



## Installation guide

### Colibri® Electric Expansion Valves

Type ETS 12C, ETS 24C, ETS 25C, ETS 50C, ETS 100C

EN / DE / FR / ES / CH

034R9806

034R9806

#### Refrigerants / Fluides / Kaltemittel / 制冷剂适用

R410A, R404A, R507, R134a, R407A, R407B, R407C, R407F, R32, R290, R1234ze, R1234yf, R449A, R449B, R452A, R1270, R600, R600a, R22, R23, R227, R417A, R444B, R447A, R448A, R454B, R422A, R422D, R427A, R502, R513A, R413A, R438A, R450A, R455B, R454C, R454A, R452B and \*L40

\*R-number allocation by ASHRAE is pending.

**Allowable ambient temperature/Umgebungstemperatur/Température ambiante/ Temperatura ambiente permisible / 允许运行的环境温度**

Min. -40 °C / -40 °F  
Max. 70 °C / 158 °F

**Fluid temperature/Kältemitteltemperatur / Température du fluide/Temperatura liquido / 流体温度**

Min. -40 °C / -40 °F  
Max. 95 °C / 203 °F  
(120°C / 248°F possible, please see more information in product datasheet)

**Max. working pressure / Max. Betriebsdruck / Pression de service max. / Presión de trabajo máx / 最大工作压力**

50 bar(g) / 725 psi(g)

**Stepper motor  
Schrittmotortyp / Type de moteur pas à pas  
Tipo de motor a pasos / 步进电机形式**

Bipolar / 双极

**Phase current / Stromaufnahme / Courant de / phase Intensidad / 相电流**

800 mA peak / 600 mA RMS

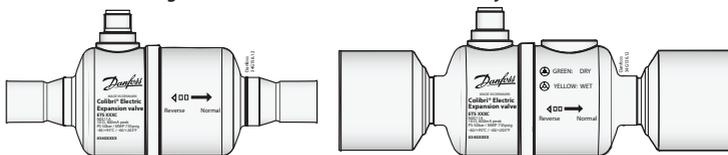
**Coil resistance  
Widerstand, Spule / Résistance de la bobine  
Resistencia / 电阻**

10 Ω (20 °C / 68 °F)

**Total steps  
Max. Schritte / Nombre de pas total  
Número de pasos total / 总步数**

600 full steps

#### Flow direction / Durchflussrichtung / Sens d'écoulement / Dirección del flujo / 流向



Bi-flow

Reverse flow



Normal flow

(Using sight glass for flash gas detection - ETS 25C to ETS 100C)  
KVS Colibri® valves have no sight glass integrated

Umgekehrt  
Durchfluss /  
Direction inverse



Normaler Durchfluss  
(ETS 25C und ETS 100C mit Schauglas für Flashgas Erkennung) Sens normal  
(ETS 25C pour ETS 100C - à l'aide du voyant de détection de gaz flash)  
KVS Colibri® haben kein Schauglass  
Les détendeurs KVS Colibri® n'ont pas de voyant intégré

Flujo reversible  
反向流动方向

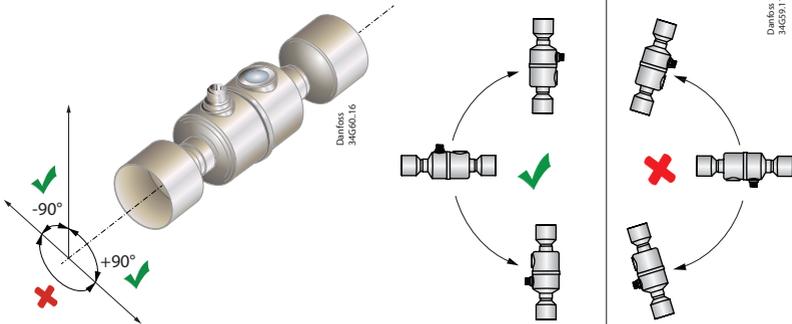


Flujo normal  
(ETS 25C a ETS 100C incorpora un visor de líquido para detector flash-gas)  
正常流动方向 (视液镜, 用于闪发气体检测 - ETS 25C 和 ETS 100C)  
Las válvulas KVS Colibri® no tienen visor integrado  
KVS Colibri® 电子膨胀阀没有集成观察镜

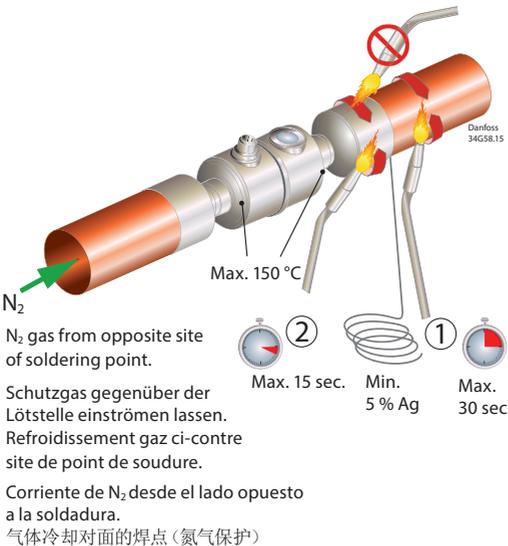
Імпортер: ТОВ з іі "Данфосс ТОВ" 04080, Київ 80, п/с 168, Україна

Danfoss Ltd., 22 Wymcombe End, HP9 1NB, GB

## Mounting / Einbaulage / Montage / Instalación / 安装



## Brazing / Löten / Soudure / Soldadura / 焊接



## Recommended / Empfehlung / Recomendación / 推荐

Connector / Anschluss / Raccord / Conexión / 连接	Nozzle size / Brennerdüse / Buse de brasage / Boquilla soplete / 钎焊嘴	
1/2 inch	2 mm	1/16 inch
5/8 inch	↕	↕
7/8 inch		
1 1/8 inch	↕	↕
1 3/8 inch		
1 5/8 inch	9 mm	3/8 inch

## M12 Connection / M12 Raccordement / M12 Conexión / M12 链接

Motor coil resistance check / Wicklungswiderstand prüfen / Vérification de la résistance de / la bobine du moteur / Verificar la resistencia de la bobina del motor

Coil A = Coil B

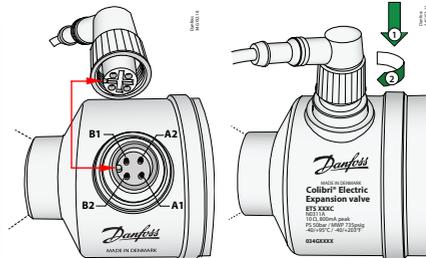
Wicklung A = Wicklung B

Bobine A = Bobine B

Bobina A = Bobina B

电机线圈电阻检查

10 Ω (20 °C / 68 °F)



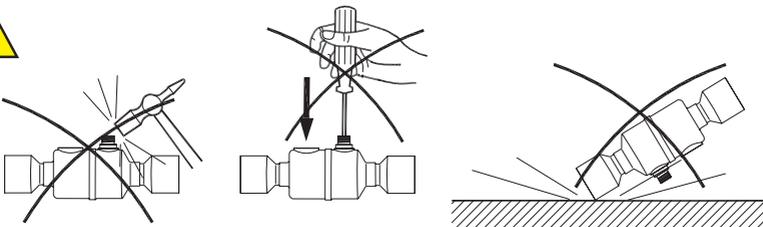
**Warning:**



- EN** Do not connect directly to AC/DC power source.  
Connect valve to appropriate controller/driver only.
- DE** Bitte das ETS / KVS Colibri® nicht direkt mit einer Spannungsquelle verbinden.  
Schließen Sie das Ventil nur an geeignete Regler/ Steuergeräte an.
- FR** Ne pas raccorder directement le moteur à une alimentation AC / DC.  
Raccorder la vanne au régulateur approprié.
- ES** No aplicar tensión directamente a la válvula.  
Conectar la válvula a un controlador/driver adecuado.
- CH** 请仅将阀门连接于合适的控制器/驱动器，  
勿直接与交流或直流电源连接。



- EN** ETS / KVS Colibri® valves are delivered in open position, ready for brazing.  
An AST -g service driver is available for manual operation / service of ETS / KVS Colibri® valves.
- DE** Ventile werden in offener Position geliefert, bereit zum Löten. Für den manuellen Betrieb / Wartung von ETS / KVS Colibri® Ventilen, ist ein AST -g- Servicemodul als Zubehör erhältlich.
- FR** Les vannes sont livrées en position ouverte, prêtes pour le brasage.  
Un pilote d'entretien AST-g est disponible pour manœuvrer les vannes ETS C / KVS Colibri®.
- ES** Las válvulas se entregan abiertas listas para soldar. Existe un driver de servicio AST-g para la operación manual y servicio de las válvulas ETS / KVS Colibri®.
- CH** 交付时阀门处于全开状态,再进行焊接  
一切就绪,准备铜焊. 提供AST -g手操器用于  
ETS/KVS Colibri® 电子膨胀阀的手动操作和维修.



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Installation Video / Installation vidéo / Instalación vídeo / 安裝 視頻



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