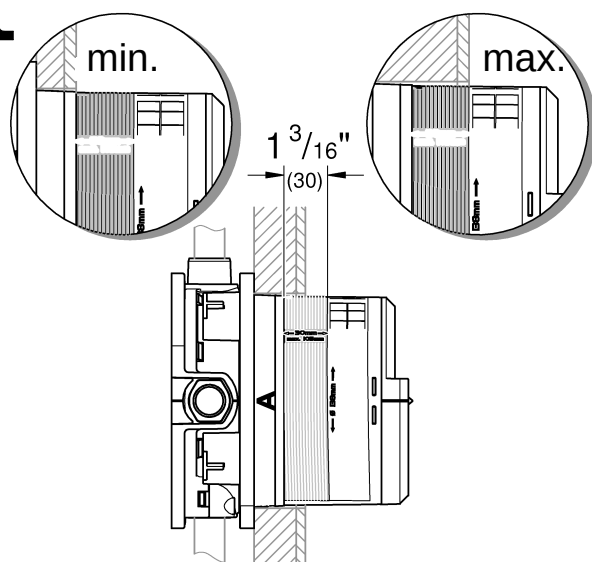
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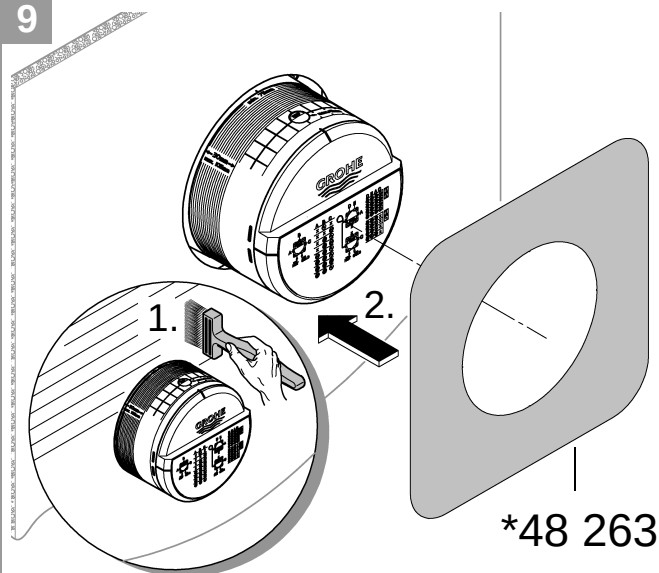
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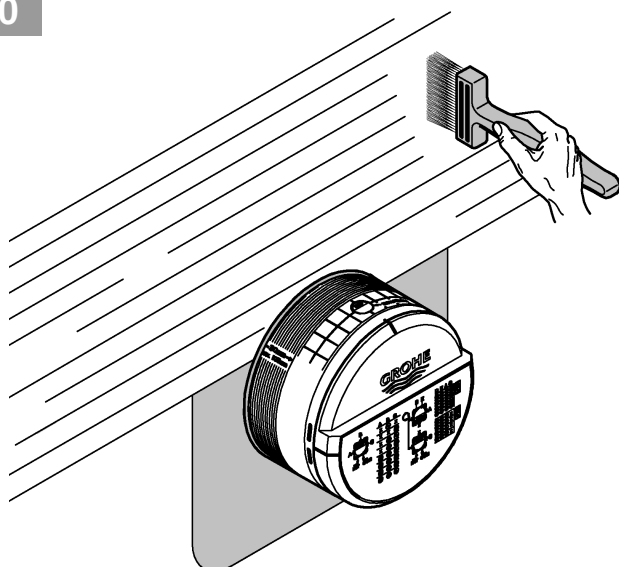
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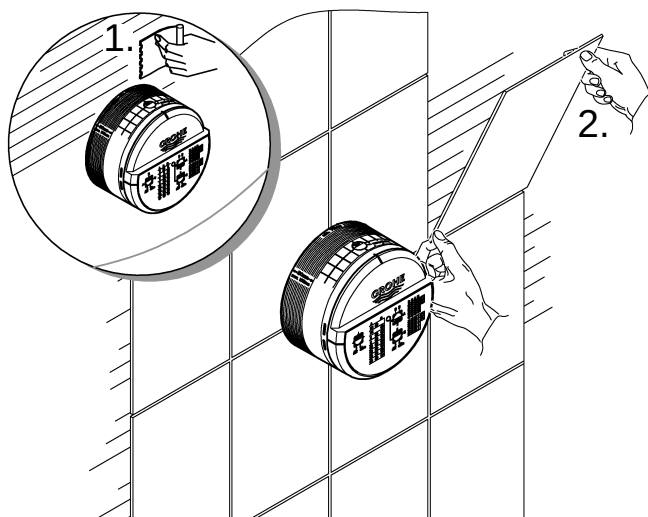
9



10



11



Technical specifications Grohtherm SmartControl

Thermostat

- Flow pressure
- Minimum flow pressure without downstream resistances 7.25 psi
- Minimum flow pressure with downstream resistances 14.5 psi
- Recommended 21.75 – 72.5 psi
- Temperature
- Hot water inlet max. 158 °F
- Recommended for energy saving 140 °F
- Thermal disinfection possible
- Hot water temperature at supply connection min. 3.6 °F higher than mixed water temperature

Flow rates without downstream resistances, see page 12-24. **These are to be observed when dimensioning the outlet!**

- Recommended configuration options, see from page 11-24.

The following special accessories are available:

- Extension 1" (prod. no.: 14 048)
- Service stops (prod. no.: 14 053)
- Reversed connection, hot on right – cold on left replace thermostat cartridges (prod. no.: 49 003)

Caractéristiques techniques Grohtherm SmartControl

Thermostat

- Pression dynamique
- Pression dynamique minimale sans résistances en aval 0,5 bar
- Pression dynamique minimale avec résistances en aval 1 bar
- Recommandée 1,5 à 5 bars
- Température
- Arrivée d'eau chaude max. 70 °C
- Recommandée pour une économie d'énergie 60 °C
- Désinfection thermique possible
- Température de l'eau chaude au raccord d'alimentation au moins 2 °C de plus que la température de l'eau mitigée

Débits sans résistances en aval, voir pages 12-24.

Veillez en tenir compte lors du

dimensionnement de l'évacuation!

- Possibilités de configuration recommandées, voir à partir de la page 11-24.

Les accessoires spéciaux suivants sont disponibles :

- Rallonge de 25mm (réf. : 14 048)
- Robinets d'arrêt (réf. : 14 053)
- Raccordement inversé, chaud à droite - froid à gauche, remplacer la cartouche du thermostat (réf. : 49 003)

Datos técnicos de Grohtherm SmartControl

Thermostat

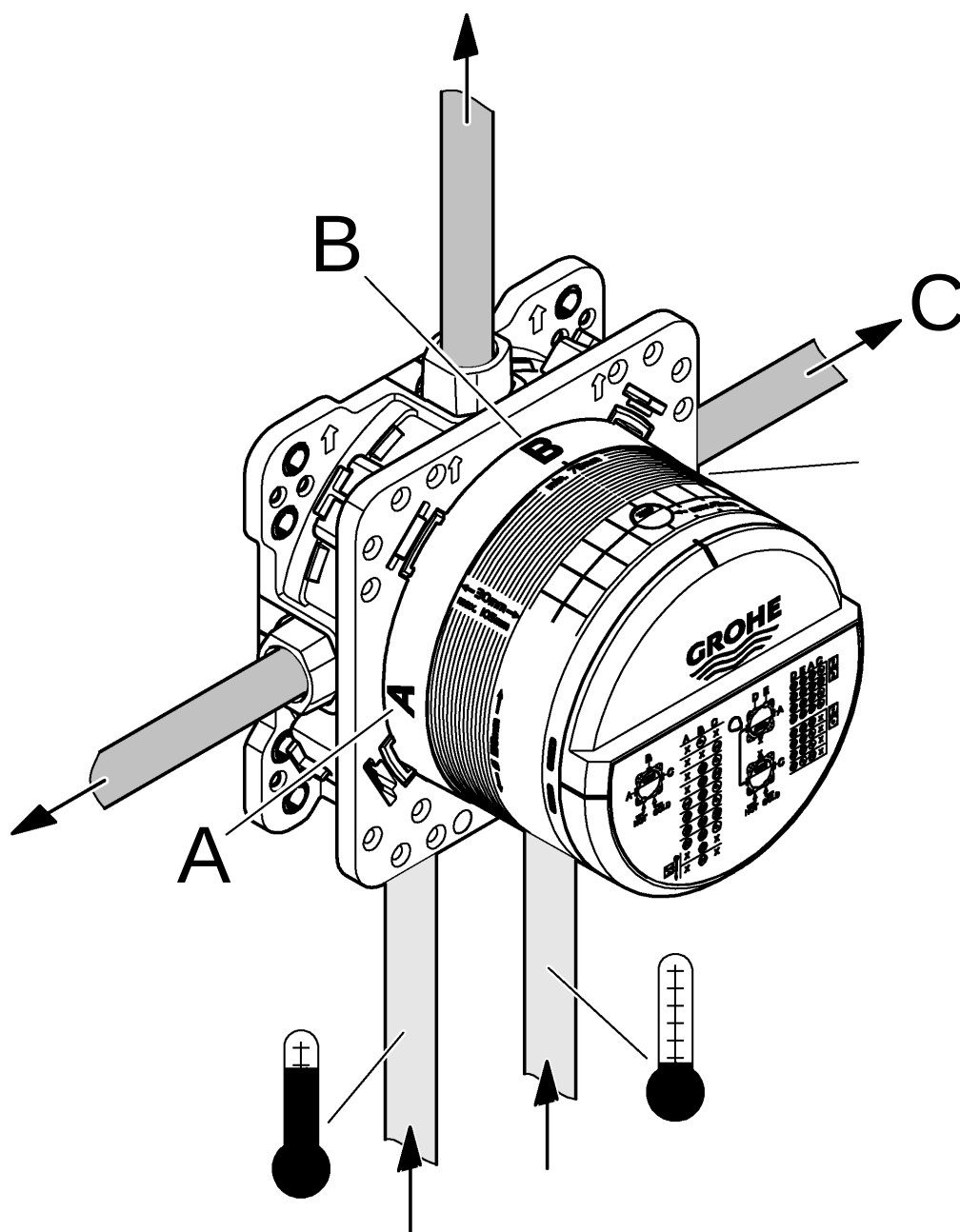
- Presión de trabajo
- Presión mínima de trabajo sin resistencias posacopladas 7.25 psi
- Presión mínima de trabajo con resistencias posacopladas 14.5 psi
- Presión recomendada 21.75 – 72.5 psi
- Temperatura
- Entrada de agua caliente máx. 158 °F
- Recomendada para ahorrar energía 140 °F
- Desinfección térmica posible
- La temperatura del agua caliente en la acometida mín. 3.6 °F superior a la temperatura del agua mezclada

Caudales sin resistencias posacopladas, véanse las páginas 12-24. **Tenga en cuenta las dimensiones del desagüe.**

- Posibilidades de configuración recomendadas, véase a partir de la página 11-24.

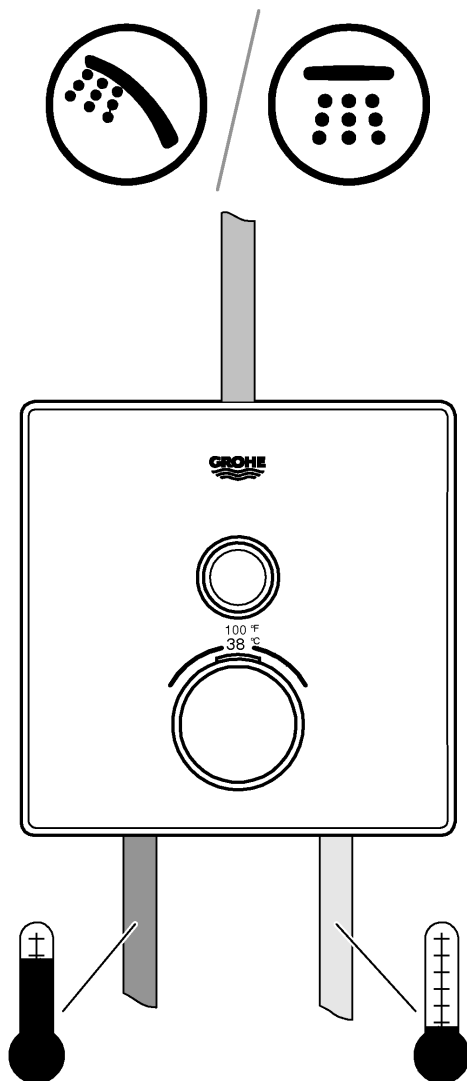
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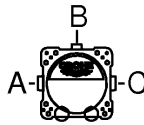
- Prolongación de 1" (n.º de pedido: 14 048)
- Bloqueos de seguridad (n.º de pedido: 14 053)
- Conexión invertida, derecha caliente - izquierda frío sustituir los cartuchos del termostato (n.º de pedido: 49 003)

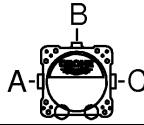


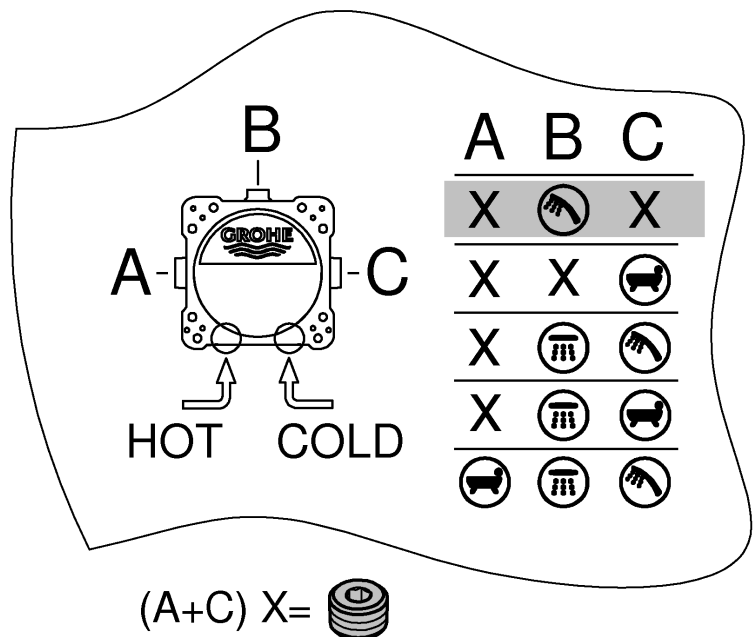


Grohtherm SmartControl



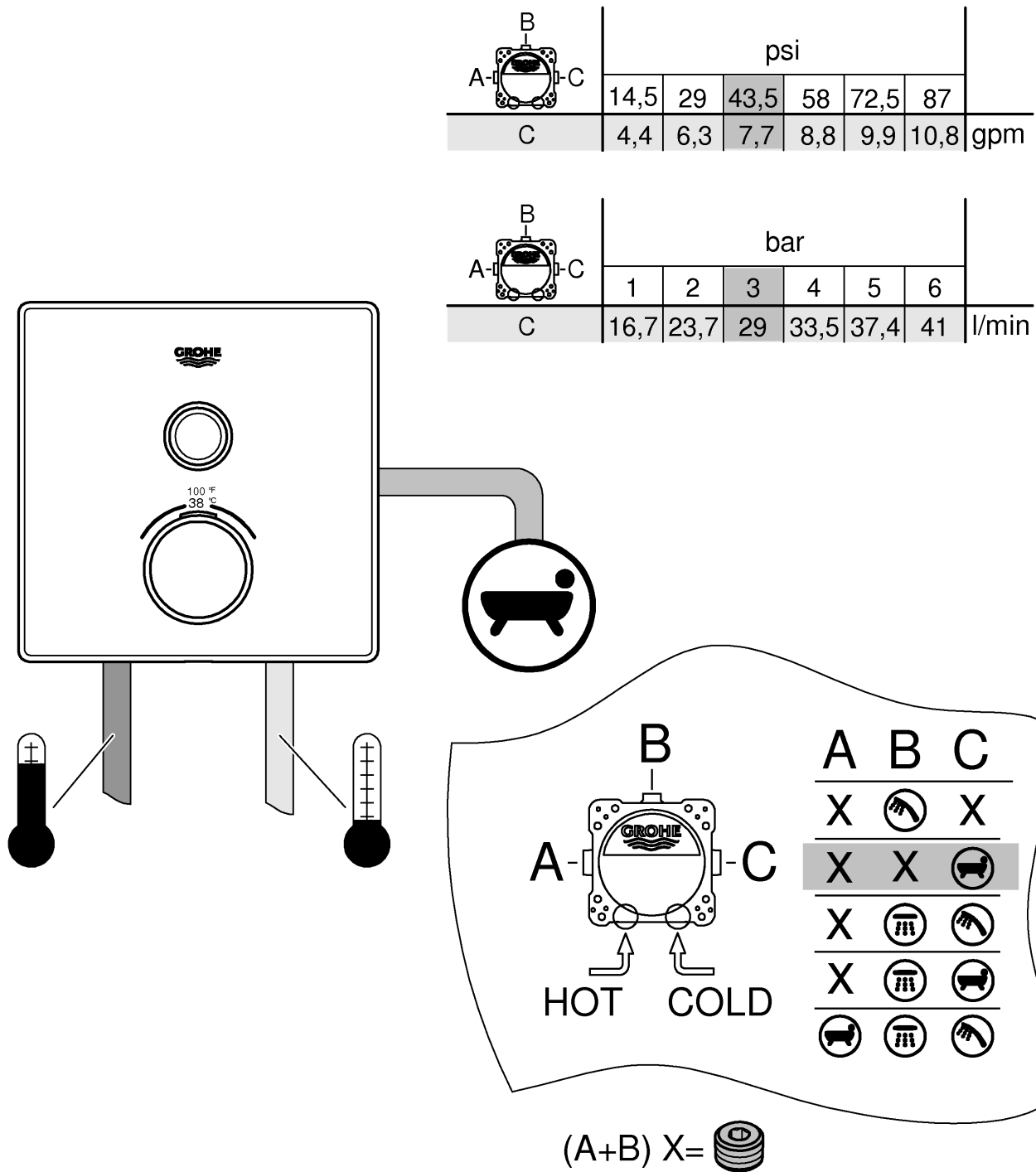
	psi						
	14,5	29	43,5	58	72,5	87	
B	4,4	6,3	7,7	8,8	9,9	10,8	gpm

	bar						
	1	2	3	4	5	6	
B	16,7	23,7	29	33,5	37,4	41	l/min



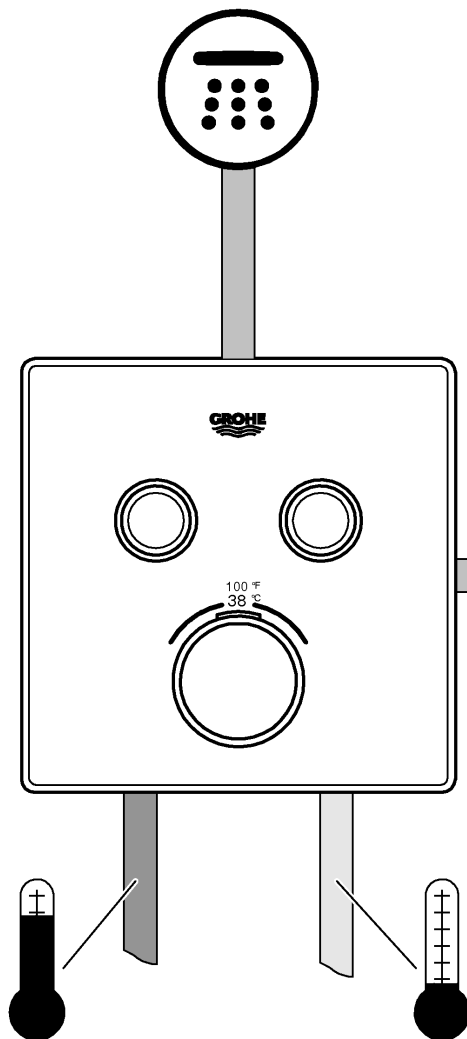


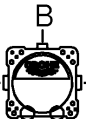
Grohtherm SmartControl

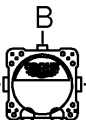


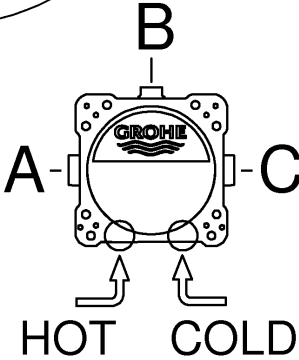


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	psi						
	14,5	29	43,5	58	72,5	87	
B	3,7	5,2	6,3	7,3	8,2	9	gpm
C	4	5,6	6,9	7,9	8,9	9,7	
B + C	4,4	6,3	7,7	8,8	9,9	10,8	

	bar						
	1	2	3	4	5	6	
B	13,9	19,6	24	27,7	31	33,9	l/min
C	15	21,2	26	30	33,6	36,8	
B + C	16,7	23,7	29	33,5	37,4	41	

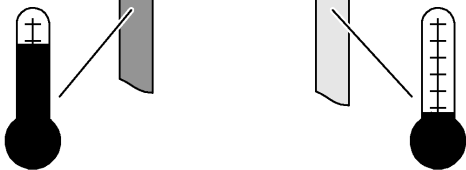
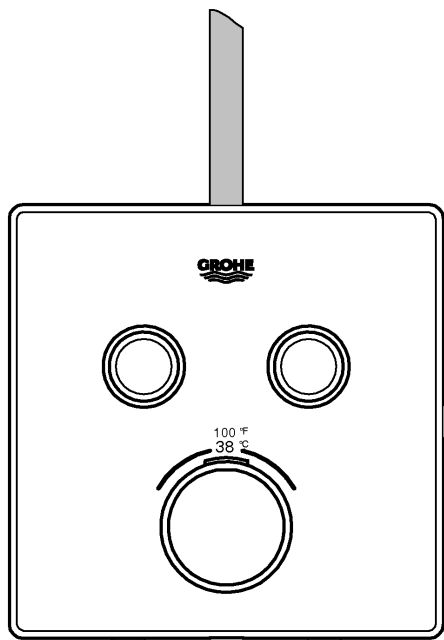
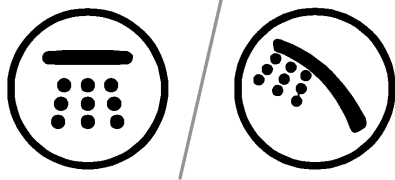


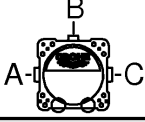
A	B	C
X		X
X	X	
X		
X		

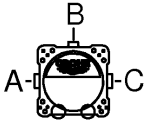
! (A) X=

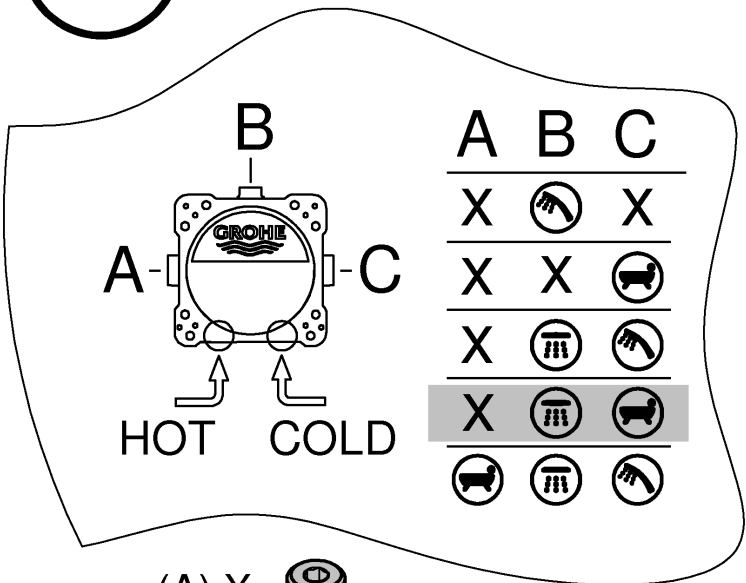


Grohtherm SmartControl



	psi						
	14,5	29	43,5	58	72,5	87	
B	3,7	5,2	6,3	7,3	8,2	9	gpm
C	4	5,6	6,9	7,9	8,9	9,7	
B + C	4,4	6,3	7,7	8,8	9,9	10,8	

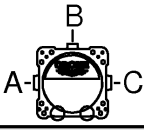
	bar						
	1	2	3	4	5	6	
B	13,9	19,6	24	27,7	31	33,9	l/min
C	15	21,2	26	30	33,6	36,8	
B + C	16,7	23,7	29	33,5	37,4	41	

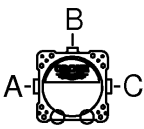


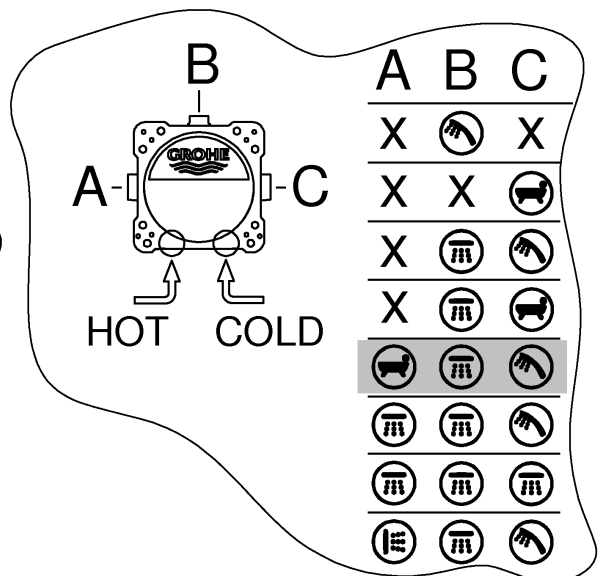
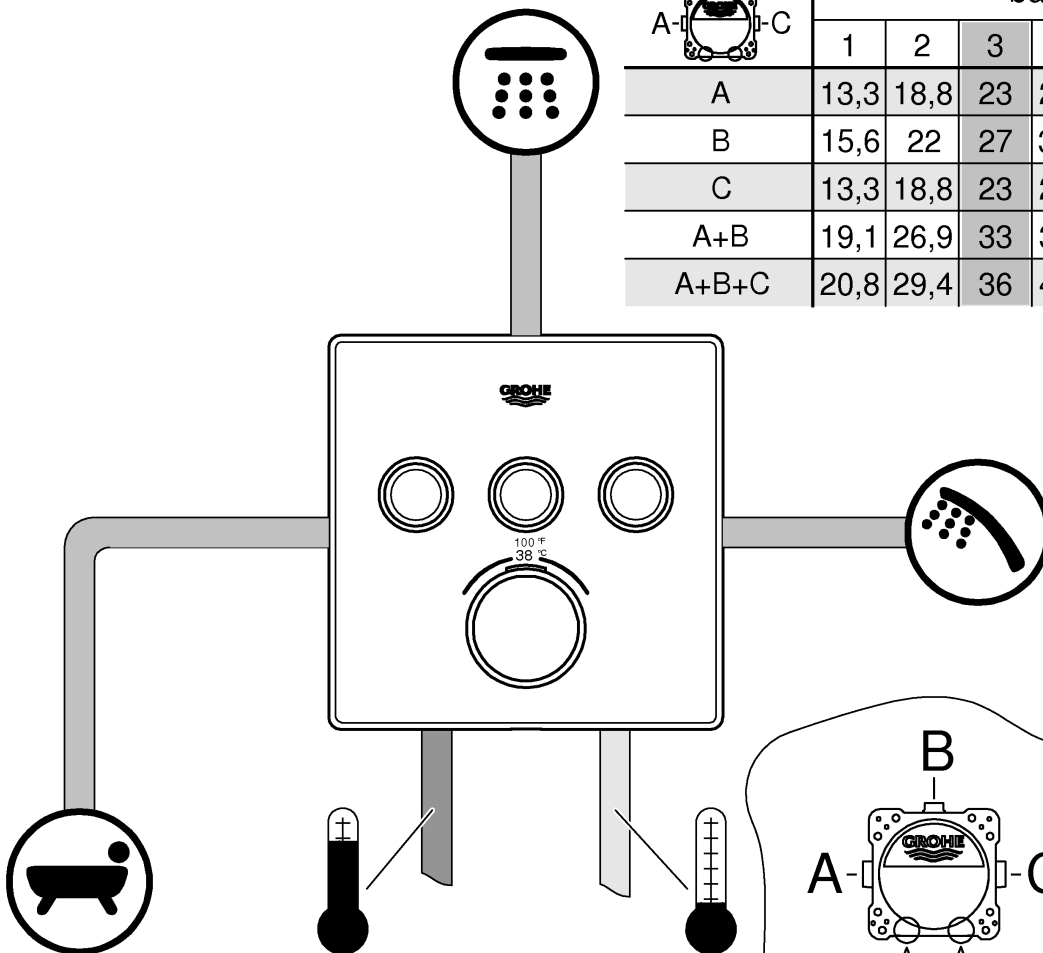
(A) X= 



Grohtherm SmartControl

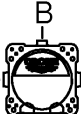
	psi						
	14,5	29	43,5	58	72,5	87	
A	3,5	5	6,1	7	7,8	8,6	gpm
B	4,1	5,8	7,1	8,2	9,2	10,1	
C	3,5	5	6,1	7	7,8	8,6	
A+B	5	7,1	8,7	10,1	11,3	12,3	
A+B+C	5,5	7,8	9,5	11	12,3	13,4	

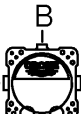
	bar						
	1	2	3	4	5	6	
A	13,3	18,8	23	26,6	29,7	32,5	l/min
B	15,6	22	27	31,2	34,9	38,2	
C	13,3	18,8	23	26,6	29,7	32,5	
A+B	19,1	26,9	33	38,1	42,6	46,7	
A+B+C	20,8	29,4	36	41,6	46,5	50,9	

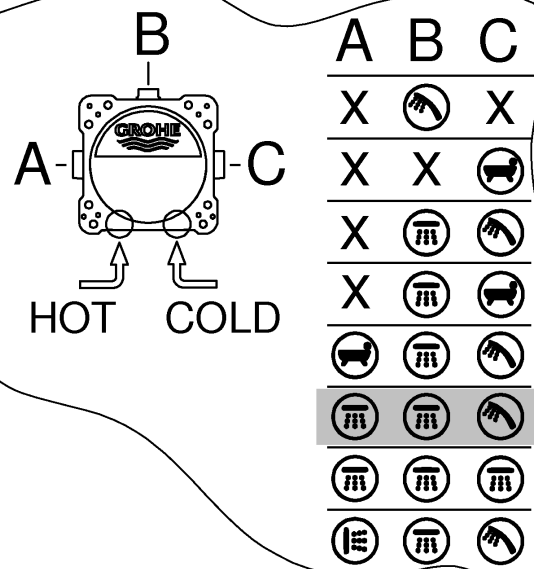
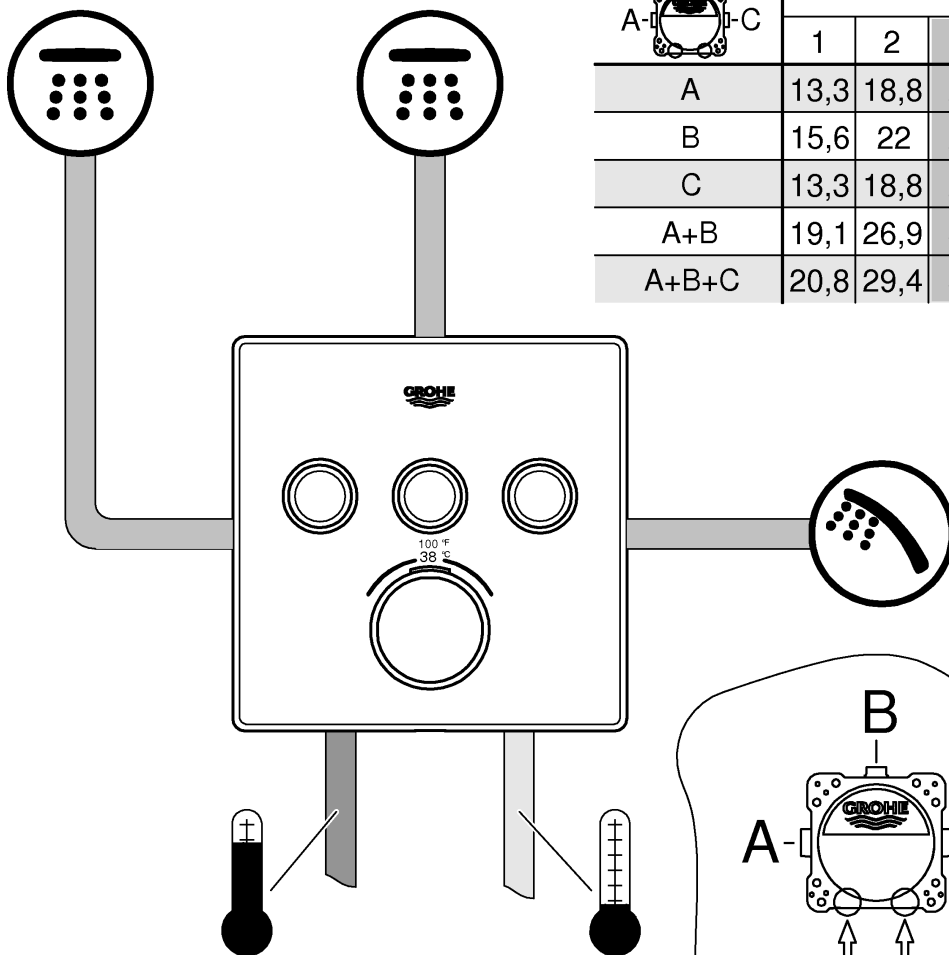




Grohtherm SmartControl

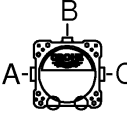
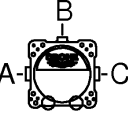
	psi						
	14,5	29	43,5	58	72,5	87	
A	3,5	5	6,1	7	7,8	8,6	gpm
B	4,1	5,8	7,1	8,2	9,2	10,1	
C	3,5	5	6,1	7	7,8	8,6	
A+B	5	7,1	8,7	10,1	11,3	12,3	
A+B+C	5,5	7,8	9,5	11	12,3	13,4	

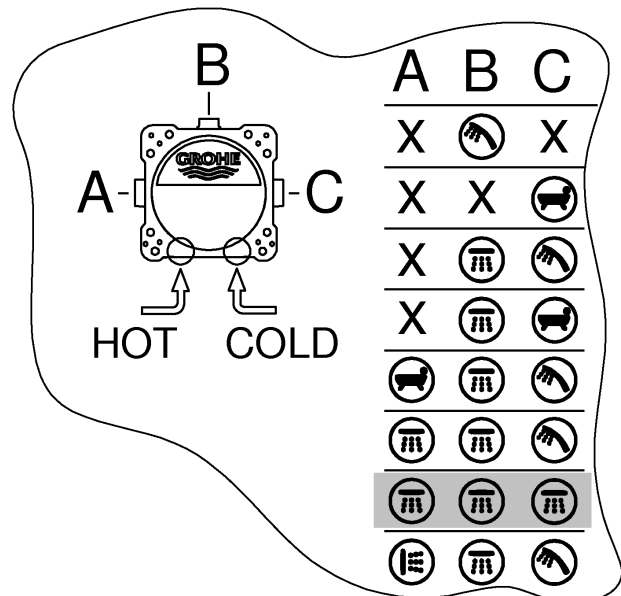
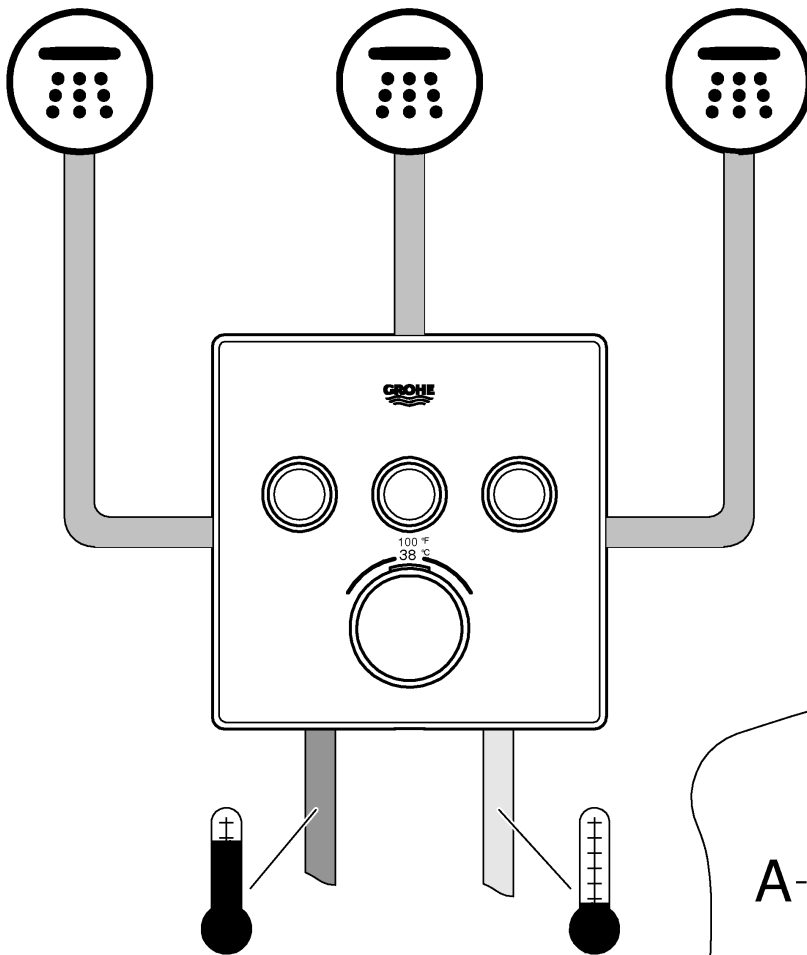
	bar						
	1	2	3	4	5	6	
A	13,3	18,8	23	26,6	29,7	32,5	l/min
B	15,6	22	27	31,2	34,9	38,2	
C	13,3	18,8	23	26,6	29,7	32,5	
A+B	19,1	26,9	33	38,1	42,6	46,7	
A+B+C	20,8	29,4	36	41,6	46,5	50,9	





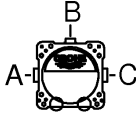
Grohtherm SmartControl

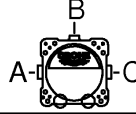
	bar							
	1	2	3	4	5	6		
A	13,3	18,8	23	26,6	29,7	32,5	l/min	
B	15,6	22	27	31,2	34,9	38,2		
C	13,3	18,8	23	26,6	29,7	32,5		
A+B	19,1	26,9	33	38,1	42,6	46,7		
A+B+C	20,8	29,4	36	41,6	46,5	50,9		
	psi							
	14,5	29	43,5	58	72,5	87		
A	3,5	5	6,1	7	7,8	8,6	gpm	
B	4,1	5,8	7,1	8,2	9,2	10,1		
C	3,5	5	6,1	7	7,8	8,6		
A+B	5	7,1	8,7	10,1	11,3	12,3		
A+B+C	5,5	7,8	9,5	11	12,3	13,4		

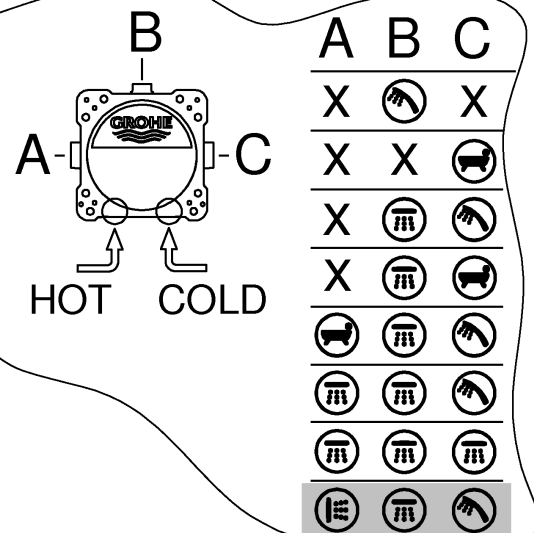
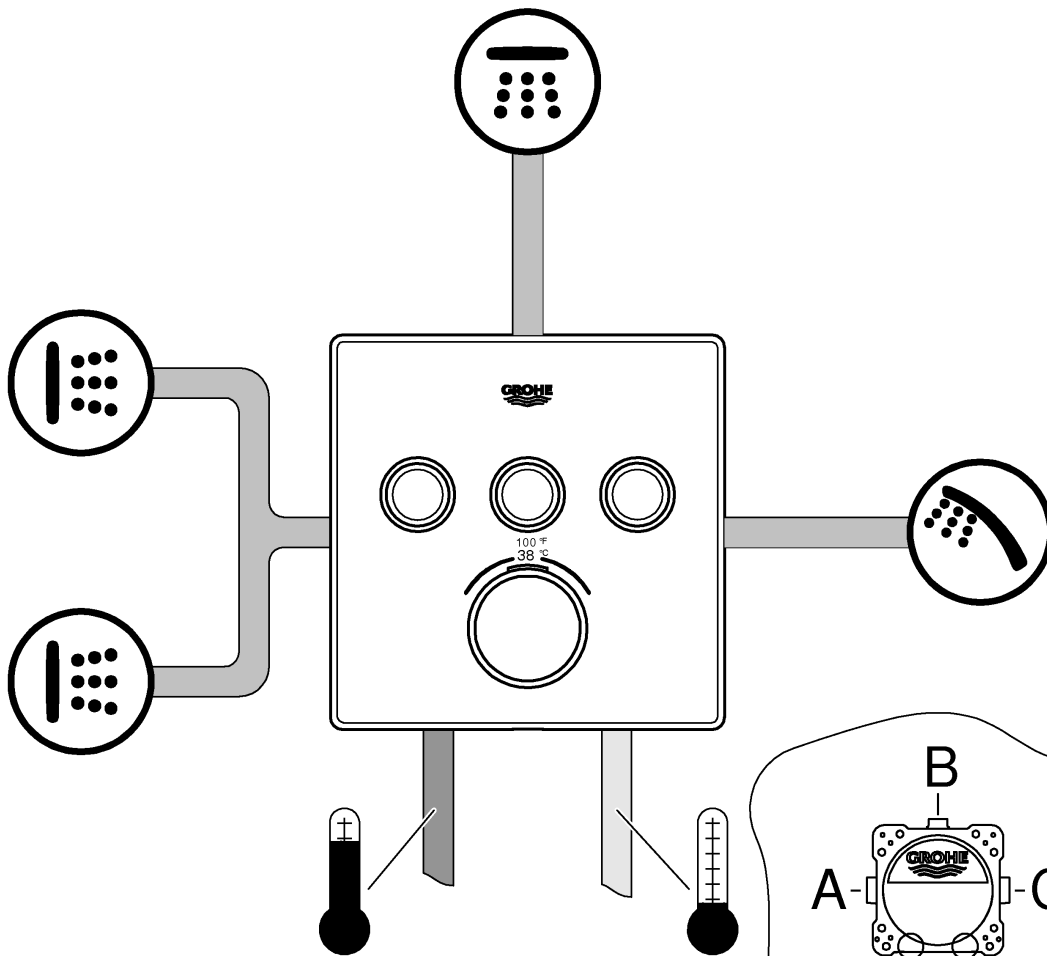


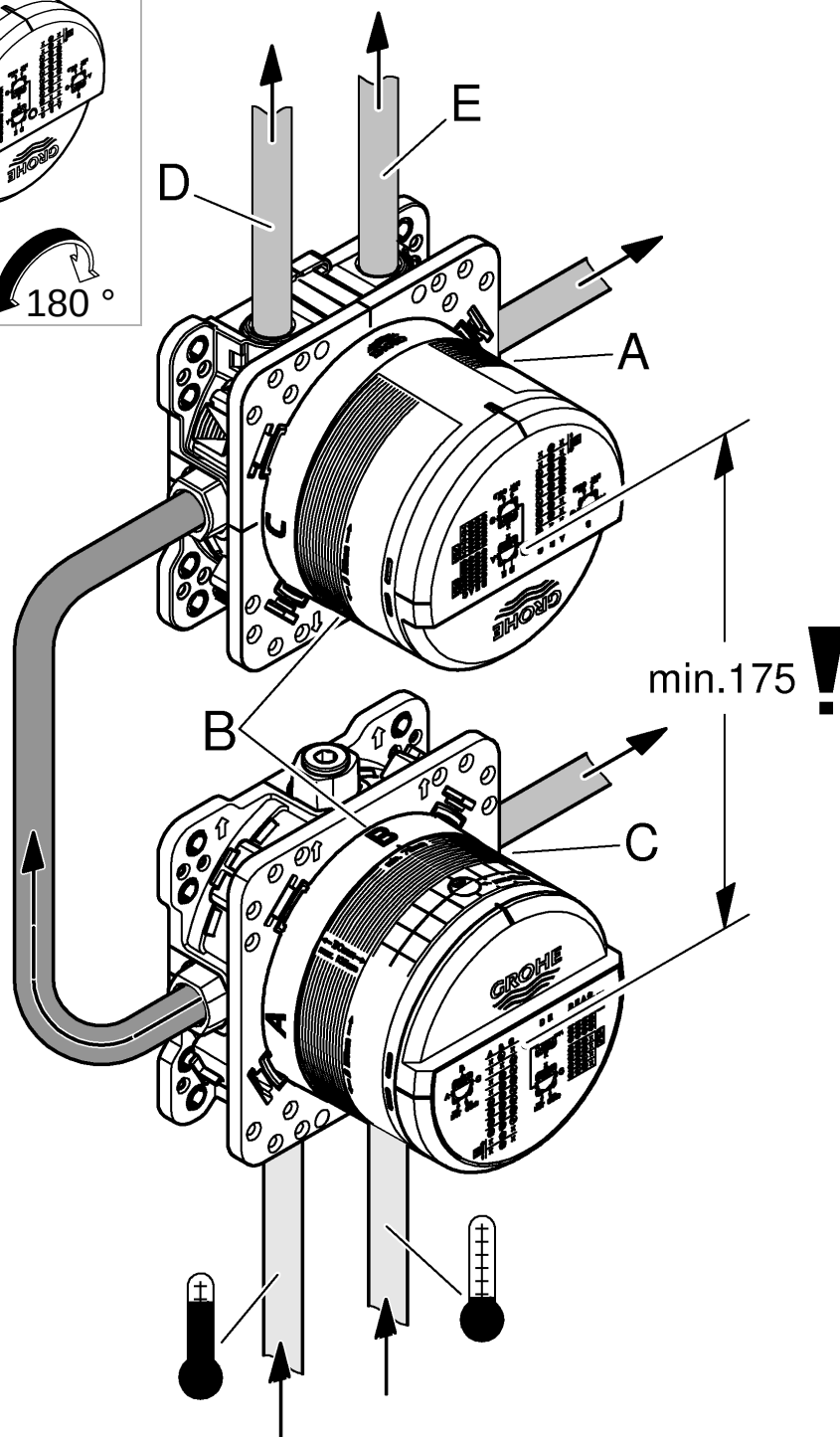
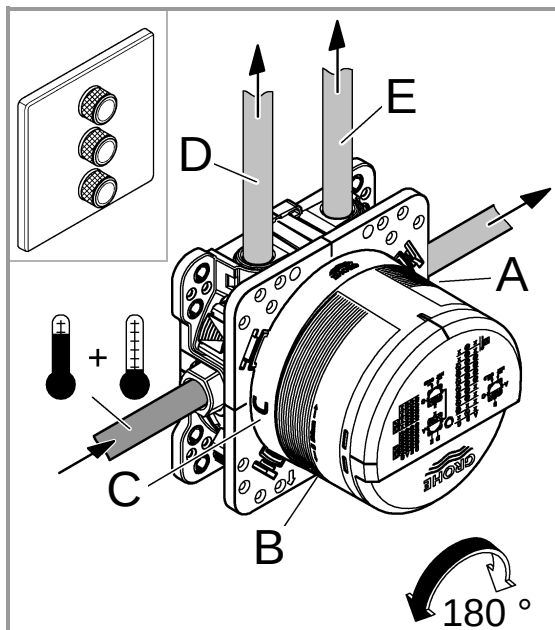


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	bar						
	1	2	3	4	5	6	
A	13,3	18,8	23	26,6	29,7	32,5	l/min
B	15,6	22	27	31,2	34,9	38,2	
C	13,3	18,8	23	26,6	29,7	32,5	
A+B	19,1	26,9	33	38,1	42,6	46,7	
A+B+C	20,8	29,4	36	41,6	46,5	50,9	

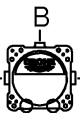
	psi						
	14,5	29	43,5	58	72,5	87	
A	3,5	5	6,1	7	7,8	8,6	gpm
B	4,1	5,8	7,1	8,2	9,2	10,1	
C	3,5	5	6,1	7	7,8	8,6	
A+B	5	7,1	8,7	10,1	11,3	12,3	
A+B+C	5,5	7,8	9,5	11	12,3	13,4	

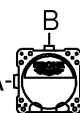


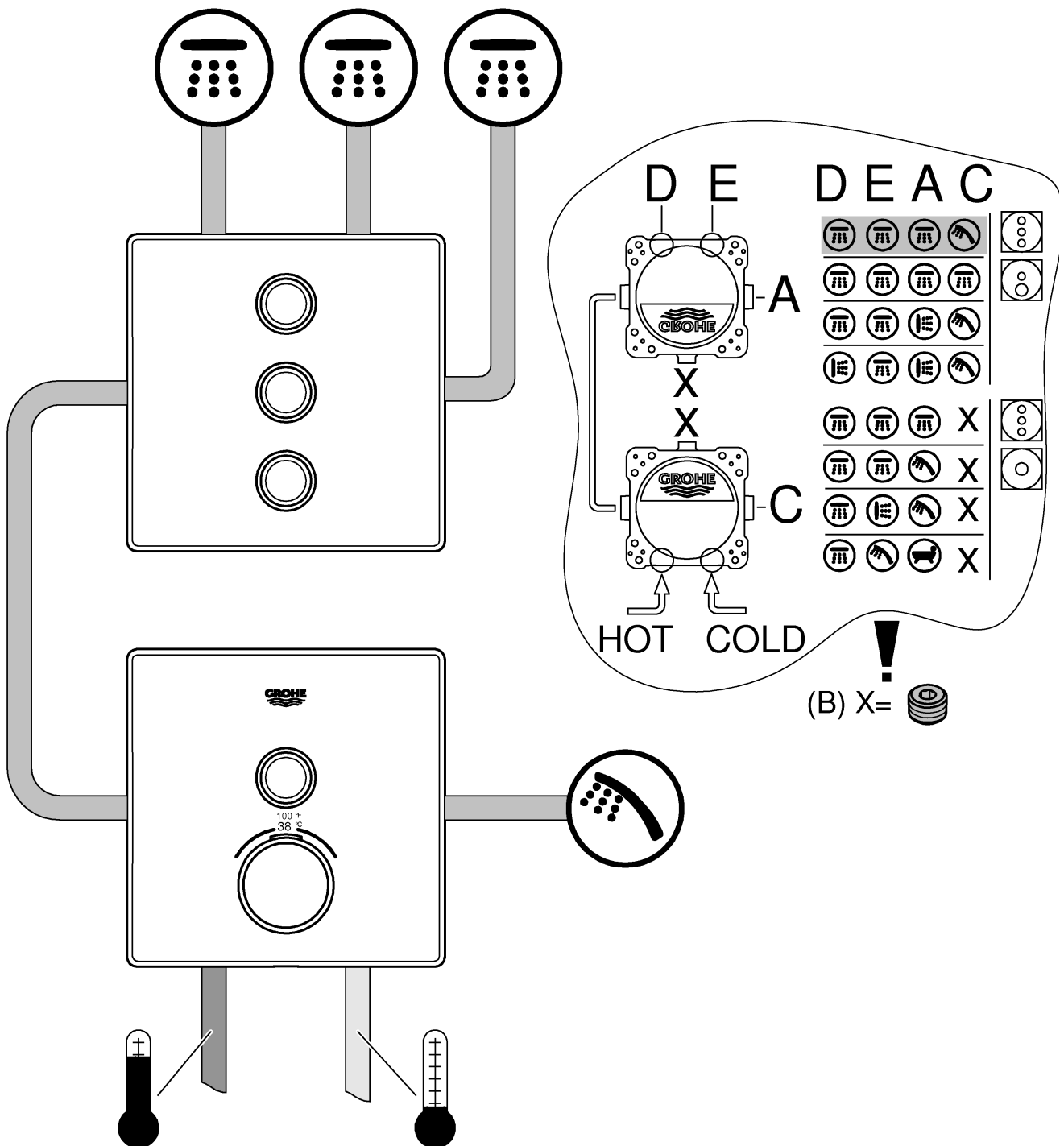




Grohtherm SmartControl

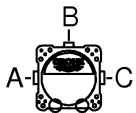
	psi						
	14,5	29	43,5	58	72,5	87	
D	3,2	4,5	5,5	6,4	7,2	7,8	gpm
E	3,2	4,5	5,5	6,4	7,2	7,8	
A	3,2	4,5	5,5	6,4	7,2	7,8	
C	4,4	6,3	7,7	8,8	9,9	10,8	
D+E+A	4,4	6,3	7,7	8,8	9,9	10,8	
D+E+A+C	5,5	7,8	9,5	11	12,3	13,4	

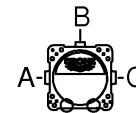
	bar						
	1	2	3	4	5	6	
D	12,1	17,1	21	24,2	27,1	29,7	l/min
E	12,1	17,1	21	24,2	27,1	29,7	
A	12,1	17,1	21	24,2	27,1	29,7	
C	16,7	23,7	29	33,5	37,4	41	
D+E+A	16,7	23,7	29	33,5	37,4	41	
D+E+A+C	20,8	29,4	36	41,6	46,5	50,9	

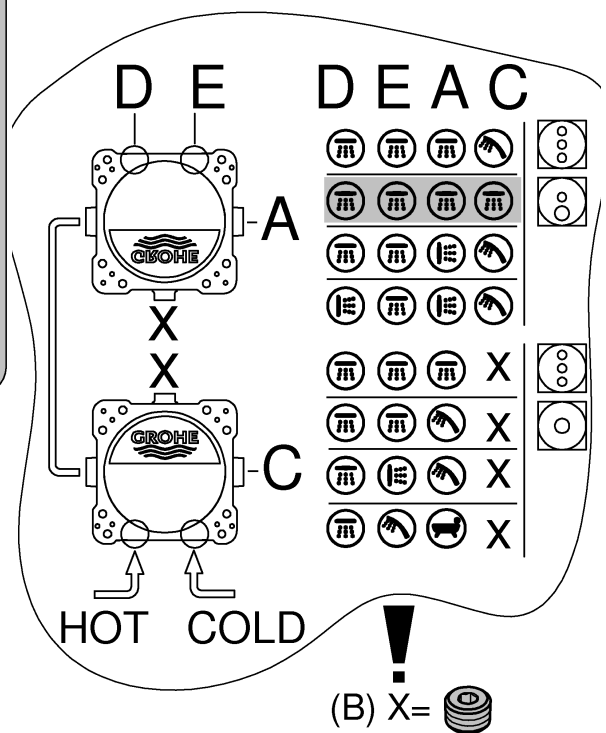
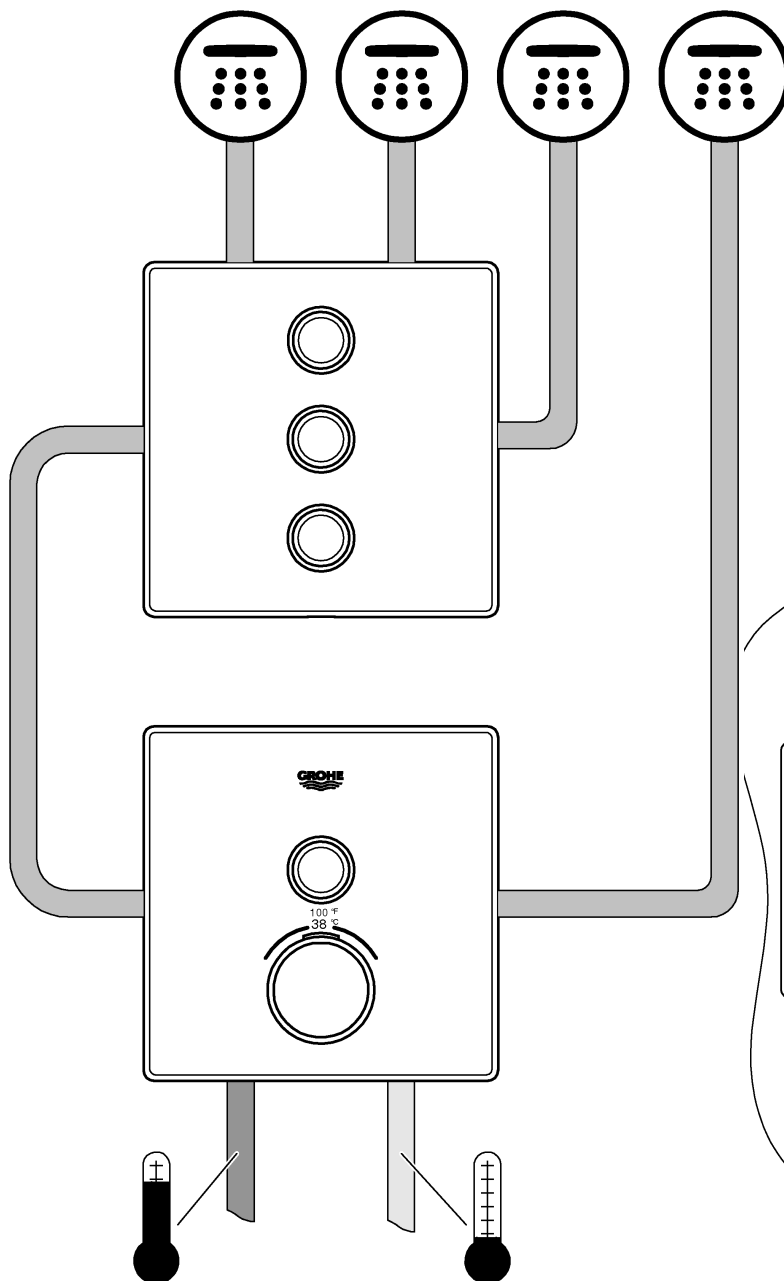




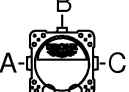
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	psi						
	14,5	29	43,5	58	72,5	87	
D	3,2	4,5	5,5	6,4	7,2	7,8	gpm
E	3,2	4,5	5,5	6,4	7,2	7,8	
A	3,2	4,5	5,5	6,4	7,2	7,8	
C	4,4	6,3	7,7	8,8	9,9	10,8	
D+E+A	4,4	6,3	7,7	8,8	9,9	10,8	
D+E+A+C	5,5	7,8	9,5	11	12,3	13,4	

	bar						
	1	2	3	4	5	6	
D	12,1	17,1	21	24,2	27,1	29,7	l/min
E	12,1	17,1	21	24,2	27,1	29,7	
A	12,1	17,1	21	24,2	27,1	29,7	
C	16,7	23,7	29	33,5	37,4	41	
D+E+A	16,7	23,7	29	33,5	37,4	41	
D+E+A+C	20,8	29,4	36	41,6	46,5	50,9	

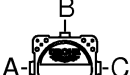


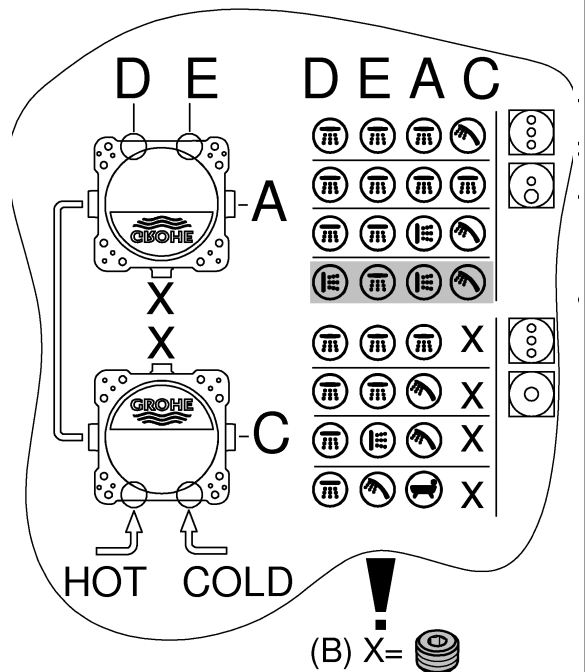


	bar						
	1	2	3	4	5	6	
D	12,1	17,1	21	24,2	27,1	29,7	l/min
E	12,1	17,1	21	24,2	27,1	29,7	
A	12,1	17,1	21	24,2	27,1	29,7	
C	16,7	23,7	29	33,5	37,4	41	
D+E+A	16,7	23,7	29	33,5	37,4	41	
D+E+A+C	20,8	29,4	36	41,6	46,5	50,9	





	bar						
	1	2	3	4	5	6	
D	12,1	17,1	21	24,2	27,1	29,7	l/min
E	12,1	17,1	21	24,2	27,1	29,7	
A	12,1	17,1	21	24,2	27,1	29,7	
C	16,7	23,7	29	33,5	37,4	41	
D+E+A	16,7	23,7	29	33,5	37,4	41	
D+E+A+C	20,8	29,4	36	41,6	46,5	50,9	



Technical specifications Grohtherm 2-Handle Thermostat

- Flow pressure
 - Minimum flow pressure without downstream resistances 7.25 psi
 - Minimum flow pressure with downstream resistances 14.5 psi
 - Recommended 21.75-72.5 psi
- Minimum flow rate 1.3gpm
- Temperature
 - Hot water inlet max. 158 °F
 - Recommended for energy saving 140 °F
 - Thermal disinfection possible
- Hot water temperature at supply connection min. 3.6 °F higher than mixed water temperature

Flow rates without downstream resistances, see page 27-30. **These are to be observed when dimensioning the outlet!**

- Recommended configuration options, see from page 26-30.

The following special accessories are available:

- Extension 1" (prod. no.: 14 058)
- Service stops (prod. no.: 14 053)
- Reversed connection, hot on right – cold on left replace thermostat cartridges (prod. no.: 49 003)

Caractéristiques techniques Grohtherm 2-Handle Thermostat

- Pression dynamique
 - Pression dynamique minimale sans résistances en aval 0,5 bar
 - Pression dynamique minimale avec résistances en aval 1 bar
 - Recommandée 1,5 à 5 bars
- Débit minimal 5 l/min
- Température
 - Arrivée d'eau chaude max. 70 °C
 - Recommandée pour une économie d'énergie 60 °C
 - Désinfection thermique possible
- Température de l'eau chaude au raccord d'alimentation au moins 2 °C de plus que la température de l'eau mitigée

Débits sans résistances en aval, voir pages 27-30.

Veillez en tenir compte lors du dimensionnement de l'évacuation !

- Possibilités de configuration recommandées, voir à partir de la page 26-30.

Les accessoires spéciaux suivants sont disponibles :

- Rallonge de 25mm (réf. : 14 058)
- Robinets d'arrêt (réf. : 14 053)
- Raccordement inversé, chaud à droite - froid à gauche, remplacer la cartouche du thermostat (réf. : 49 003)

Datos técnicos de Grohtherm 2-Handle Thermostat

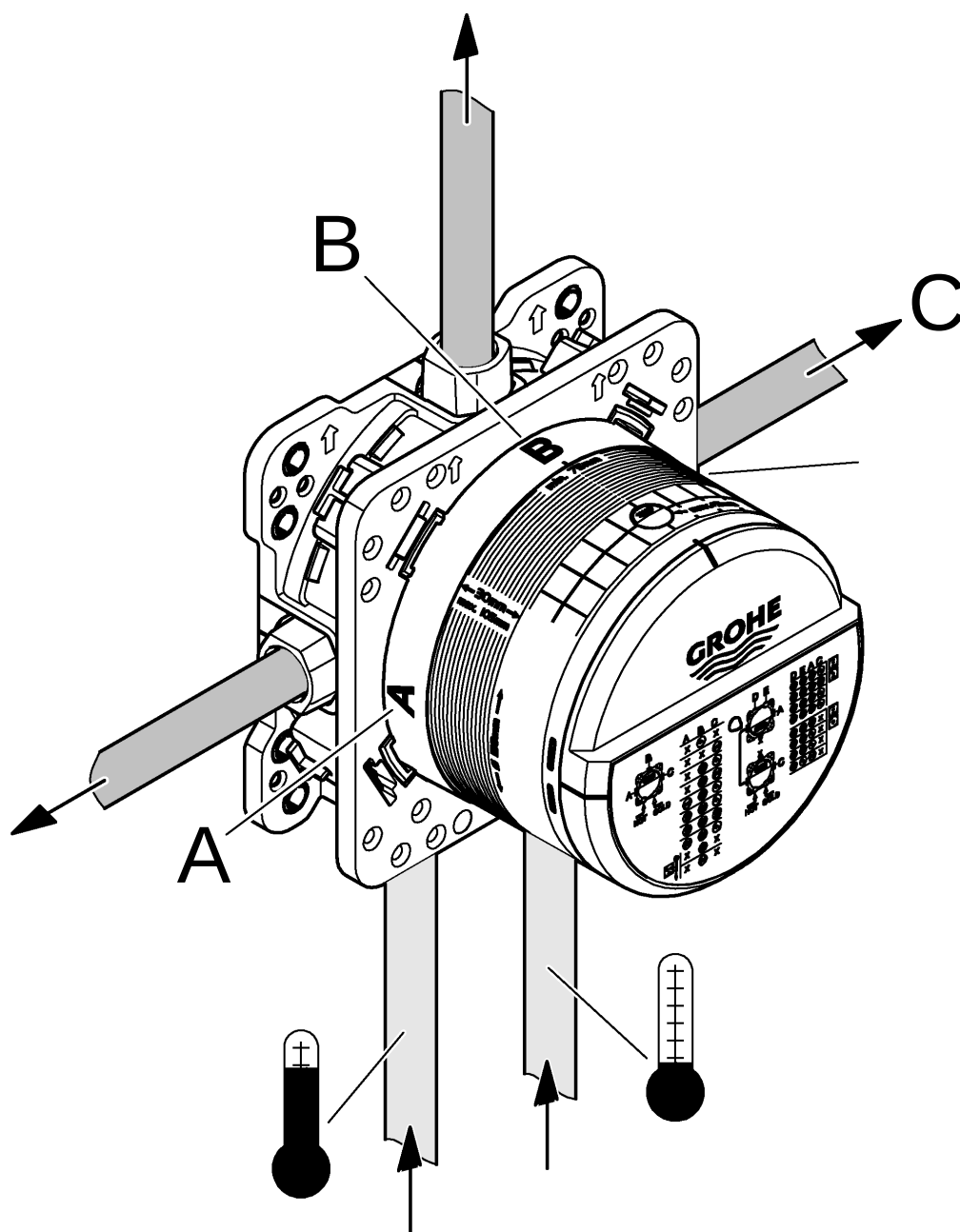
- Presión de trabajo
 - Presión mínima de trabajo sin resistencias posacopladas 7.25 psi
 - Presión mínima de trabajo con resistencias posacopladas 14.5 psi
 - Presión recomendada 21.75-72.5 psi
- Caudal mínimo 1.3gpm
- Temperatura
 - Entrada de agua caliente máx. 158 °F
 - Recomendada para ahorrar energía 140 °F
 - Desinfección térmica posible
- La temperatura del agua caliente en la acometida mín. 3.6 °F superior a la temperatura del agua mezclada

Caudales sin resistencias posacopladas, véanse las páginas 27-30. **Tenga en cuenta las dimensiones del desagüe.**

- Posibilidades de configuración recomendadas, véase a partir de la página 26-30.

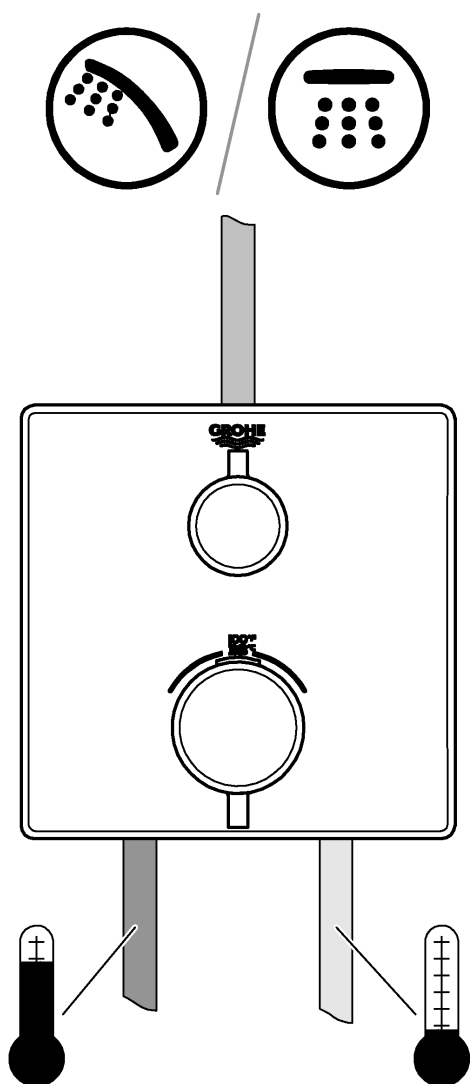
Los siguientes accesorios opcionales están disponibles:

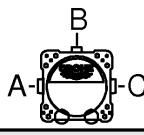
- Prolongación de 1" (n.º de pedido: 14 058)
- Bloqueos de seguridad (n.º de pedido: 14 053)
- Conexión invertida, derecha caliente - izquierda frío sustituir los cartuchos del termostato (n.º de pedido: 49 003)

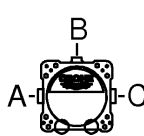


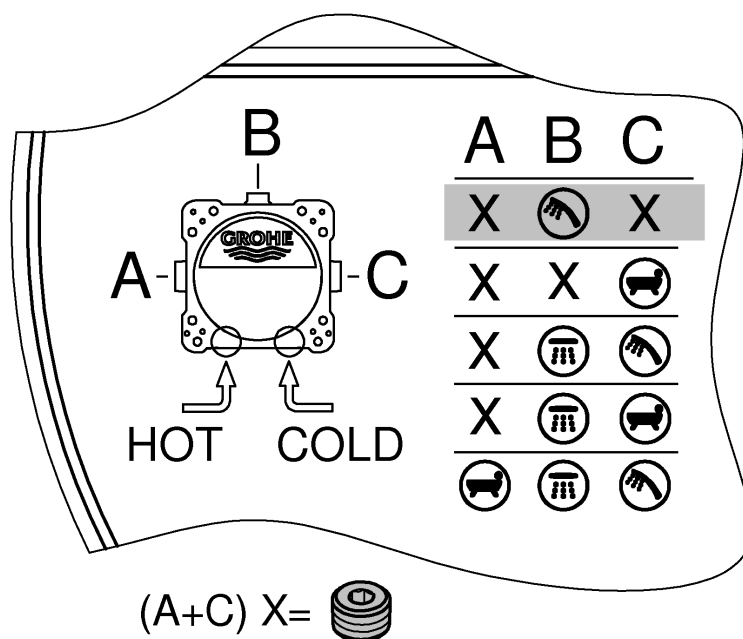


Grohtherm 2-Handle Thermostat



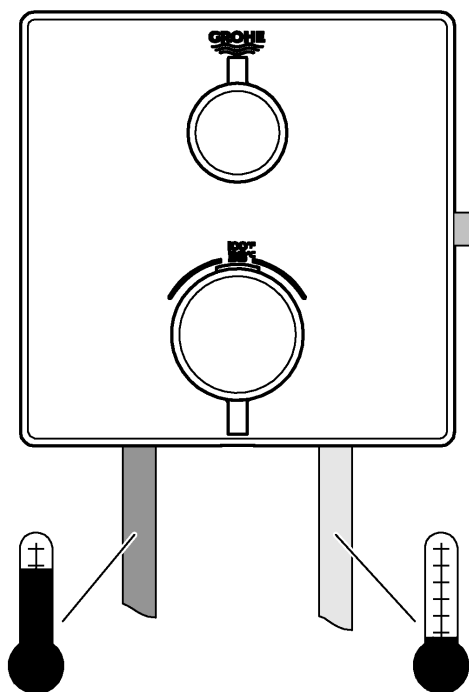
	psi						
	14,5	29	43,5	58	72,5	87	
B	4,1	5,8	7,1	8,2	9,2	10,0	gpm

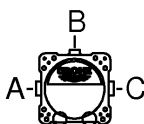
	bar						
	1	2	3	4	5	6	
B	15,5	22	27	31,0	35	38	l/min

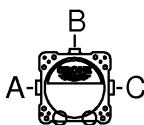


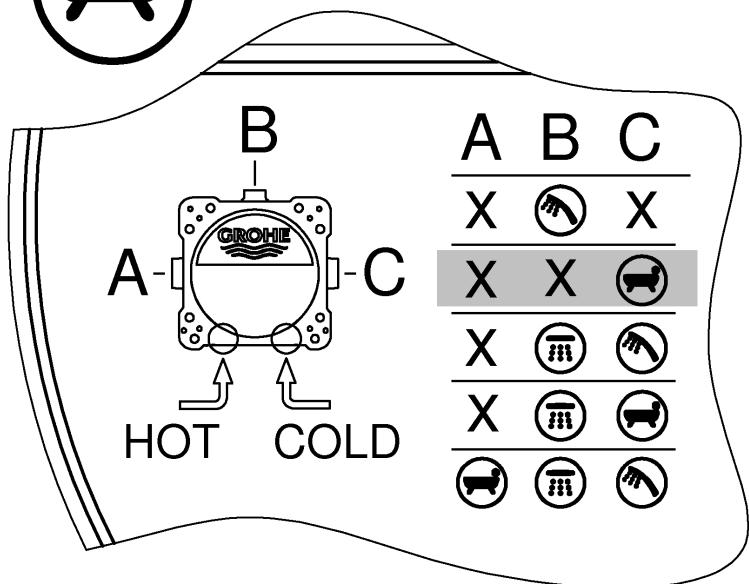


Grohtherm 2-Handle Thermostat



	psi						
	14,5	29	43,5	58	72,5	87	
C	4,1	5,8	7,1	8,2	9,2	10	gpm

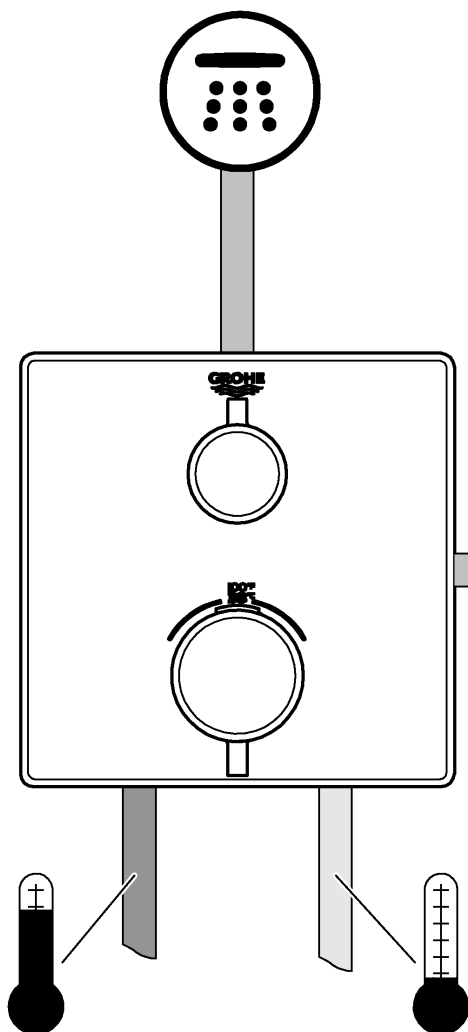
	bar						
	1	2	3	4	5	6	
C	15,5	22	27	31	35	38	l/min

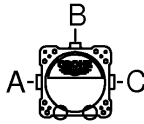


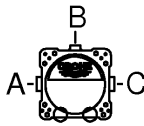
(A+B) X= 

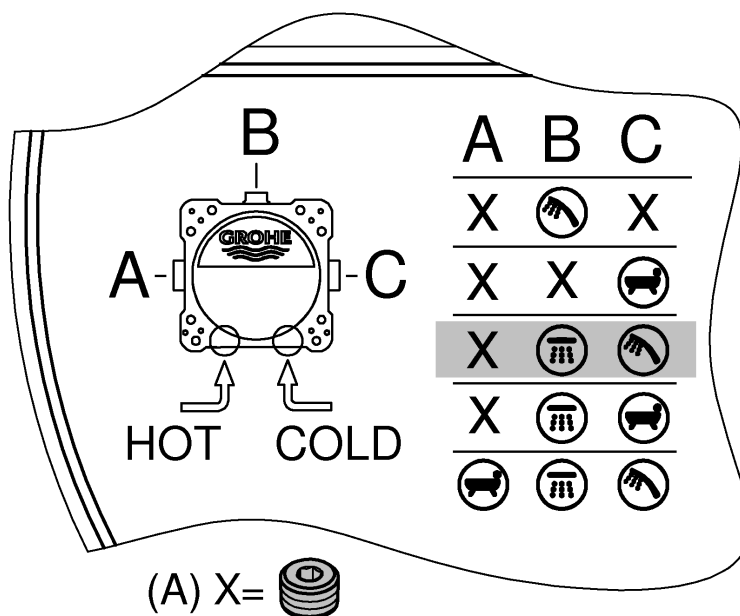


Grohtherm 2-Handle Thermostat



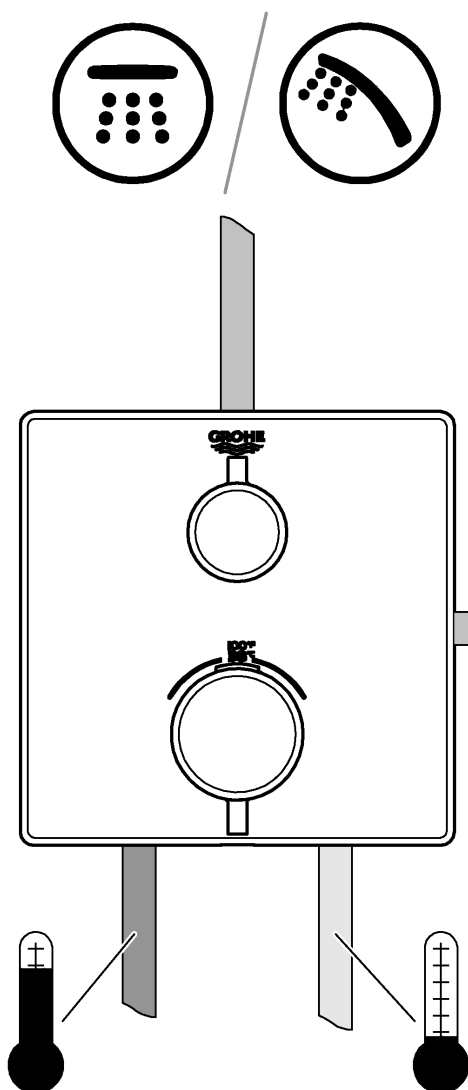
	psi						
	14,5	29	43,5	58	72,5	87	
B/C	4,1	5,8	7,1	8,2	9,2	10,0	gpm

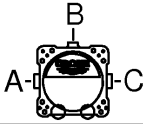
	bar						
	1	2	3	4	5	6	
B/C	15,5	22	27	31	35	38	l/min

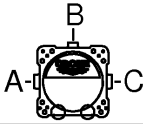


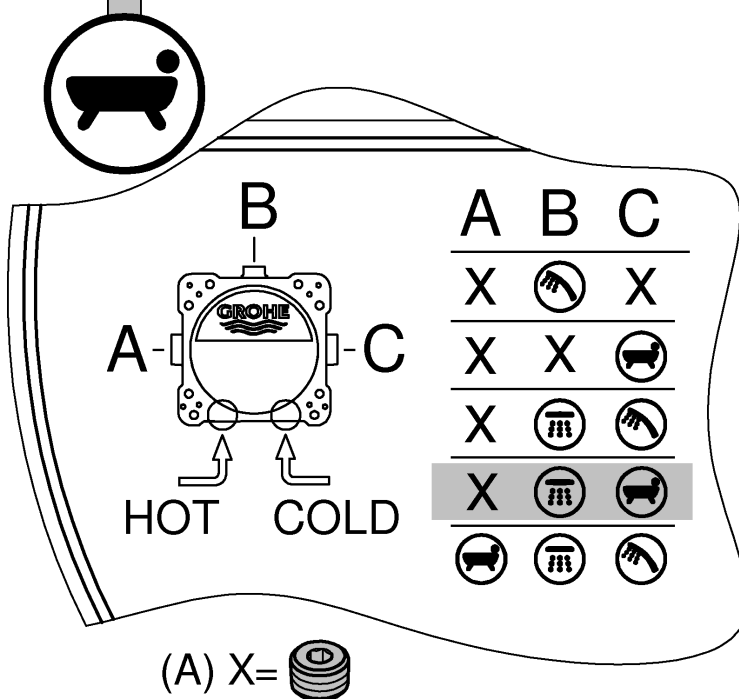


Grohtherm 2-Handle Thermostat



	psi						
	14,5	29	43,5	58	72,5	87	
B/C	4,1	5,8	7,1	8,2	9,2	10,0	gpm

	bar						
	1	2	3	4	5	6	
B/C	15,5	22	27	31	35	38	l/min



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