

XX7399167-02

07- 2019

**INSTALLATION, OPERATION AND
MAINTENANCE INSTRUCTIONS**

FREE COOLING VALVE KIT

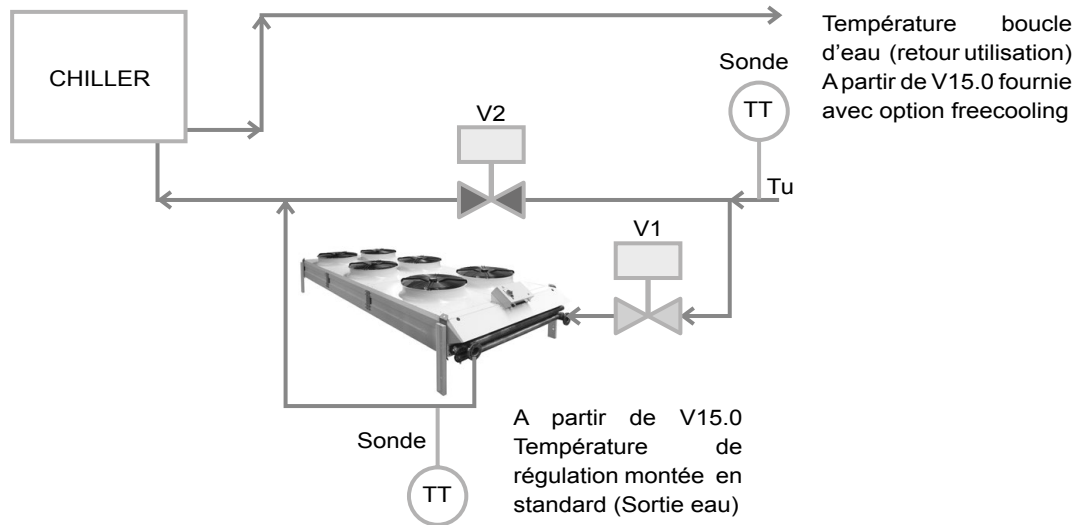


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1. COMPOSITION DU KIT

- 2 Vannes papillon 2 voies DN 40.....DN 125
- 2 Moteurs de vanne 230 V – 50 Hz

2. SCHEMA DE PRINCIPE



3. CONDITIONS DE FONCTIONNEMENT

- Fluide : Eau → MEG 10 % à 50 %; MPG 10% à 50%, Ethanol maxi 30 %
Pression 10 bar maxi
- Température fonctionnement : Fluide : -10 °C/+120 °C jusqu'au DN 100 (Ethanol 55 °C maxi)
0 °C/+90 °C pour le DN 125 (Ethanol 55 °C maxi)
Air : 0 °C/+60 °C

4. CONDITIONS DE STOCKAGE

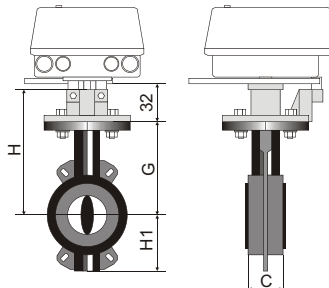
- Température : -20 °C/+65 °C

5. VANNES 2 VOIES



Caractéristiques vannes	
Type	Papillon
PN	10 ou 16 bar
Diamètre	DN 40 à DN 125

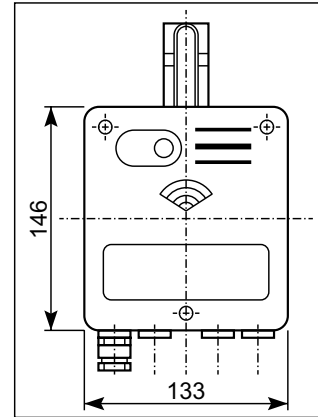
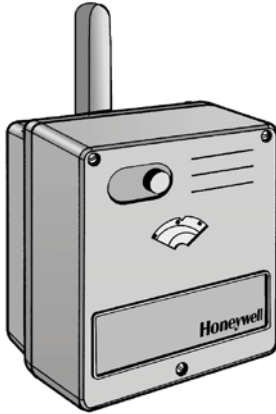
Encombrement



Ø	KV (m3/h)	Cotes (mm)				Masse (Kg)	
		H	H1	C	G	Vanne	Vanne + moteur
DN 40	50	159	66	33	134	2	3.5
DN 50	116	165	69	43	140	2.4	3.9
DN 65	259	175	81	46	150	3	4.5
DN 80	377	183	100	46	158	3.6	5.1
DN 100	763	204	109	52	179	4.4	5.9
DN 125	1030	221	124	56	196	7	8.5

6. MOTEURS DE VANNE

▪ MOTEUR M6061



Caractéristiques des moteurs

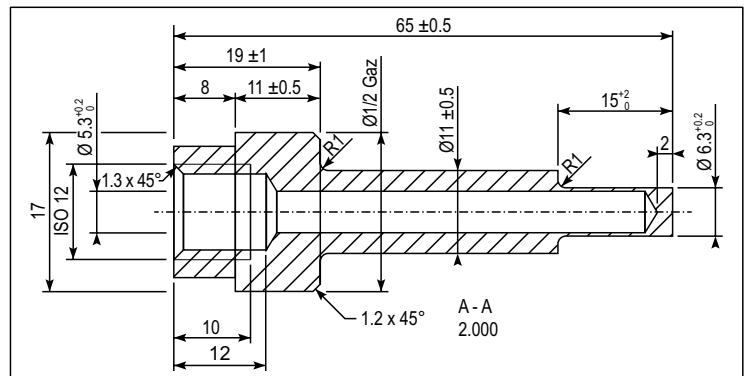
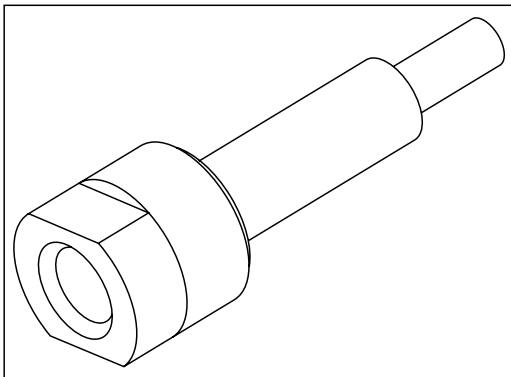
Tension alimentation	230 V +10/-15% -50 Hz
Puissance	3.5 VA
Sens action	Phase sur borne 2 ouverture de la vanne Phase sur borne 3 fermeture de la vanne
Classe de protection	Classe I selon EN60730-1
Degré de protection	IP54
Angle de rotation	90°
Temps ouverture	3.5 minutes
Section des bornes	1,5 mm ²
Entrée de câble	Prédécoupe M20
Masse	1.5 Kg

7. MONTAGE SONDE

L'ensemble doigt de gant, sonde et presse étoupe est livré avec l'option freecooling dans l'armoire.

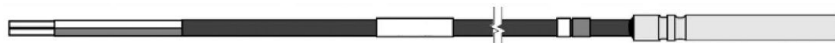
Doigt de gant :

- A visser dans un manchon 1/2" Gaz sur la tuyauterie en amont des vannes V1 et V2
(Voir § 2. SCHEMA DE PRINCIPE, rep. TT)



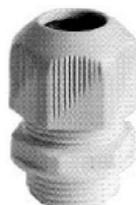
Sonde de mesure :

- A faire glisser dans le doigt de gant.



Presse étoupe :

- A visser dans la partie supérieure du doigt de gant.



8. RACCORDEMENT HYDRAULIQUE

A

B

1

TYPE	DN	A (mm)
V5421B1009	25	30
V5421B1017	32	30
V5421B1025	40	33
V5421B1033	50	43
V5421B1041	65	46
V5421B1058	80	46
V5421B1066	100	52
V5421B1074	125	56
V5421B1082	150	56

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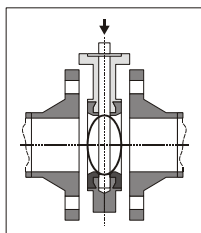
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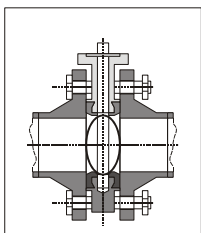
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8.1 - Montage

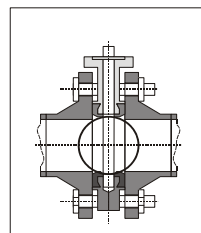
- Avant de fixer le moteur, mettre la vanne en place selon les instructions de montage.



1. Ecarter les contre-brides pour faciliter l'installation. Le papillon doit être partiellement ouvert.



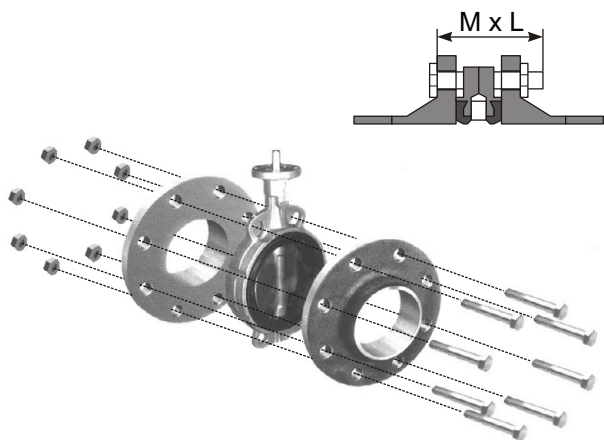
2. Mettre en place tous les boulons en maintenant le papillon légèrement ouvert. Ne pas serrer les boulons.



3. Ouvrir complètement le papillon. S'assurer que la tuyauterie est dans l'alignement. Serrer les écrous en diagonale jusqu'à ce que les contre-brides viennent en contact avec le corps de la vanne.

8.2 - Fixation

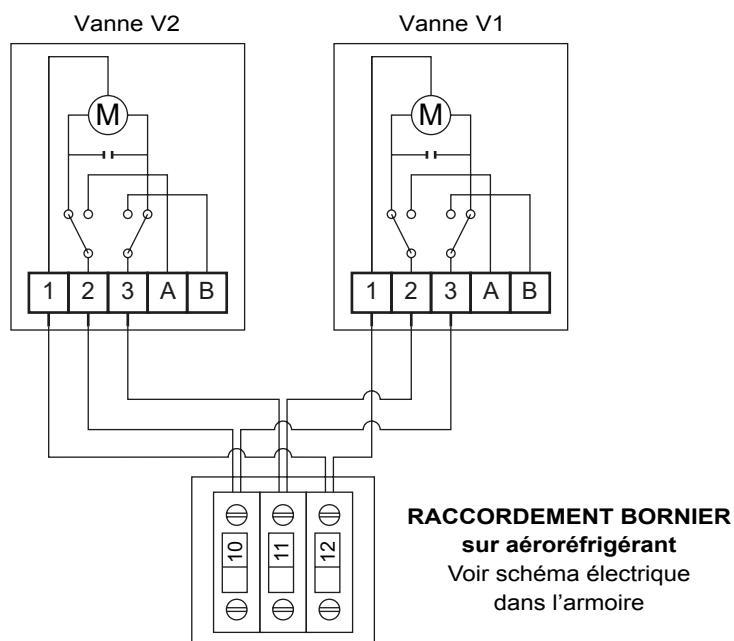
- Le nombre de boulons et écrous dépend de la pression nominale (PN), voir tableau



DN	PN10		PN16	
	Boulons	n	Boulons	n
40	M16 x 90	4	M16 x 90	4
50	M16 x 110	4	M16 x 110	4
65	M16 x 110	4	M16 x 110	4
80	M16 x 120	8	M16 x 120	8
100	M16 x 120	8	M16 x 120	8
125	M16 x 130	8	M16 x 130	8

9. RACCORDEMENT ELECTRIQUE

9.1 - Vannes



9.2 - Sondes

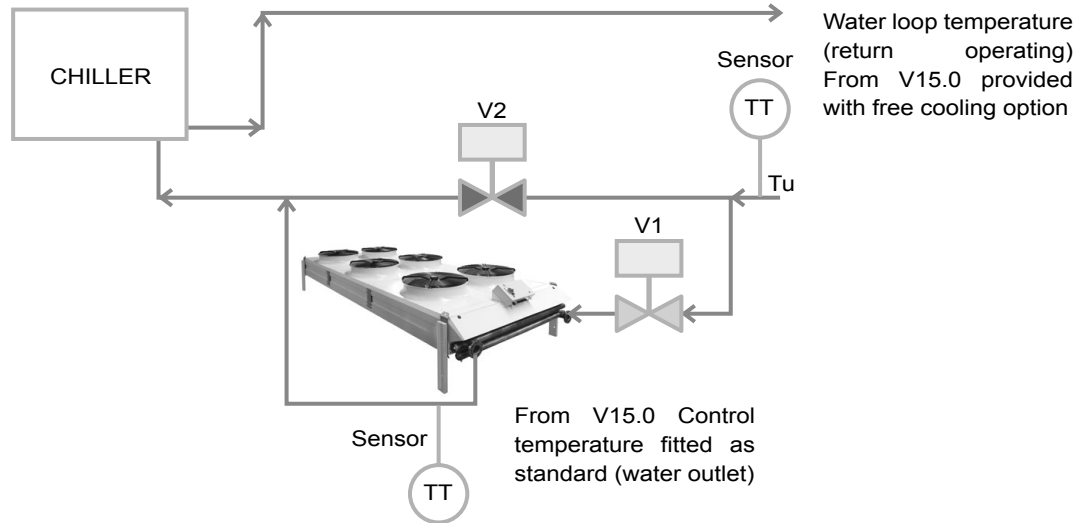
- Pour le raccordement des sondes boucle d'eau et température extérieur voir schéma électrique et IOM livrés avec l'appareil.

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1. KIT CONTENTS

- 2 x 2-way butterfly valves DN 40.....DN 125
- 2 x 230 V – 50 Hz valve motors

2. SCHEMATIC DIAGRAM



3. OPERATING CONDITIONS

- Fluid: Water → MEG 10% to 50% - MPG 10% to 50%, Ethanol max. 30%
10 bar maximum pressure
- Operating temperature: Fluid: -10°C/+120°C up to DN 100 (Ethanol 50 °C max.)
0°C/+90°C for DN 125 (Ethanol 50°C max.)
Air: 0°C/+60°C

4. STORAGE CONDITIONS

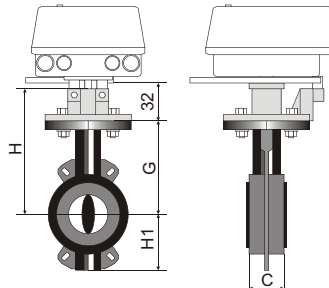
- Temperature: -20°C/+65°C

5. 2-WAY VALVES



Valve specifications	
Type	Butterfly
NP	10 or 16 bar
Diameter	DN 40 to DN 125

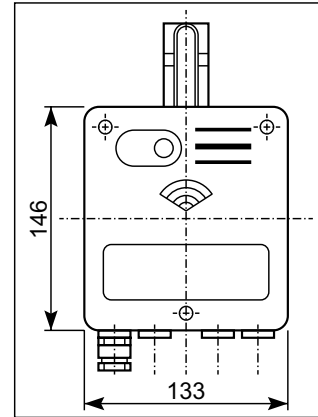
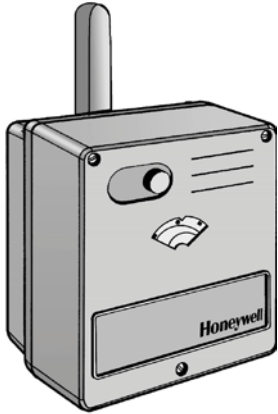
Dimensions



Ø	KV (m3/h)	Dimensions (mm)				Weight (kg)	
		H	H1	C	G	Valve	Valve + motor
DN 40	50	159	66	33	134	2	3.5
DN 50	116	165	69	43	140	2.4	3.9
DN 65	259	175	81	46	150	3	4.5
DN 80	377	183	100	46	158	3.6	5.1
DN 100	763	204	109	52	179	4.4	5.9
DN 125	1030	221	124	56	196	7	8.5

6. VALVE MOTORS

- M6061 MOTOR



Motor specifications

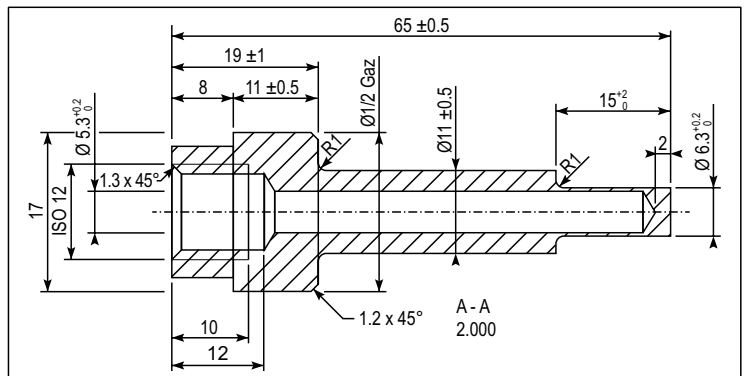
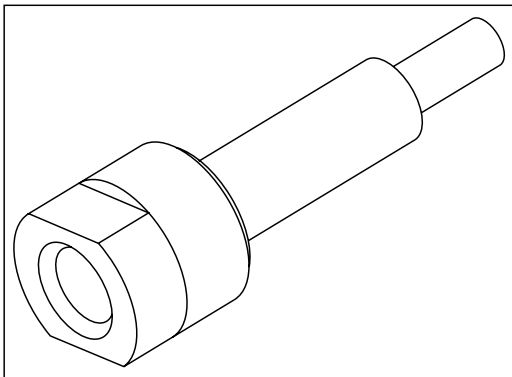
Supply voltage	230 V +10/-15% -50 Hz
Power	3.5 VA
Direction of action	Phase on terminal 2 opens valve Phase on terminal 3 closes valve
Protection class	Class I according to EN60730-1
Degree of protection	IP54
Angle of rotation	90°
Burner servo	3.5 minutes
Terminal cross-section	1,5 mm ²
Cable input	M20 knockout
Weight	1.5 Kg

7. SENSOR MOUNTING

The pocket, sensor and packing box assembly is supplied with the freecooling option in the vertical unit.

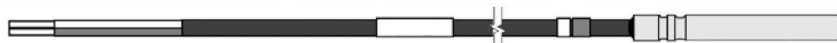
Pocket:

- To be screwed into a 1/2" gas sleeve on the pipe upstream of valves V1 and V2
(See § 2. SCHEMATIC DIAGRAM, ref. TT)



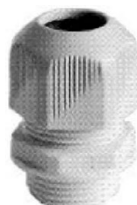
Measurement sensor:

- To be slid into the pocket.



Cable gland:

- To be screwed into the upper section of the pocket.



8. HYDRAULIC CONNECTION

A

B

1

TYPE	DN	A (mm)
V5421B1009	25	30
V5421B1017	32	30
V5421B1025	40	33
V5421B1033	50	43
V5421B1041	65	46
V5421B1058	80	46
V5421B1066	100	52
V5421B1074	125	56
V5421B1082	150	56

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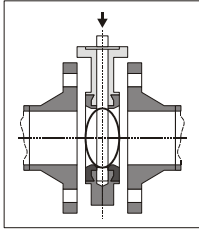
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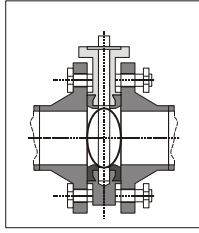
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8.1 - Assembly

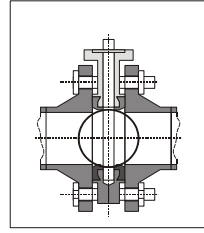
- Before fixing the motor, fit the valve according to the assembly instructions.



1. Facilitate the installation by moving aside the counter-flanges. The butterfly valve must be partially open.



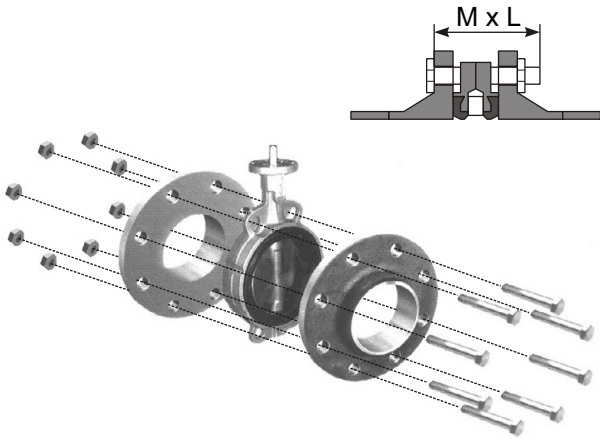
2. Fit all the bolts while holding the butterfly valve slightly open. Do not tighten the bolts.



3. Open the butterfly valve fully. Ensure that the pipework is aligned. Tighten the nuts diagonally until the counter-flanges make contact with the body of the valve.

8.2 - Mounting

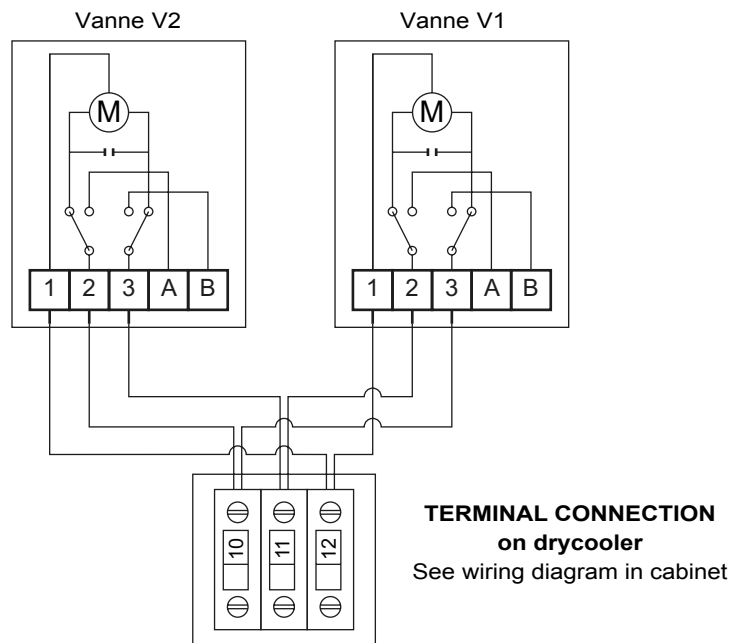
- The number of nuts and bolts depends on the nominal pressure (NP), see table



DN	PN10		PN16	
	Bolts	n	Bolts	n
40	M16 x 90	4	M16 x 90	4
50	M16 x 110	4	M16 x 110	4
65	M16 x 110	4	M16 x 110	4
80	M16 x 120	8	M16 x 120	8
100	M16 x 120	8	M16 x 120	8
125	M16 x 130	8	M16 x 130	8

9. ELECTRICAL CONNECTION

9.1 - Valves



9.2 - Sensors

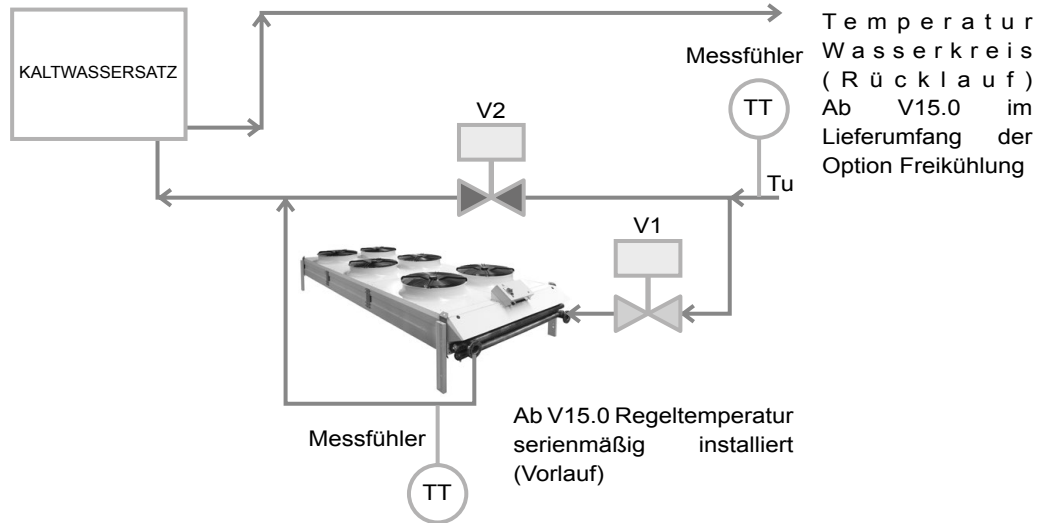
- To connect the water loop and outdoor temperature sensors, see the wiring diagram and IOM supplied with the unit.

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1. INHALT DES BAUSATZES

- 2 Stck. 2-Wege-Drosselklappen DN 40.....DN 125
- 2 Ventilstellmotoren 230 V – 50 Hz

2. SCHALTPLAN



3. BETRIEBSBEDINGUNGEN

- Medium: Wasser → MEG 10 % bis 50 %; MPG 10 % bis 50 %, Ethanol 30% max.
Maximaldruck 10 bar
- Betriebstemperatur: Medium: -10 °C/+120 °C bis DN 100 (Ethanol 55 °C max.)
0 °C/+90 °C beim DN 125 (Ethanol 55 °C max.)
Luft: 0 °C / +60 °C

4. LAGERBEDINGUNGEN

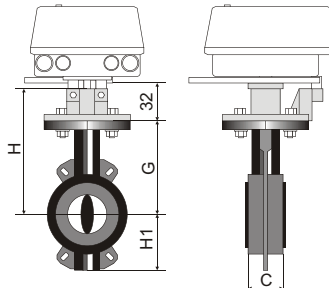
- Temperatur: -20 °C/+65 °C

5. 2-WEGE-VENTILE



Technische Daten der Ventile	
Typ	Drosselklappe
PN	10 oder 16 bar
Durchmesser	DN 40 bis DN 125

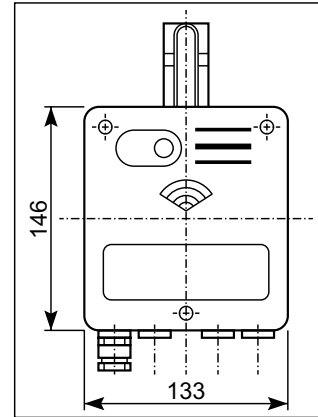
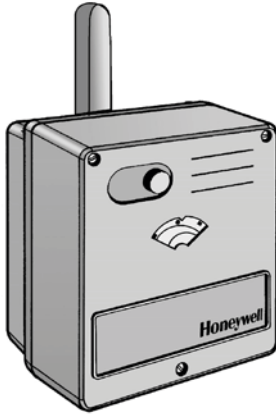
Abmessungen



ø	KV (m3/h)	Abmessungen (mm)				Gewicht (kg)	
		H	H1	C	G	Ventil	Ventil + Motor
DN 40	50	159	66	33	134	2	3.5
DN 50	116	165	69	43	140	2.4	3.9
DN 65	259	175	81	46	150	3	4.5
DN 80	377	183	100	46	158	3.6	5.1
DN 100	763	204	109	52	179	4.4	5.9
DN 125	1030	221	124	56	196	7	8.5

6. VENTILSTELLMOTOREN

- STELLANTRIEB M6061



Technische Daten der Motoren

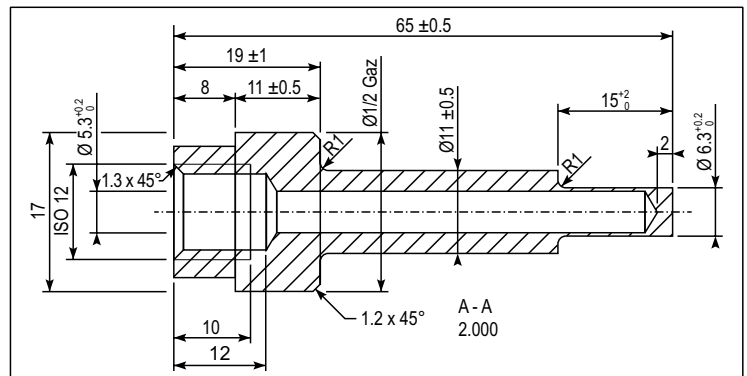
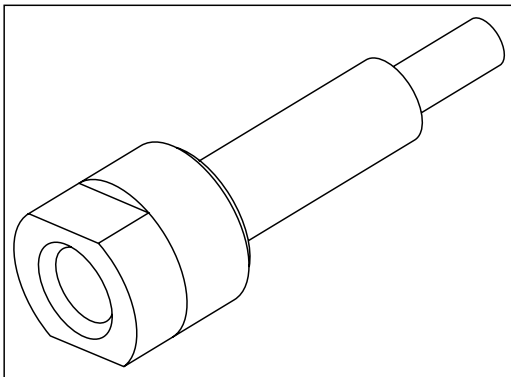
Versorgungsspannung	230 V +10/-15% -50 Hz
Leistung	3,5 VA
Drehrichtung	Phase an Klemme 2: Öffnen des Ventils Phase an Klemme 3: Schließen des Ventils
Schutzklasse	Klasse I gemäß EN60730-1
Schutzart	IP54
Drehwinkel	90°
Öffnungszeit	3,5 Minuten
Klemmenquerschnitt	1,5 mm ²
Kabeleinführung	vorgestanzt M20
Gewicht	1,5 Kg

7. MONTAGE MESSFÜHLER

Tauchhülse, Messfühler und Stopfbuchse werden mit der Option Freikühlung im Schaltschrank mitgeliefert.

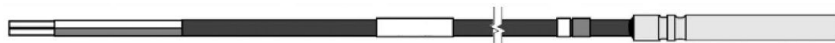
Tauchhülse:

- Muss vor den Ventilen V1 und V2 in einen 1/2"-Gas-Anschlussflansch geschraubt werden (Siehe § 2. SCHALTPLAN, Wahrzeichen TT)



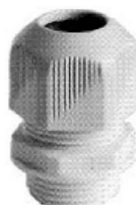
Messfühler:

- Muss in die Tauchhülse eingeführt werden.



Kabelverschraubung:

- Muss in das obere Ende der Tauchhülse geschraubt werden.



8. HYDRAULIKANSCHLÜSSE

A

B

1

TYPE	DN	A (mm)
V5421B1009	25	30
V5421B1017	32	30
V5421B1025	40	33
V5421B1033	50	43
V5421B1041	65	46
V5421B1058	80	46
V5421B1066	100	52
V5421B1074	125	56
V5421B1082	150	56

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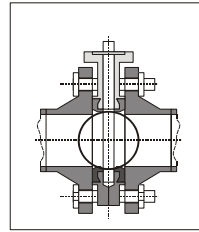
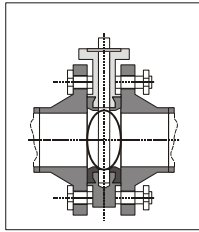
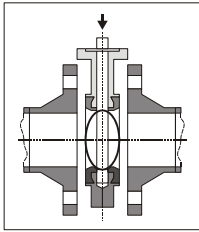
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8.1 - Montage

- Vor dem Anbau des Motors muss das Ventil gemäß den Montageanweisungen eingebaut werden.



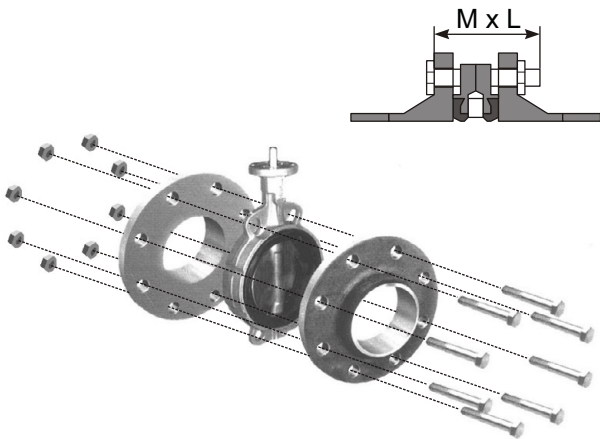
1. Die Gegenflansche auseinanderspreizen, um die Installation zu erleichtern. Die Ventilklappe muss teilweise geöffnet sein.

2. Alle Schraubenbolzen anbringen und dabei die Ventilklappe leicht geöffnet halten. Die Schraubenbolzen nicht festziehen.

3. Die Ventilklappe ganz öffnen. Sicherstellen, dass die Leitungen fluchten. Die Muttern über Kreuz festziehen, bis die Gegenflansche den Ventilkörper berühren.

8.2 - Befestigung

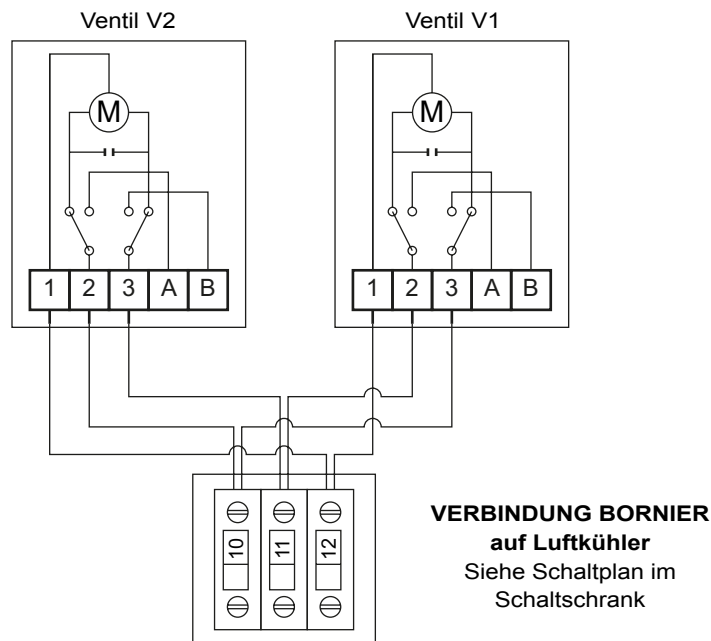
- Die Anzahl der Schraubenbolzen und Muttern hängt vom Nenndruck (PN) ab, siehe Tabelle



DN	PN10		PN16	
	Schraubenbolzen	n	Schraubenbolzen	n
40	M16 x 90	4	M16 x 90	4
50	M16 x 110	4	M16 x 110	4
65	M16 x 110	4	M16 x 110	4
80	M16 x 120	8	M16 x 120	8
100	M16 x 120	8	M16 x 120	8
125	M16 x 130	8	M16 x 130	8

9. ELEKTRISCHER ANSCHLUSS

9.1 - Ventile



9.2 - Messfühler

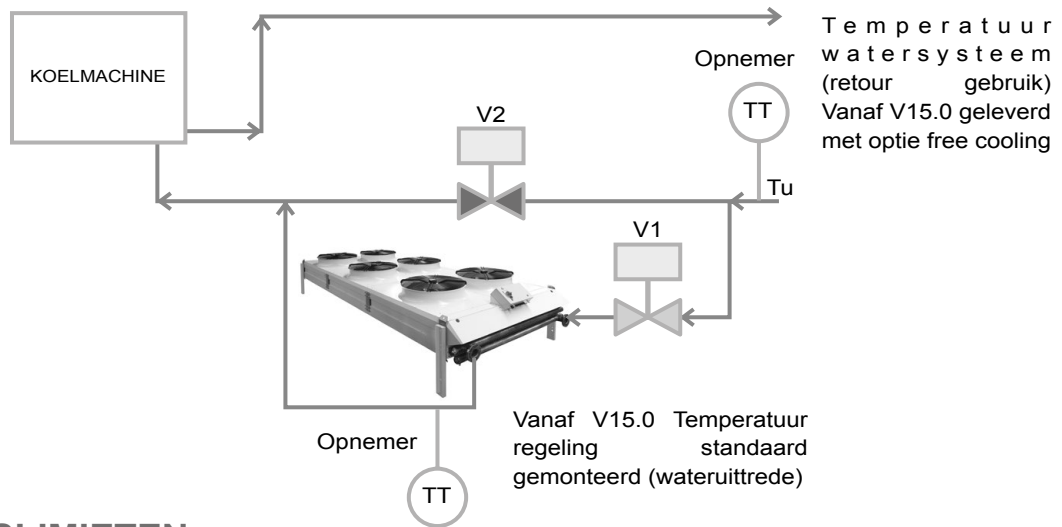
- Anschluss der Messfühler im Wasserkreislauf und für die Außentemperatur siehe Schaltplan und Installations- und Betriebsanleitung, die mit dem Gerät geliefert wurden.

INHOUD	PAGINA
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9.1 - kleppen	25
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1. INHOUD VAN DE SET

- 2 tweeweg vlinderkleppen DN 40.....DN 125
- 2 klepmotoren 230 V – 50 Hz

2. PRINCIPESHEMA



3. BEDRIJFSLIMIETEN

- Vloeistof: Water → MEG 10 % tot 50 %; MPG 10% tot 50%, Ethanol 30% max.
Max. druk 10 bar
- Bedrijfstemperatuur: Vloeistof: -10 °C/+120 °C tot aan de DN 100 (Ethanol 55 °C max.)
0 °C/+90 °C voor de DN 125 (Ethanol 55 °C max.)
Lucht: 0 °C / +60 °C

4. VOORWAARDEN VOOR DE OPSLAG

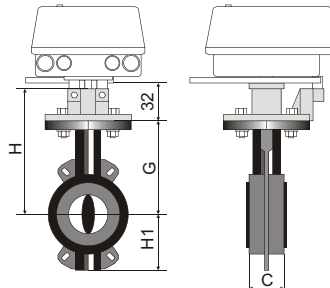
- Temperatuur: -20 °C / +65 °C

5. 2-WEG KLEPPEN



Klep specificaties	
Type	Vlinderklep
PN	10 of 16 bar
Diameter	DN 40 tot DN 125

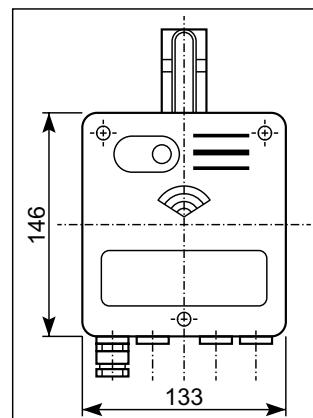
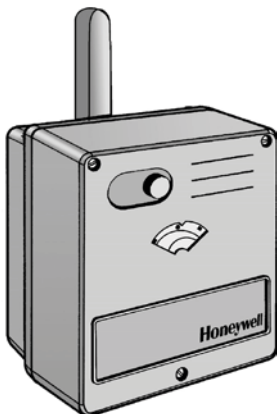
Afmetingen



Ø	KV (m3/u)	Maten (mm)				Gewicht (kg)	
		H	H1	C	G	Klep	Klep + motor
DN 40	50	159	66	33	134	2	3.5
DN 50	116	165	69	43	140	2.4	3.9
DN 65	259	175	81	46	150	3	4.5
DN 80	377	183	100	46	158	3.6	5.1
DN 100	763	204	109	52	179	4.4	5.9
DN 125	1030	221	124	56	196	7	8.5

6. KLEPMOTOREN

- MOTOR M6061



Motor specificaties

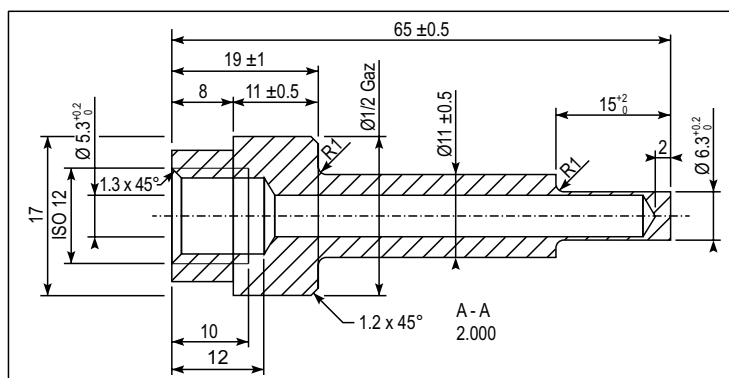
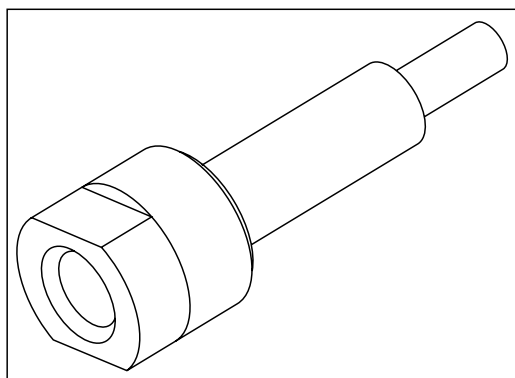
Voedingsspanning	230 V +10/-15% -50 Hz
Vermogen	3,5 VA
Werkrichting	Fase op klem 2: klep openen Fase op klem 3: klep sluiten
Beschermingsklasse	Klasse I volgens EN60730-1
Beschermingsklasse	IP54
Rotatiehoek	90°
Openingstijd	3,5 minuten
Afmeting van de aansluitklemmen	1,5 mm ²
Kabelingang	Voorgestanst M20
Massa	1,5 kg

7. INSTALLATIE VAN OPNEMER

De set dompelelement, opnemer en kabelwartel wordt geleverd met de optie free cooling in de kast.

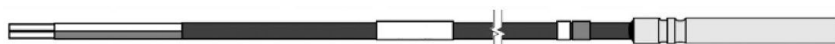
Dompelbuis:

- In een huls met 1/2" gasdraad te schroeven op de leiding stroomopwaarts van de ventielen V1 en V2 (Zie § 2. PRINCIPESHEMA, landmark TT)



Meetopnemer:

- In de dompelbuis te schroeven.



Kabelwartel:

- In de bovenkant van de dompelbuis te schroeven.



8. HYDRAULISCHE AANSLUITING

A

B

1

$A + 5$

TYPE	DN	A (mm)
V5421B1009	25	30
V5421B1017	32	30
V5421B1025	40	33
V5421B1033	50	43
V5421B1041	65	46
V5421B1058	80	46
V5421B1066	100	52
V5421B1074	125	56
V5421B1082	150	56

2

3

90°

4

5

6

8

7

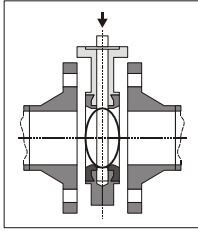
8

0° 90°

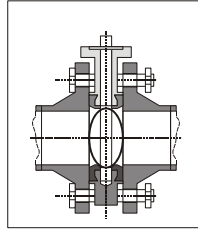
9

8.1 - Montage

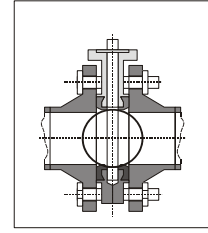
- Monteer de klep op zijn plaats volgens de montage-instructies voordat u de motor vastzet.



1. Verschuif de tegen-flenzen om de installatie te vergemakkelijken. De vlinderklep moet gedeeltelijk geopend zijn.



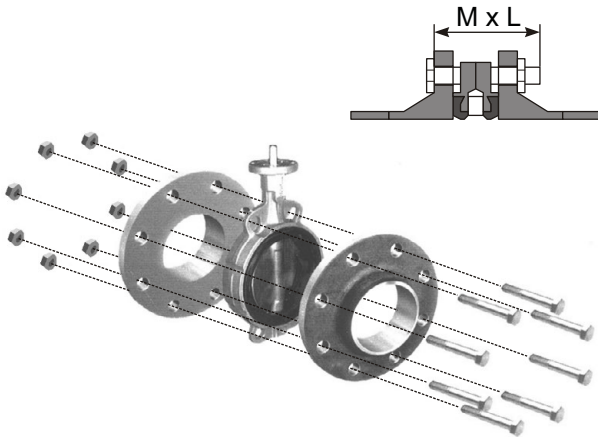
2. Houd de vlinderklep enigszins open en plaats alle bouten. Zet de bouten niet vast.



3. Open de vlinderklep volledig. Controleer of de leiding op één lijn ligt. Zet de moeren diagonaalsgewijs vast tot de tegen-flenzen in contact komen met het klephuis.

8.2 - Bevestiging

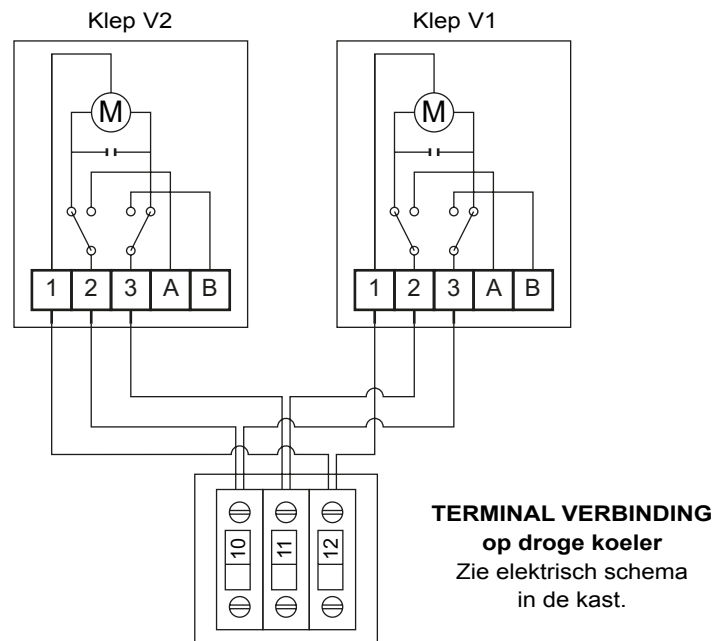
- Het aantal bouten en moeren is afhankelijk van de nominale druk (PN), zie de tabel



DN	PN10		PN16	
	Bouten	n	Bouten	n
40	M16 x 90	4	M16 x 90	4
50	M16 x 110	4	M16 x 110	4
65	M16 x 110	4	M16 x 110	4
80	M16 x 120	8	M16 x 120	8
100	M16 x 120	8	M16 x 120	8
125	M16 x 130	8	M16 x 130	8

9. ELEKTRISCHE AANSLUITING

9.1 - kleppen



9.2 - Opnemer

- Voor de aansluiting van de opnemers watersysteem en buitentemperatuur, zie het elektrisch schema en IOM van het apparaat.

