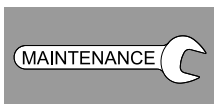


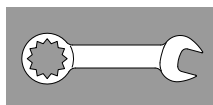
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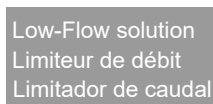
11 - 12



2 - 8



13



9 - 10



14



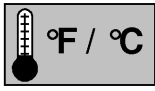
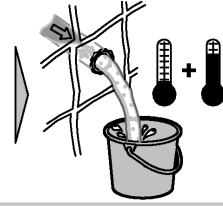


DIN 1053

DIN 18534

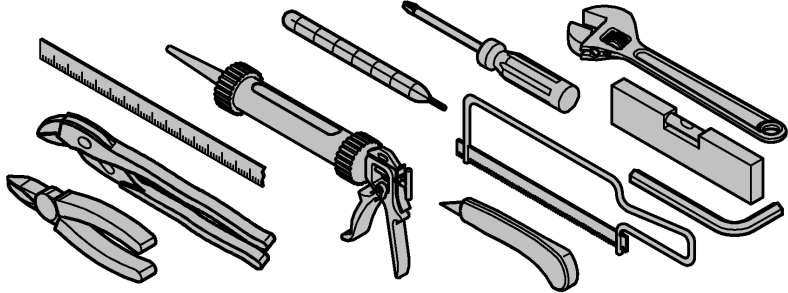
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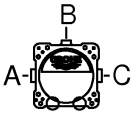
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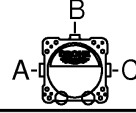


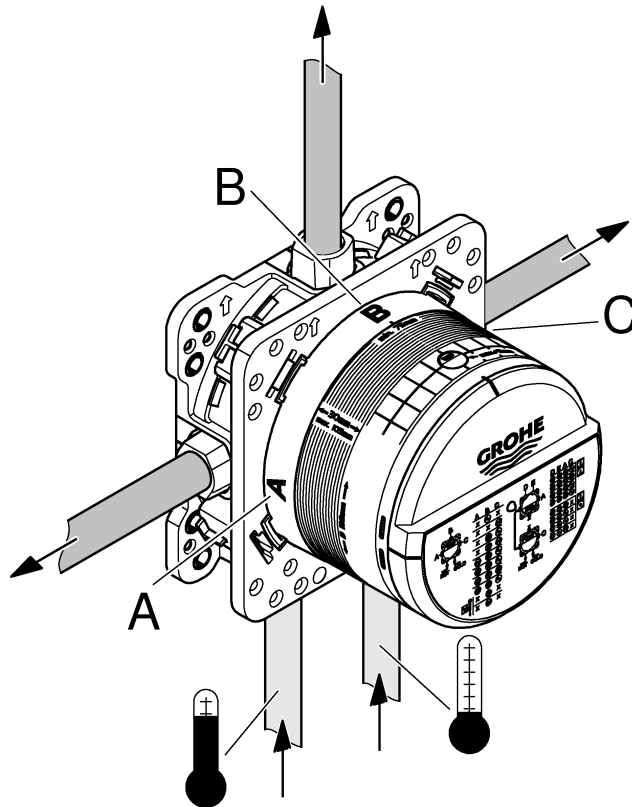
max. 158°F / 70°C

140°F / 60°C



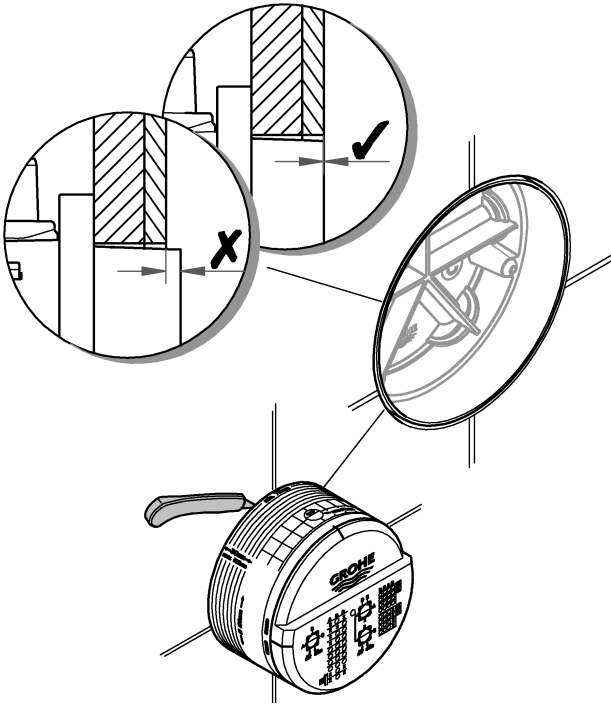
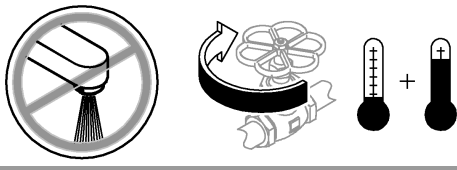
	bar						l/min
	1	2	3	4	5	6	
A	13,3	18,8	23	26,6	29,7	32,5	
B	15,6	22	27	31,2	34,9	38,2	
C	13,3	18,8	23	26,6	29,7	32,5	
A+B	19,1	26,9	33	38,1	42,6	46,7	
A+B+C	20,8	29,4	36	41,6	46,5	50,9	

	psi						gpm
	14,5	29	43,5	58	72,5	87	
A	3,5	5	6,1	7	7,8	8,6	
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	

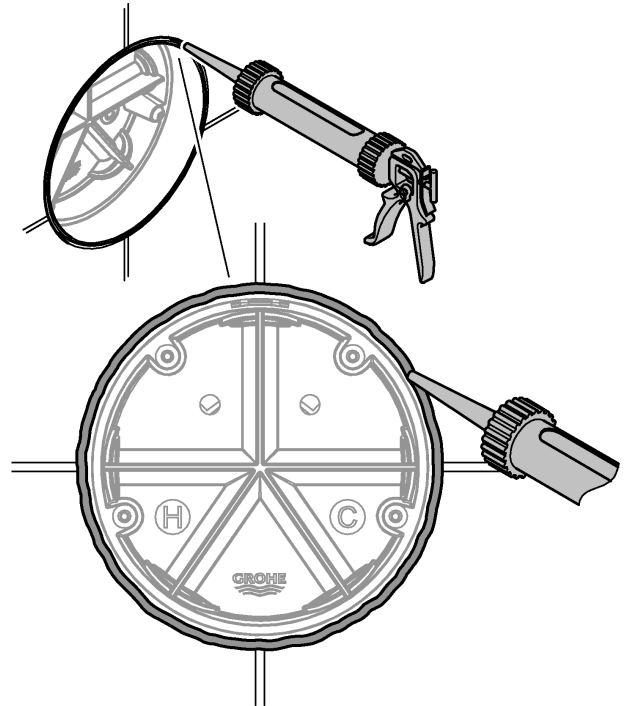




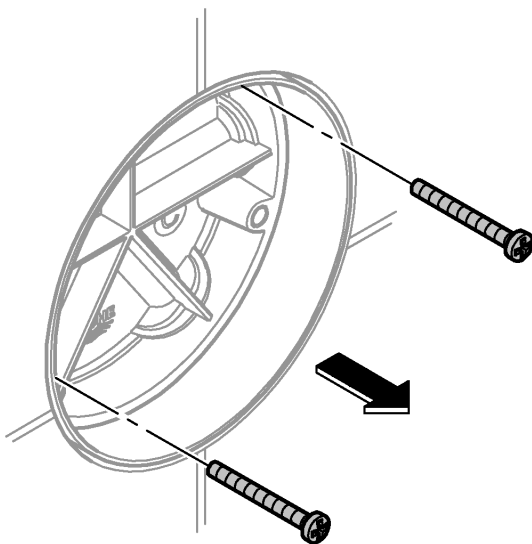
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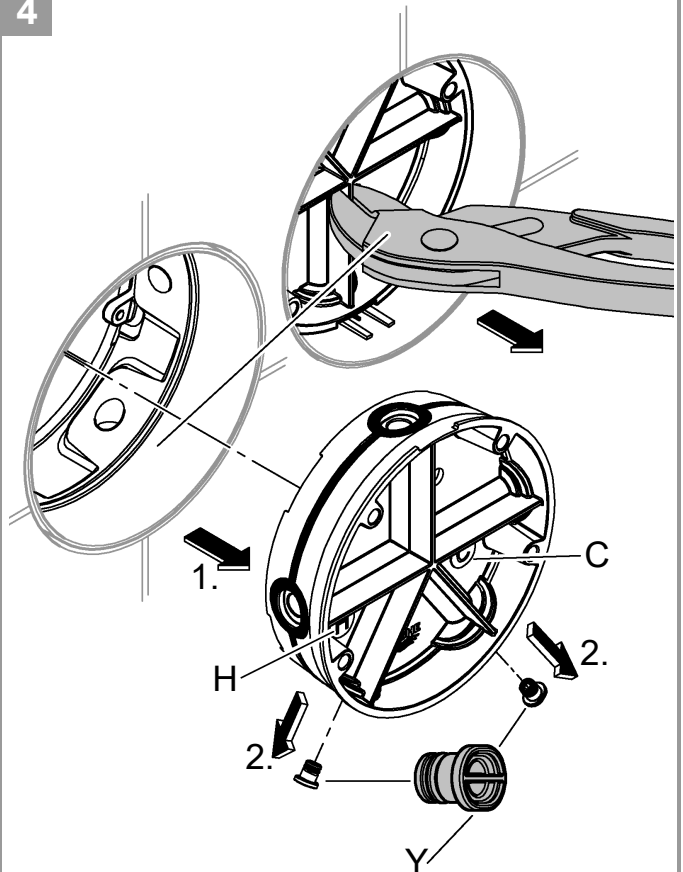
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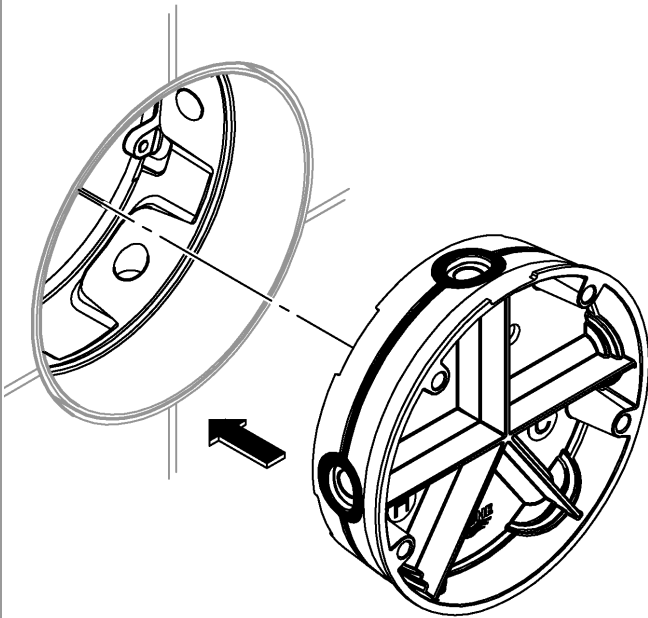


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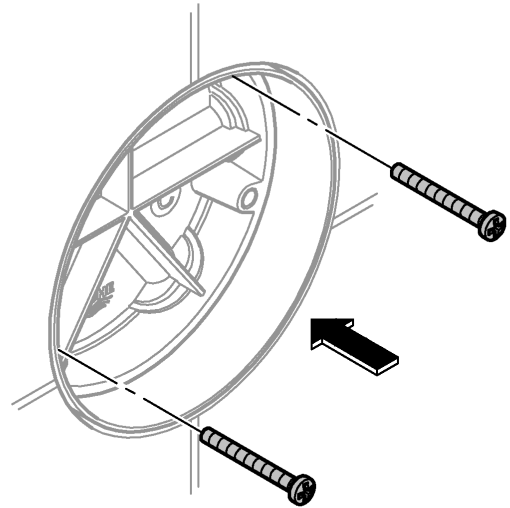




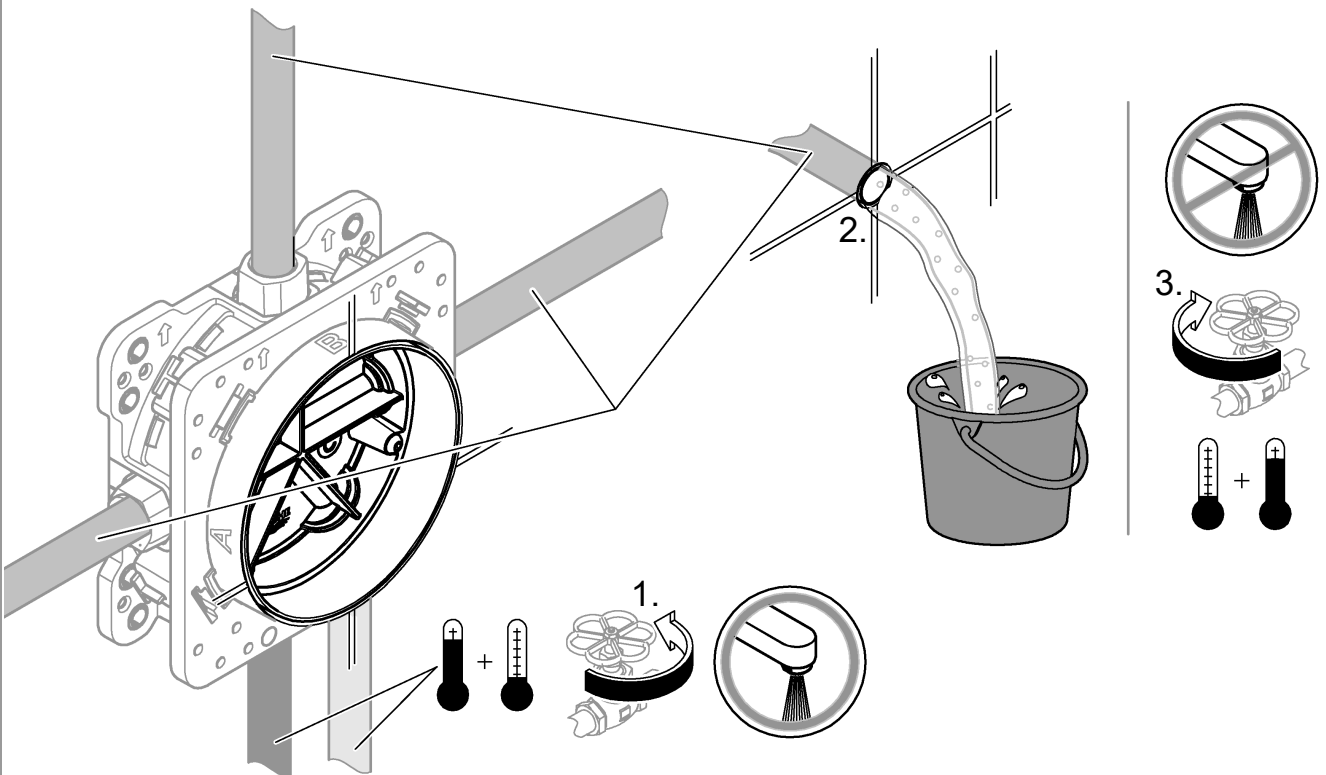
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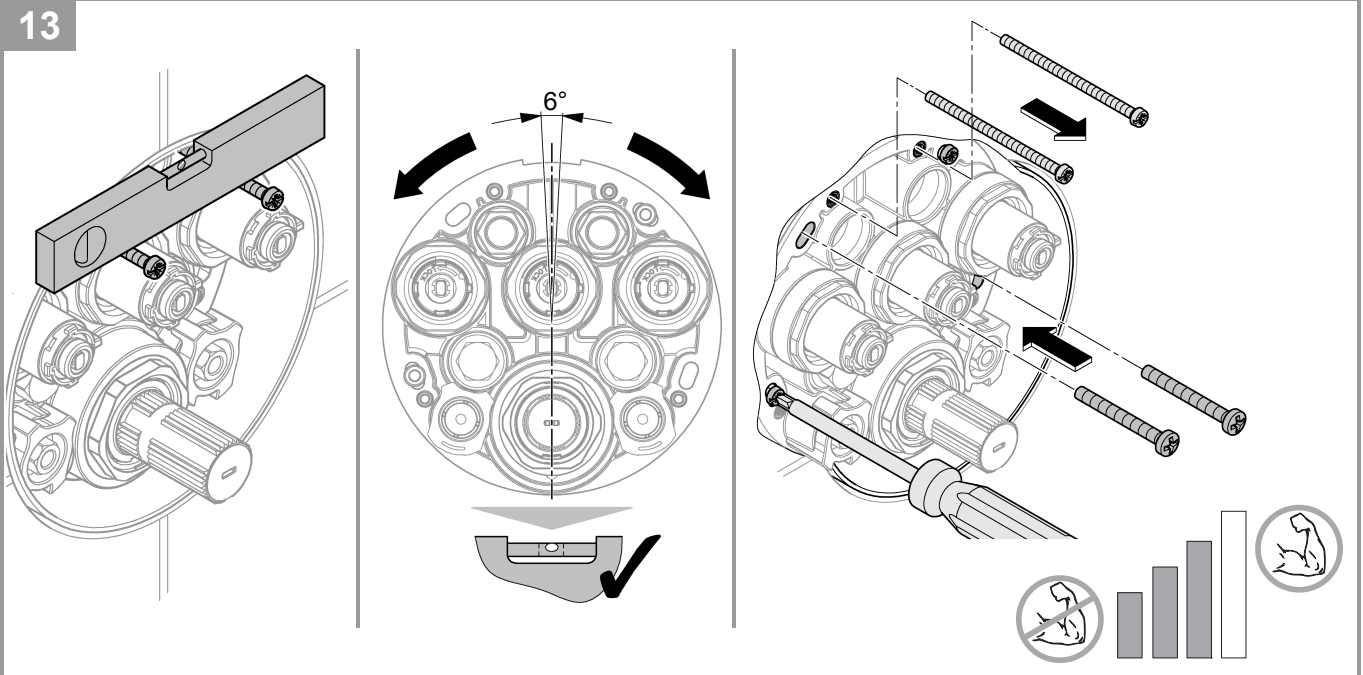
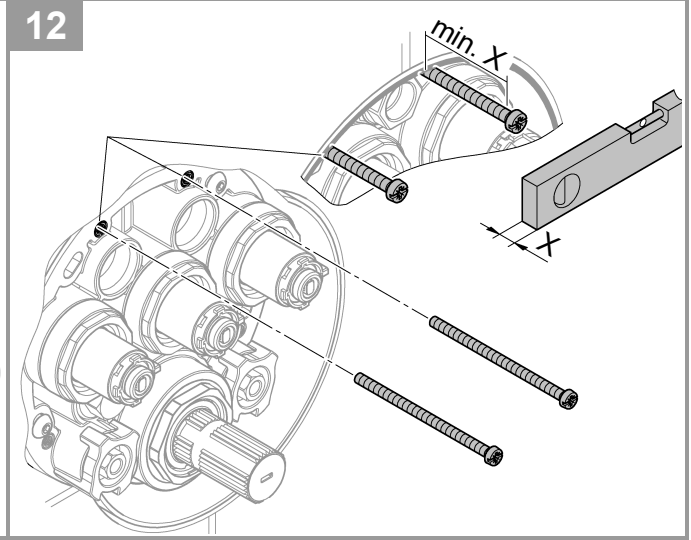
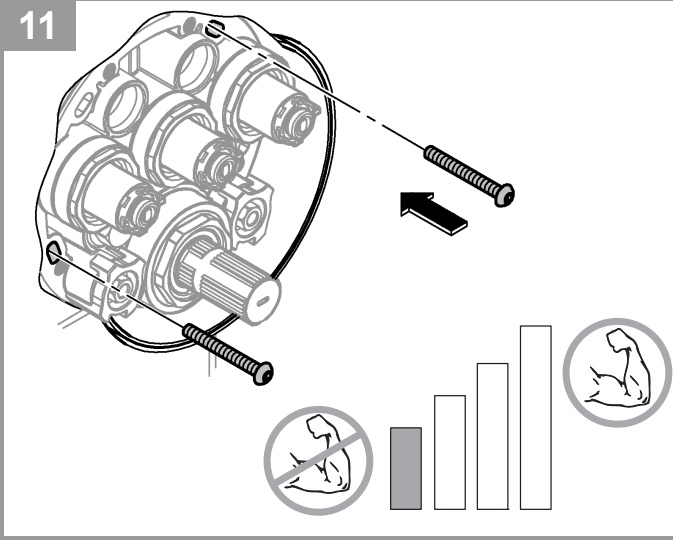
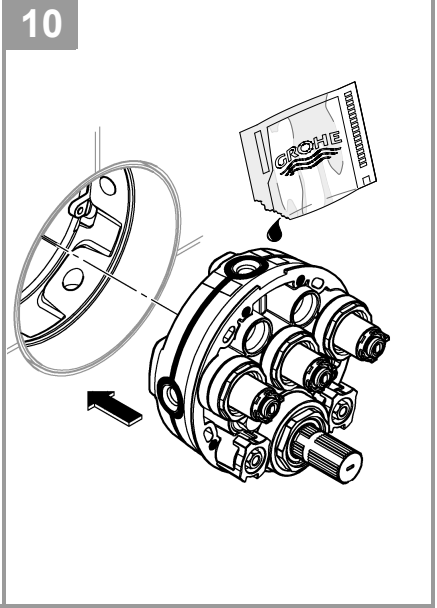
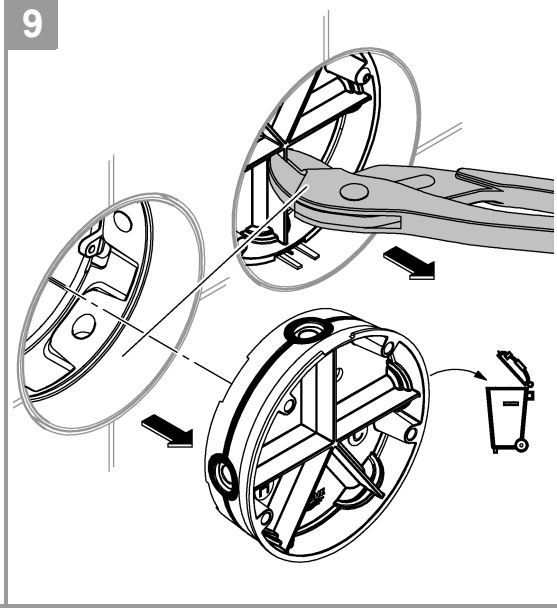
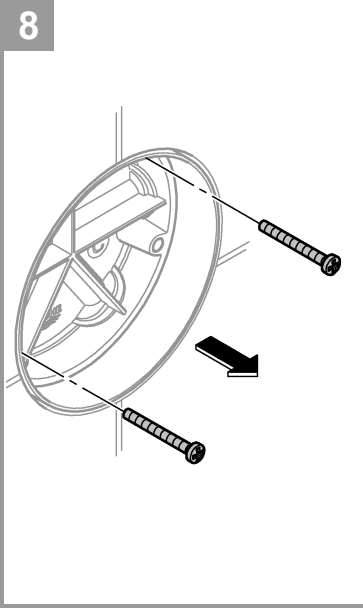


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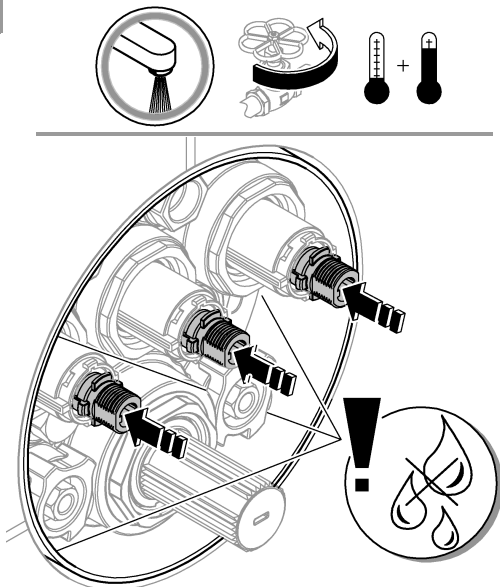
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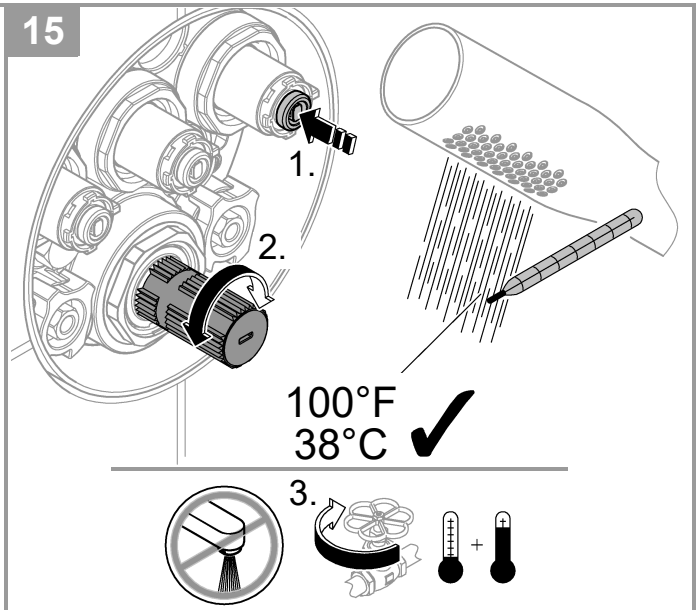




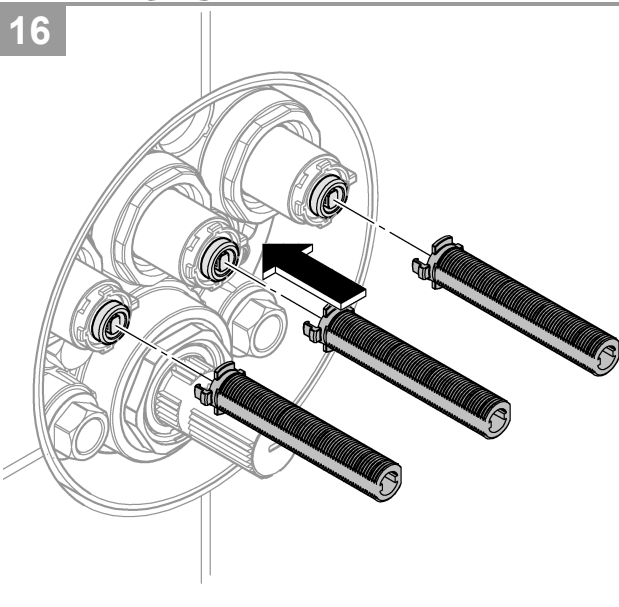
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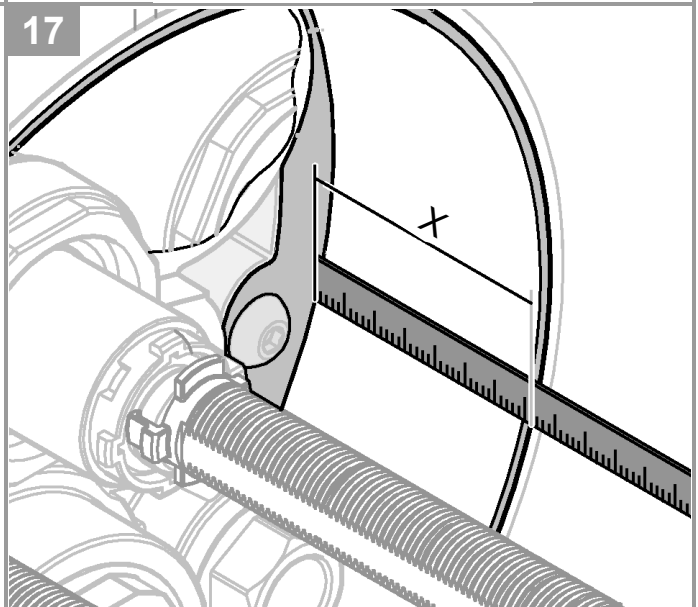
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16

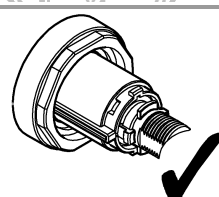
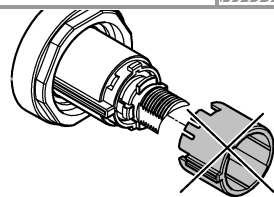


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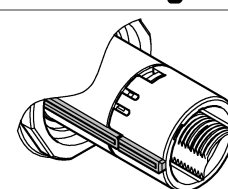
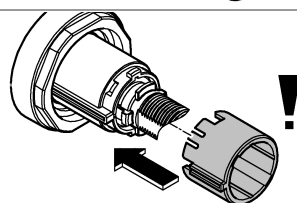


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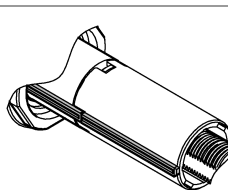
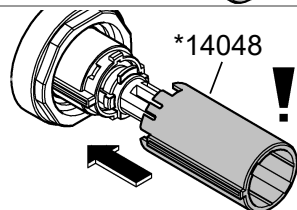
A
 $X < 1\frac{3}{4}''$
(40mm)



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

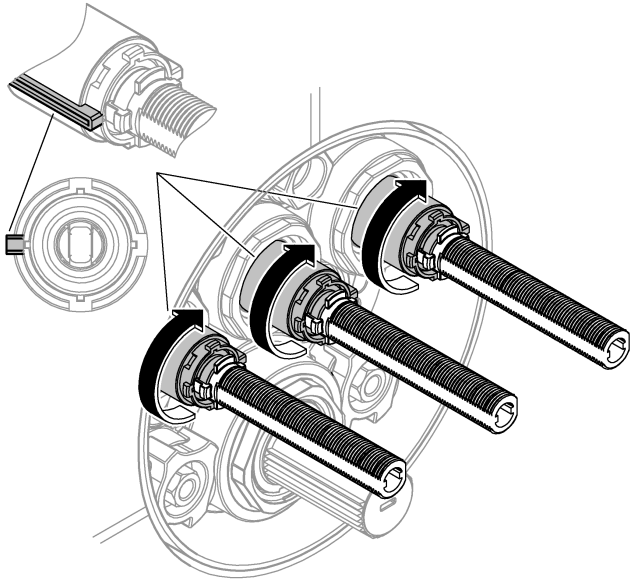


C
 $X > 2\frac{3}{16}''$
(55mm)

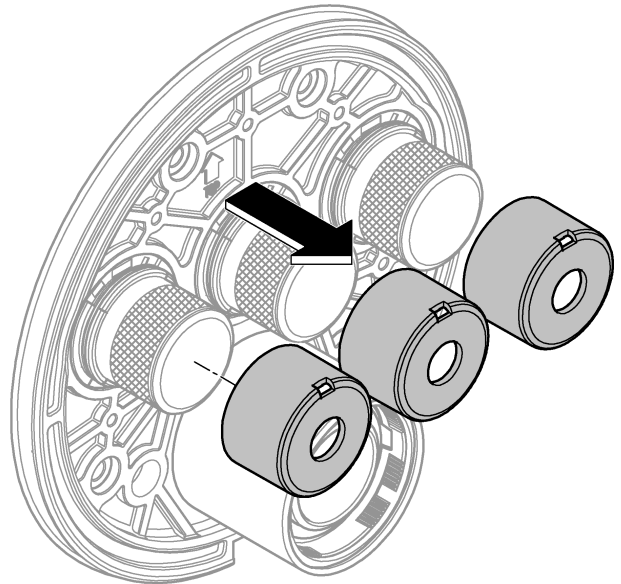




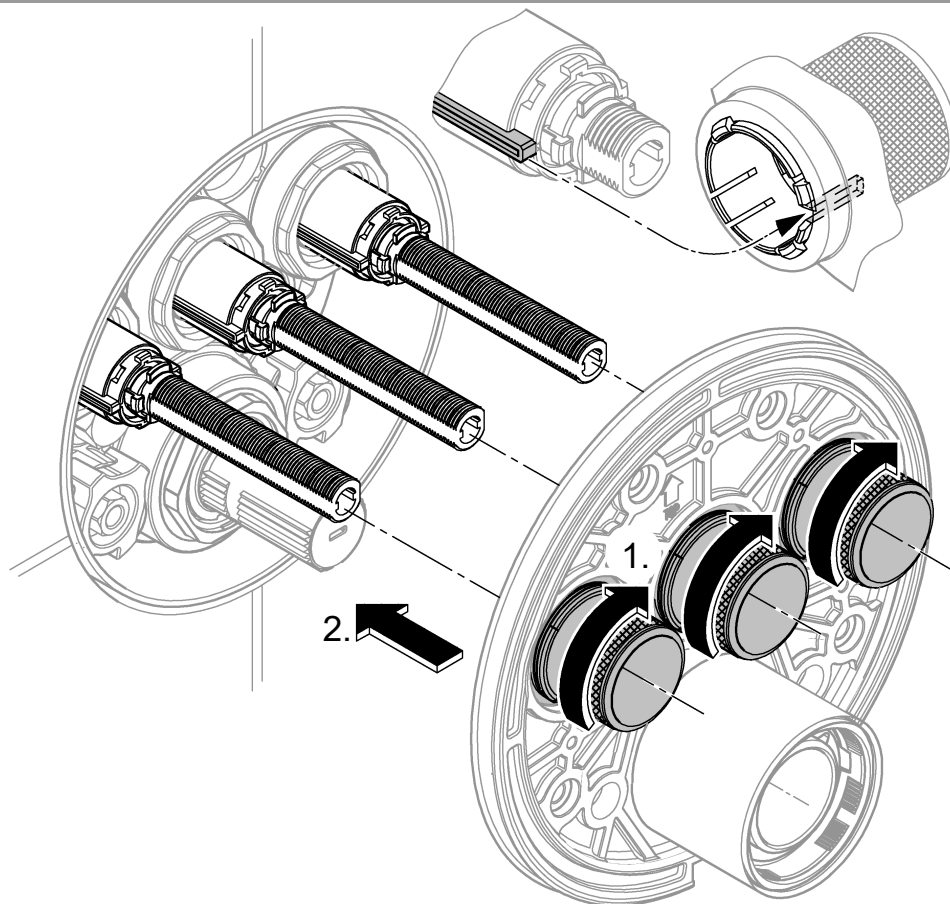
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20

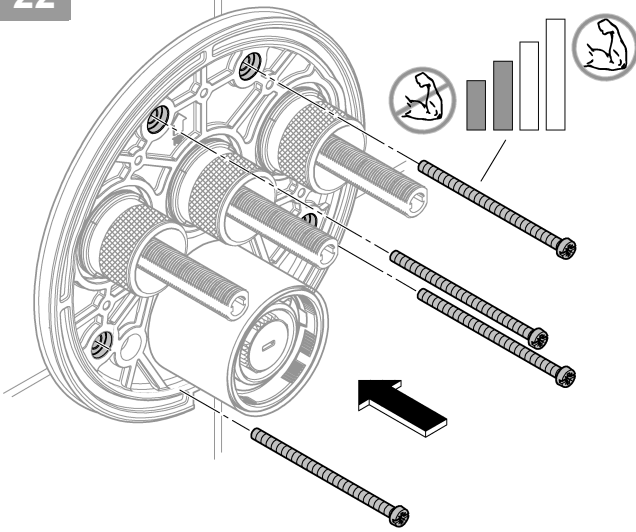


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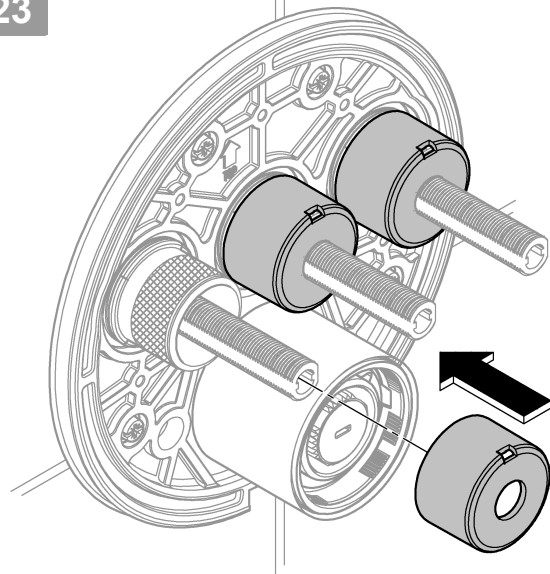




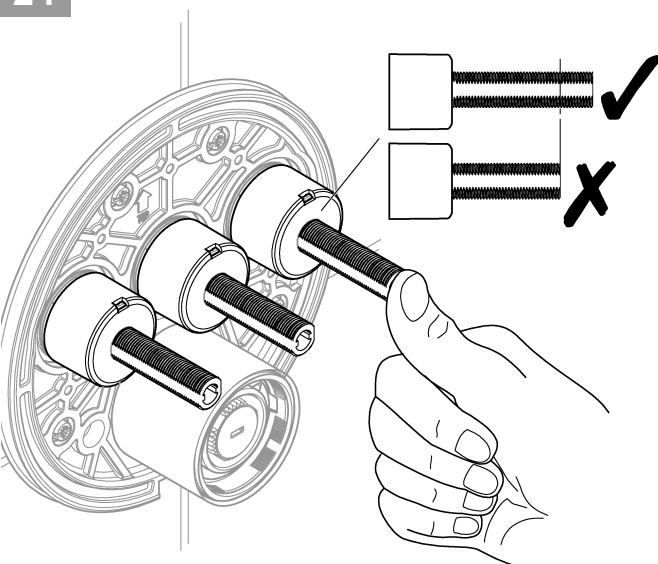
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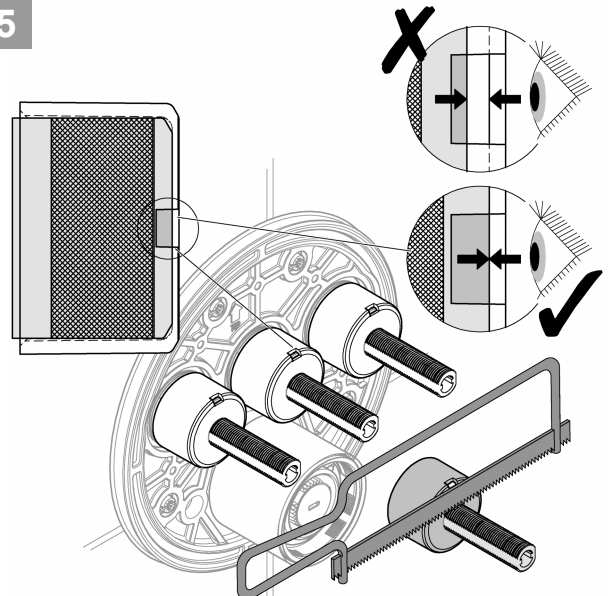
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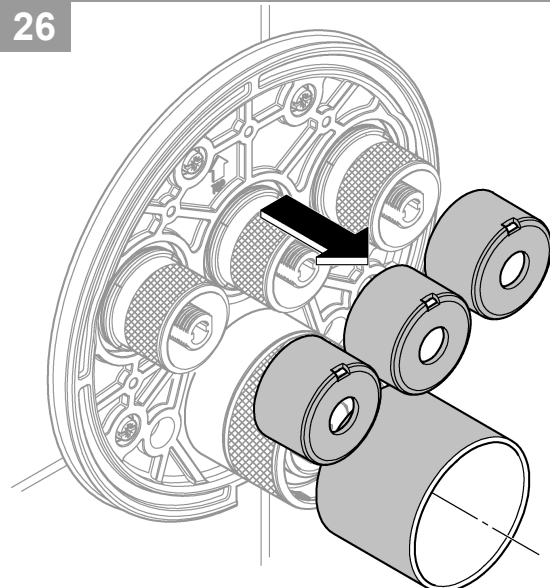
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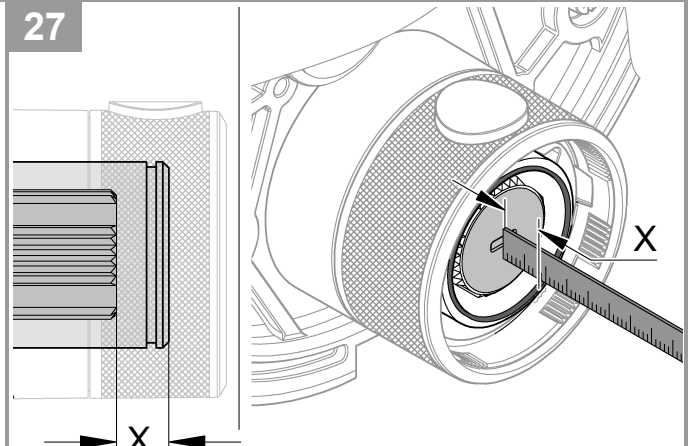
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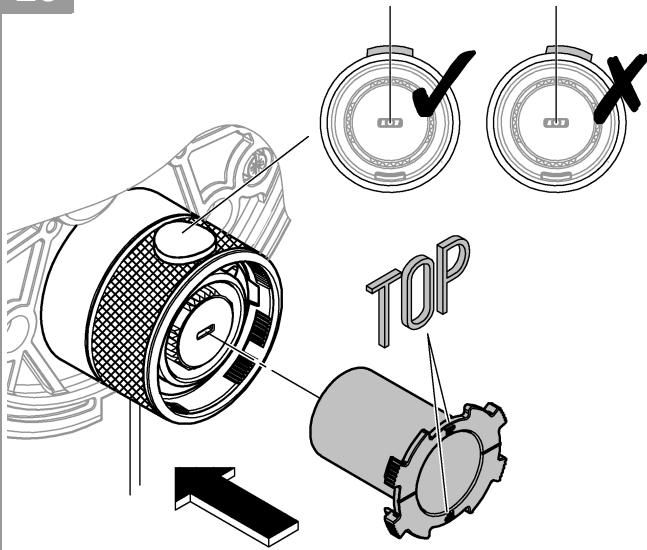
$X < 1\frac{3}{16}$ "
(29,5)

28

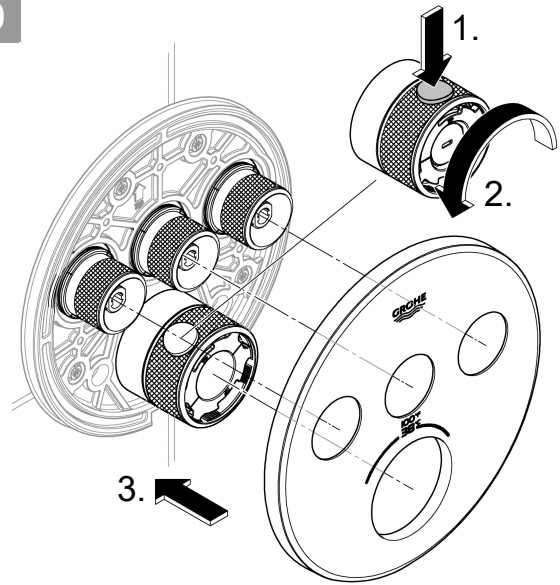
$X > 1\frac{3}{16}$ "
(29,5) *14 048



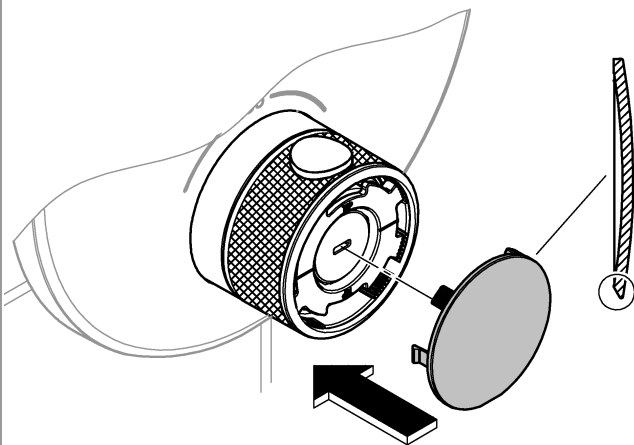
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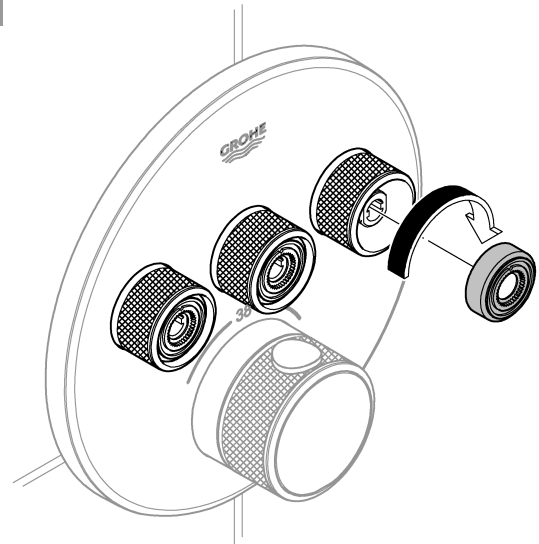
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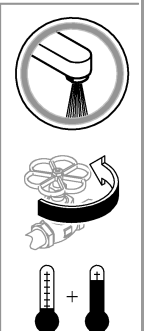
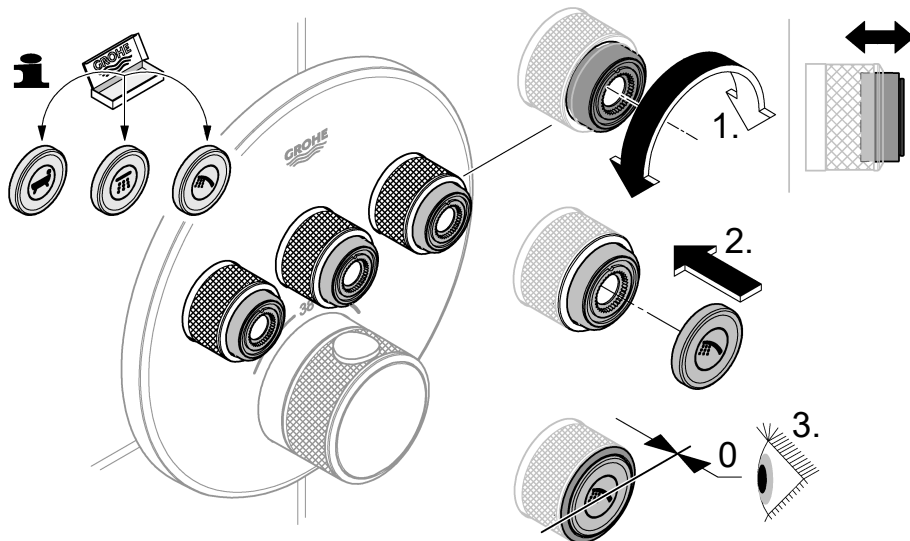
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31



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 11.

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. [18]. 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 6 Fig. [20].
- 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 11.

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. [18]. 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 6, fig. [20].
- 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 thermostatiques 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 11.

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. [18]. 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 6 fig. [20].
- Después de cada operación de mantenimiento en el cartucho compacto del termostato.

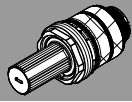
Limitación de la temperatura

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.

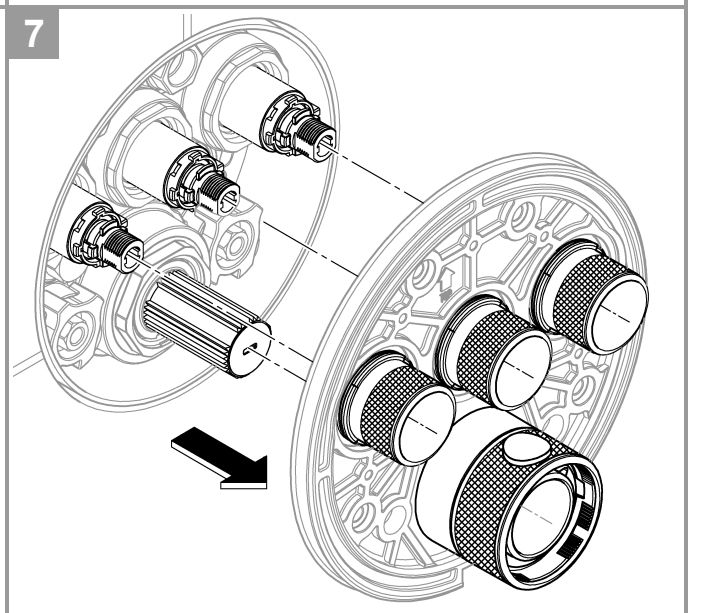
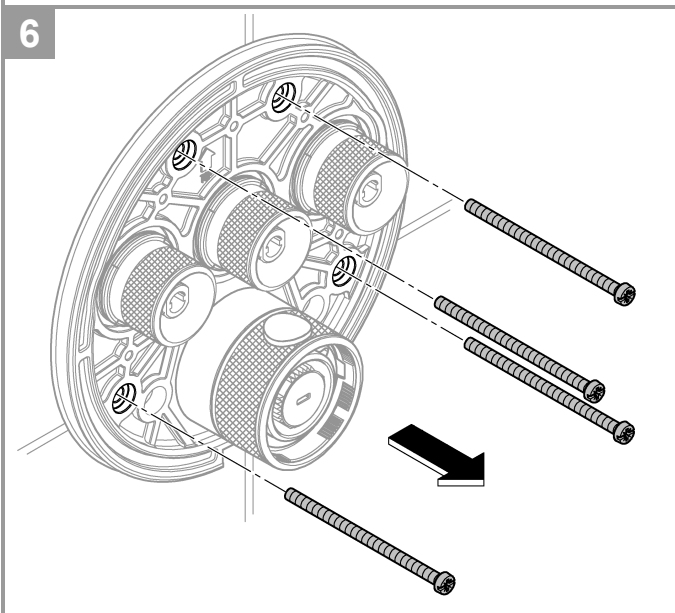
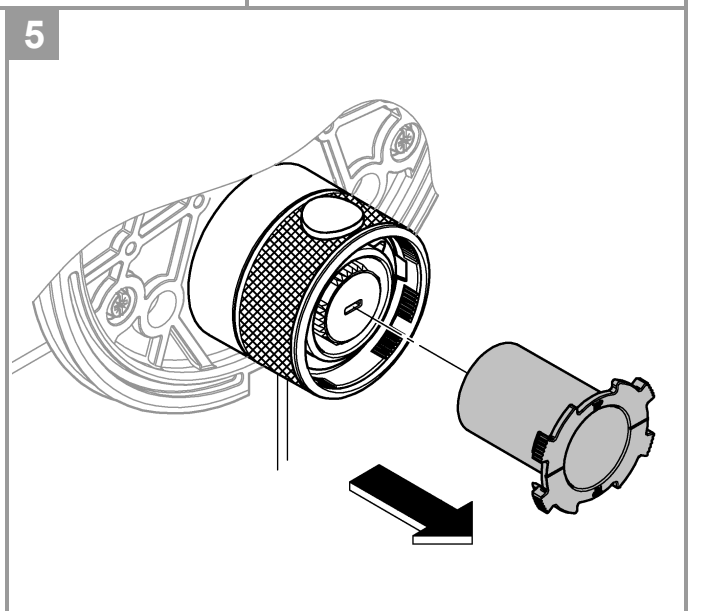
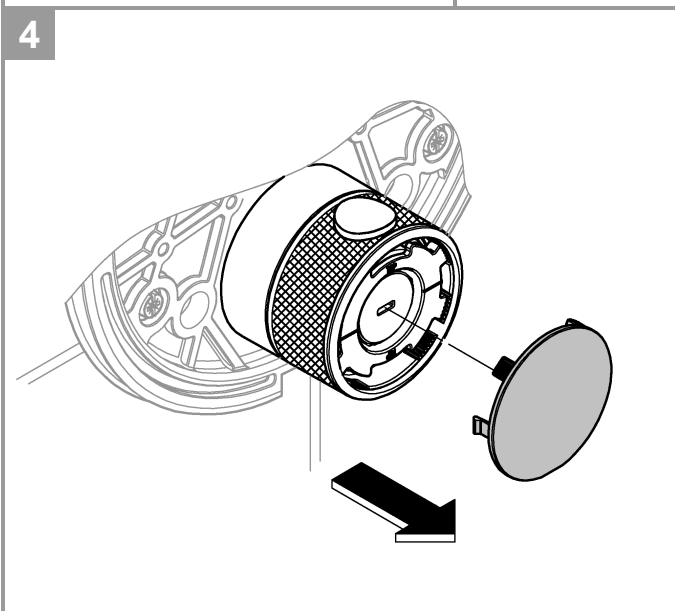
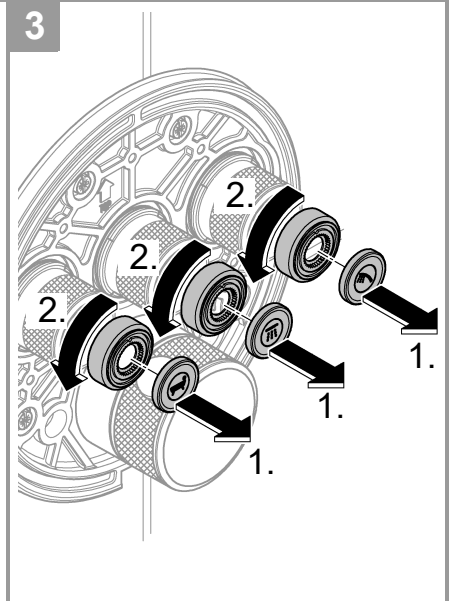
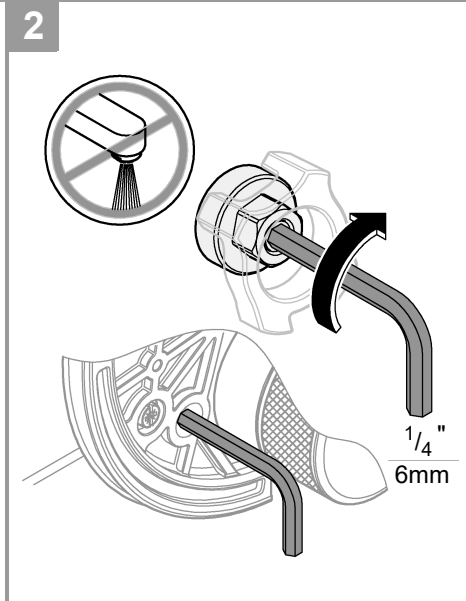
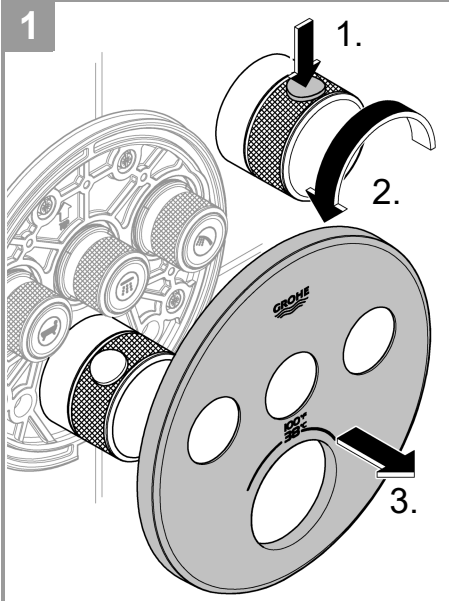
En las normas de instalación locales el termostato tiene una temperatura máxima establecida de 109 °F.

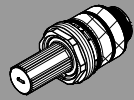
Atención en caso de peligro de helada

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

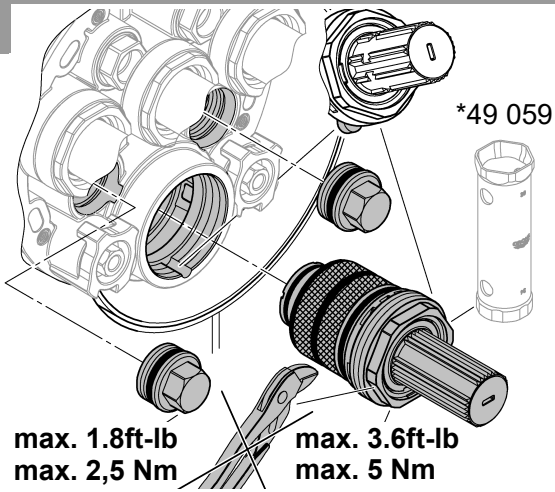




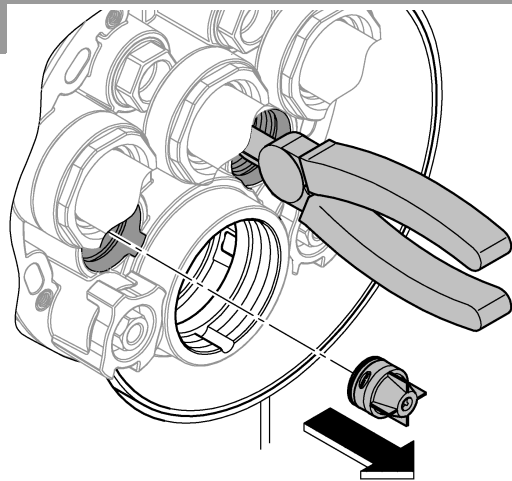
MAINTENANCE



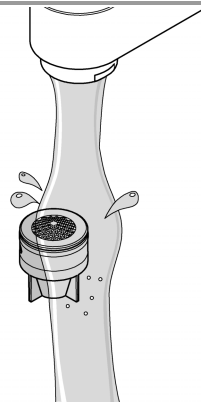
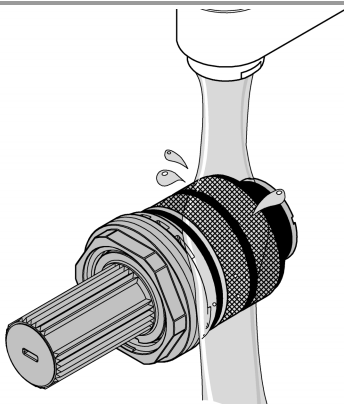
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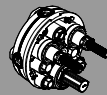
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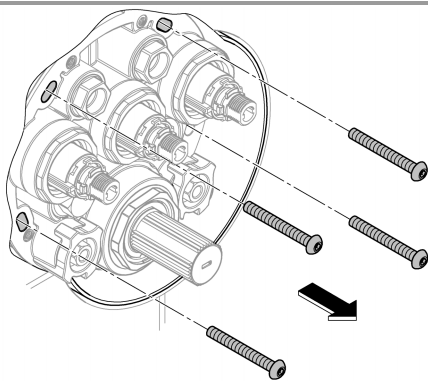
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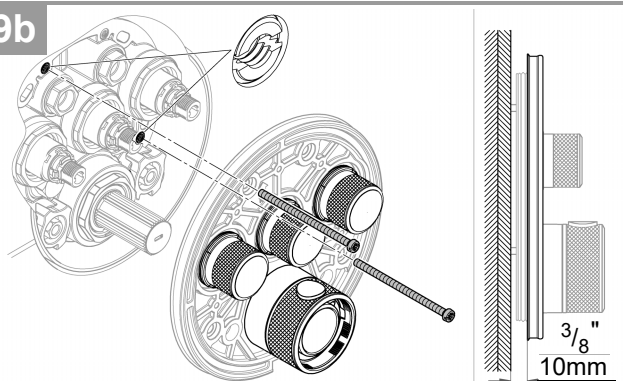
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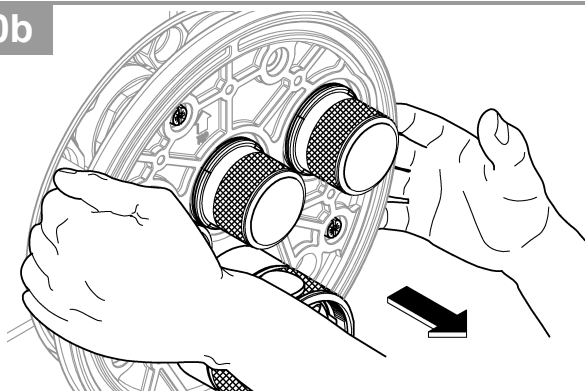
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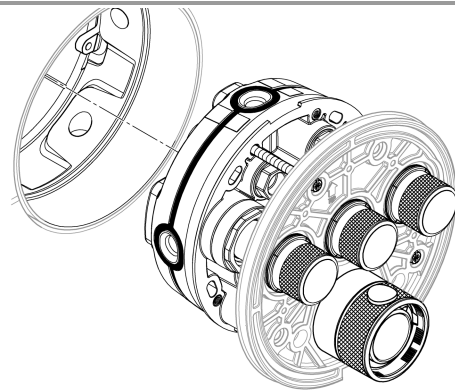
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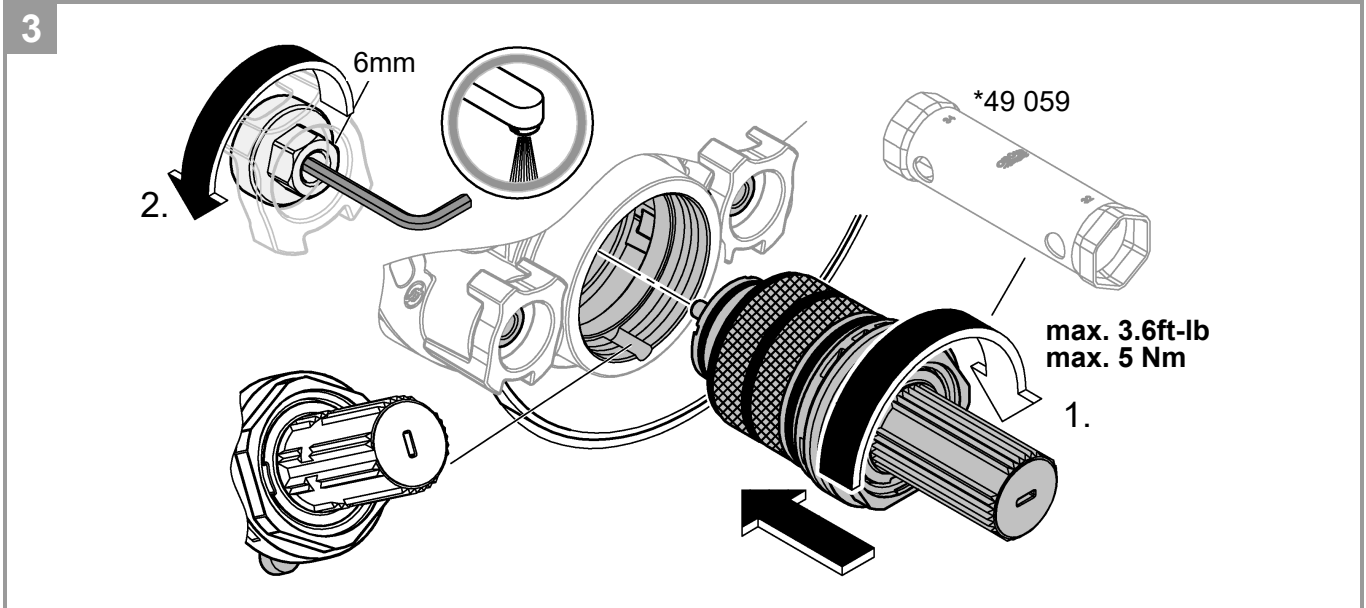
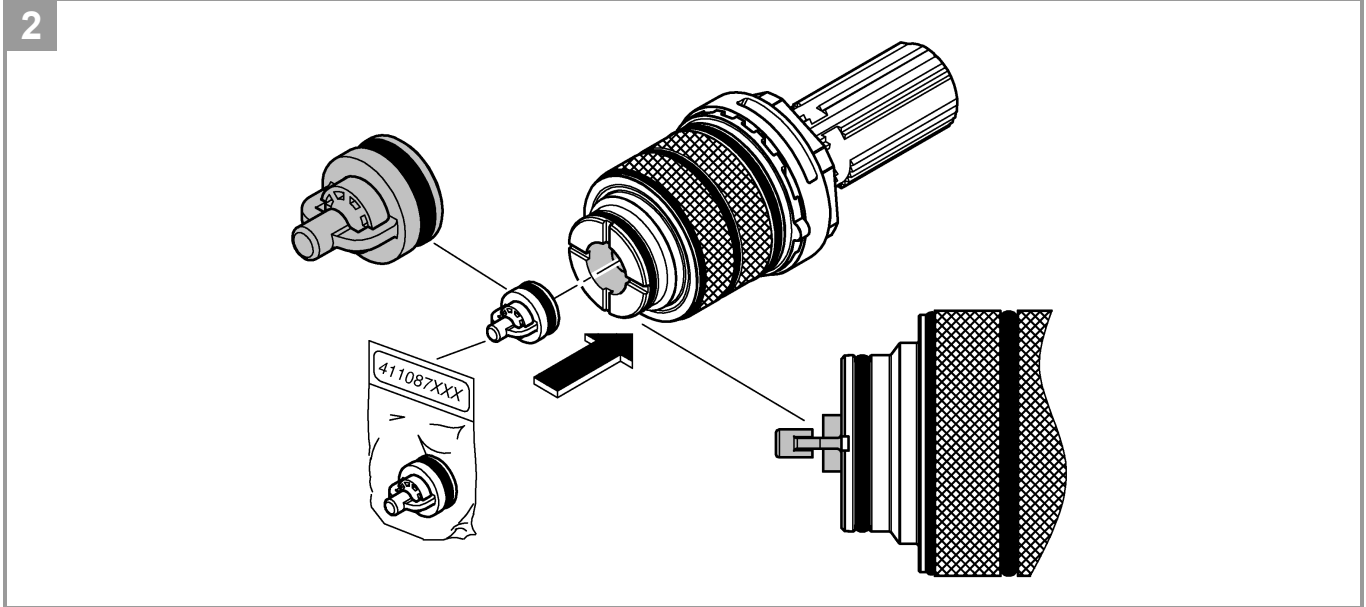
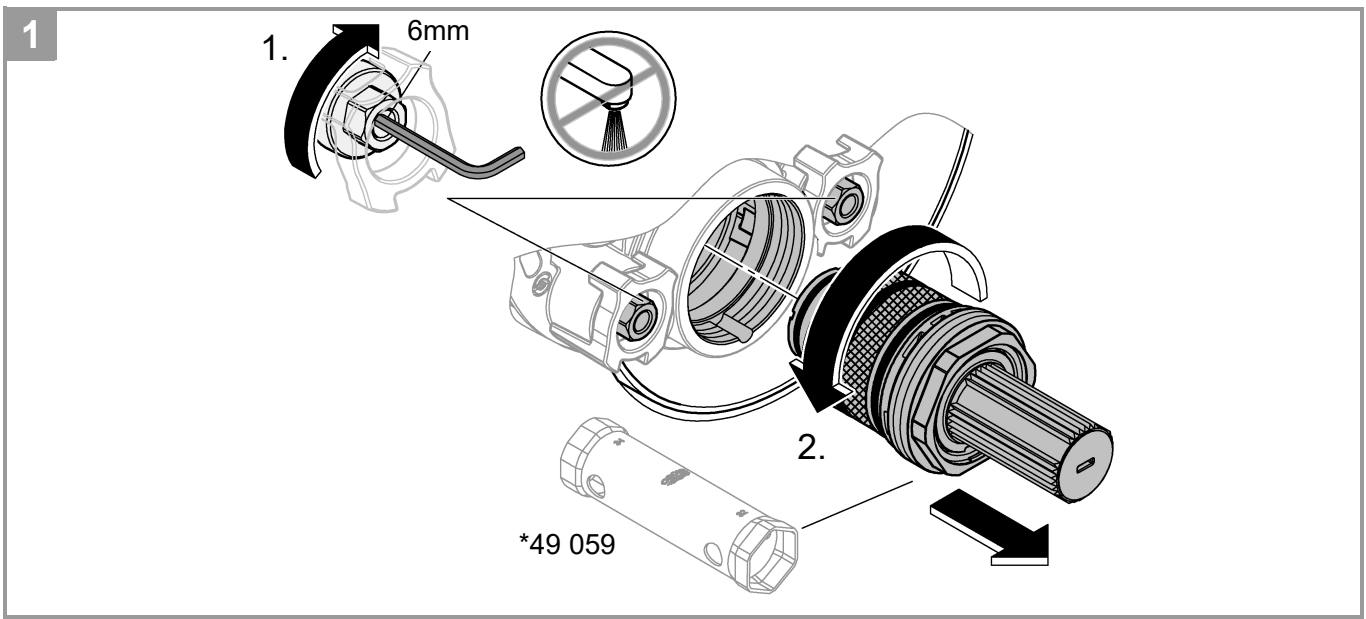


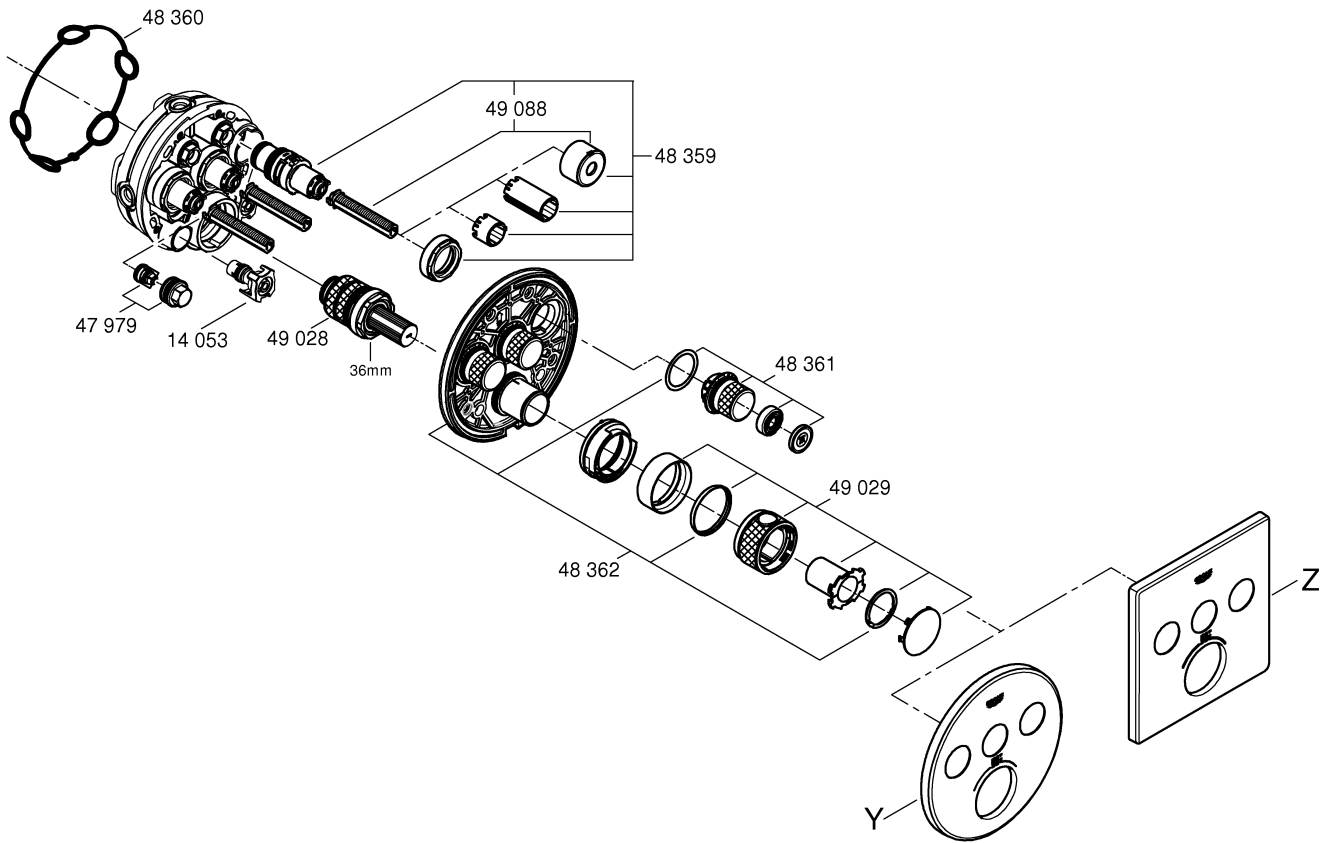
10b



11b







*49 059	36mm
*49 003	
*14 048	+25

Y		Z	
49 048		49 054	
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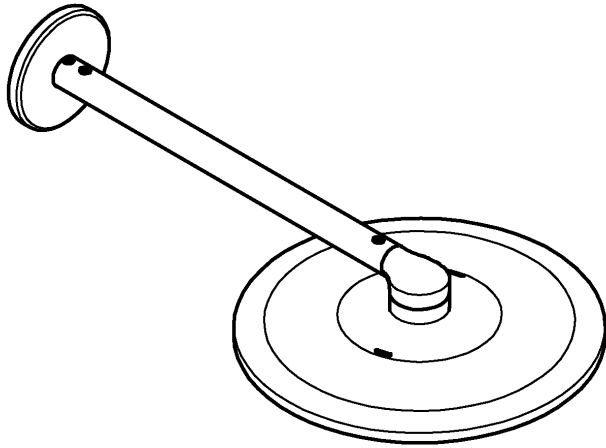
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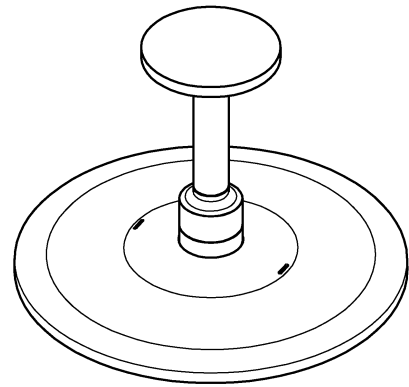
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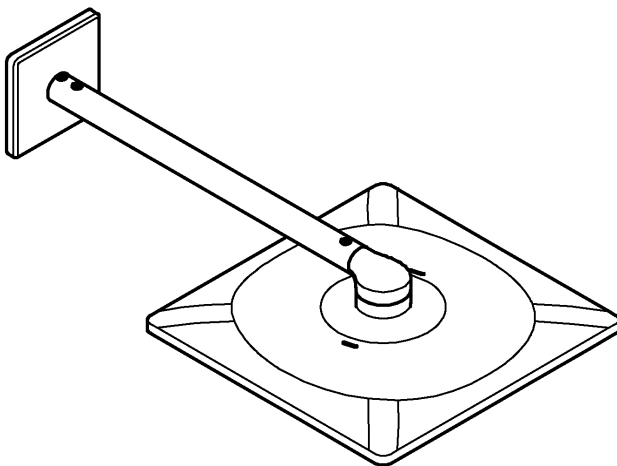
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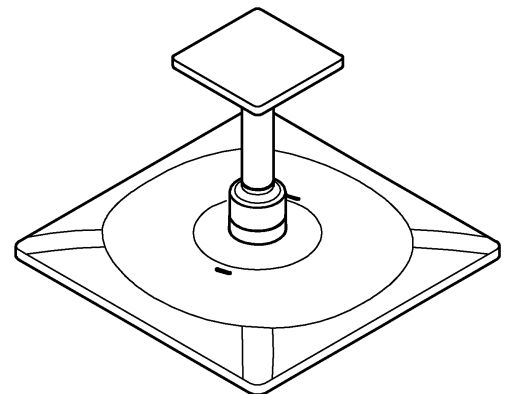
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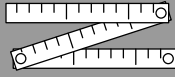


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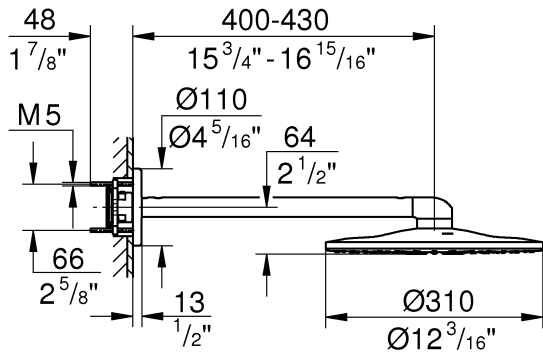


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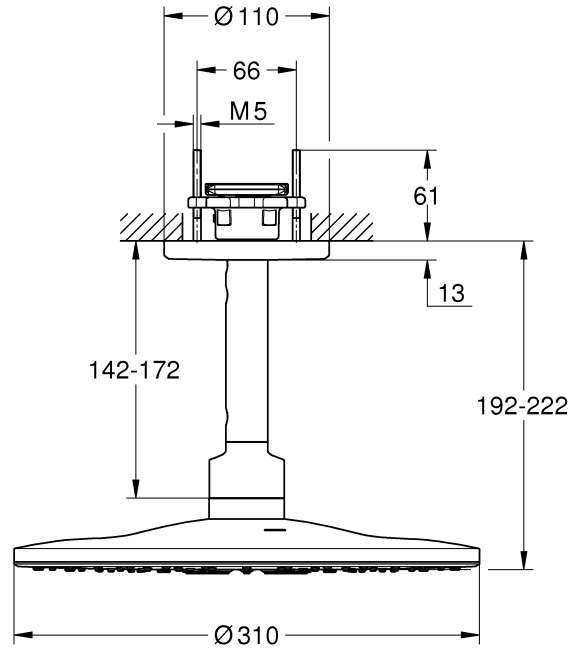




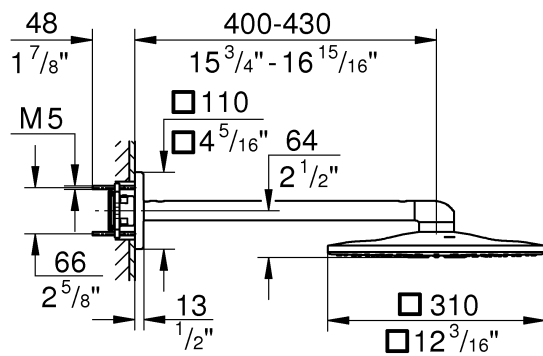
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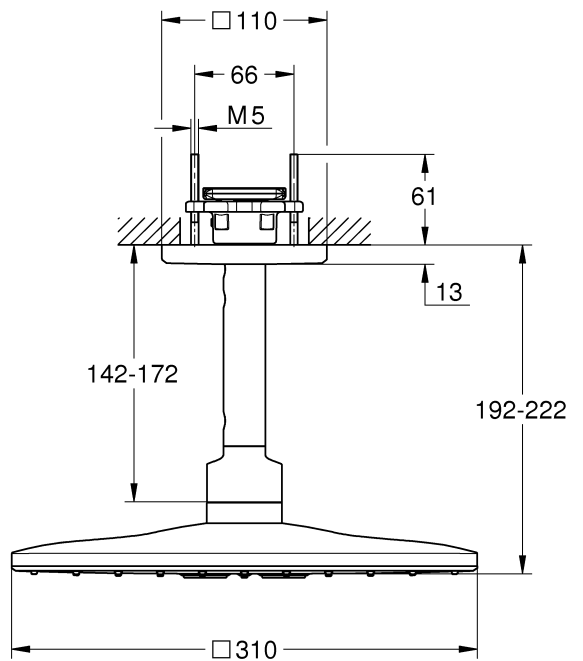
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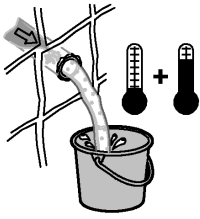


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DIN 1988
DIN EN 806



bar

max. 5
1.5

psi

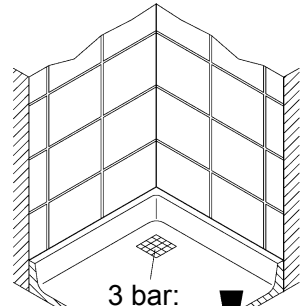
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21.75

°C

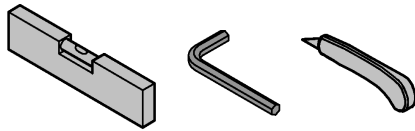
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°F

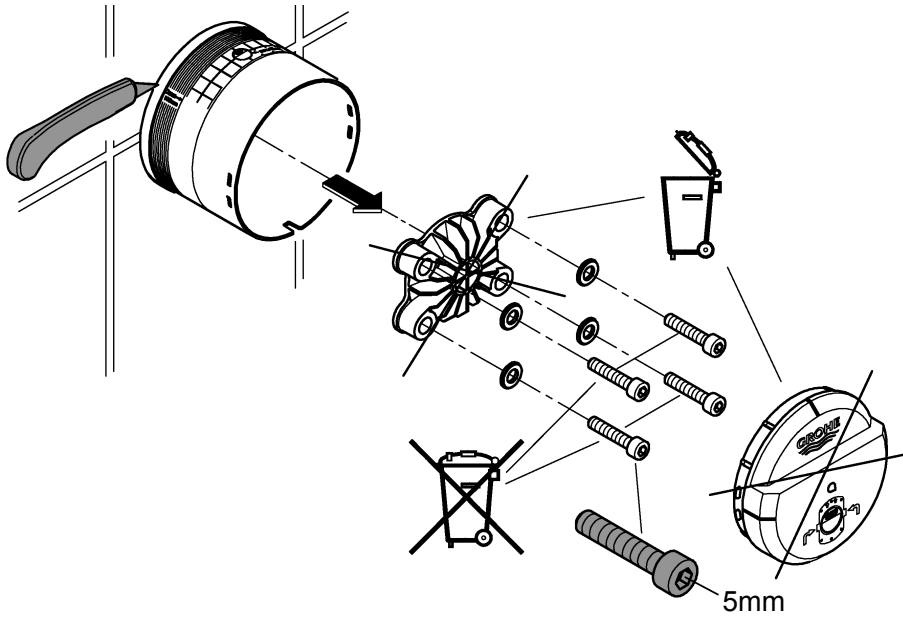
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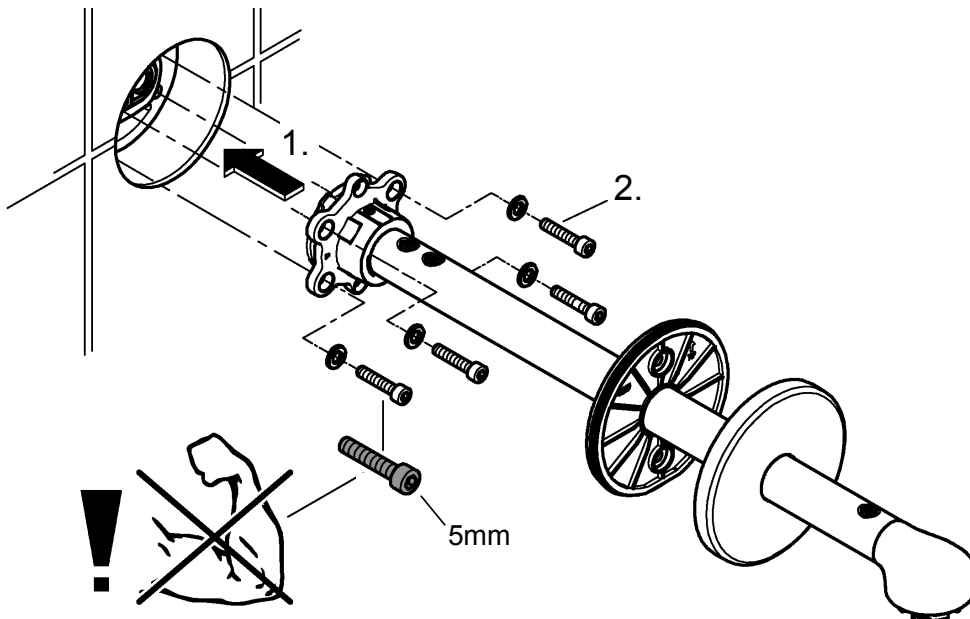
3 bar:
>44 l/min.
43 psi:
>11.6 gpm



1

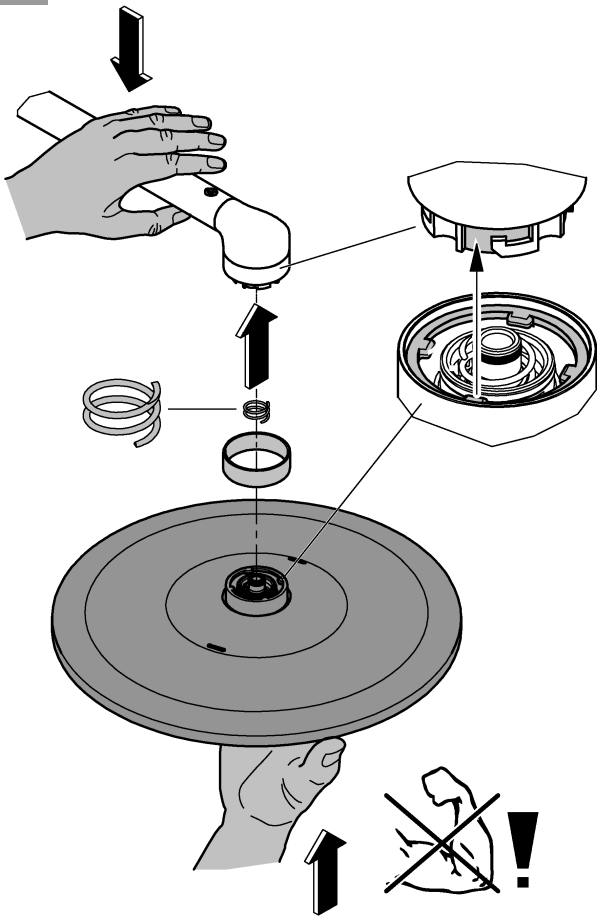


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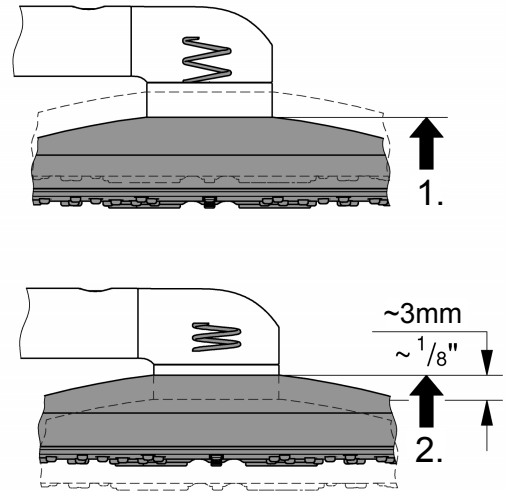




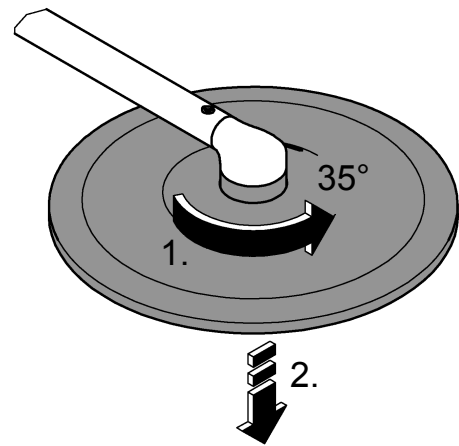
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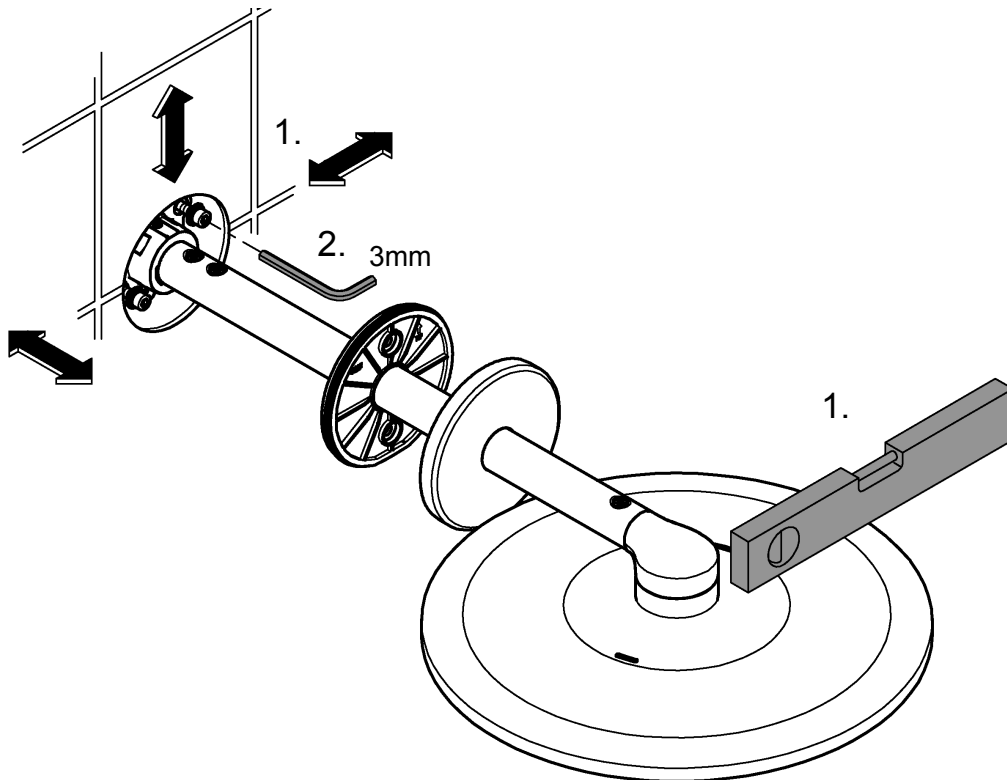
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3c

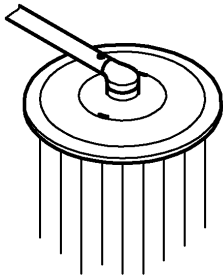
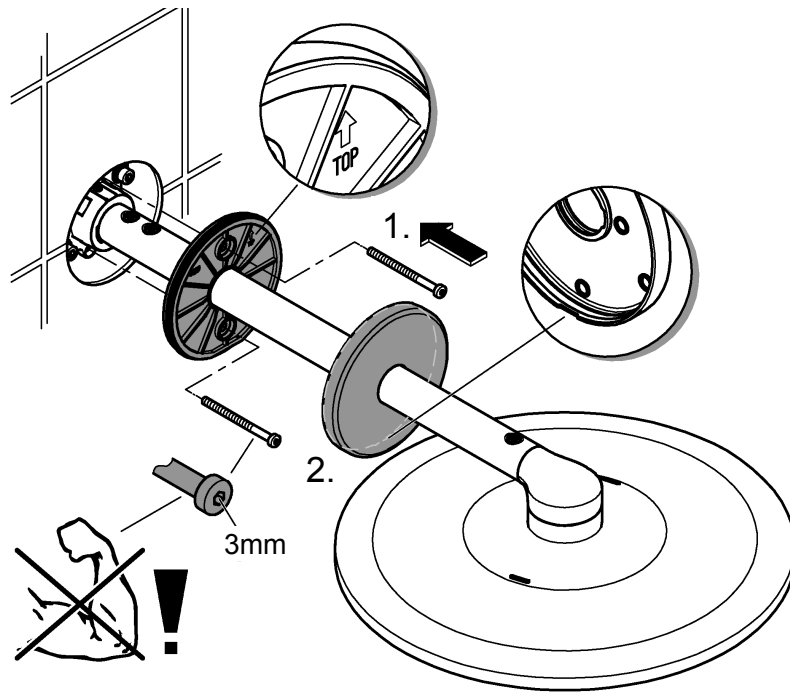


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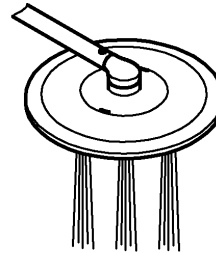




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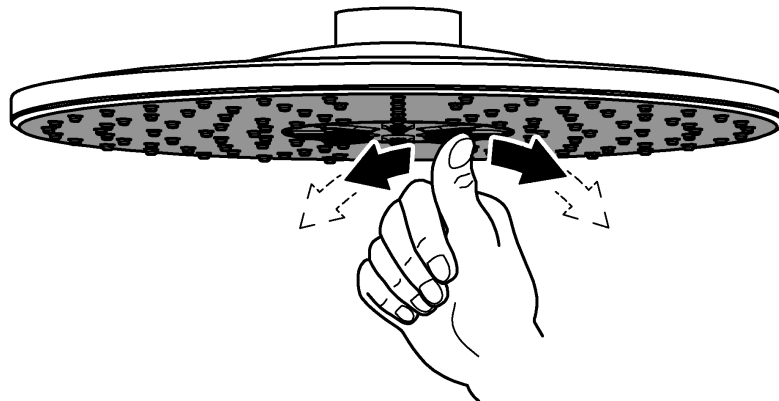


3 bar:	43 psi:
25 l/min	6.6 gpm



3 bar:	43 psi:
19 l/min	5 gpm

MAINTENANCE



<p>D</p> <p>5 Jahre Garantie auf die gleichbleibende Funktion der SpeedClean-Düsen.</p> <p>Durch die SpeedClean-Düsen, die regelmäßig gereinigt werden müssen, werden Kalkablagerungen am Strahlbildner durch einfaches Drüberstreichen entfernt.</p>	<p>GB</p> <p>The function of the SpeedClean nozzles is guaranteed for a period of five years.</p> <p>Thanks to the SpeedClean nozzles, which must be regularly cleaned, limescale deposits on the rose can be removed by simply rubbing with the fingers.</p>
<p>F</p> <p>Les buses SpeedClean sont garanties 5 ans.</p> <p>Les buses SpeedClean, qui doivent être nettoyées régulièrement, permettent d'éliminer, par frottement avec les doigts, les dépôts calcaires sur le diffuseur.</p>	<p>E</p> <p>Los conos SpeedClean tienen 5 años de garantía de funcionamiento.</p> <p>Las boquillas SpeedClean deben limpiarse con regularidad y gracias a ellas los depósitos calcáreos que se hayan podido formar en el aro de salida se eliminan con un simple frotado.</p>
<p>I</p> <p>Garanzia di 5 anni sul funzionamento invariato degli ugelli SpeedClean.</p> <p>Grazie agli ugelli SpeedClean, che devono essere puliti regolarmente, i residui calcarei sul disco getti possono essere rimossi semplicemente passandovi sopra un dito.</p>	<p>NL</p> <p>Wij verlenen 5 jaar garantie op het constant functioneren van de SpeedClean-sproeiers.</p> <p>Door de SpeedClean-sproeiers, die regelmatig moeten worden gereinigd, wordt kalkaanslag op de stralvormer door eenvoudig erover smeren verwijderd.</p>
<p>S</p> <p>5 års garanti för att SpeedClean-munstyckenas funktion förblir oförändrad.</p> <p>Tack vare SpeedClean-munstycken, som måste rengöras med jämna mellanrum, kan kalkavlagringar på strålmunstycket tas bort enkelt genom att stryka över det.</p>	<p>DK</p> <p>5 års garanti på SpeedClean-dysernes funktion.</p> <p>SpeedClean-dyserne, der skal rengøres jævnligt, gør, at kalkaflejringer på stråleformeren ganske enkelt kan fjernes ved at tørre hen over dem.</p>
<p>N</p> <p>5 års garanti på stabil funksjon av SpeedClean-dyser.</p> <p>Med SpeedClean-dyser, som må rengjøres jevnlig, fjernes kalkavleiringer på perlatoren ved å gni over den.</p>	<p>FIN</p> <p>SpeedClean-suuttimien toimintakyvyn säilymiselle myönnetään 5 vuoden takuu.</p> <p>Säännöllisesti puhdistettavien SpeedClean-suuttimien avulla kalkkikerrostumat poistetaan suihkunmuodostajasta yhdellä pyyhkäisyllä.</p>
<p>PL</p> <p>5 lat gwarancji na niezawodne działanie dysz samooczyszczających SpeedClean.</p> <p>Dzięki dyszom SpeedClean, które należy regularnie czyścić, osady wapienne z kształtownika strumienia można usunąć poprzez przetarcie jego powierzchni.</p>	<p>UAE</p> <p>نحن نضمن لك بقاء وظيفة منافذ التنظيف السريع SpeedClean بنفس مستوى الجودة لمدة 5 سنوات.</p> <p>بفضل منافذ التنظيف السريع SpeedClean يتم إزالة الترسبات الكلسية المتراكمة على فتحات تشكيل التدفق من خلال المسح فوقها بكل بساطة.</p>
<p>GR</p> <p>5 χρόνια εγγύηση για την αδιάκοπη λειτουργία των θηλών - Speed clean.</p> <p>Με τις θηλές SpeedClean, οι οποίες πρέπει να καθαρίζονται τακτικά, οι επικαθίσεις αλάτων ασβεστίου απομακρύνονται από το διαμορφωτή ψεκασμού με ένα απλό καθαρίσμα από πάνω.</p>	<p>CZ</p> <p>Na konstantní funkci trysek SpeedClean se poskytuje záruka 5 let.</p> <p>Usazeniny vodního kamene na regulátoru rozptylu paprsků lze odstranit jednoduchým přetřením povrchu trysek SpeedClean. Tyto trysky čistěte pravidelně.</p>

H

A SpeedClean fűvókákra 5 év garancia érvényes.
A SpeedClean fűvókák révén, amelyeket rendszeresen tisztítani kell, a sugárképzőn keletkezett vízkőlerakódások egyszerű, kézzel történő simítással eltávolíthatók.

P

5 anos de garantia de manutenção de um funcionamento igual dos orifícios de saída SpeedClean.
Através das saídas SpeedClean, as quais têm de ser limpas regularmente, os depósitos de calcário no formador do jacto de água são eliminados com uma simples passagem da mão.

TR

SpeedClean çıkışları 5 sene garanti kapsamındadır.
Düzenli olarak temizlenmesi gereken, SpeedClean-uçları sayesinde kireç tabakalarını temizlemek için parmağınızı duşun üzerinden geçirmeniz yeterlidir.

SK

Na konštantnú funkciu trysiek SpeedClean sa poskytuje záruka 5 rokov.
Vápenaté usadeniny na regulátore rozptylu prúdu sa dajú odstrániť jednoduchým pretretím povrchu trysiek SpeedClean, ktoré je potrebné pravidelne čistiť.

SLO

5-letna garancija za nespremenjeno delovanje šob SpeedClean.
Šobe SpeedClean, ki jih je treba redno čistiti, omogočajo, da nabrani vodni kamen z glave razpršilnika odstranite tako, da preprosto potegnete čeznje.

HR

Petogodišnje jamstvo na za nepromijenjenu funkcijubespriječorno funkcioniranje SpeedClean-sapnica.
Pomoću SpeedClean-sapnica, koje se moraju redovito čistiti, mogu se odstraniti talozi vapnenca na oblikovniku mlaza, tako da se jednostavno prebrišu.

BG

5 години гаранция за функционирането на дюзите - SpeedClean.
С помощта на дюзите SpeedClean, които трябва редовно да се почистват, отлагания от варовик по струйника се отстраняват лесно чрез избърсване с ръка.

EST

SpeedClean-düüside muutumatu töötamise garantiiajaks on 5 aastat.
SpeedClean-düüside kaudu, mida tuleb korrapäraselt puhastada, saab dušipihustilt lubjasetet eemaldada lihtsa ülepühkimise teel.

LV

SpeedClean sprauslu darbam tiek dota 5 gadu garantija.
Kaļķu nogulsņējumus no strūkļas veidotāja var viegli notīrīt, paberzējot Speed Clean sprauslas, kas regulāri jātīra.

LT

„SpeedClean“ purkštukams suteikiama 5 metų nuolatinio veikimo garantija.
„SpeedClean“ palengvina dušo, kurį reikia valyti reguliariai, priežiūrą. Pakanka per dušo galvutės skylutes perbraukti ranka ir nuo jų nubyrės susidariusios kalkių nuosėdos.

RO

5 ani garanție pentru funcționarea stabilă a duzelor SpeedClean.
Prin duzele cu spălare rapidă (SpeedClean), care trebuie să fie curățate regulat, pot fi înlăturate prin simplă frecare depunerile de piatră de pe formatorul de jet.

CN

快速清洁 (SpeedClean) 喷嘴功能正常工作的保证期为 5 年。
由于采用快速清洁 (SpeedClean) 喷嘴 (必须定期清洁), 喷雾器喷嘴上的钙质沉积可以用手指直接擦去。

RUS

5 лет гарантии на неизменное функционирование быстро очищаемых форсунок.
Благодаря форсункам быстрого очищения SpeedClean, которые необходимо периодически чистить, известковые отложения на формирователе струй удаляются простым вытиранием.

USA

The function of the SpeedClean nozzles is guaranteed for a period of five years.
Thanks to the SpeedClean nozzles, which must be regularly cleaned, limescale deposits on the rose can be removed by simply rubbing with the fingers.

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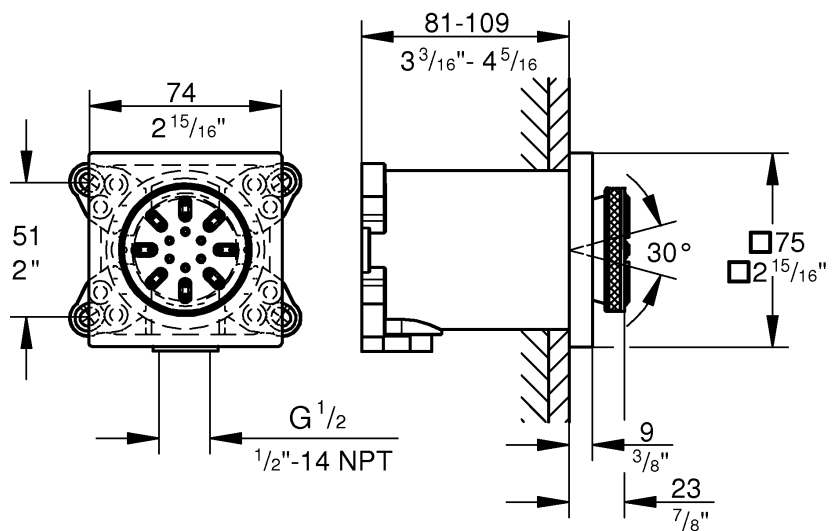
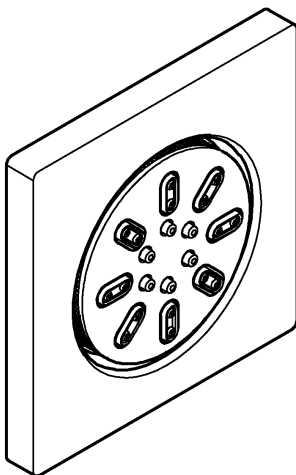
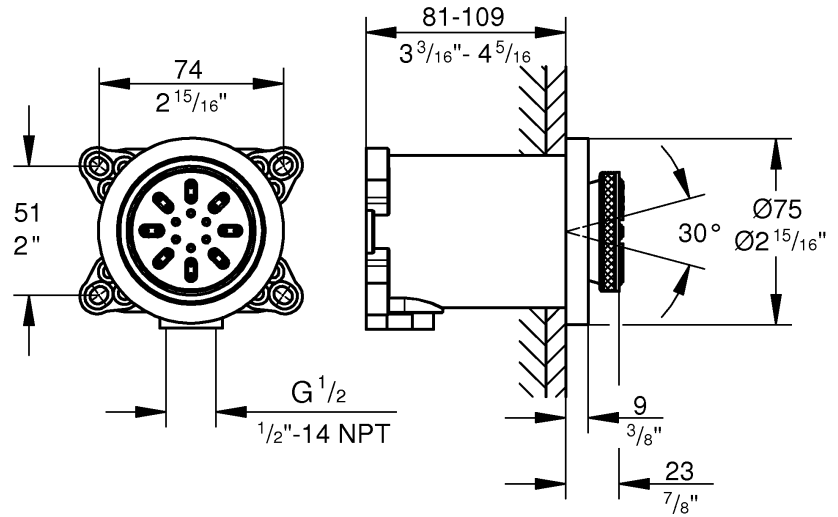
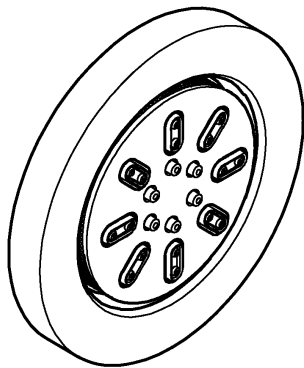
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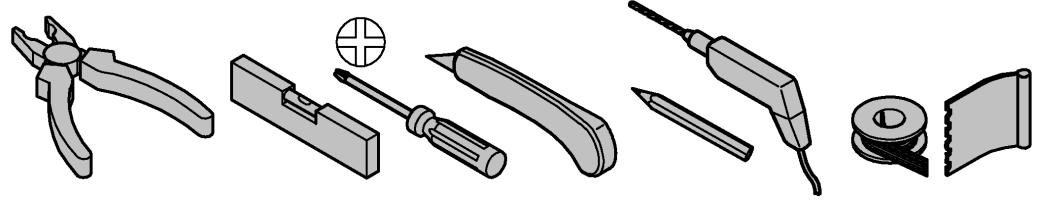
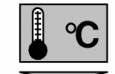
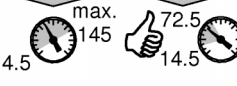
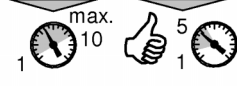
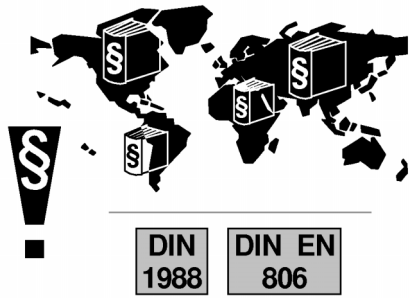
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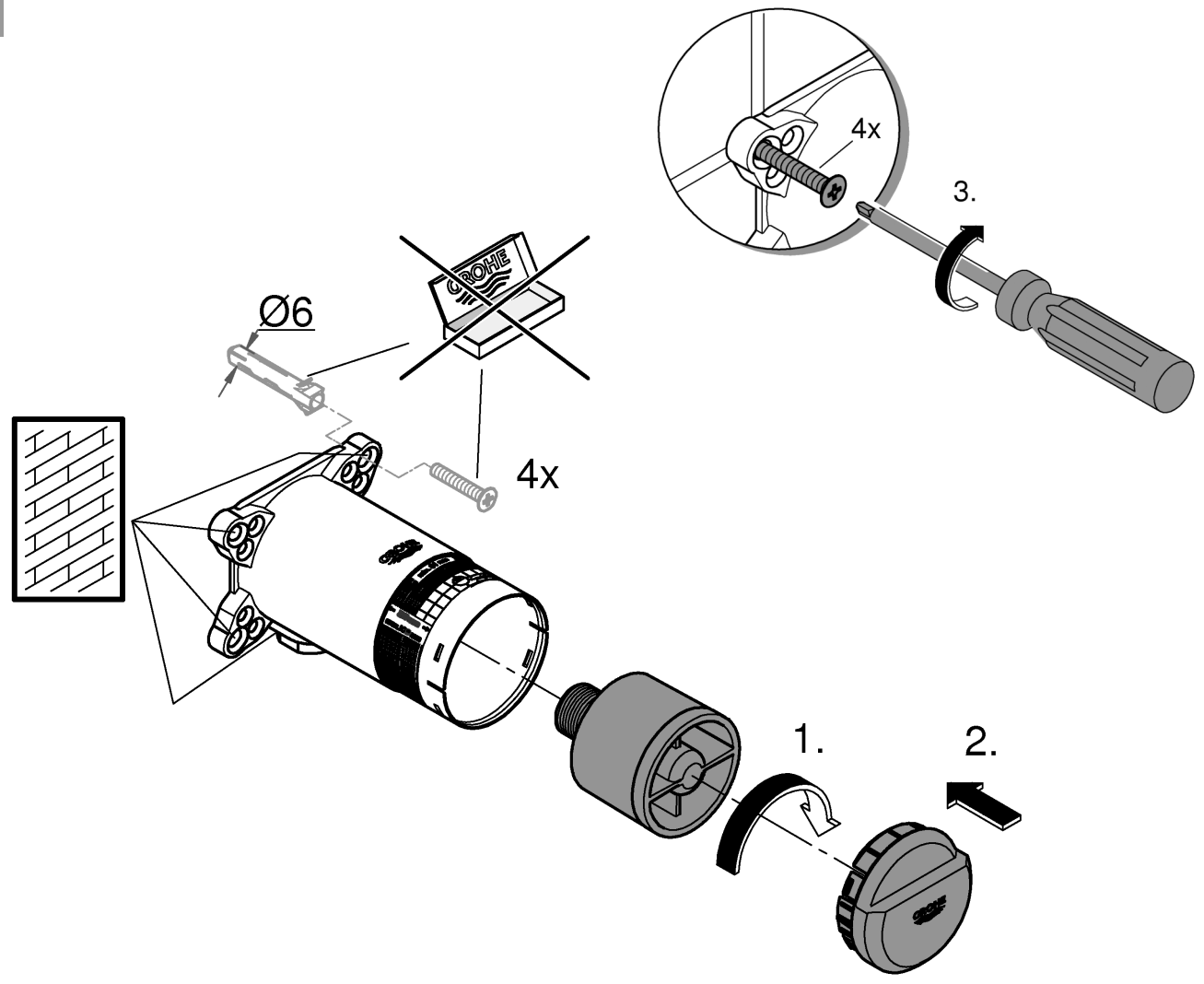
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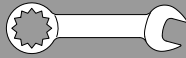
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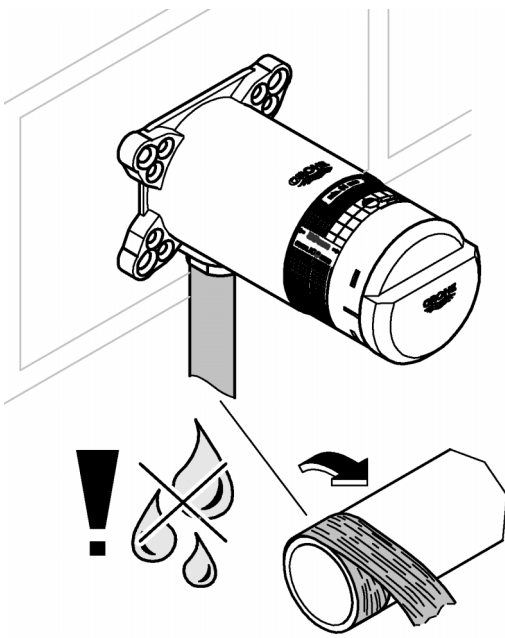


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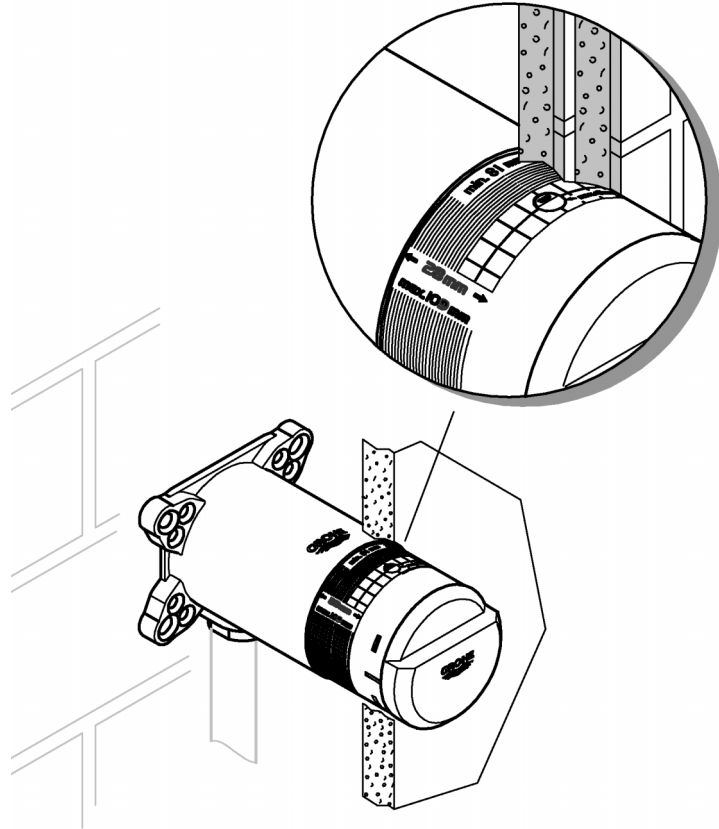




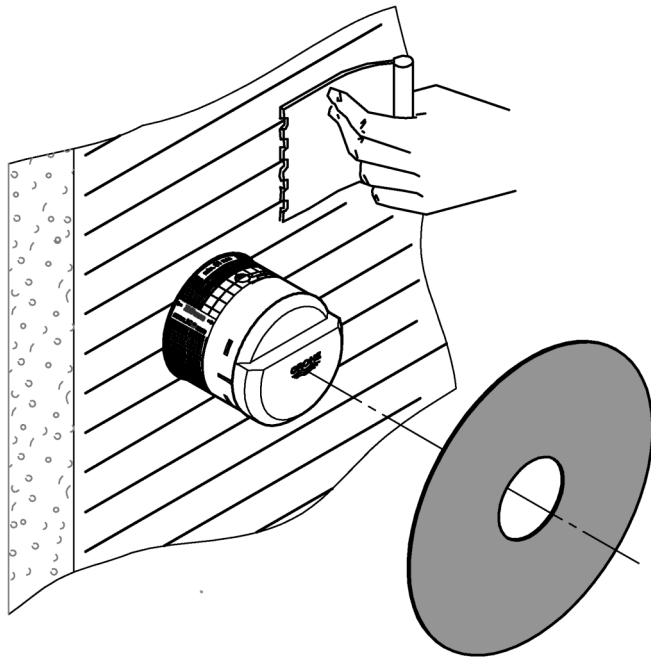
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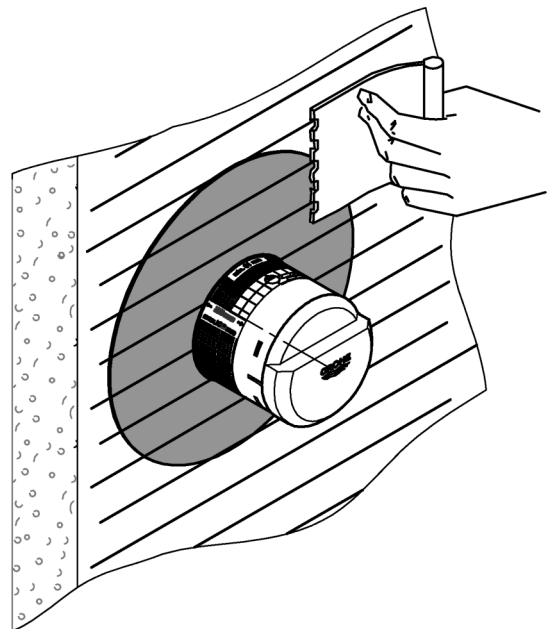
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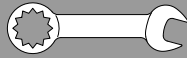


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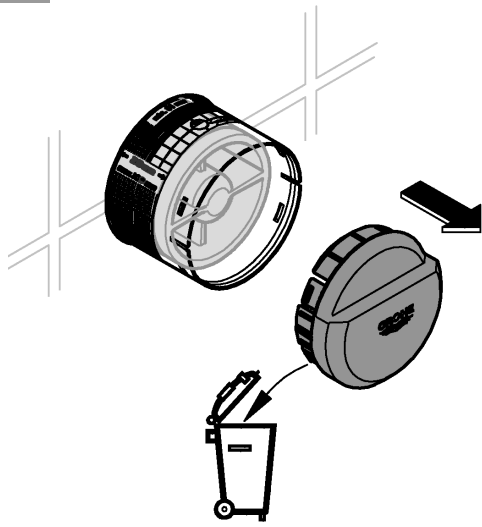


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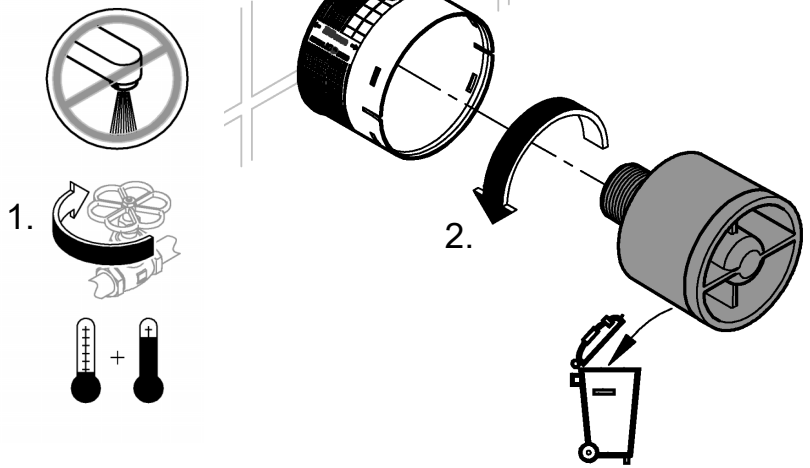




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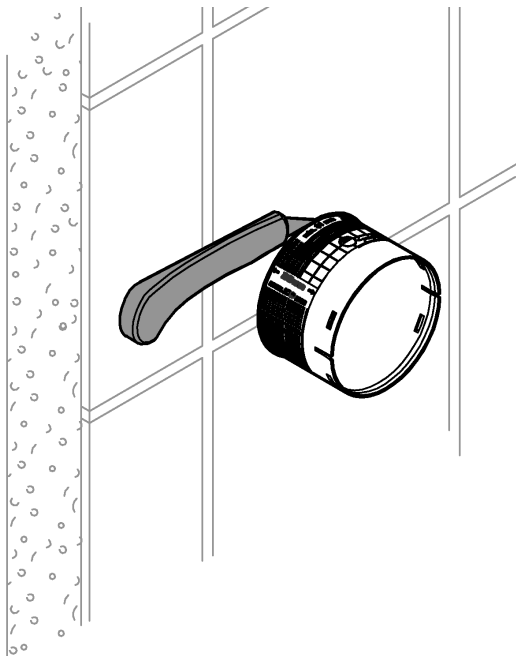
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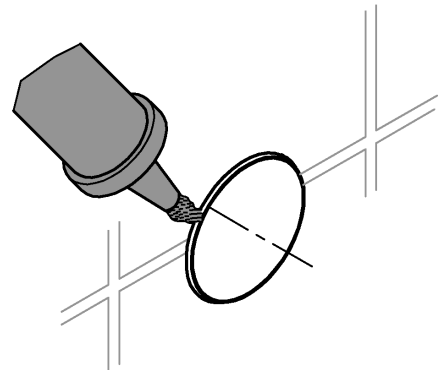
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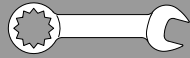


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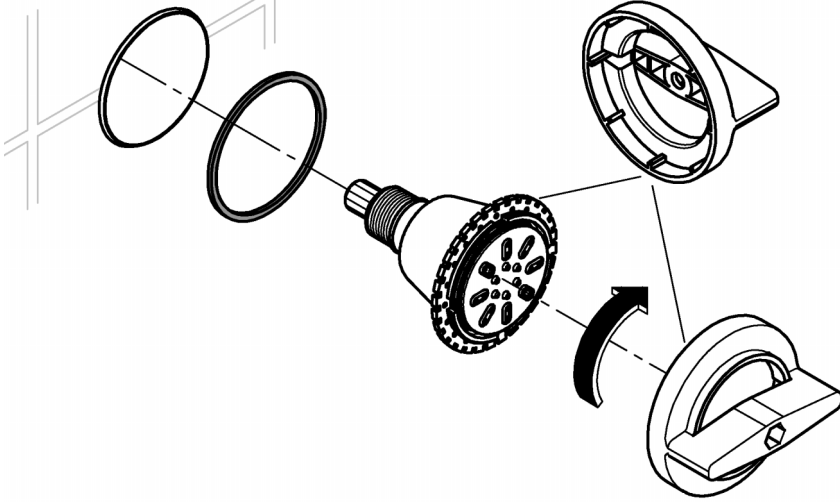


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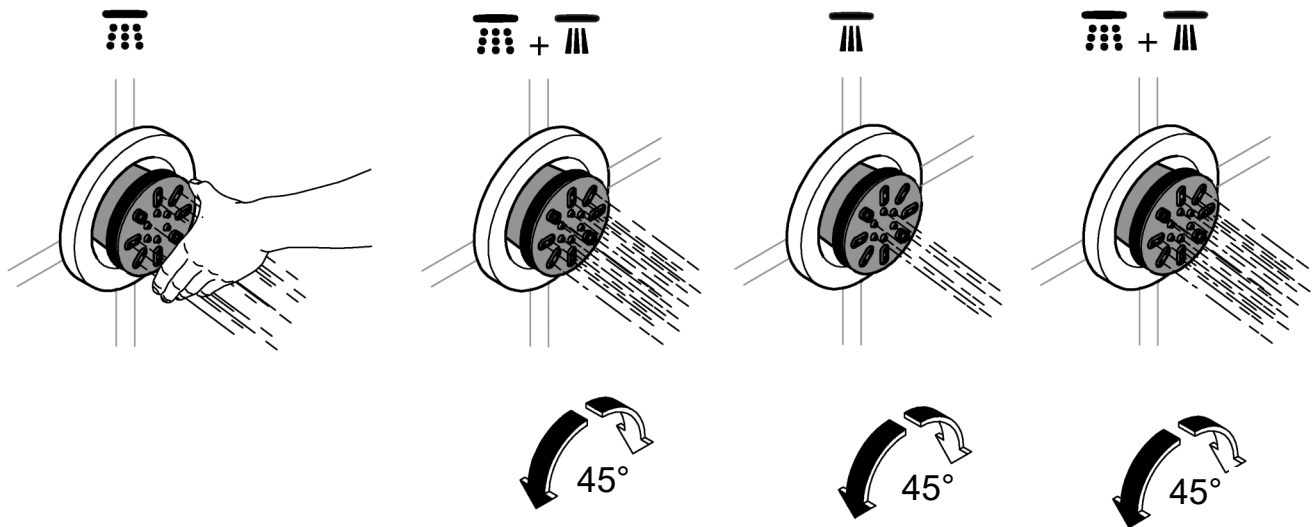
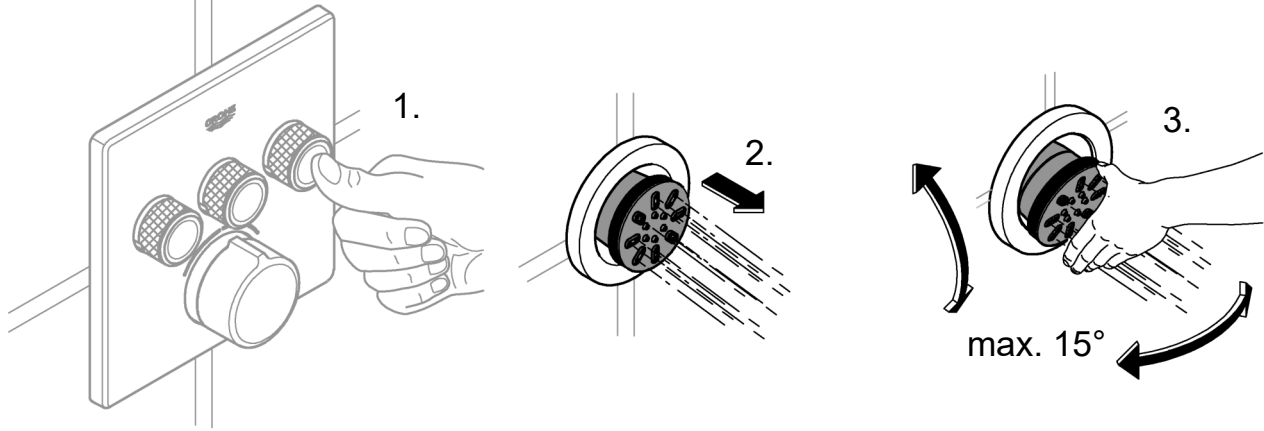
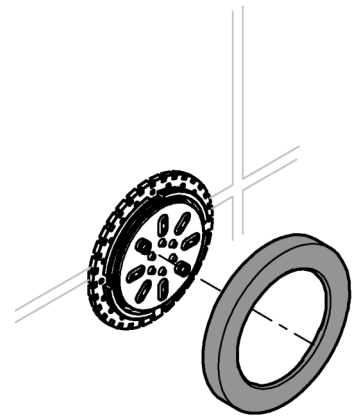


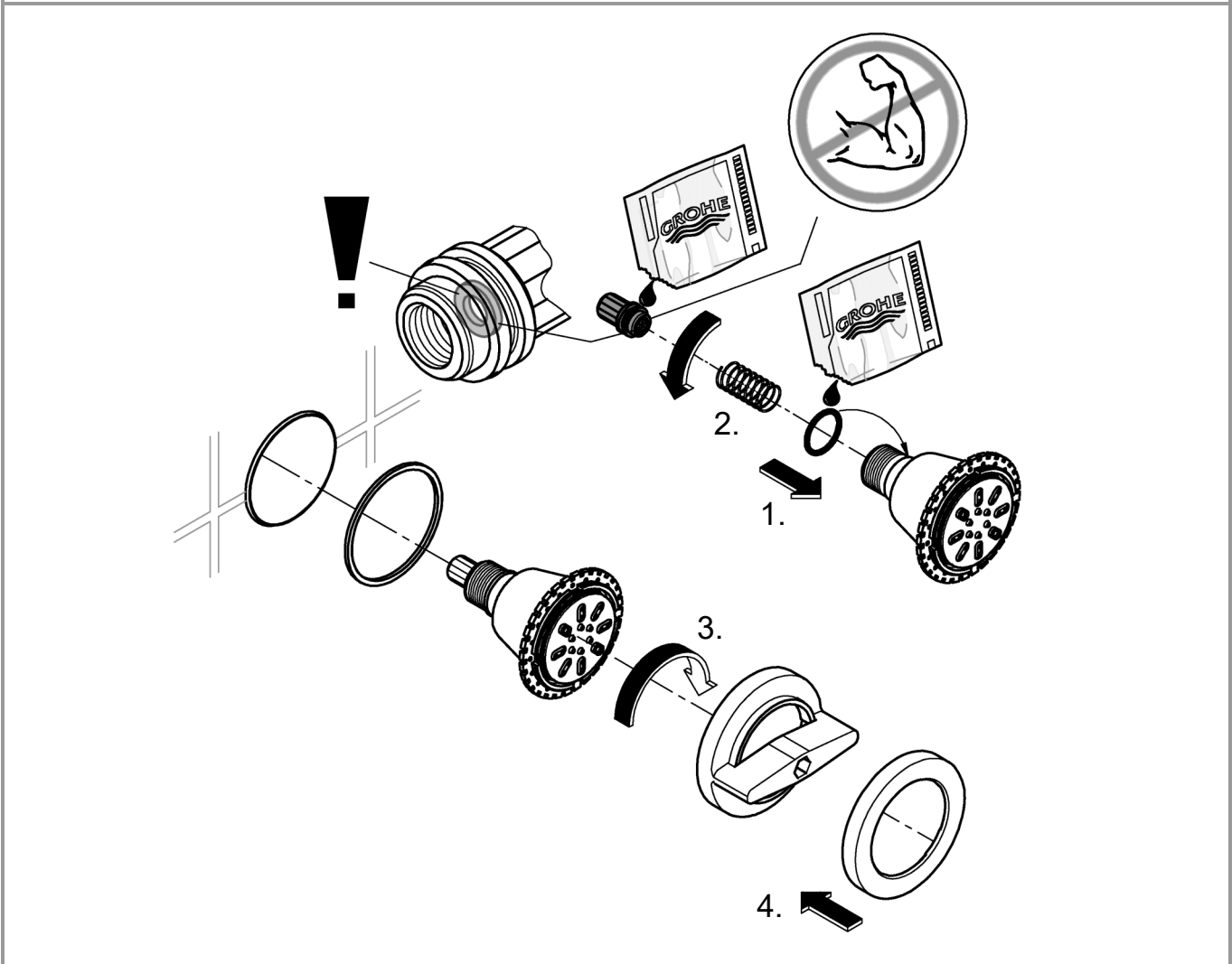
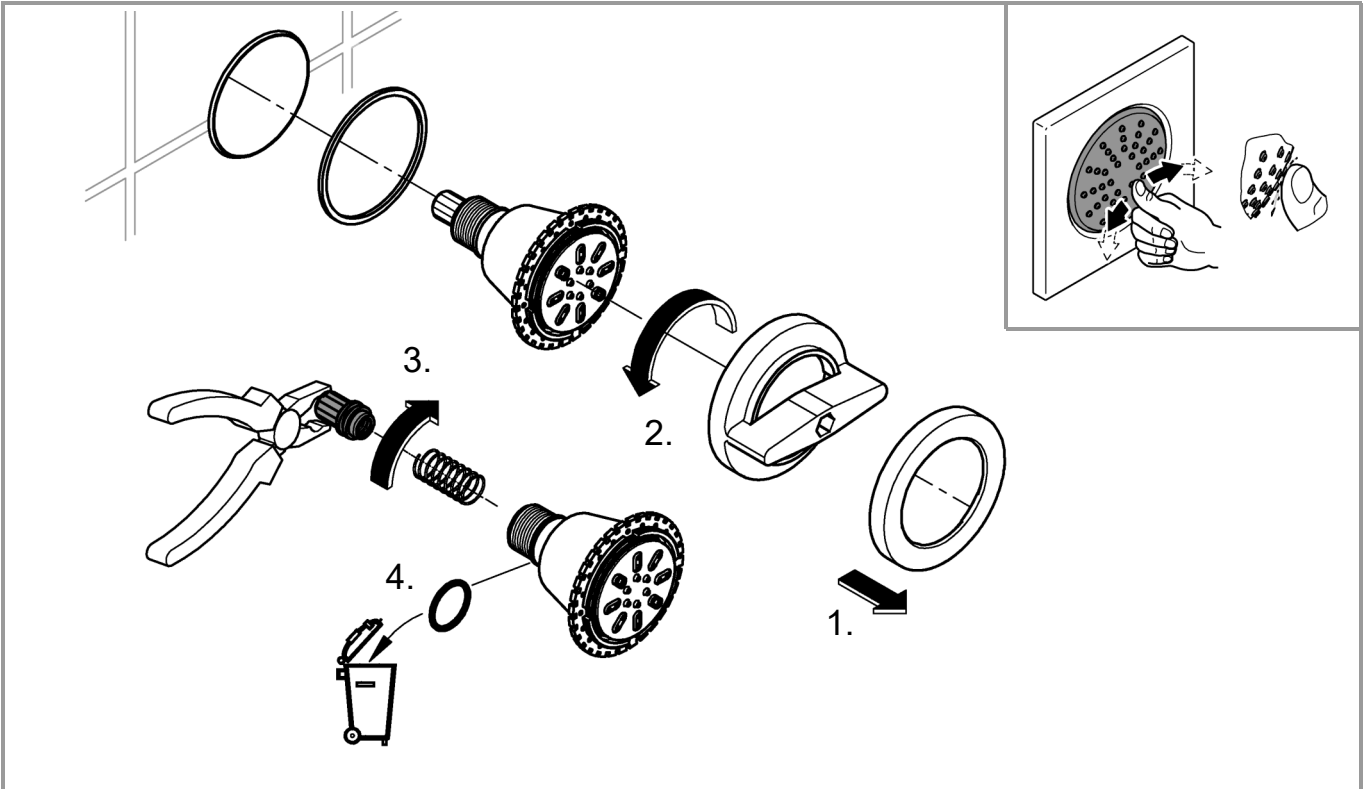


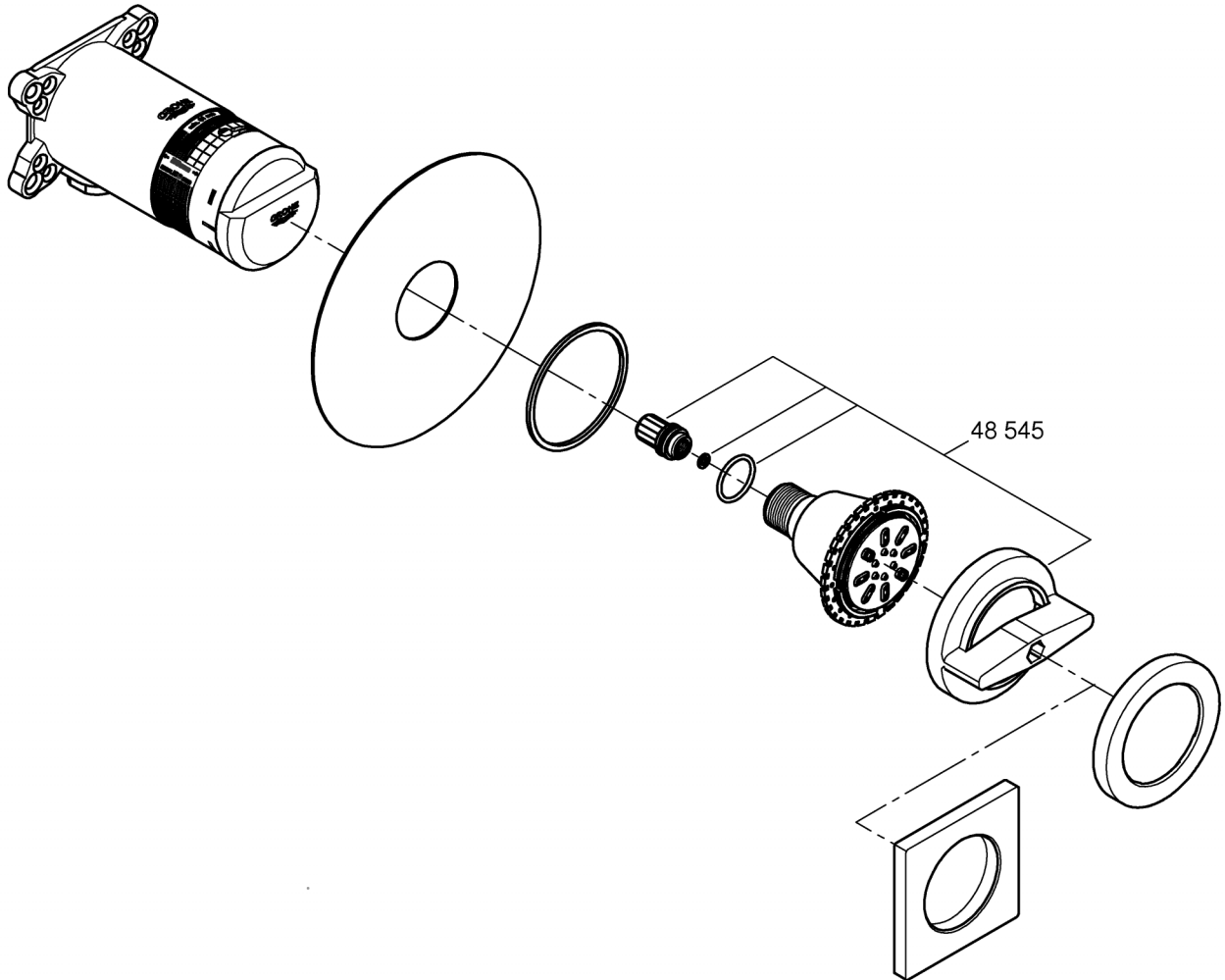
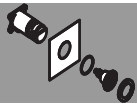
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12







- D** Bei Montage z.B. an Gipskartonwänden (keine feste Wand) muss sichergestellt sein, dass eine ausreichende Festigkeit durch eine entsprechende Verstärkung in der Wand vorhanden ist.
- GB** When installing e.g. on plasterboard walls (not solid walls) it must be assured that an appropriate reinforcement is in place to ensure sufficient strength.
- F** En cas de montage sur un support souple, une plaque de plâtre par exemple, s'assurer que des renforts ont été montés sur le mur.
- E** En el caso del montaje, por ejemplo en paredes de planchas de yeso (tabiques ligeros), debe asegurarse de que exista una firmeza suficiente mediante un refuerzo adecuado en la pared.
- I** Durante il montaggio per es. su pareti in cartongesso (parete non fissa) assicurarsi che vi sia adeguata stabilità grazie ad un rinforzo corrispondente nella parete.
- NL** Bij montage bijv. aan gipswanden (geen vaste wand) moet ervoor worden gezorgd, dat er voldoende stevigheid door een overeenkomstige versterking in de wand is.
- S** Vid montering t.ex. på gipsväggar (inte fast vägg), måste kontrolleras att tillräcklig hållfasthet garanteras av en förstärkning i väggen.
- DK** Ved montering på f.eks. vægge af gipsplader (ikke faste vægge) skal væggen være tilstrækkelig solid og derfor evt. forstærkes.
- N** Ved montering på f.eks. gipsplater (ikke fast vegg) må det kontrolleres at det er forsterkning i veggen.
- FIN** Kun asennus tehdään esim. kipsilevyseiniiin (kevytrakenteinen seinä), seinässä täytyy olla riittävä vahvike pitävän kiinnityksen varmistamiseksi.
- PL** W przypadku montażu na ścianach gipsowo-kartonowych (nie na ścianach stałych) należy zwiększyć wytrzymałość ściany przez wykonanie odpowiedniego wzmocnienia.
- UAE** عند التركيب على جدران الكرتون المجصصة على سبيل المثال (جدار غير ثابت) يجب التأكد من وجود ثبات كافي عن طريق تسليح مناسب في الجدار.
- GR** Σε περίπτωση τοποθέτησης σε γυψοσανίδες (όχι σε σταθερή τοιχοποιία) θα πρέπει να φροντίσετε ώστε ο τοίχος να παρουσιάζει την απαιτούμενη αντοχή, π.χ. με κατάλληλη ενίσχυση.
- CZ** Při montáži např. na sádkokartonové stěny (není pevná stěna) se musí zkontrolovat, zda je odpovídajícím zesílením zajištěna dostatečná pevnost stěny.
- H** Nem szilárd falba történő szerelésnél (pl. gipszkarton fal) ügyelni kell arra, hogy a szükséges szilárdság érdekében megfelelő falba épített merevítés álljon rendelkezésre.
- P** Se a montagem for feita, por exemplo, a paredes de placa de gesso cartonado (paredes que não são compactas e fixas), é necessário assegurar uma suficiente fixação na parede através de um reforço.
- TR** Örn. alçı duvarlara (sabit duvar değil) yapılacak montajda, duvarın uygun takviyeyle yeterli ölçüde sağlamlaştırıldığından emin olunmalıdır.
- SK** Pri montáži napr. na sadrokartónové steny (nie je pevná stena) sa musí skontrolovať, či je odpovedajúcim vystužením zabezpečená dostatočná pevnosť steny.
- SLO** Npr. pri montaži na stene, ki niso zidane, je treba najprej preveriti, da je stena dovolj okrepljena in tako dovolj trdna.
- HR** Pri montaži na, primjerice, zid od gipsanog kartona (na zid koji nije čvrst), potrebno je osigurati dostatnu čvrstoću postavljanjem odgovarajućeg ojačanja u zid.
- BG** При монтаж напр. върху стени от гипскартон (нетвърди стени) трябва да се осигури достатъчна стабилност чрез съответно подсилване на стената.
- EST** Kergseinale, nt kipsseinale, paigaldamisel tuleb kõigepealt veenduda, et sein oleks vastava seinasisese tugevduse abil piisavalt tugevaks tehtud.
- LV** Montējot dušas stieņa konstrukciju, piemēram, pie ģipškartona sienām (vai arī, ja siena nav smagumizturīga) jāpārlicinās, lai sienā tiek iebūvēts pietiekami stiprs, atbilstošs stiprinājuma elements (konstrukcija).
- LT** Montuojant dušą, pvz., prie gipsinės (netvirtos) sienos, būtina patikrinti, ar ji pakankamai sutvirtinta.
- RO** La montarea pe pereți din gips carton (pereți fără rigiditate), de exemplu, trebuie să se asigure o rigiditate suficientă printr-o consolidare corespunzătoare pe perete.
- CN** 如果在石膏墙面（而非实体墙）上安装，务必进行必要的加固以确保有足够的支撑力。
- UA** Під час монтажу на неміцні стіни (наприклад, гіпсокартонні) необхідно забезпечити достатню стійкість за допомогою встановлення відповідного укріплення в стіні.
- RUS** При монтаже на стенах не обладающих высокой прочностью (например гипсокартонных) необходимо удостовериться, что достаточная прочность крепления обеспечена, если нет – необходимо соответствующее усиление стены.

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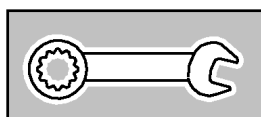
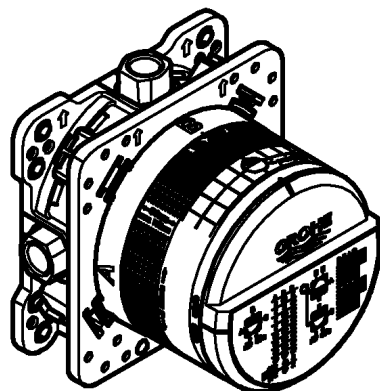
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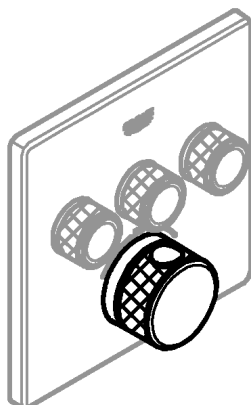
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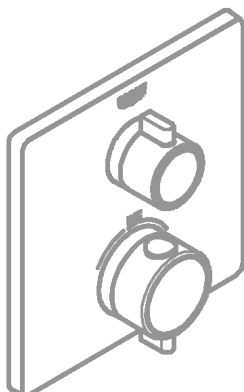
1-9

Grohtherm SmartControl

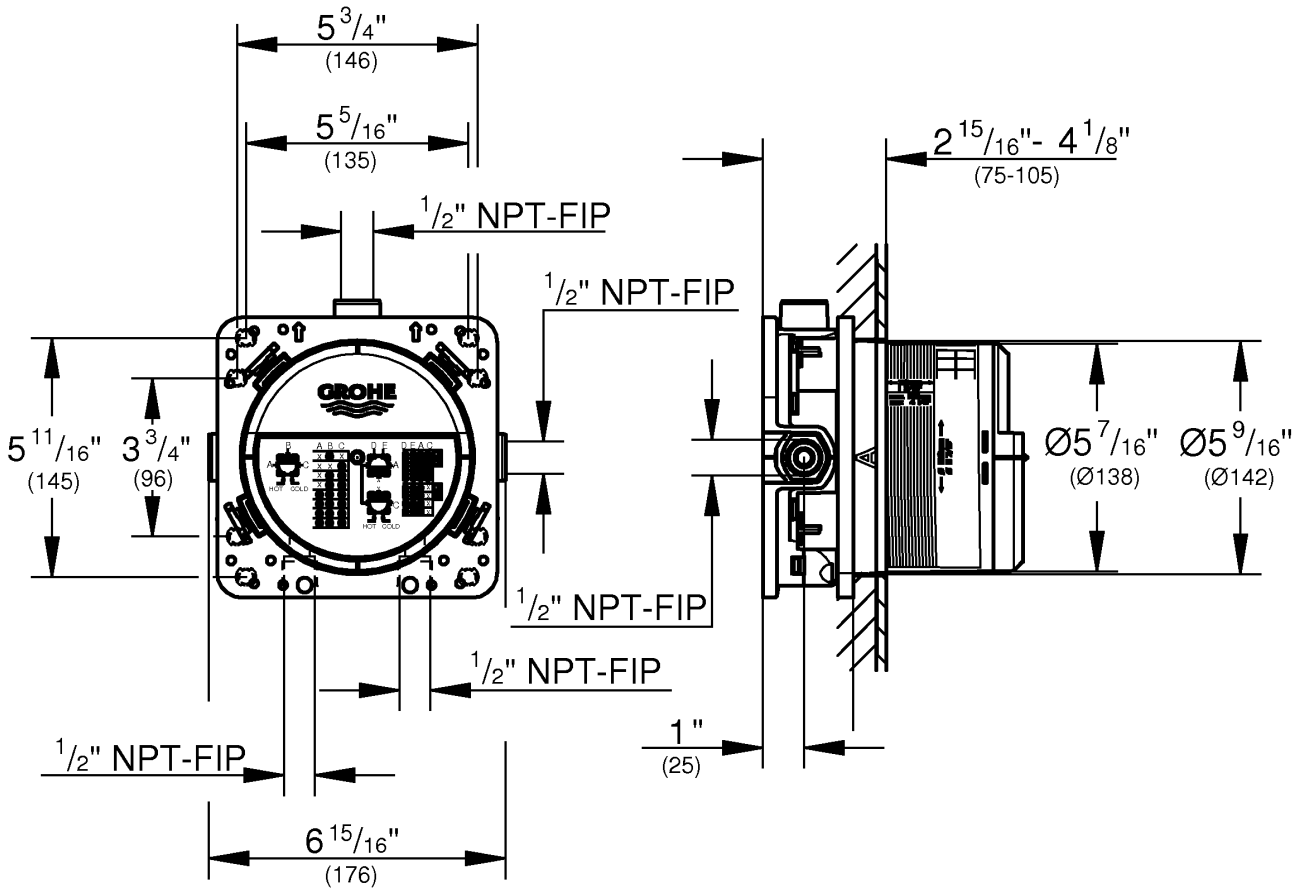
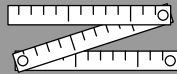
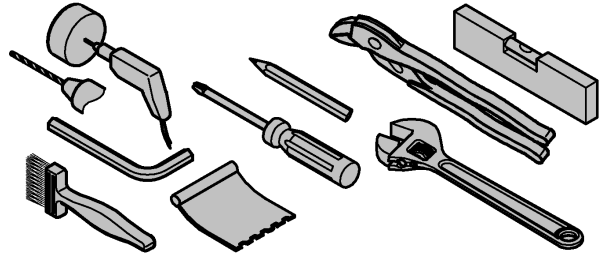
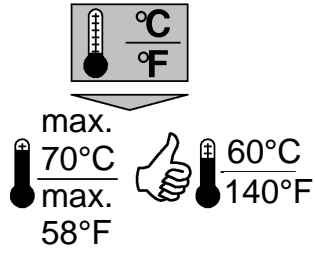
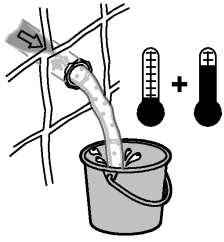


10-24

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.

E

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 tablonos
- 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

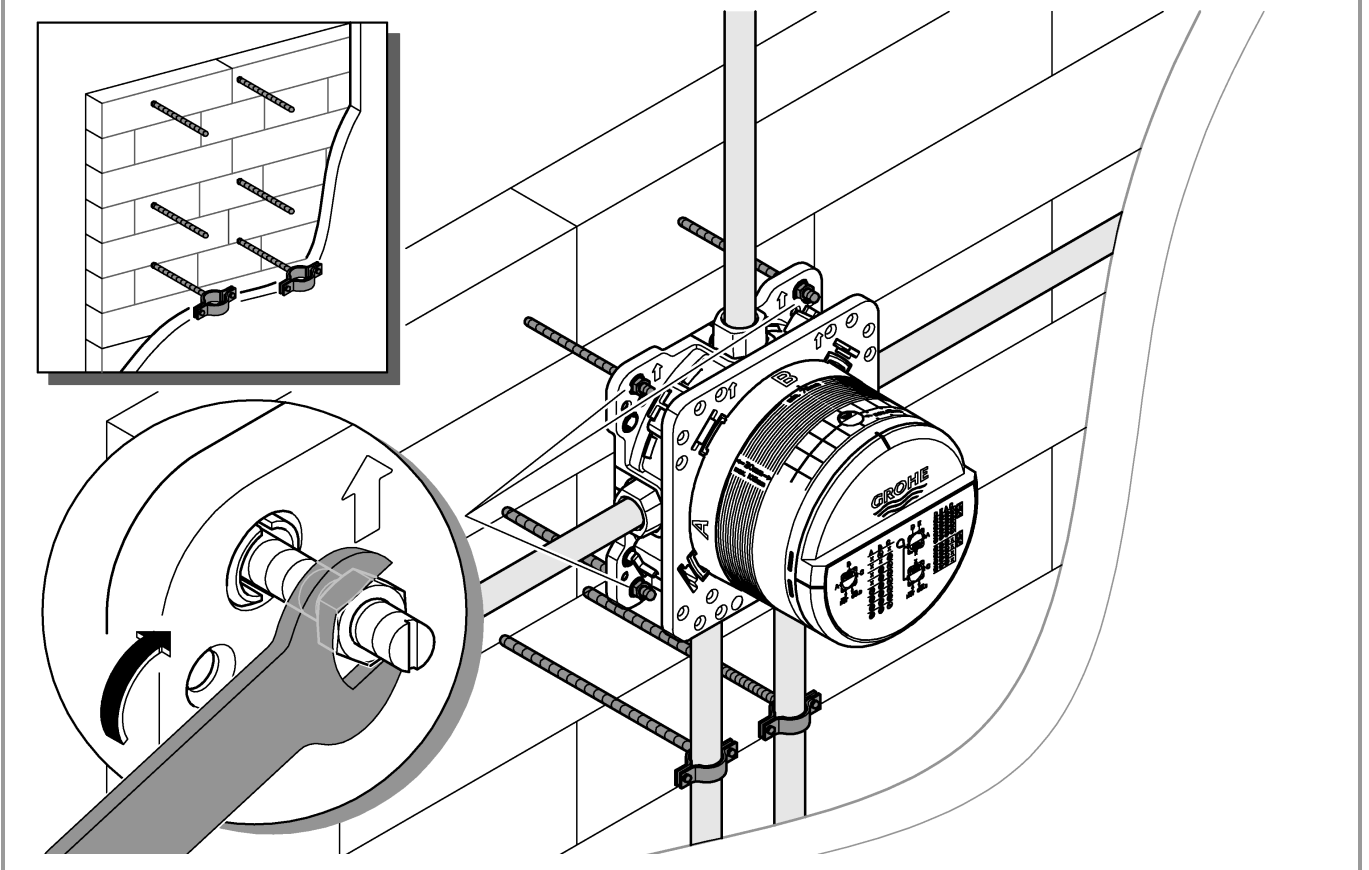
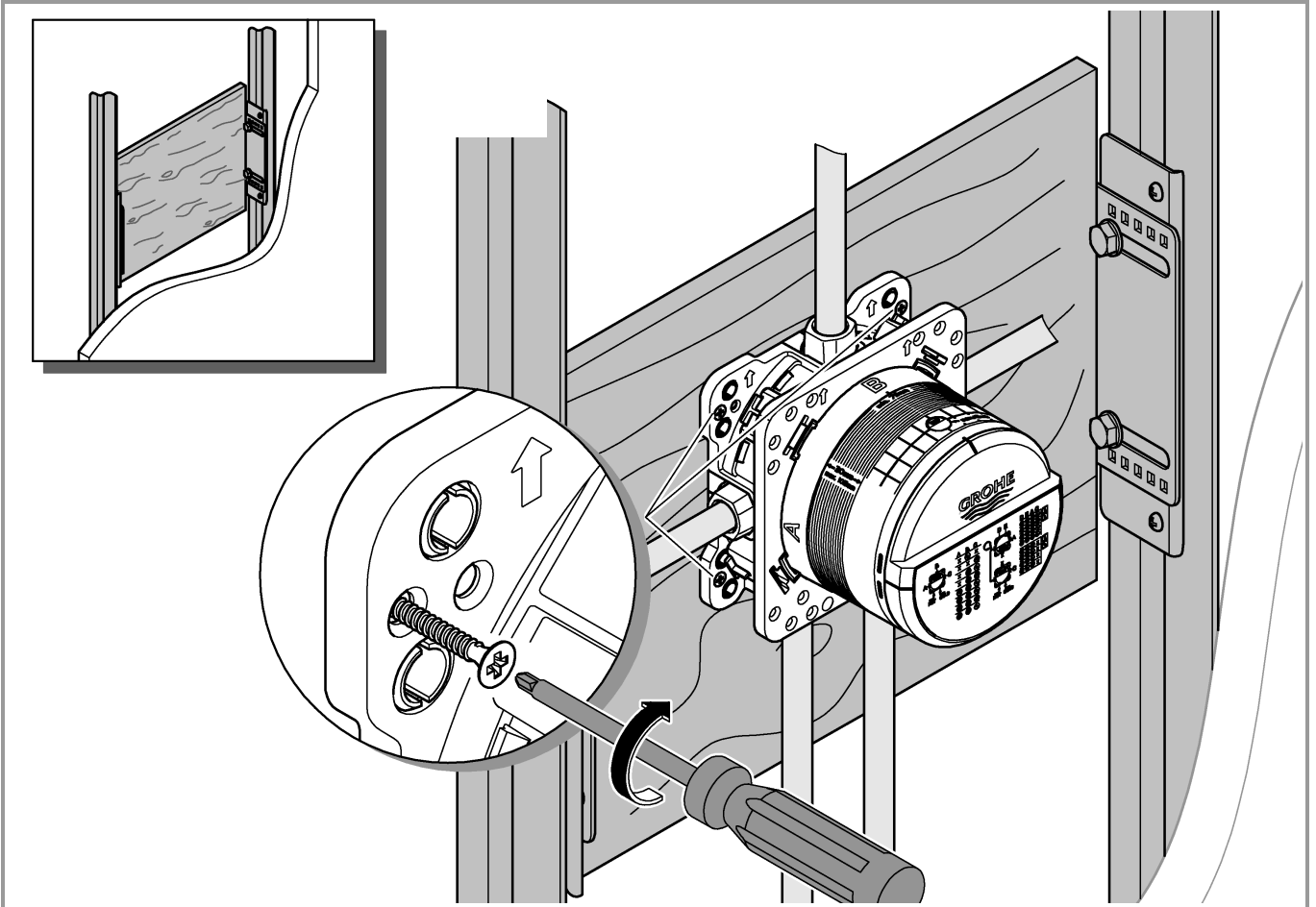
Se deben utilizar las salidas previstas para ello.

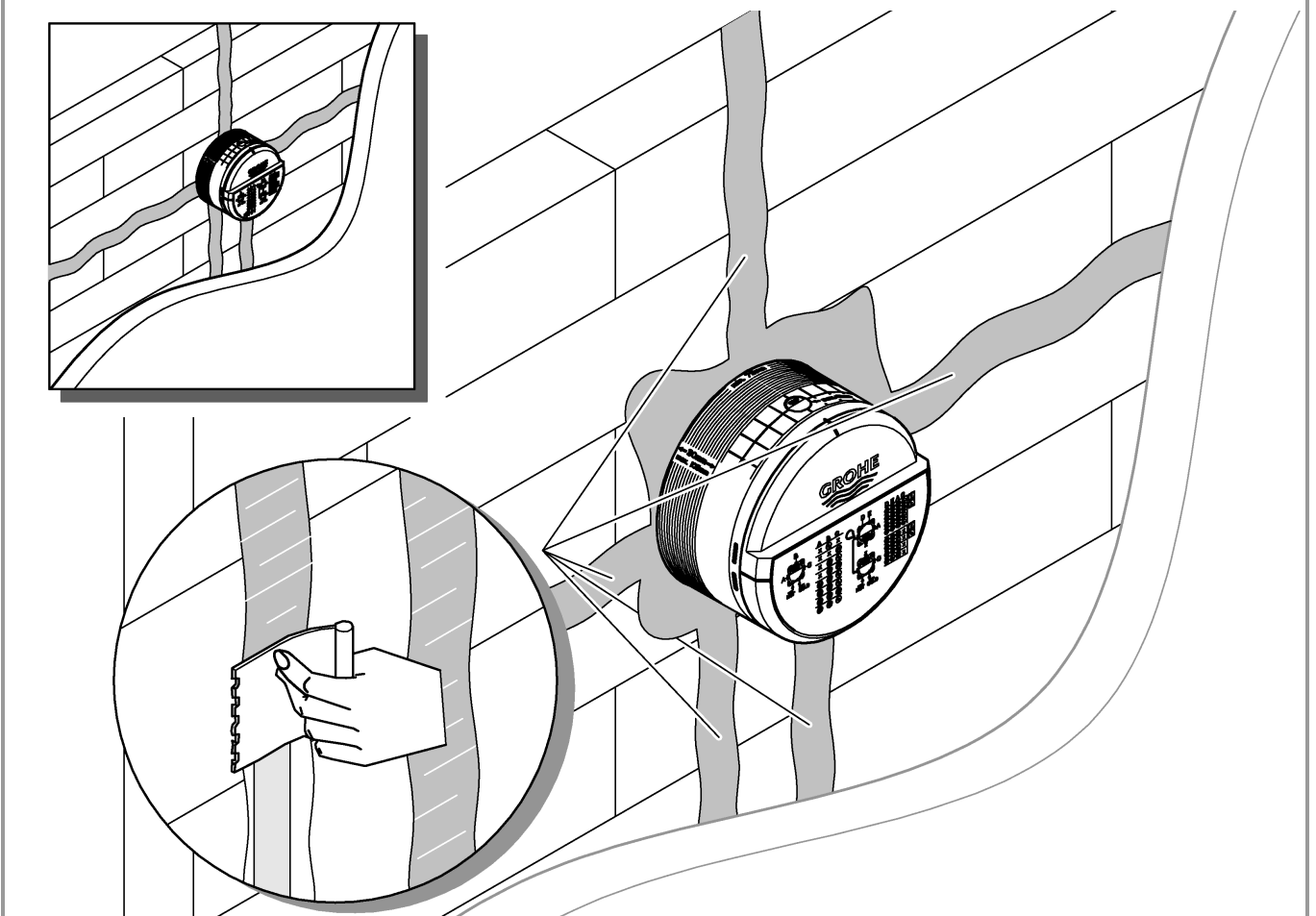
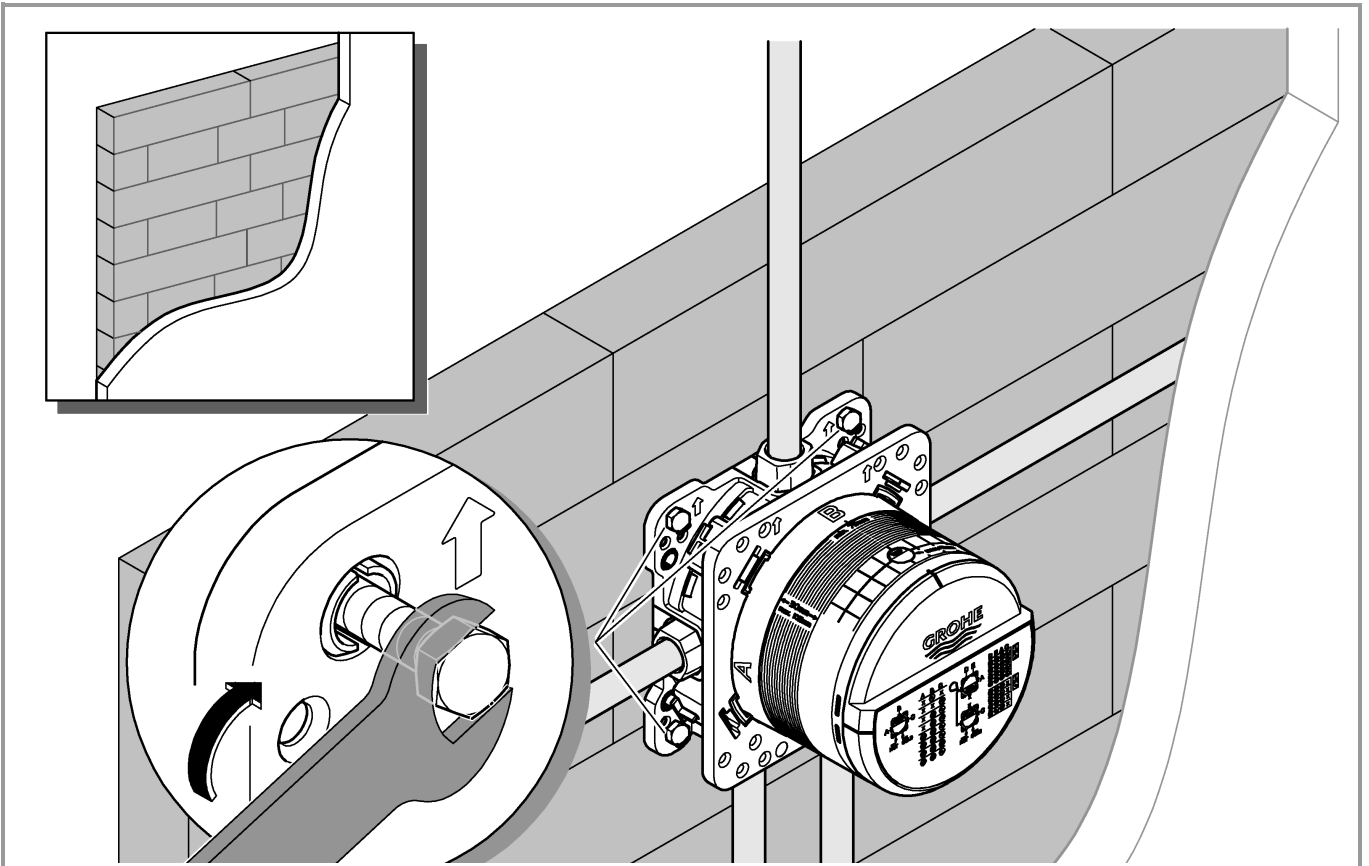
- Posibilidades de configuración recomendadas:
 - Véase Grohtherm SmartControl a partir de la página 10-24.
 - Véase Grohtherm SmartControl a partir de la página 25-30.
- Las salidas libres se deben sellar con el tapón suministrado (X).
- Comprobar la estanqueidad de las conexiones.
- **Los tapones (Y)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

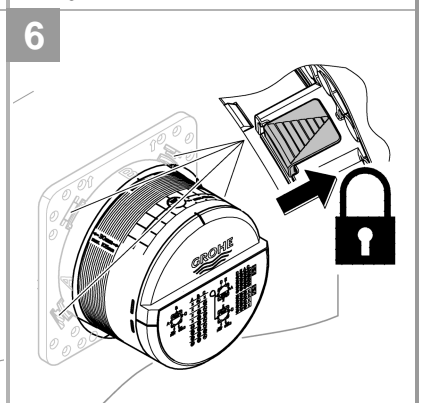
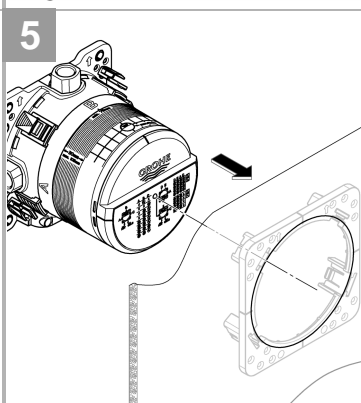
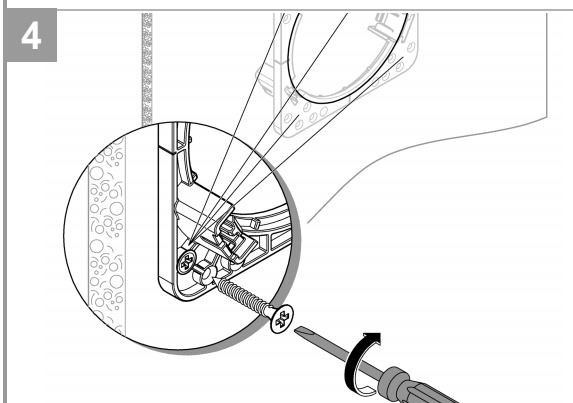
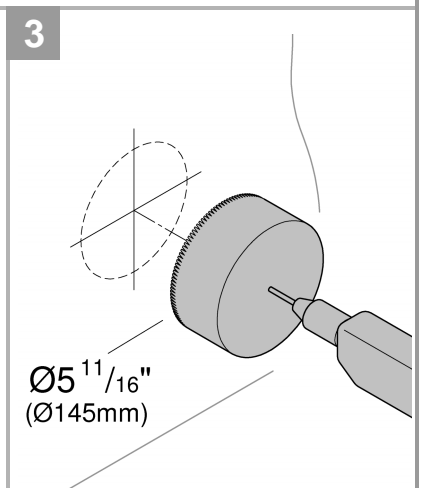
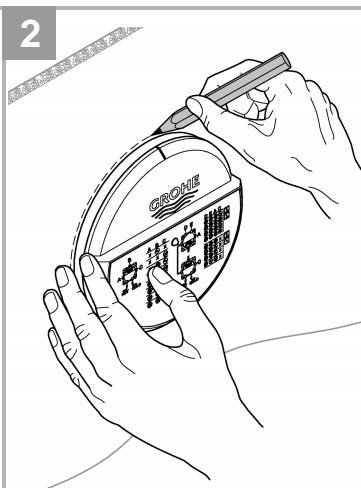
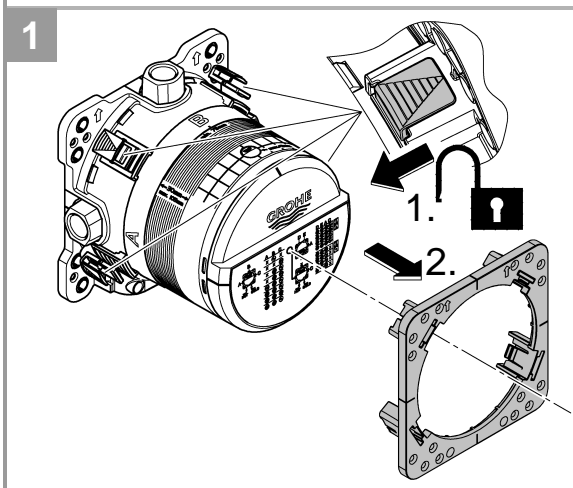
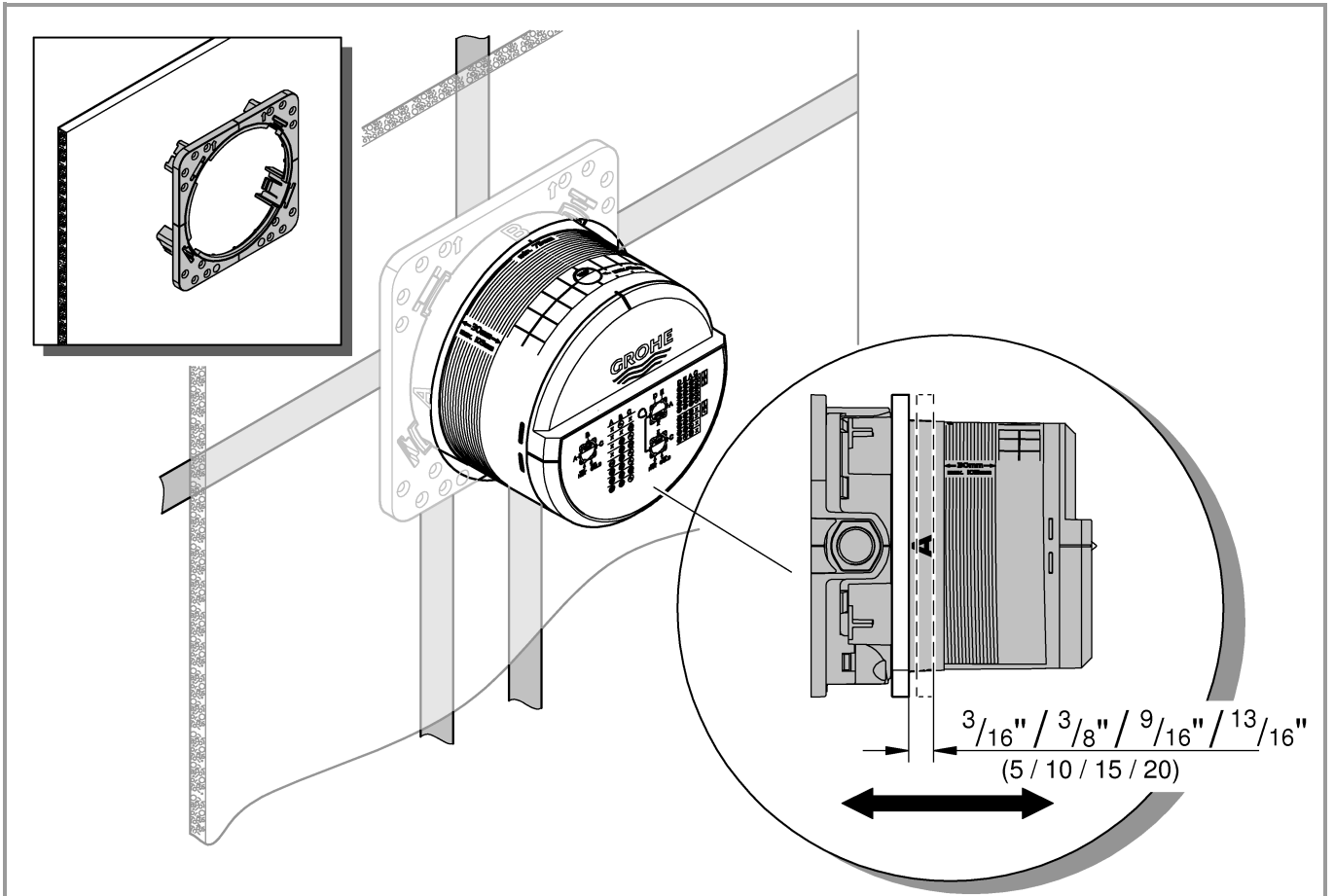
Conseguir material de base para el impermeabilizante, véase la página 9, fig. [9] hasta la [11].

Concluir el enlucido y alicatado de la pared.

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

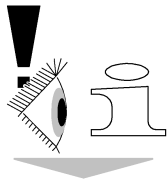








1



Grotherm Smart Control



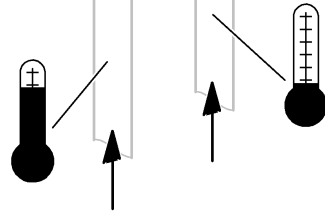
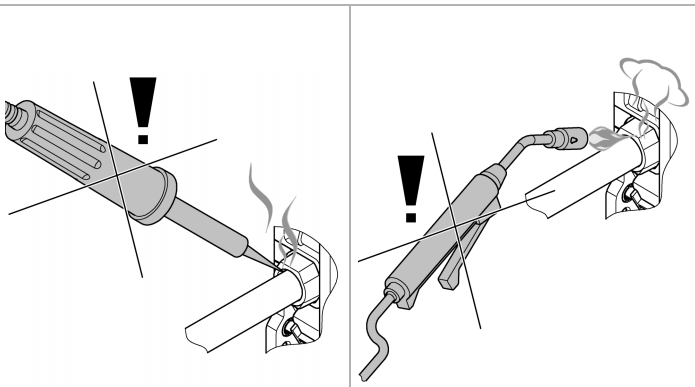
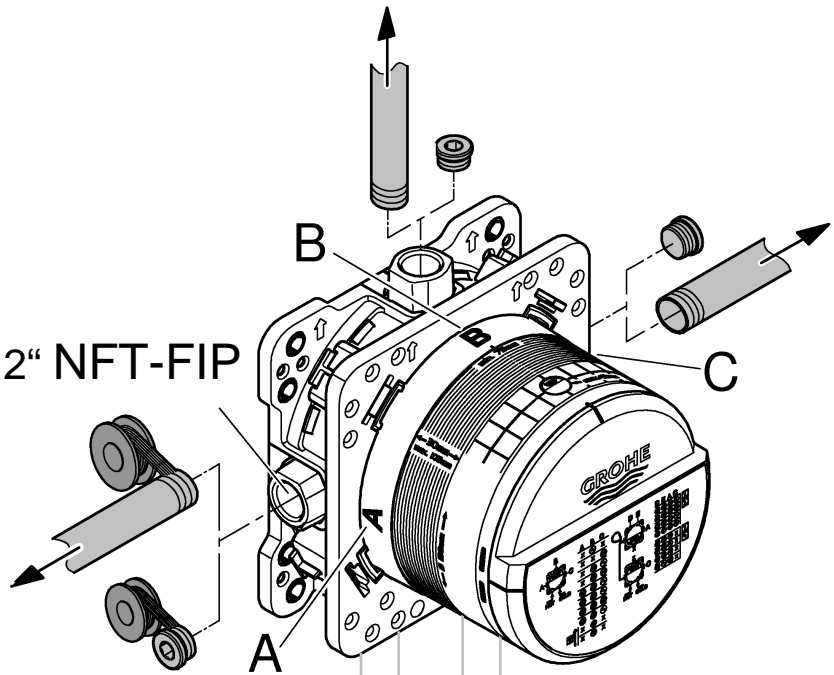
10-24

Grotherm 2-Handle Thermostat

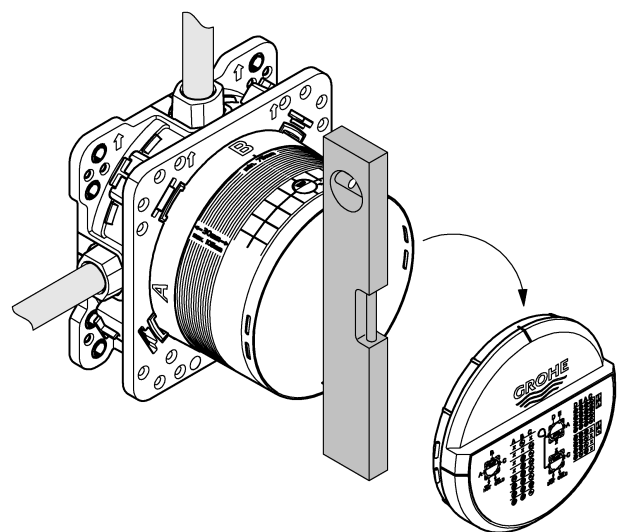
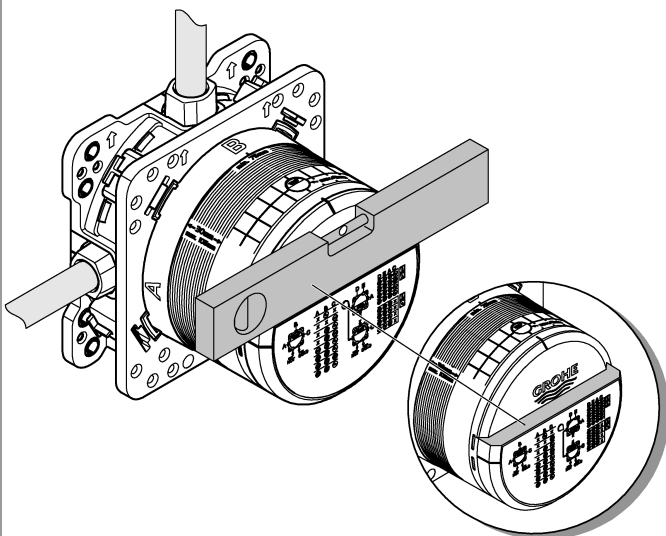


25-30

1/2" NPT-FIP

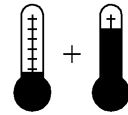
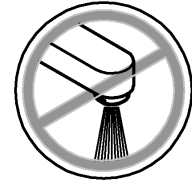
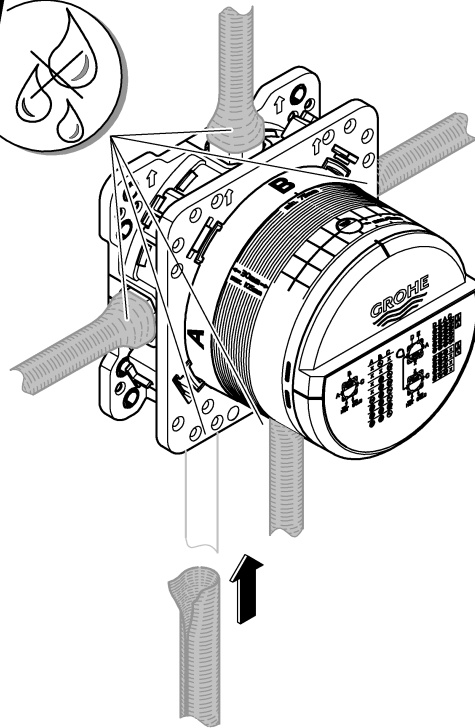
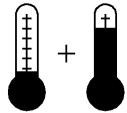
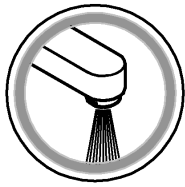


2

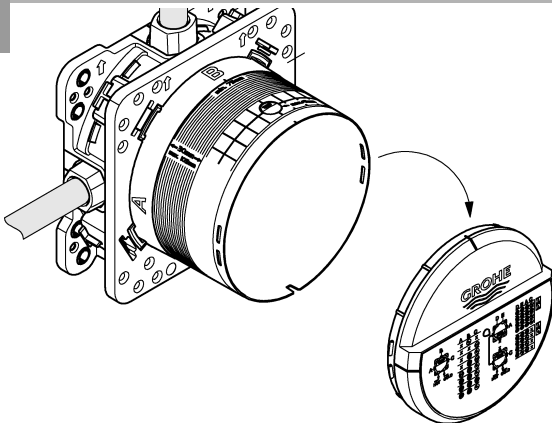




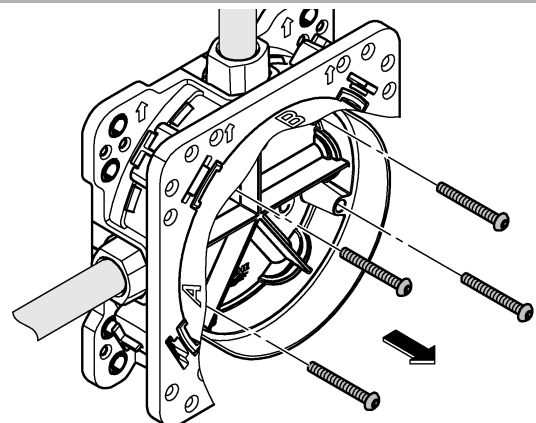
3



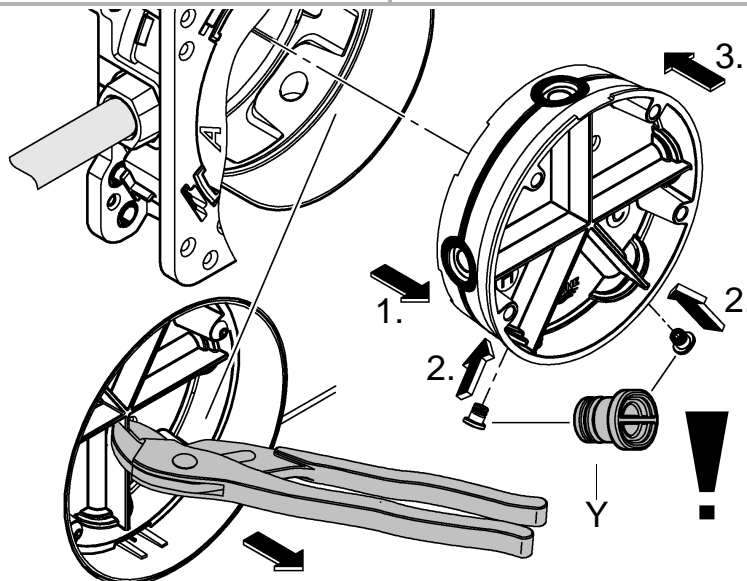
4



5

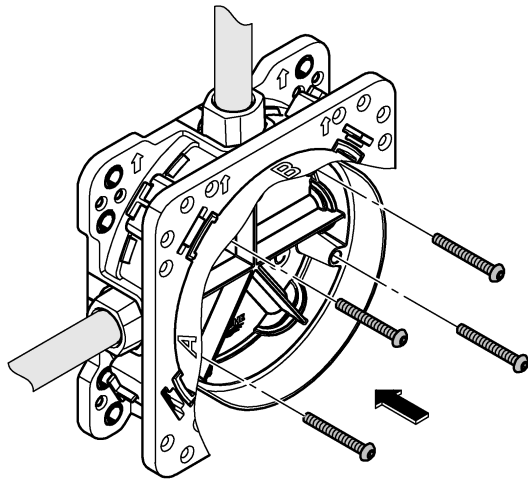


6

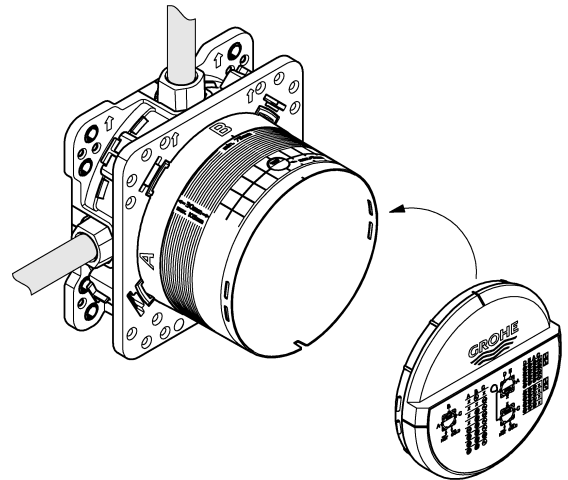




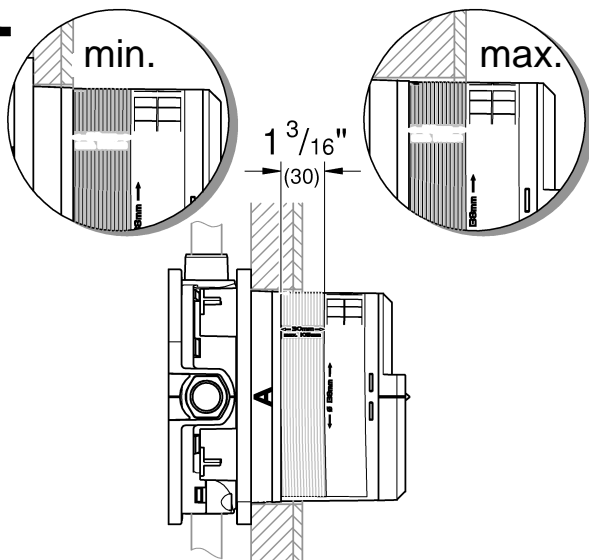
7



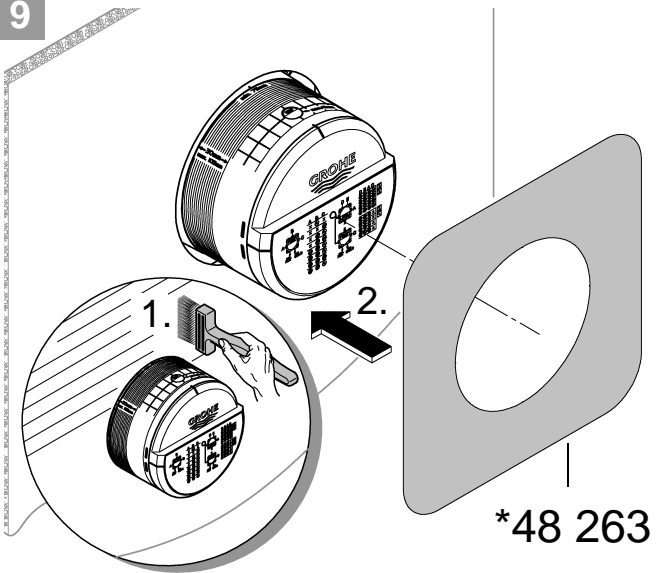
8



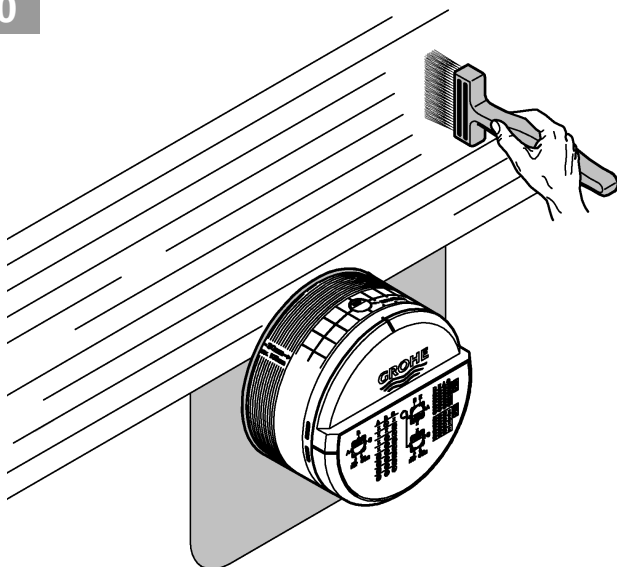
i



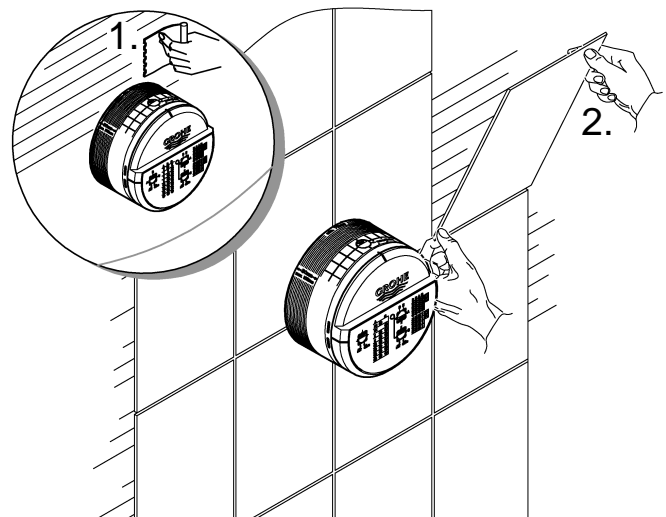
9



10



11



USA

Technical specifications Grotherm 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)

F

Caractéristiques techniques Grotherm 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)

E

Datos técnicos de Grotherm SmartControl

Thermostat

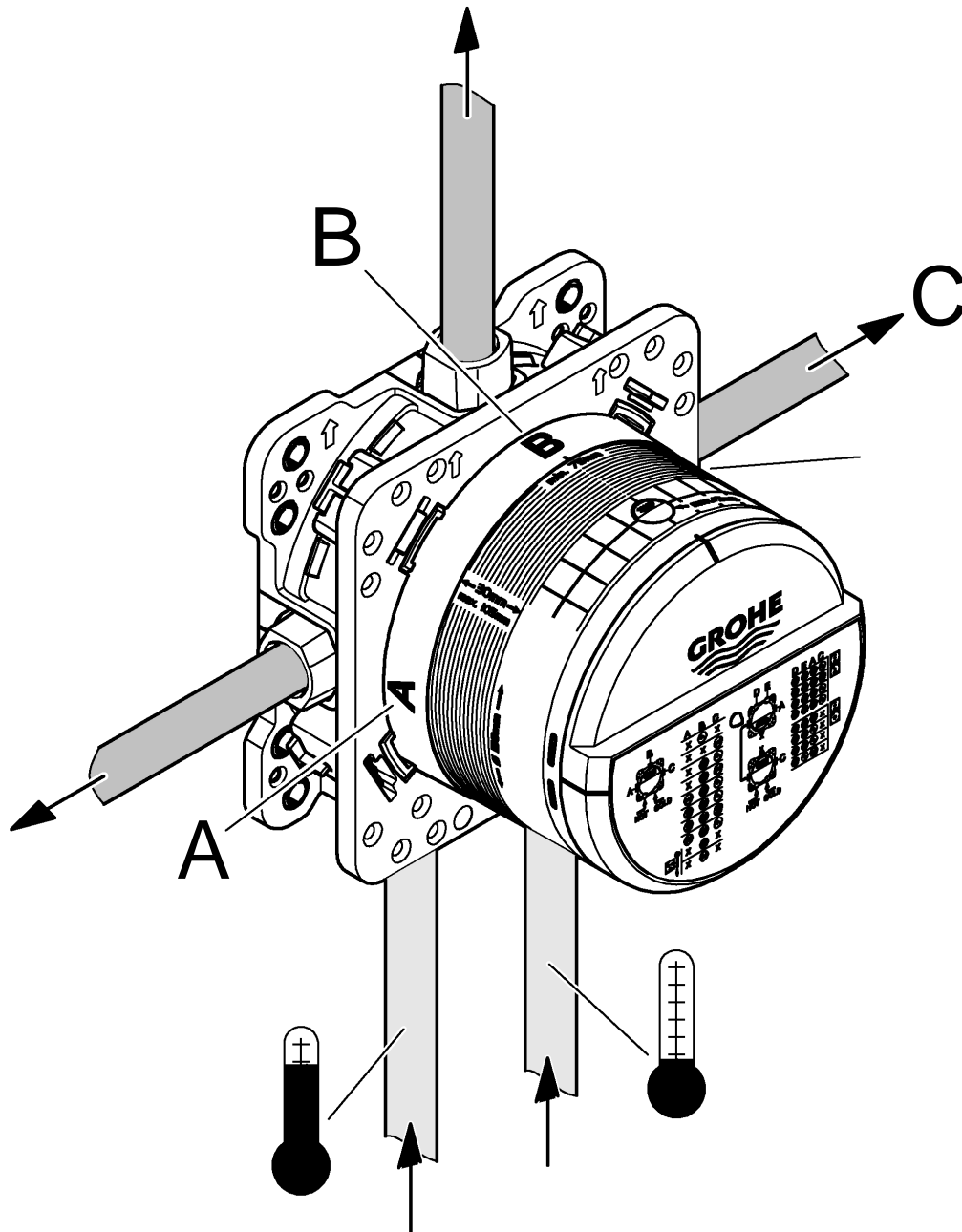
- Presión de trabajo
 - Presión mínima de trabajo sin resistencias posacopladas 7.25 psi
 - Presión mínima de trabajo con resistencias posacopladas 14.5 psi
 - Presión recomendada 21.75 – 72.5 psi
- Temperatura
 - Entrada de agua caliente máx. 158 °F
 - Recomendada para ahorrar energía 140 °F
 - Desinfección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

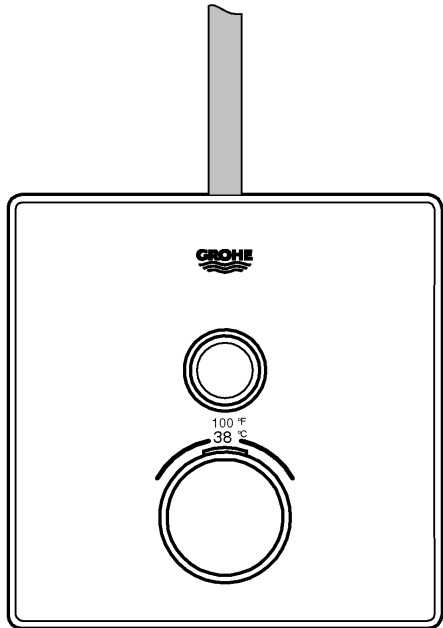
Los siguientes accesorios opcionales están disponibles:

- 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)



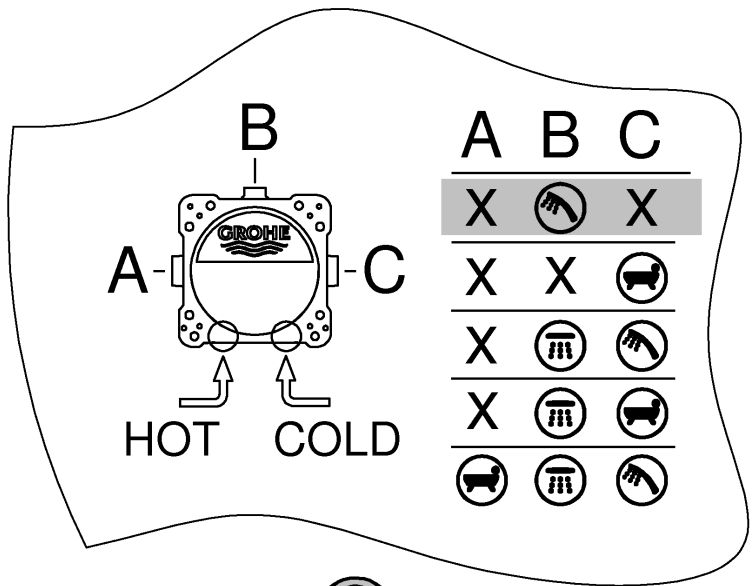


Grohtherm SmartControl



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

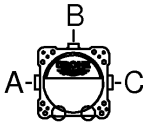
A	bar						B
	1	2	3	4	5	6	
B	16,7	23,7	29	33,5	37,4	41	l/min

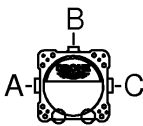


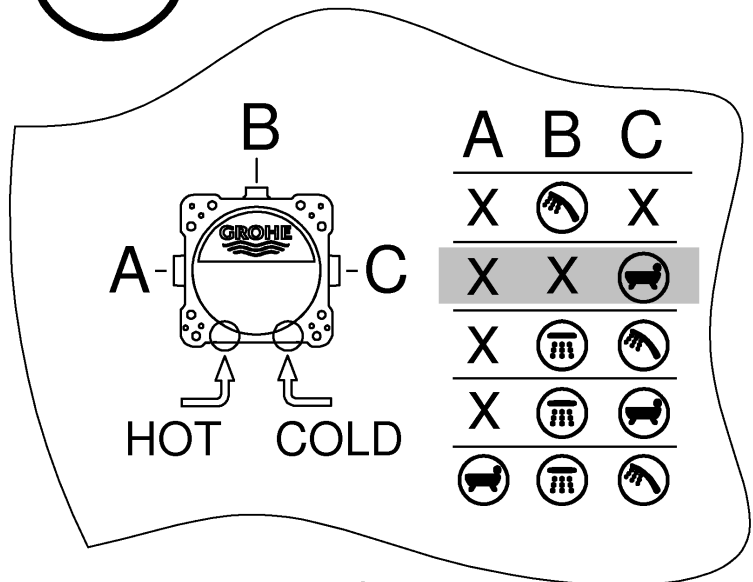
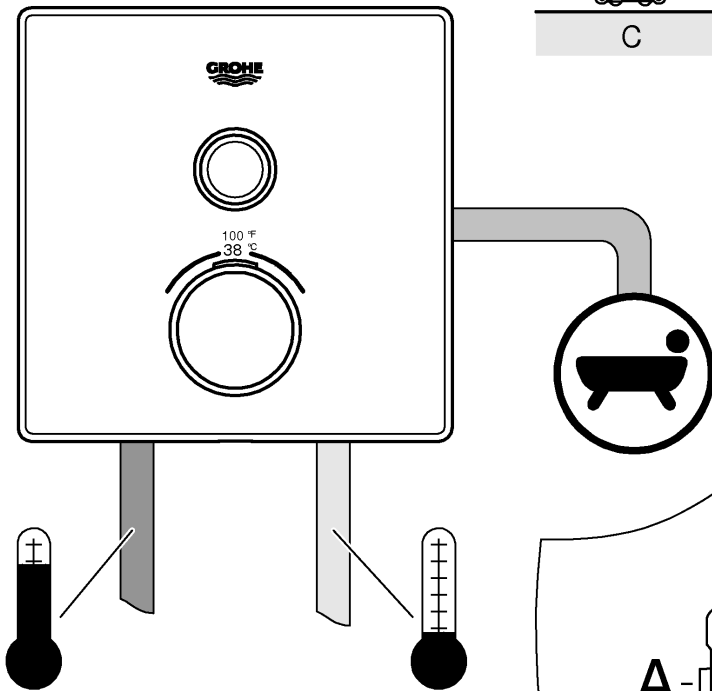
(A+C) X=



Grohtherm SmartControl

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

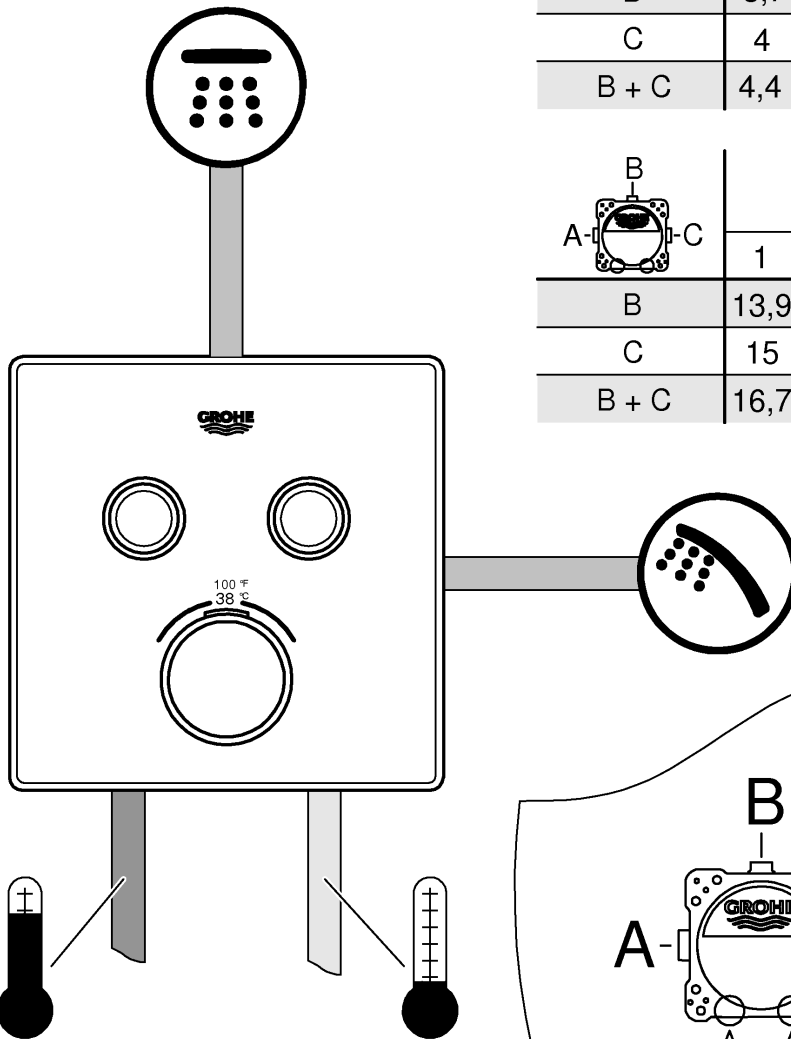
	bar						l/min
	1	2	3	4	5	6	
C	16,7	23,7	29	33,5	37,4	41	

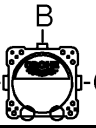


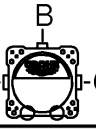
(A+B) X=

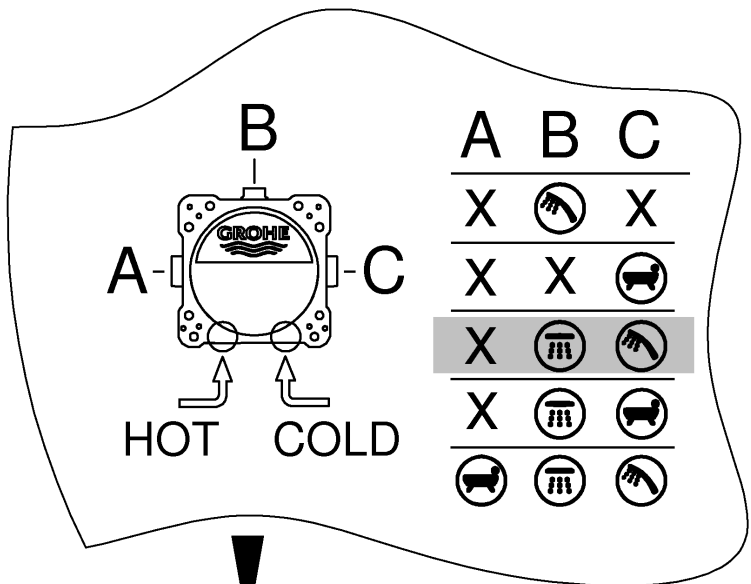



Grotherm SmartControl



A-  -C	psi						gpm
	14,5	29	43,5	58	72,5	87	
B	3,7	5,2	6,3	7,3	8,2	9	
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	

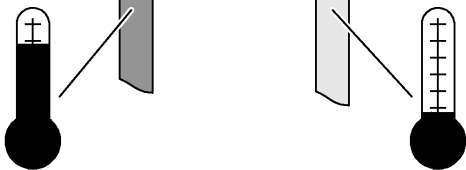
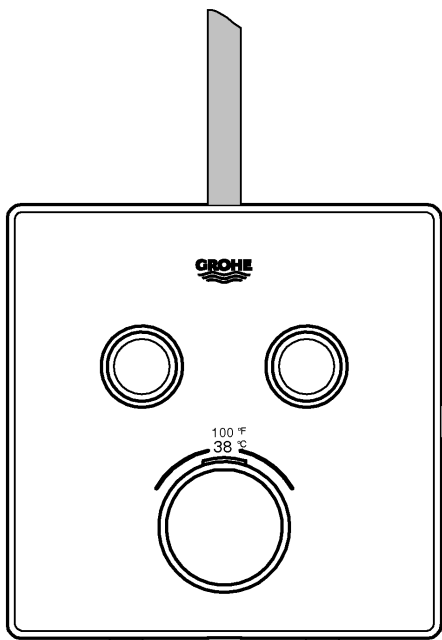
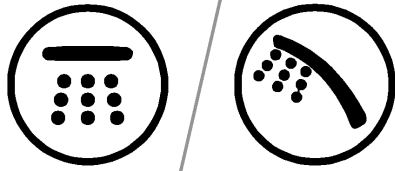
A-  -C	bar						l/min
	1	2	3	4	5	6	
B	13,9	19,6	24	27,7	31	33,9	
C	15	21,2	26	30	33,6	36,8	
B + C	16,7	23,7	29	33,5	37,4	41	

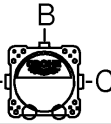


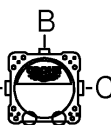
! (A) X= 

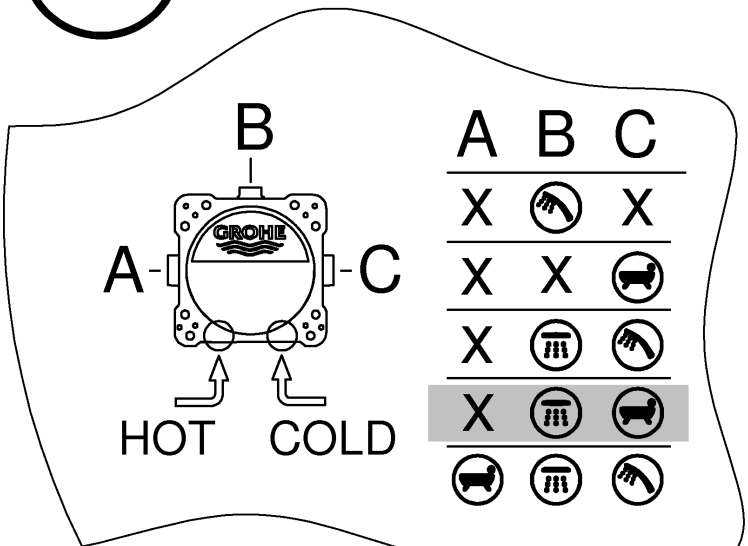



Grohtherm SmartControl



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

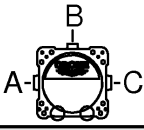
	bar						l/min
	1	2	3	4	5	6	
B	13,9	19,6	24	27,7	31	33,9	
C	15	21,2	26	30	33,6	36,8	
B + C	16,7	23,7	29	33,5	37,4	41	

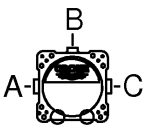


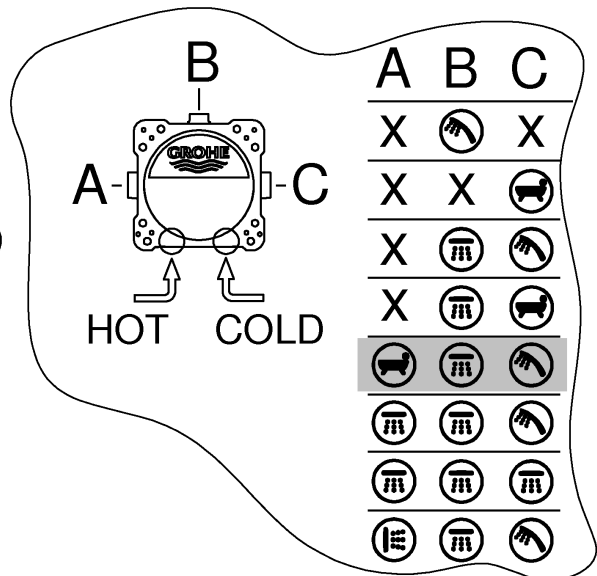
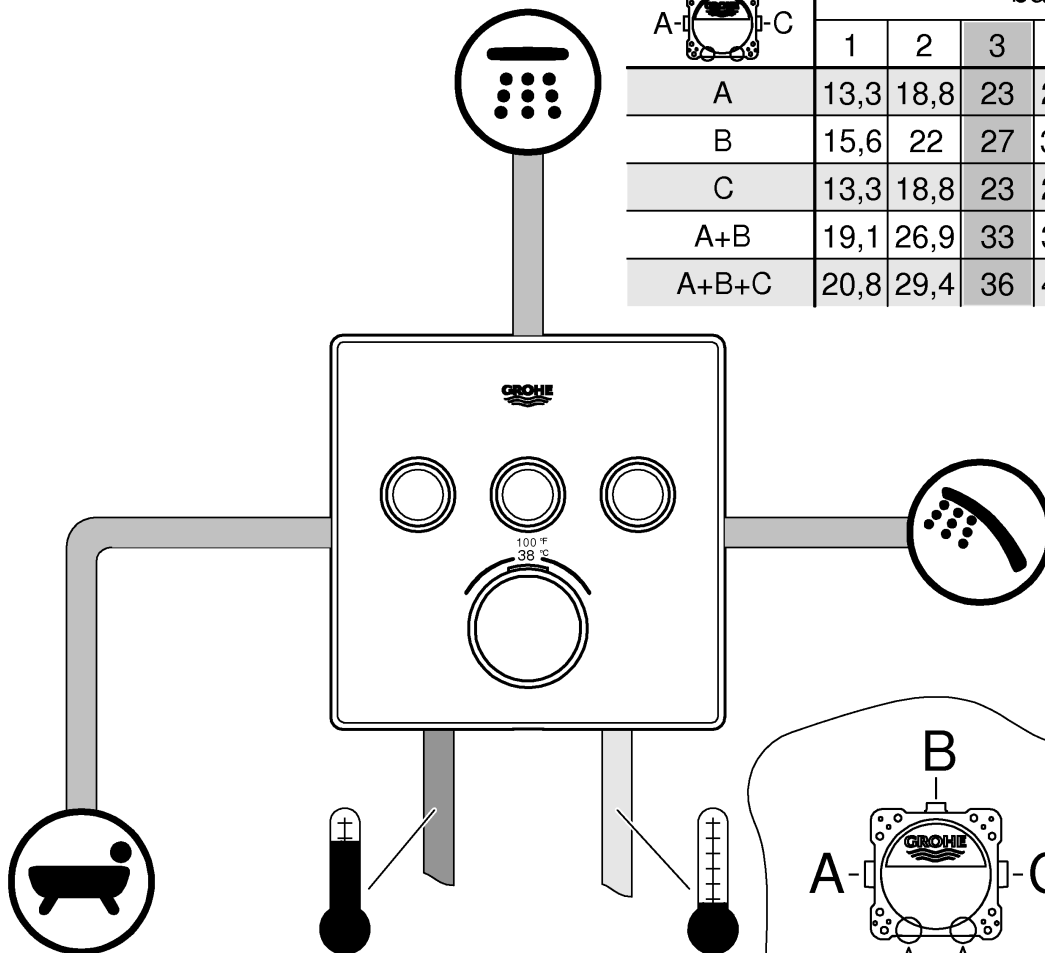
(A) X = 



Grotherm SmartControl

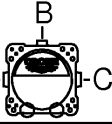
	psi						gpm
	14,5	29	43,5	58	72,5	87	
A	3,5	5	6,1	7	7,8	8,6	
B	4,1	5,8	7,1	8,2	9,2	10,1	
C	3,5	5	6,1	7	7,8	8,6	
A+B	5	7,1	8,7	10,1	11,3	12,3	
A+B+C	5,5	7,8	9,5	11	12,3	13,4	

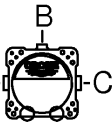
	bar						l/min
	1	2	3	4	5	6	
A	13,3	18,8	23	26,6	29,7	32,5	
B	15,6	22	27	31,2	34,9	38,2	
C	13,3	18,8	23	26,6	29,7	32,5	
A+B	19,1	26,9	33	38,1	42,6	46,7	
A+B+C	20,8	29,4	36	41,6	46,5	50,9	

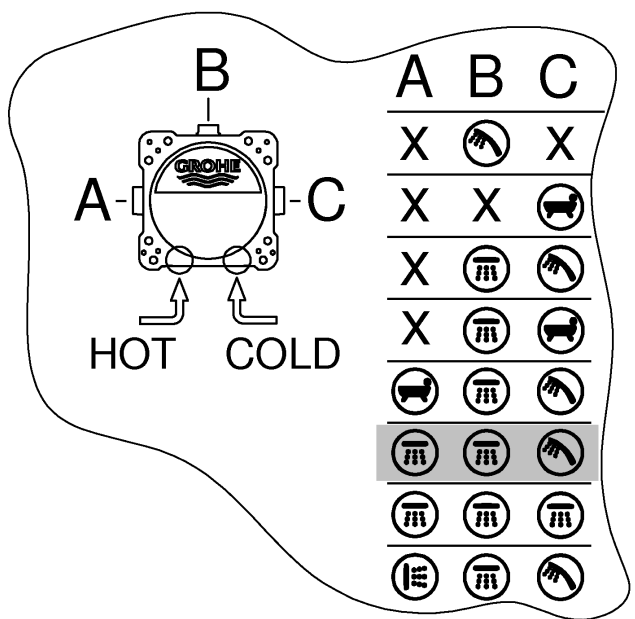
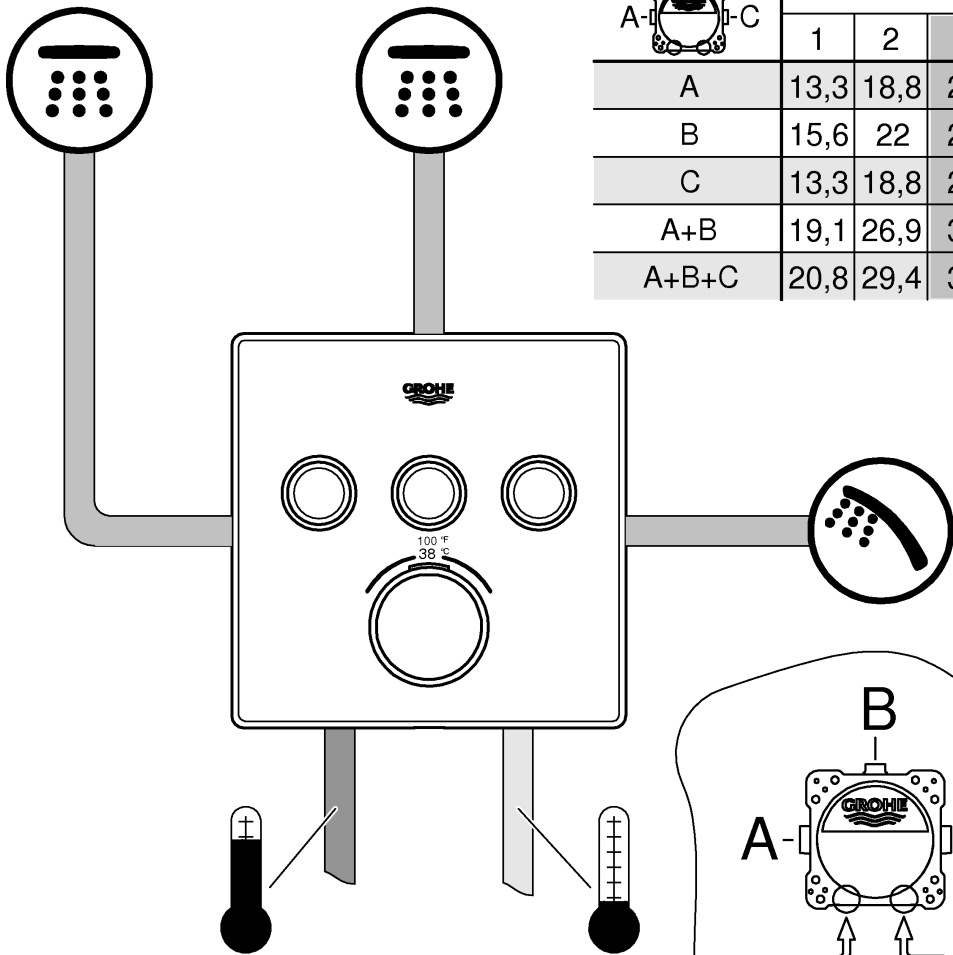




Grotherm SmartControl

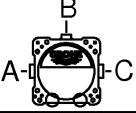
	psi					
	14,5	29	43,5	58	72,5	87
A	3,5	5	6,1	7	7,8	8,6
B	4,1	5,8	7,1	8,2	9,2	10,1
C	3,5	5	6,1	7	7,8	8,6
A+B	5	7,1	8,7	10,1	11,3	12,3
A+B+C	5,5	7,8	9,5	11	12,3	13,4

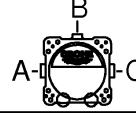
	bar					
	1	2	3	4	5	6
A	13,3	18,8	23	26,6	29,7	32,5
B	15,6	22	27	31,2	34,9	38,2
C	13,3	18,8	23	26,6	29,7	32,5
A+B	19,1	26,9	33	38,1	42,6	46,7
A+B+C	20,8	29,4	36	41,6	46,5	50,9





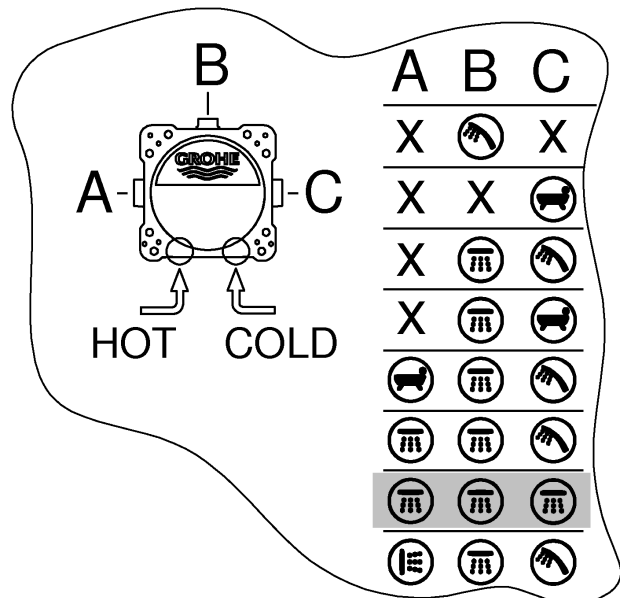
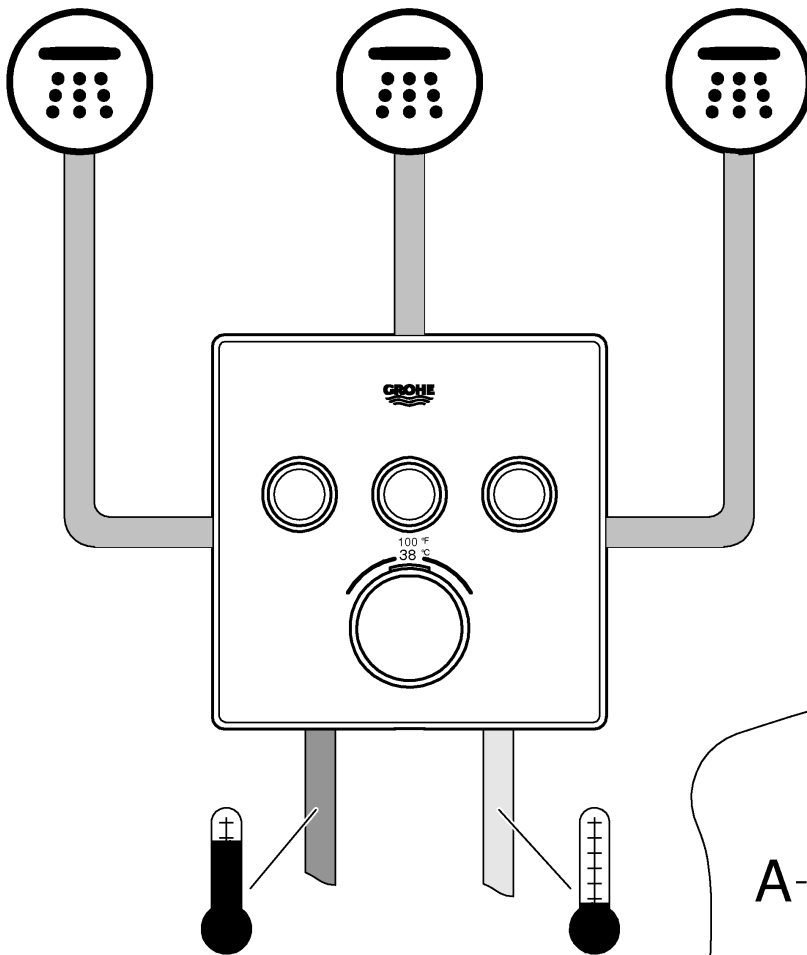
Grotherm SmartControl

	bar					
	1	2	3	4	5	6
A	13,3	18,8	23	26,6	29,7	32,5
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
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

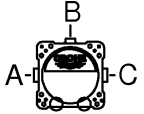
l/min

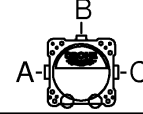
gpm

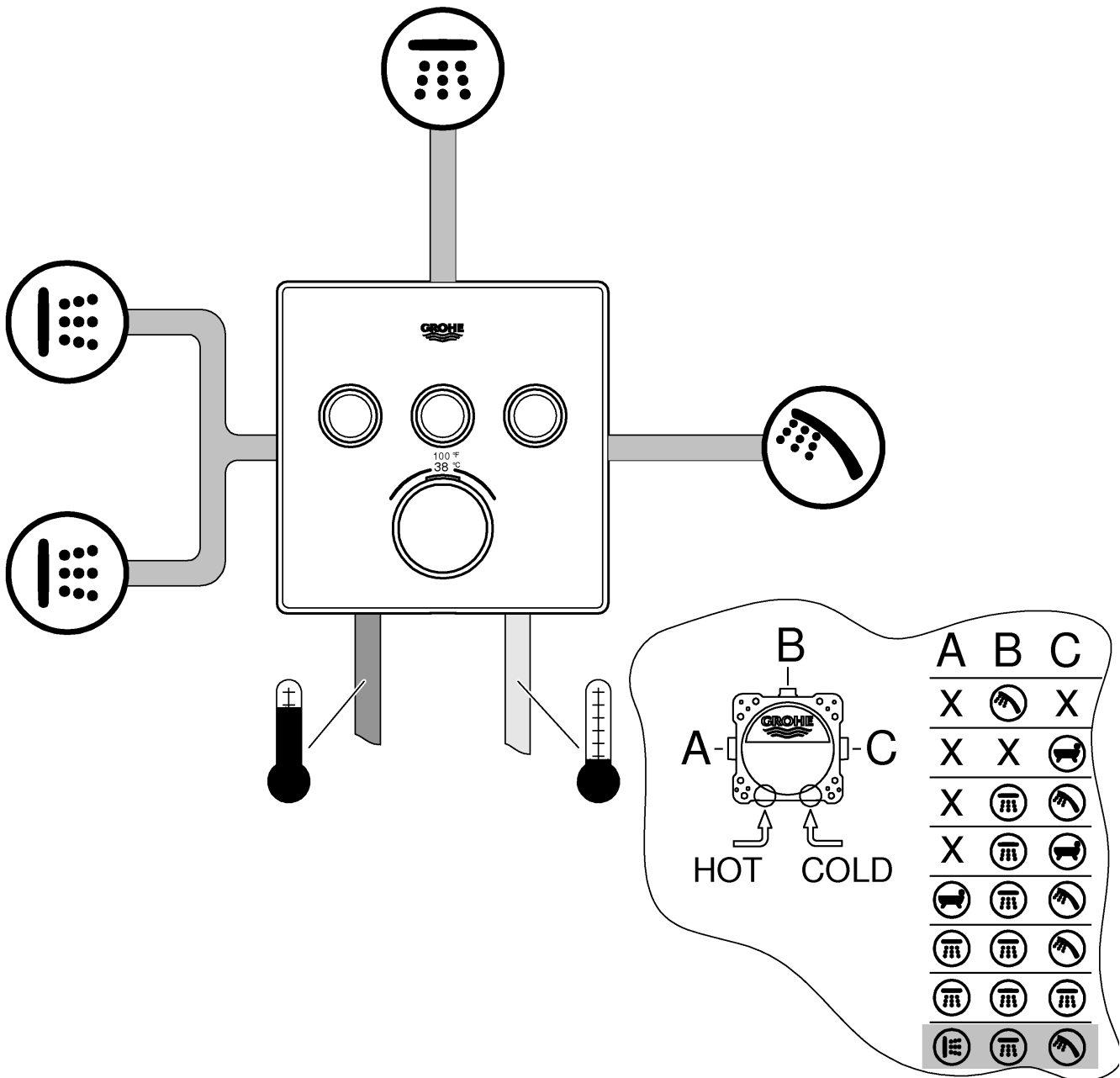


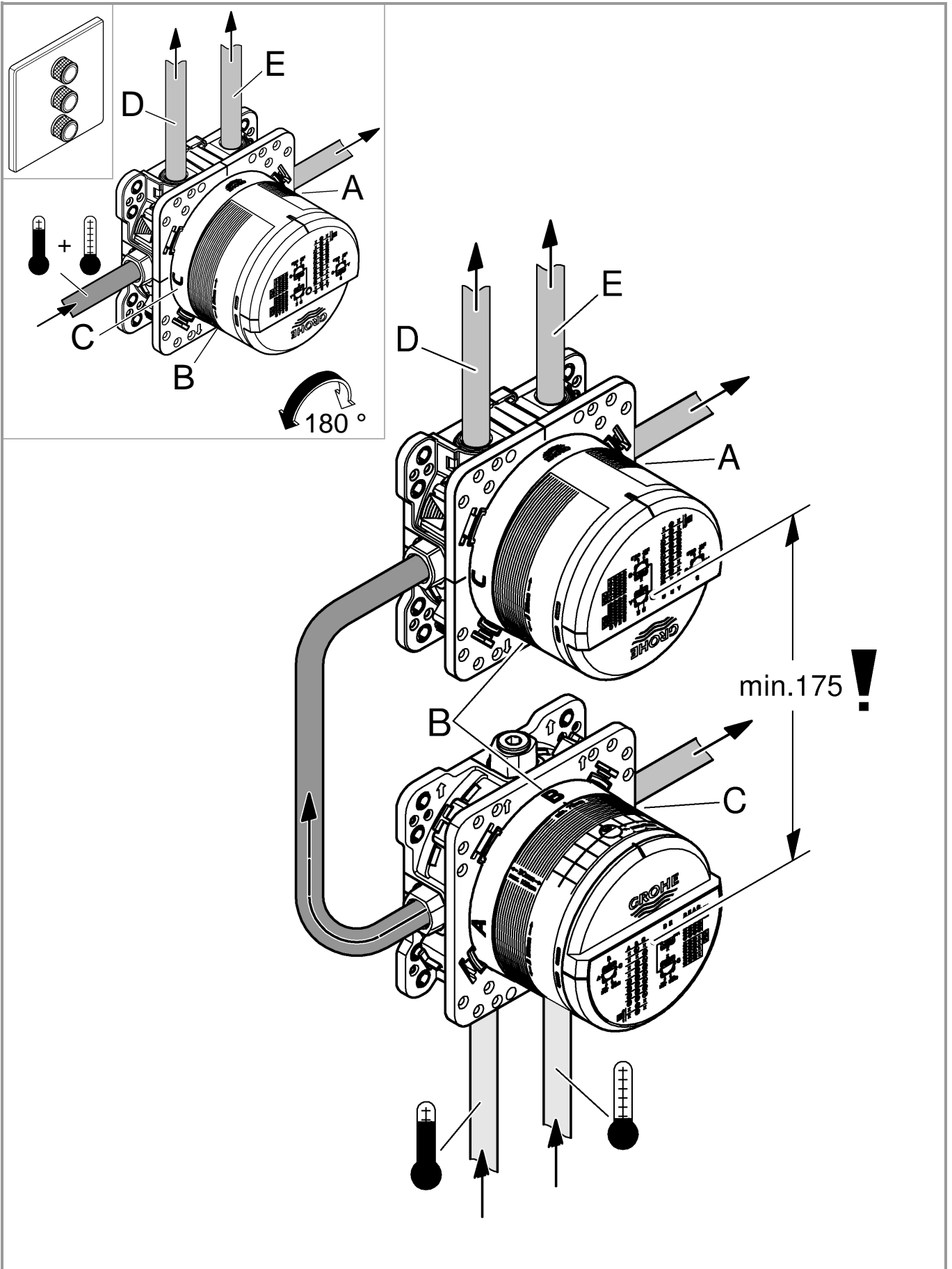


Grotherm SmartControl

	bar						l/min
	1	2	3	4	5	6	
A	13,3	18,8	23	26,6	29,7	32,5	
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	

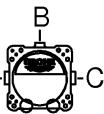
	psi						gpm
	14,5	29	43,5	58	72,5	87	
A	3,5	5	6,1	7	7,8	8,6	
B	4,1	5,8	7,1	8,2	9,2	10,1	
C	3,5	5	6,1	7	7,8	8,6	
A+B	5	7,1	8,7	10,1	11,3	12,3	
A+B+C	5,5	7,8	9,5	11	12,3	13,4	



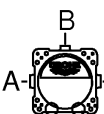




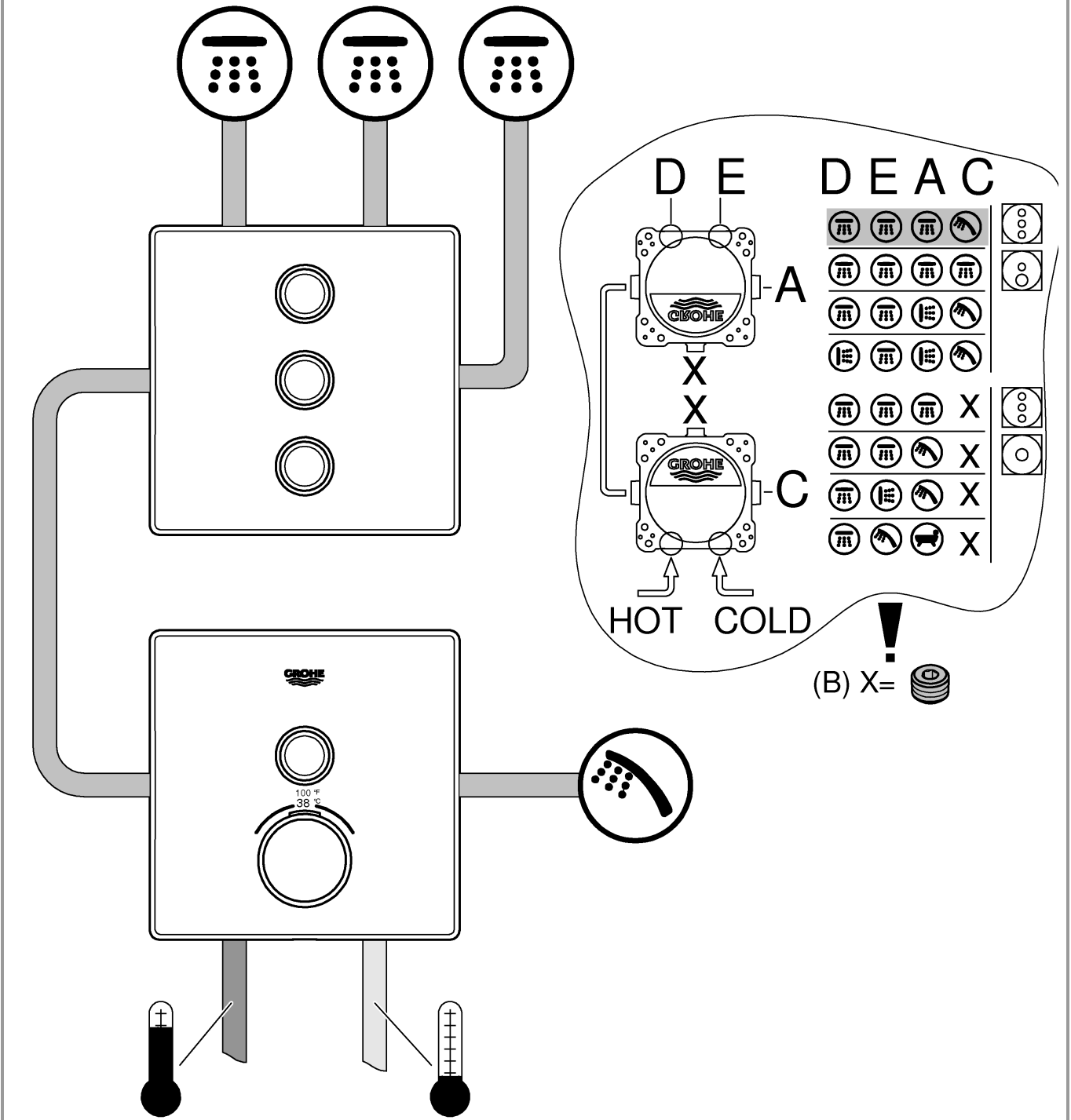
Grotherm SmartControl

	psi					
	14,5	29	43,5	58	72,5	87
D	3,2	4,5	5,5	6,4	7,2	7,8
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

gpm

	bar					
	1	2	3	4	5	6
D	12,1	17,1	21	24,2	27,1	29,7
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

l/min

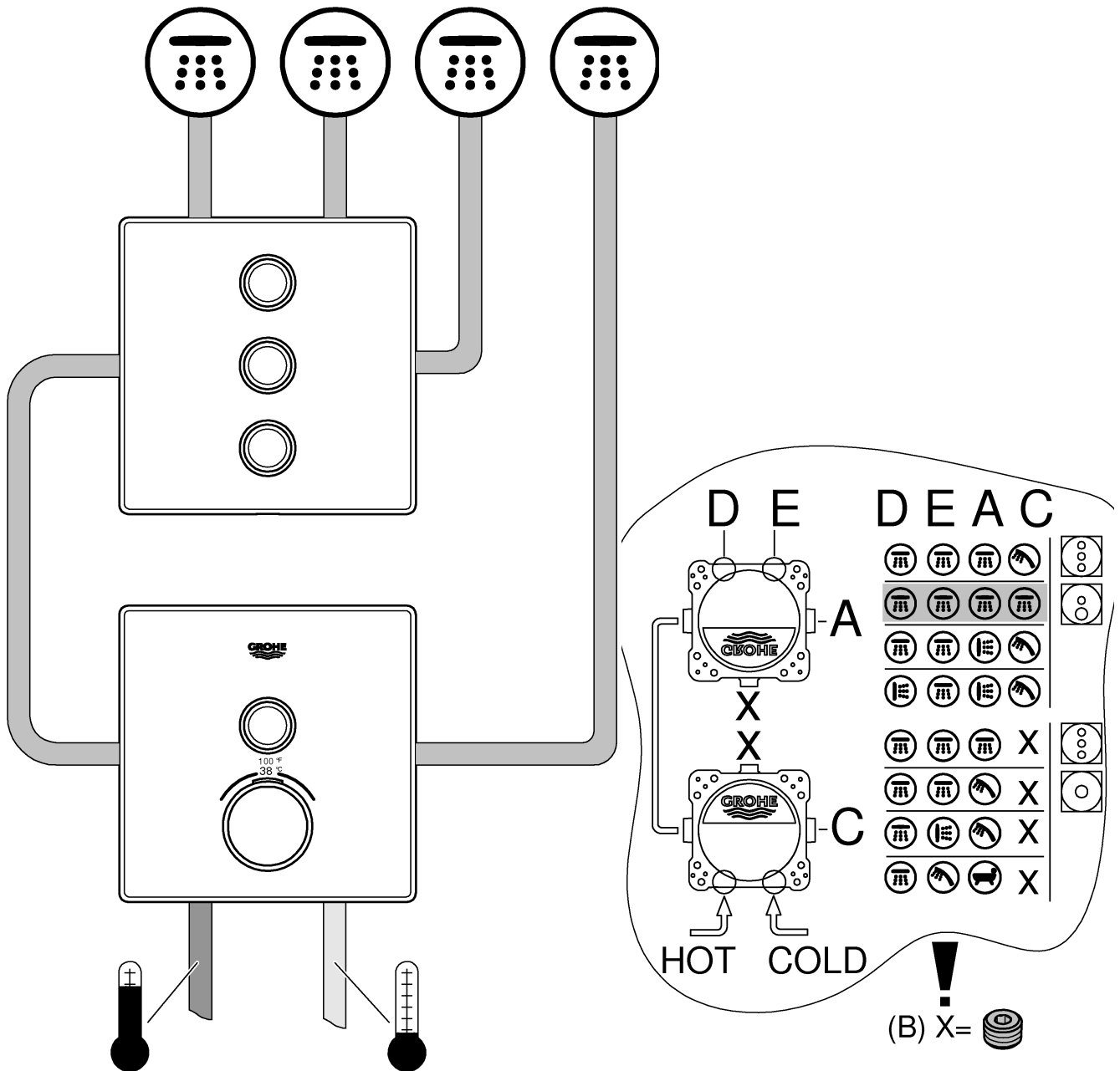




Grotherm SmartControl

A-B-C	psi						gpm
	14,5	29	43,5	58	72,5	87	
D	3,2	4,5	5,5	6,4	7,2	7,8	
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	

A-B-C	bar						l/min
	1	2	3	4	5	6	
D	12,1	17,1	21	24,2	27,1	29,7	
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	





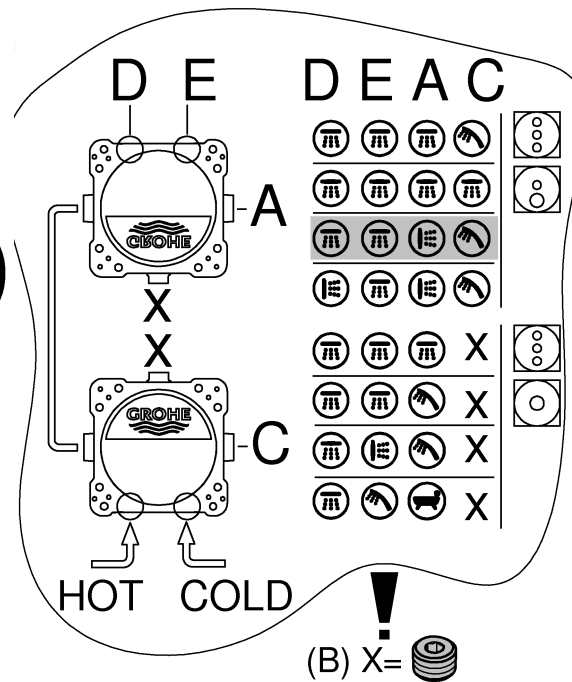
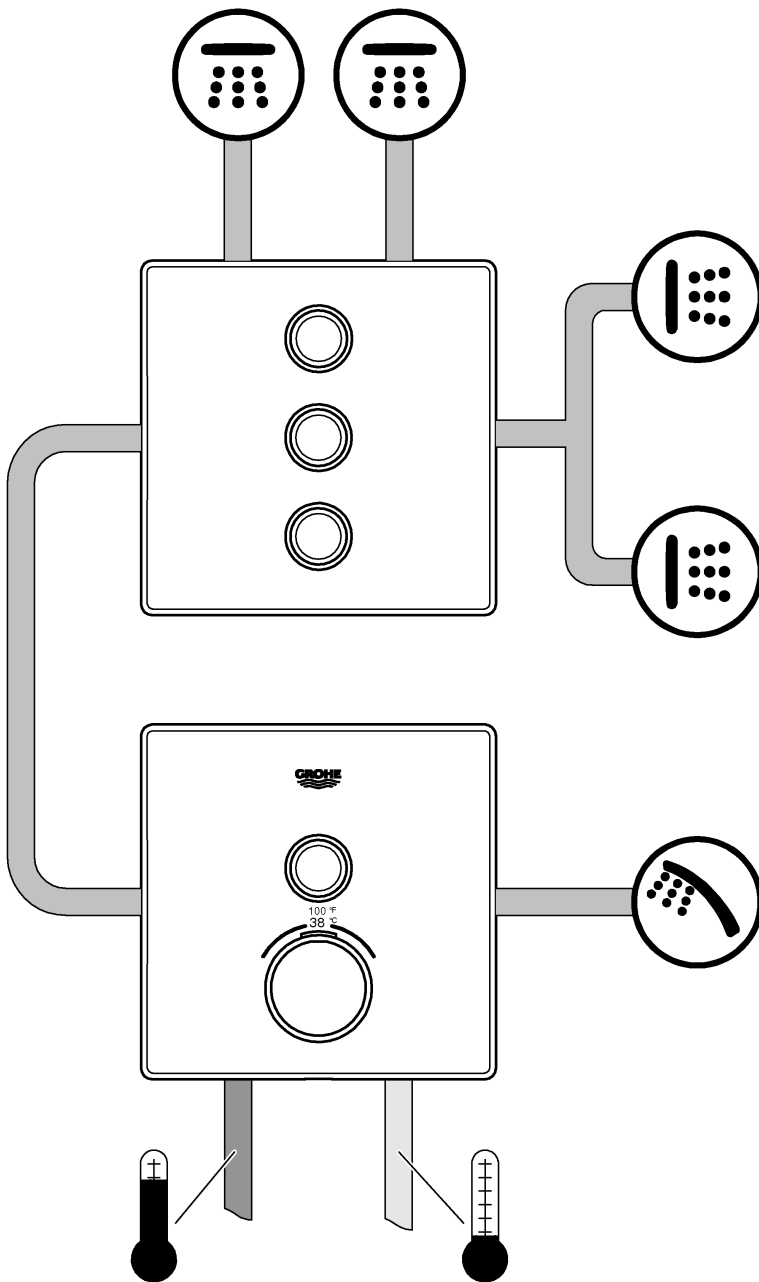
Grotherm SmartControl

A-B-C	psi					
	14,5	29	43,5	58	72,5	87
D	3,2	4,5	5,5	6,4	7,2	7,8
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

gpm

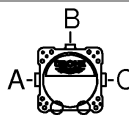
A-B-C	bar					
	1	2	3	4	5	6
D	12,1	17,1	21	24,2	27,1	29,7
E	12,1	17,1	21	24,2	27,1	29,7
A	12,1	17,1	21	24,2	27,1	29,7
C	16,7	23,7	29	33,5	37,4	41
D+E+A	16,7	23,7	29	33,5	37,4	41
D+E+A+C	20,8	29,4	36	41,6	46,5	50,9

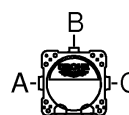
l/min

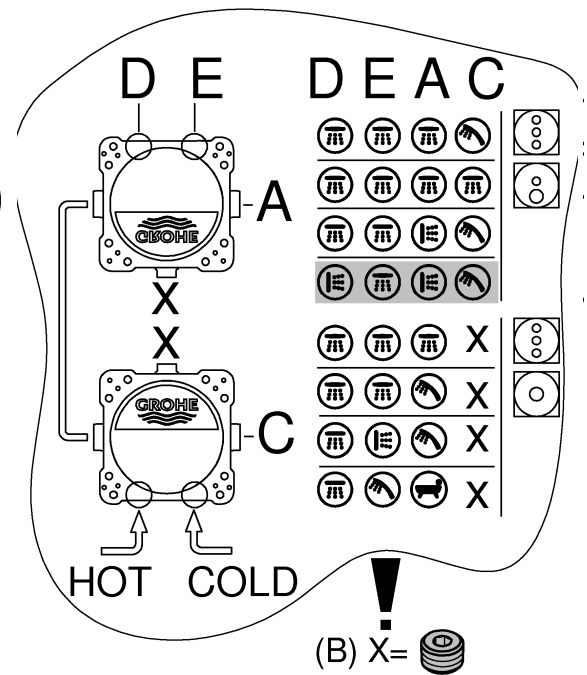
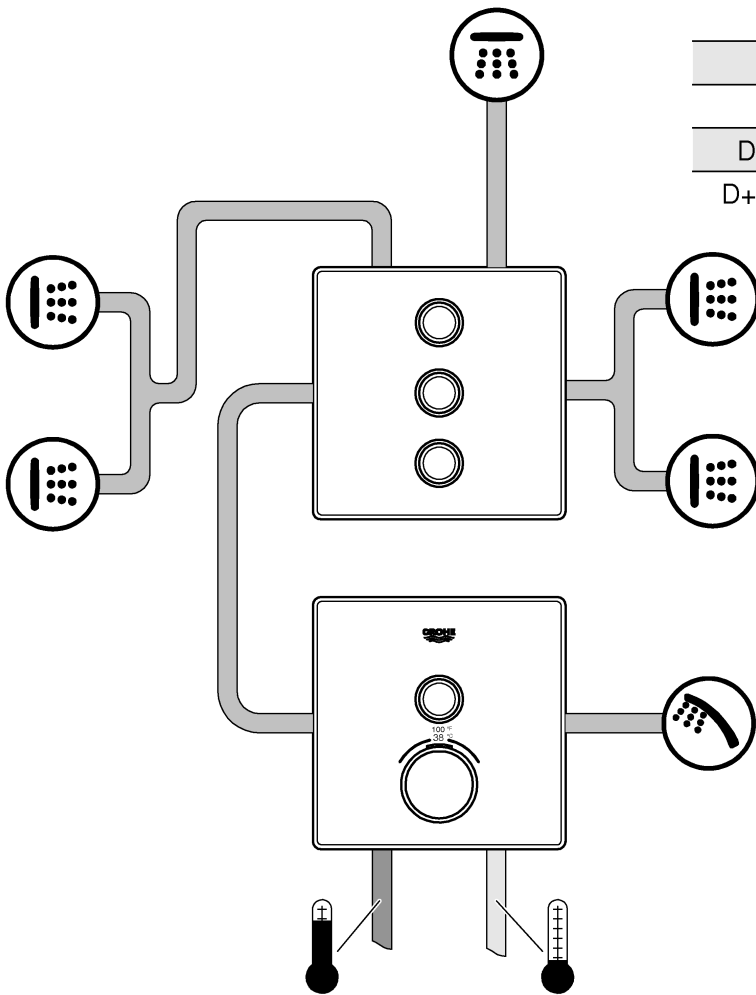




Grotherm SmartControl

	psi						gpm
	14,5	29	43,5	58	72,5	87	
D	3,2	4,5	5,5	6,4	7,2	7,8	
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						l/min
	1	2	3	4	5	6	
D	12,1	17,1	21	24,2	27,1	29,7	
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	



USA

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)

F

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)

E

Datos técnicos de Grohtherm 2-Handle Thermostat

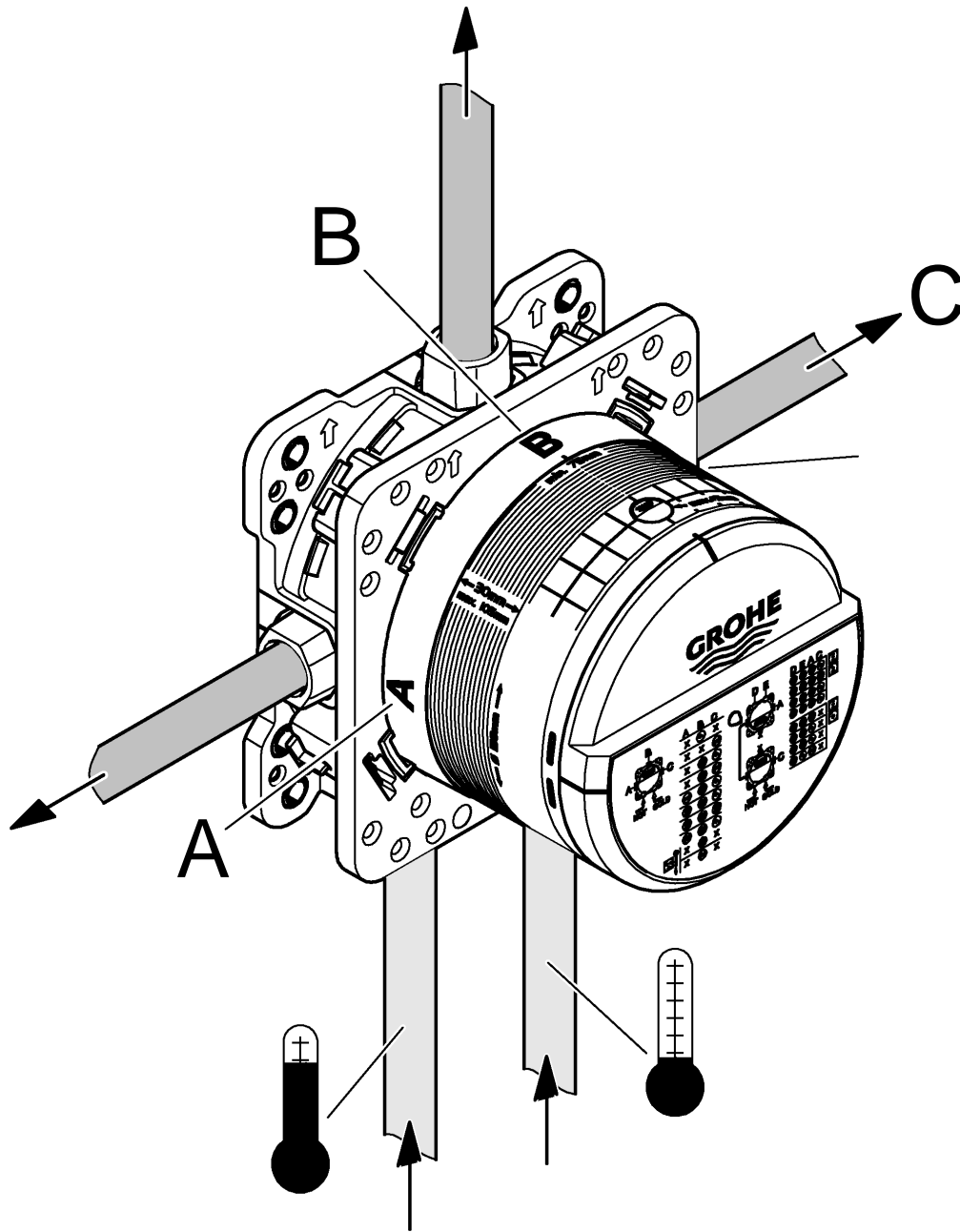
- Presión de trabajo
 - Presión mínima de trabajo sin resistencias posacopladas 7.25 psi
 - Presión mínima de trabajo con resistencias posacopladas 14.5 psi
 - Presión recomendada 21.75-72.5 psi
- Caudal mínimo 1.3gpm
- Temperatura
 - Entrada de agua caliente máx. 158 °F
 - Recomendada para ahorrar energía 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)

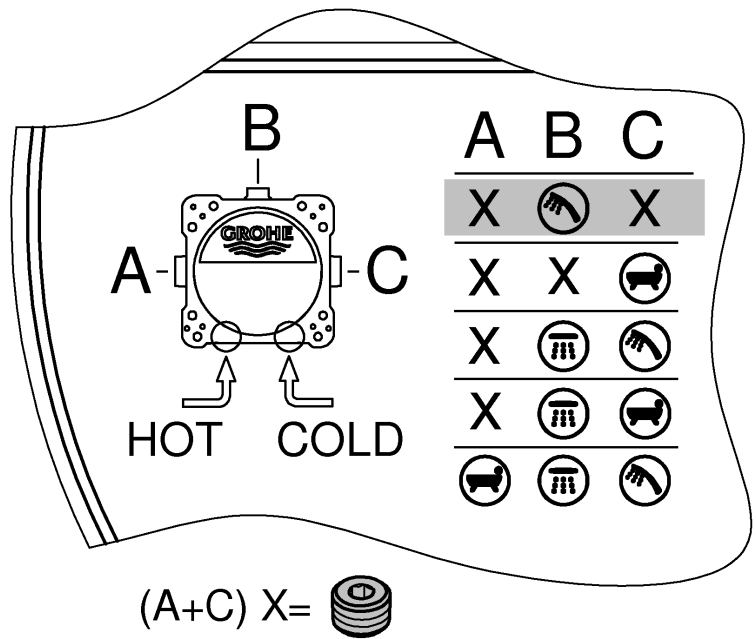
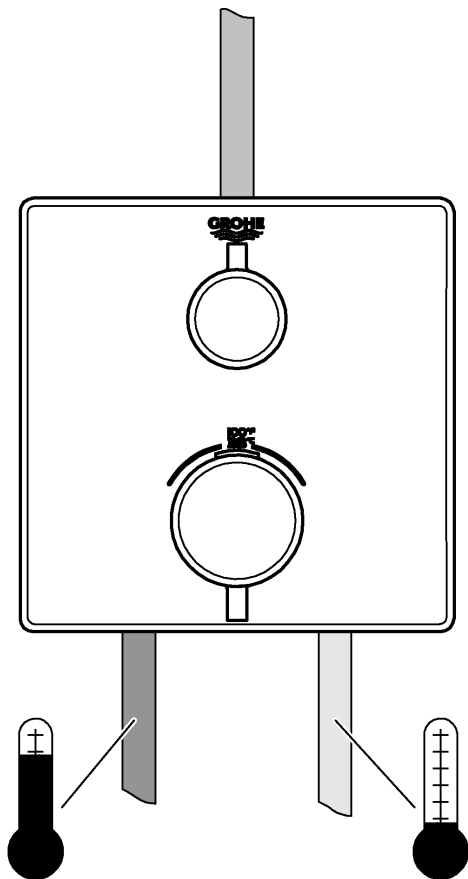




Grotherm 2-Handle Thermostat

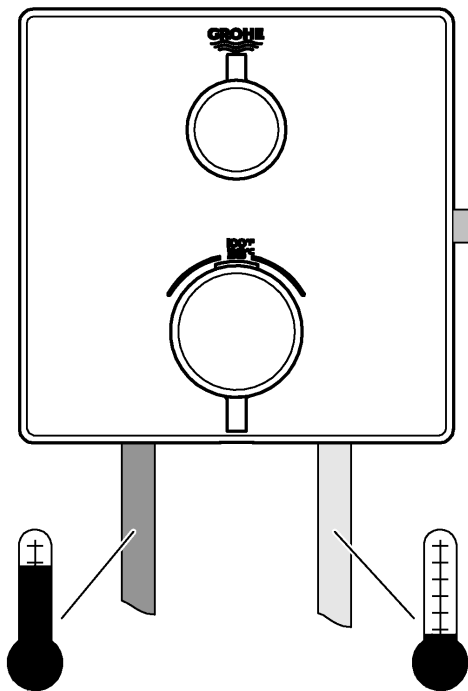
	psi						gpm
	14,5	29	43,5	58	72,5	87	
B	4,1	5,8	7,1	8,2	9,2	10,0	

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



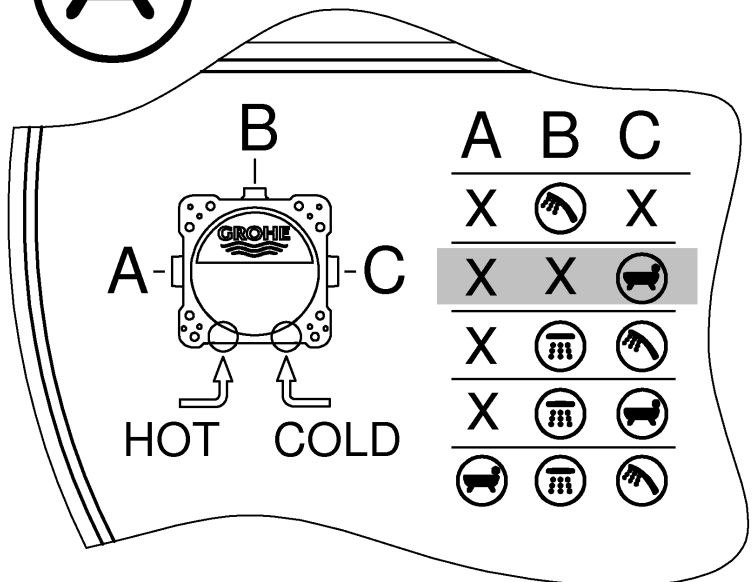


Grotherm 2-Handle Thermostat



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

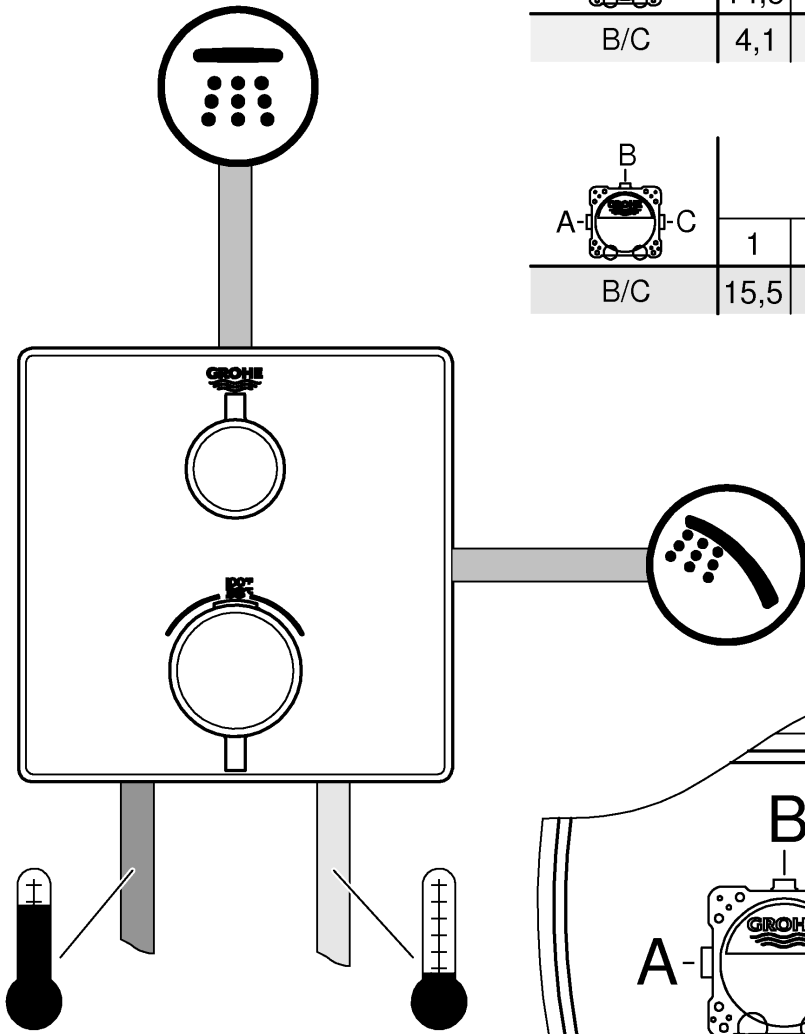
	bar						l/min
	1	2	3	4	5	6	
C	15,5	22	27	31	35	38	



(A+B) X=

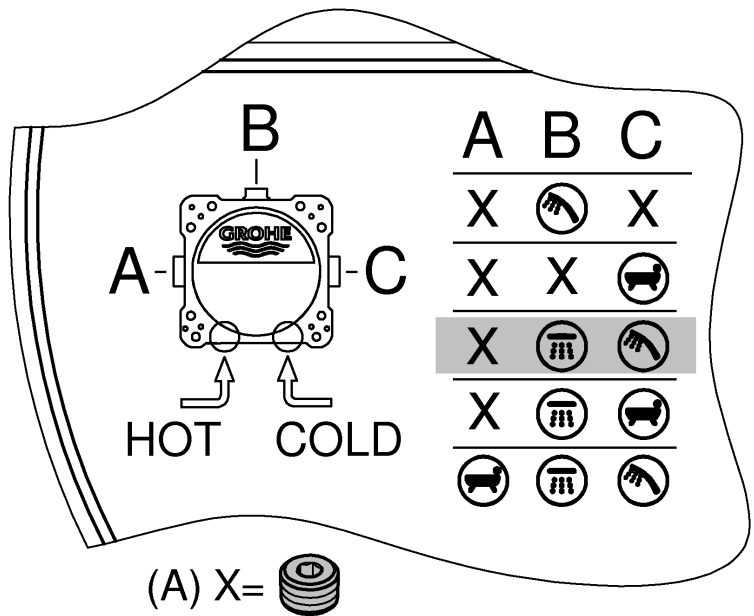


Grotherm 2-Handle Thermostat



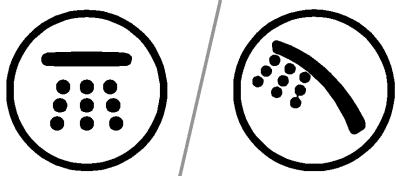
A-B-C	psi						gpm
	14,5	29	43,5	58	72,5	87	
B/C	4,1	5,8	7,1	8,2	9,2	10,0	

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



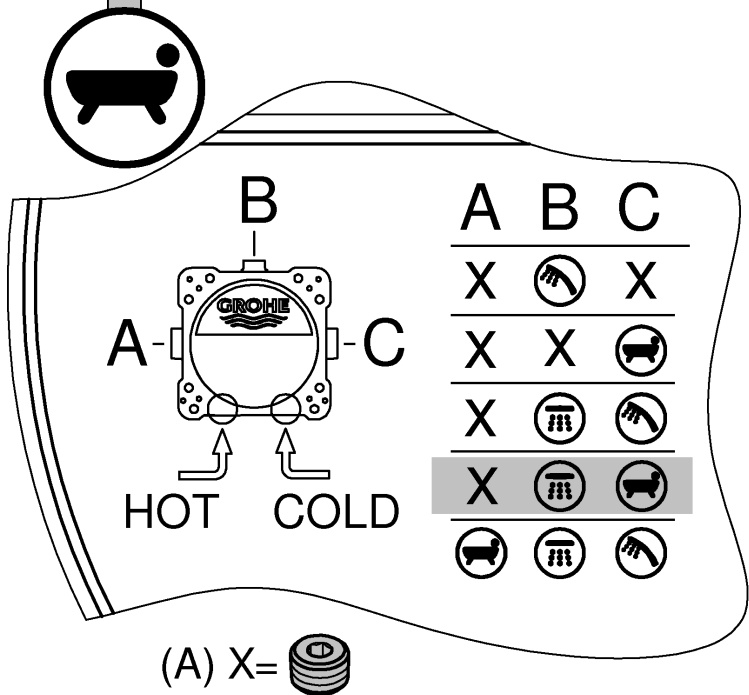
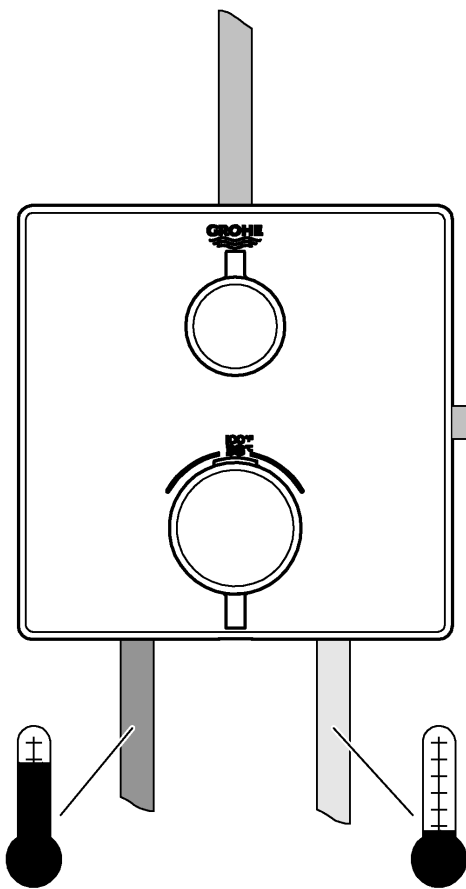


Grotherm 2-Handle Thermostat



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

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



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