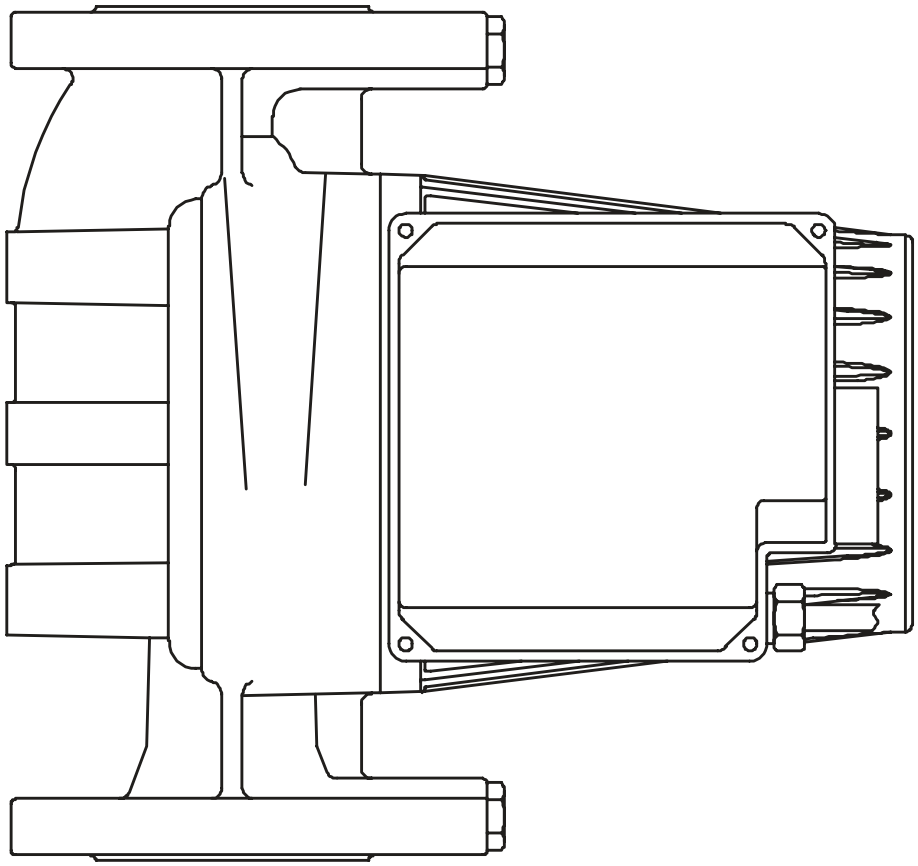
ISTRUZIONI PER L'INSTALLAZIONE E LA MANUTENZIONE
INSTRUCTIONS DE MISE EN SERVICE ET D'ENTRETIEN
INSTRUCTIONS FOR INSTALLATION AND MAINTENANCE
INSTALLATIONSANWEISUNG UND WARTUNG
INSTRUCTIES VOOR INGEBRUIKNAME EN ONDERHOUD
INSTRUCCIONES PARA LA INSTALACION Y EL MANTENIMIENTO
INSTALLATIONS - OCH UNDERHÅLLSANVISNING
INSTRUÇÕES PARA A INSTALAÇAO
МОНТАЖ
INSTALACE
ΟΔΗΓΙΕΣ ΓΙΑ ΤΗΝ ΕΓΚΑΤΑΣΤΑΣΗ
NÁVOD NA INSTALACI
MONTAJ VE BAKIM IÇIN BILGILER
POKYNY K INŠTALÁCII A ÚDRŽBE
MONTAVIMO IR PRIEŽIŪROS INSTRUKCIJA
UZSTĀDĪŠANAS UN LIETOŠANAS INSTRUKCIJA

A - B - D

BMH - BPH

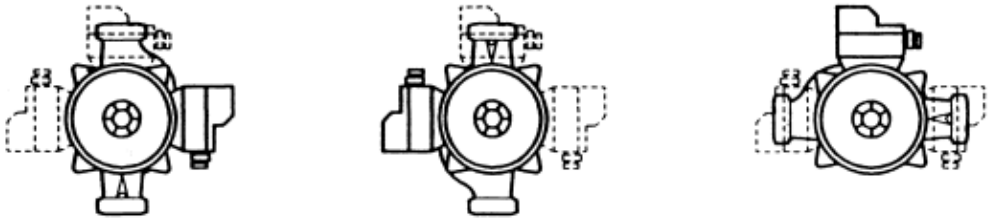
DMH - DPH



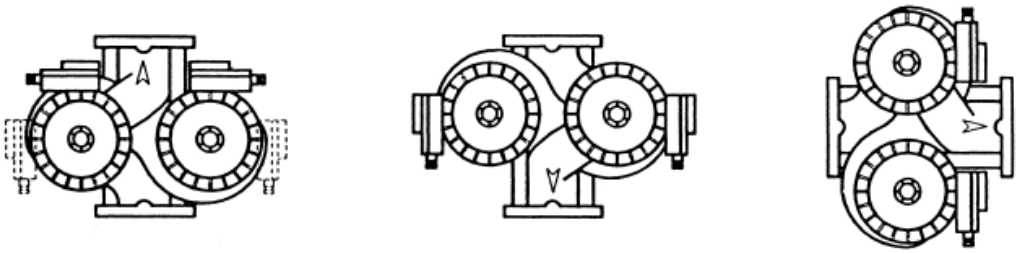
АЯ45

DAB
PUMP PERFORMANCE

PICCOLI COLLETTIVI SINGOLI - PETITES INSTALLATIONS COLLECTIVES SIMPLES - SINGLE SMALL COMMUNITY CIRCULATORS - KLEINE EINZELNE GEMEINSCHAFTSANLAGEN - KLEINE COLLECTIEVE ENKELE INSTALLATIES - PEQUEÑAS INSTALACIONES COLECTIVAS - SMÅ ENSKILDA PUMPAR FÖR FLERA SYSTEM - PEQUENAS INSTALAÇÕES COLECTIVAS SIMPLES - ОТДЕЛЬНЫЕ НАСОСЫ ДЛЯ МАЛЫХ МНОГОСИСТЕМНЫХ УСТАНОВОК - MALÁ JEDNODUCHÁ KOLEKTIVNÍ ČERPADLA - ΜΟΝΟΙ ΣΥΛΛΟΓΙΚΟΙ ΓΙΑ ΜΙΚΡΕΣ ΕΓΚΑΤΑΣΤΑΣΕΙΣ - MAŁE POJEDYŃCZE ROROCIĄGI - TEK KOLEKTIF KÜÇÜK - MALÉ ZBEROVÉ JEDNODUCHÉ - NEDIDELIO NAŠUMO VIENGUBI CIRKULIACINIAI SIURBLIAI - VIENCILPAS VA, A SĒRIJAS CIRKULĀCIJAS SŪKŅI AR VĪTŅU PIEVIENOJUMU

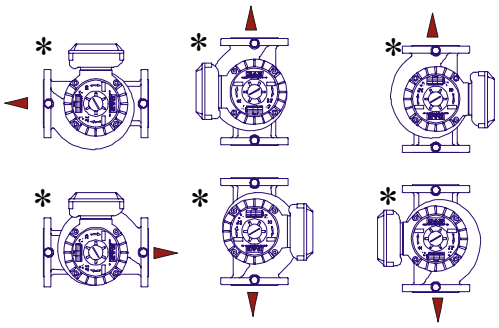


PICCOLI COLLETTIVI GEMELLARI - PETITES INSTALLATIONS COLLECTIVES JUMELÉES - TWIN SMALL COMMUNITY CIRCULATORS - KLEINE ZWILLINGS-GEMEINSCHAFTSANLAGEN - KLEINE COLLECTIEVE DUBBELE INSTALLATIES - PEQUEÑAS INSTALACIONES COLECTIVAS DOBLES - SMÅ TVILLINGPUMPAR FÖR FLERA SYSTEM - PEQUENAS INSTALAÇÕES COLECTIVAS GEMELARES - СПАРЕННЫЕ НАСОСЫ ДЛЯ МАЛЫХ - МНОГОСИСТЕМНЫХ УСТАНОВОК - MALÁ DVOJITÁ KOLEKTIVNÍ ČERPADLA - ΔΙΔΥΜΟΙ ΣΥΛΛΟΓΙΚΟΙ ΓΙΑ ΜΙΚΡΕΣ ΕΓΚΑΤΑΣΤΑΣΕΙΣ - MAŁE RUROCIĄGI BLIŹNIACZE - IKIZ KOLEKTIF KÜÇÜK - MALÉ ZDVOJENÉ ZBEROVÉ – DVIGUBI NEDIDELIO NAŠUMO CIRKULIACINIAI SIURBLIAI - VIENCILPAS VD, D SĒRIJAS CIRKULĀCIJAS DUBULTSŪKŅI AR ATLOKU PIEVIENOJUMU

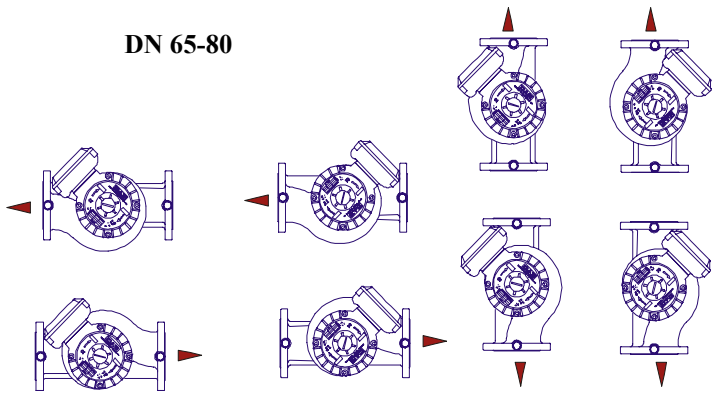


COLLETTIVI SINGOLI - INSTALLATIONS COLLECTIVES SIMPLES - SINGLE COMMUNITY CIRCULATORS - EINZELNE GEMEINSCHAFTSANLAGEN - ENKELE COLLECTIEVE INSTALLATIES - INSTALACIONES COLECTIVAS SIMPLES - ENSKILDA PUMPAR FÖR FLERA SYSTEM - INSTALAÇÕES COLECTIVAS SIMPLES - ОТДЕЛЬНЫЕ НАСОСЫ ДЛЯ МНОГОСИСТЕМНЫХ УСТАНОВОК - JEDNODUCHÁ KOLEKTIVNÍ ČERPADLA - ΜΟΝΟΙ ΣΥΛΛΟΓΙΚΟΙ - RUROCIĄGI POJEDYŃCZE - TEK KOLEKTIF - JEDNODUCHÉ ZBEROVÉ - CIRKULIACINIAI SIURBLIAI - DAUDZCILPU BPH, BMH SĒRIJAS CIRKULĀCIJAS SŪKŅI AR ATLOKIEM

DN 40-50-65-80



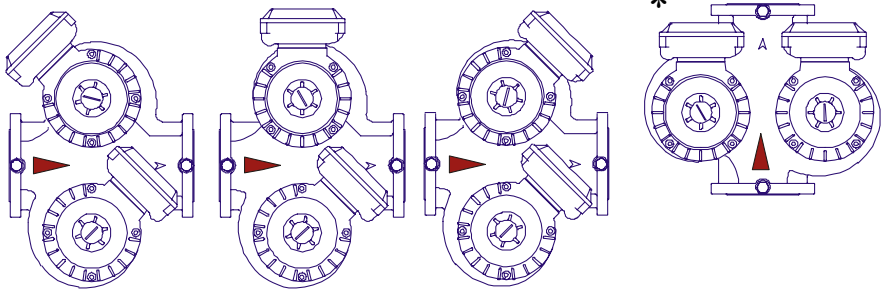
DN 65-80



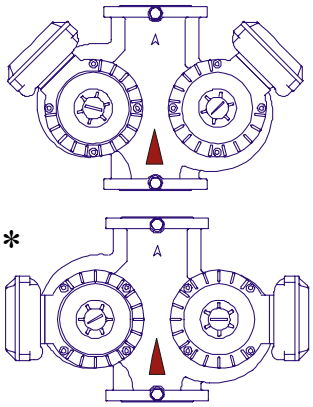
✻: PER IMPIANTI DI CONDIZIONAMENTO USARE SOLO LE POSIZIONI CON ASTERISCO
✻: POUR LES INSTALLATIONS DE CLIMATISATION, UTILISER SEULEMENT LES POSITIONS AVEC ASTÉRISQUE
✻: FOR CONDITIONING SYSTEMS USE ONLY THE POSITIONS MARKED WITH AN ASTERISK.
✻: FÜR KLIMAANLAGEN AUSSCHLIESSLICH DIE POSITIONEN MIT STERNCHEN NUTZEN.
✻: GEBRUIK VOOR AIRCONDITIONING-INSTALLATIES ALLEEN DE MET EEN STERRETJE AANGEGEVEN POSITIES
✻: PARA INSTALACIONES DE ACONDICIONAMIENTO, UTILIZAR SOLO LAS POSICIONES CON ASTERISCO
✻: VID KLIMATANLÄGGNINGAR SKA ENDAST LÄGENA MED ASTERISK ANVÄNDAS.
✻: PARA INSTALAÇÕES DE AR CONDICIONADO USAR SOMENTE AS POSIÇÕES COM ASTERISCO
✻: ДЛЯ КОНДИЦИОНЕРНЫХ УСТАНОВОК ИСПОЛЬЗОВАТЬ ТОЛЬКО ПОЗИЦИИ, ОБОЗНАЧЕННЫЕ ЗВЕЗДОЧКОЙ
✻: U KLIMATIZAČNICH SYSTÉMŮ POUŽIVAT POUZE POLOHY OZNAČENÉ HVĚZDIČKOU.
✻: ΓΙΑ ΤΙΣ ΕΓΚΑΤΑΣΤΑΣΕΙΣ ΚΛΙΜΑΤΙΣΜΟΥ, ΧΡΗΣΙΜΟΠΟΙΗΣΤΕ ΜΟΝΟ ΤΙΣ ΘΕΣΕΙΣ ΠΟΥ ΕΧΟΥΝ ΑΣΤΕΡΙΣΚΟ.
✻: DLA URZĄDZEŃ KLIMATYZACYJNYCH NALEŻY STOSOWAĆ WYŁĄCZNIE POZYCJE OZNACZONE GWIAZDKĄ
✻: KLIMA TESISLERI IÇIN SADECE YILDIZLI POZISYONLARI KULLANINIZ.
✻: PRE KLIMATIZAČNÉ ZARIADENIA POUŽÍVAŤ LEN POLOHY S HVIEZDIČKOU.
✻: ORO KONDICIONAVIMO ĮRENGINIUOSE NAUDOTI TIKTAI ŽVAIGŽDUTE PAŽYMĖTAS POZICIJAS.
✻: KONDICIONĒŠANAS SISTĒMĀS IZMANTOJIET TIKAI POZĪCIJAS, KAS ATZĪMĒTAS AR ZVAIGZNĪTI.

COLLETTIVI GEMELLARI - INSTALLATIONS COLLECTIVES JUMELÉES - TWIN COMMUNITY CIRCULATORS - ZWILLINGS-GEMEINSCHAFTSANLAGEN - DUBBELE COLLECTIEVE INSTALLATIES - INSTALACIONES COLECTIVAS DOBLES - TVILLINGPUMPAR FÖR FLERA SYSTEM - INSTALAÇÕES COLECTIVAS GEMELARES - СПАРЕННЫЕ НАСОСЫ ДЛЯ МНОГОСИСТЕМНЫХ УСТАНОВОК - DVOJITÁ KOLEKTIVNÍ ČERPADLA - ΔΙΔΥΜΟΙ ΣΥΛΛΟΓΙΚΟΙ - RUROCIĄGI BLIŹNIACZE - IKIZ KOLEKIF - ZDVOJENÉ ZBEROVÉ - DVIGUBI CIRKULIACINIAI SIURBLIAI - DAUZCILPU DPH, DMH SĒRIJAS CIRKULĀCIJAS DUBULTSŪKŅI AR ATLOKIEM

DN 65-80

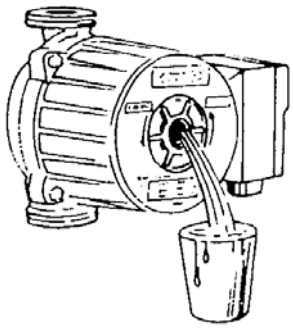


DN 40-50-65-80

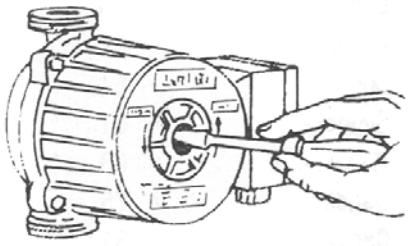


✻: PER IMPIANTI DI CONDIZIONAMENTO USARE SOLO LE POSIZIONI CON ASTERISCO
✻: POUR LES INSTALLATIONS DE CLIMATISATION, UTILISER SEULEMENT LES POSITIONS AVEC ASTÉRISQUE
✻: FOR CONDITIONING SYSTEMS USE ONLY THE POSITIONS MARKED WITH AN ASTERISK.
✻: FÜR KLIMAANLAGEN AUSSCHLIESSLICH DIE POSITIONEN MIT STERNCHEN NUTZEN.
✻: GEBRUIK VOOR AIRCONDITIONING-INSTALLATIES ALLEEN DE MET EEN STERRETJE AANGEGEVEN POSITIES
✻: PARA INSTALACIONES DE ACONDICIONAMIENTO, UTILIZAR SOLO LAS POSICIONES CON ASTERISCO
✻: VID KLIMATANLÄGGNINGAR SKA ENDAST LÄGENA MED ASTERISK ANVÄNDAS.
✻: PARA INSTALAÇÕES DE AR CONDICIONADO USAR SOMENTE AS POSIÇÕES COM ASTERISCO
✻: ДЛЯ КОНДИЦИОНЕРНЫХ УСТАНОВОК ИСПОЛЬЗОВАТЬ ТОЛЬКО ПОЗИЦИИ, ОБОЗНАЧЕННЫЕ ЗВЕЗДОЧКОЙ
✻: U KLIMATIZAČNICH SYSTÉMŮ POUŽIVAT POUZE POLOHY OZNAČENÉ HVĚZDIČKOU.
✻: ΓΙΑ ΤΙΣ ΕΓΚΑΤΑΣΤΑΣΕΙΣ ΚΛΙΜΑΤΙΣΜΟΥ, ΧΡΗΣΙΜΟΠΟΙΗΣΤΕ ΜΟΝΟ ΤΙΣ ΘΕΣΕΙΣ ΠΟΥ ΕΧΟΥΝ ΑΣΤΕΡΙΣΚΟ.
✻: DLA URZĄDZEŃ KLIMATYZACYJNYCH NALEŻY STOSOWAĆ WYŁĄCZNIE POZYCJE OZNACZONE GWIAZDKĄ
✻: KLIMA TESISLERI IÇIN SADECE YILDIZLI POZISYONLARI KULLANINIZ.
✻: PRE KLIMATIZAČNÉ ZARIADENIA POUŽÍVAŤ LEN POLOHY S HVIEZDIČKOU.
✻: ORO KONDICIONAVIMO ĮRENGINIUOSE NAUDOTI TIKTAI ŽVAIGŽDUTE PAŽYMĖTAS POZICIJAS.
✻: KONDICIONĒŠANAS SISTĒMĀS IZMANTOJIET TIKAI POZĪCIJAS, KAS ATZĪMĒTAS AR ZVAIGZNĪTI.

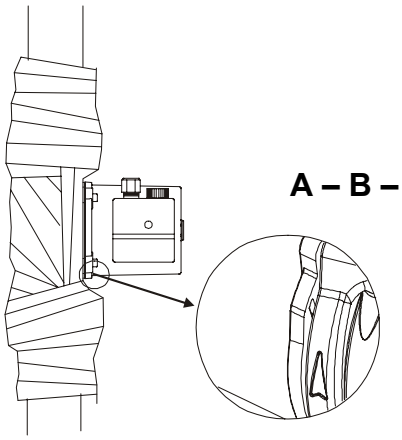
①



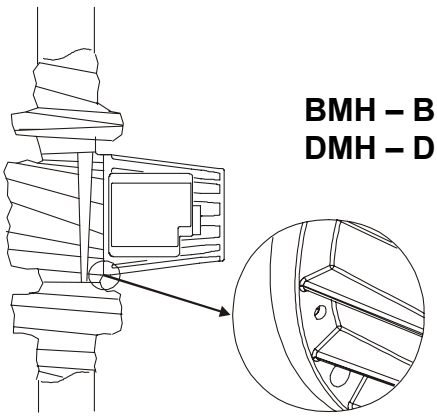
②



③

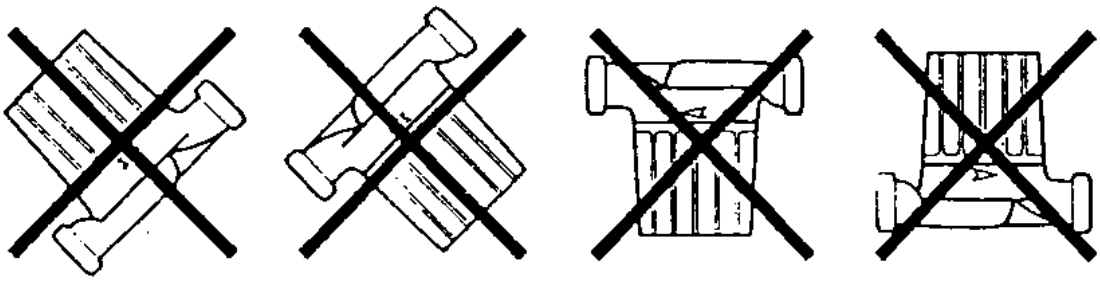


A – B – D

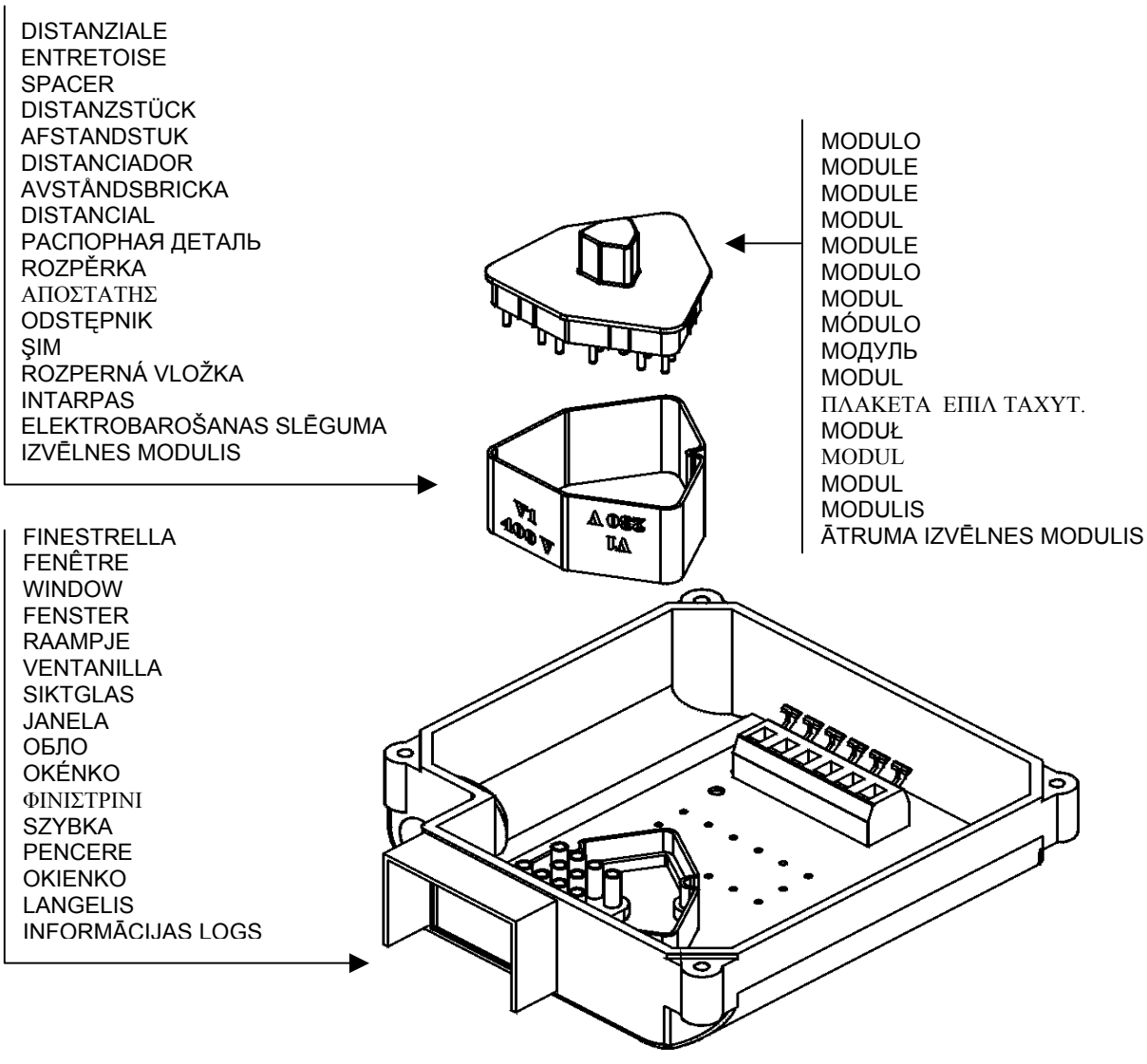


BMH – BPH
DMH – DPH

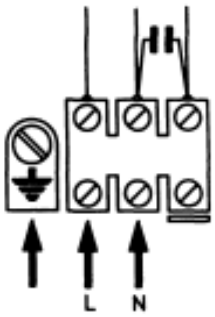
④



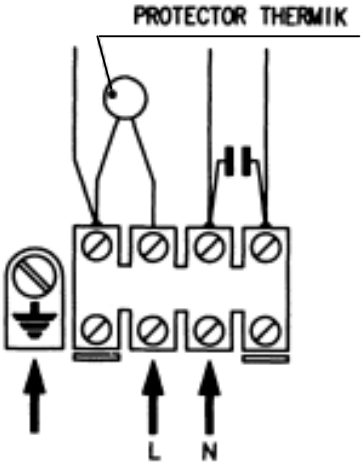
SELETTORE VELOCITÀ COLLETTIVI TRIFASE - SÉLECTEUR DE VITESSE INSTALLATIONS COLLECTIVES TRIPHASÉES - THREE-PHASE COMMUNITY CIRCULATORS SPEED SELECTOR - GESCHWINDIGKEITSWAHLSCHALTER DREIPHASEN- GEMEINSCHAFTSANLAGEN - KEUZEKNOP SNELHEID DRIEFASE COLLECTIEVE INSTALLATIES - MANDO DE VELOCIDAD INSTALACIONES COLECTIVAS TRIFASICAS - HASTIGHETSVÄLJARE FÖR TREFASPUMPAR FÖR FLERA SYSTEM - SELECTOR DE VELOCIDADE INSTALAÇÕES COLECTIVAS TRIFÁSICAS - ПЕРЕКЛЮЧАТЕЛЬ СКОРОСТИ ДЛЯ ТРЕХФАЗНЫХ ДВИГАТЕЛЕЙ ДЛЯ МНОГОСИСТЕМНЫХ УСТАНОВОК - PŘEPÍNAČ RYCHLOSTI KOLEKTIVNÍCH TŘÍFÁZOVÝCH ČERPADEL - ΕΠΙΛΟΓΕΑΣ ΤΑΧΥΤΗΤΑΣ ΤΡΙΦΑΣΙΚΩΝ ΣΥΛΛΟΓΙΚΩΝ - SELEKTOR SZYBKOCI AGREGATÓW TRÓJFAZOWYCH - ÜÇ FAZLI KOLEKTIF HIZ SELEKTÖRÜ - SELEKTOR RÝCHLOSTI TROJFÁZOVÝCH ZBEROVÝCH - TRIFAZIŲ VARIKLIŲ GREIČIŲ PERJUNGIMAS - TRĪSFĀZU CIRKULĀCIJAS SŪKŅA ĀTRUMU SLĒDZIS



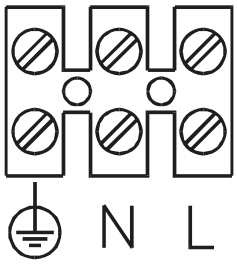
1 ~
A 20/180 X M



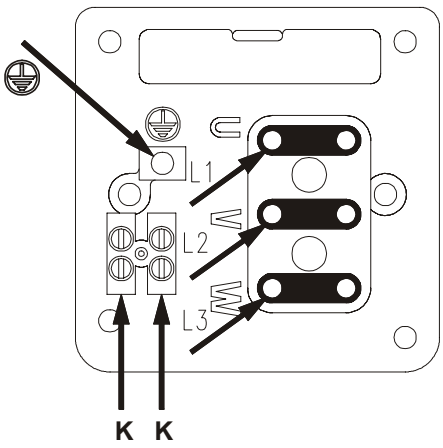
1 ~
A 50/180 X M – B 50/250.40 M – D 50/250.40 M
A 56/180 X M – B 56/250.40 M – D 56/250.40 M
A 80/180 X M – B 80/250.40 M – D 80/250.40 M

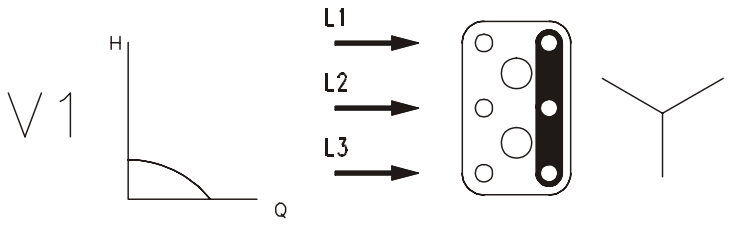


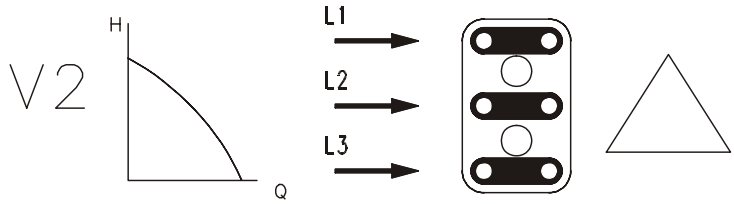
1 ~
BPH 60/250.40 M – DPH 60/250.40 M
BPH 60/280.50 M – DPH 60/280.50 M
BPH 60/340.65 M – DPH 60/340.65 M
BPH 120/250.40 M – DPH 120/250.40 M
BPH 120/280.50 M – DPH 120/280.50 M



3 ~
A 50/180 X T – B 50/250.40 T – D 50/250.40 T
A 56/180 X T – B 56/250.40 T – D 56/250.40 T
A 80/180 X T – B 80/250.40 T – D 80/250.40 T







3 ~
BMH 30/250.40 T – DMH 30/250.40 T
BPH 60/250.40 T – DPH 60/250.40 T
BPH 120/250.40 T – DPH 120/250.40 T
BMH 30/280.50 T – DMH 30/280.50 T
BMH 60/280.50 T – DMH 60/280.50 T
BPH 60/280.50 T – DPH 60/280.50 T
BPH 120/280.50 T – DPH 120/280.50 T
BPH 150/280.50 T – DPH 150/280.50 T
BPH 180/280.50 T – DPH 180/280.50 T
BMH 30/340.65 T – DMH 30/340.65 T
BMH 60/340.65 T – DMH 60/340.65 T
BPH 60/340.65 T – DPH 60/340.65 T
BPH 120/340.65 T – DPH 120/340.65 T
BPH 150/340.65 T – DPH 150/340.65 T
BPH 180/340.65 T – DPH 180/340.65 T
BMH 30/360.80 T – DMH 30/360.80 T
BMH 60/360.80 T – DMH 60/360.80 T
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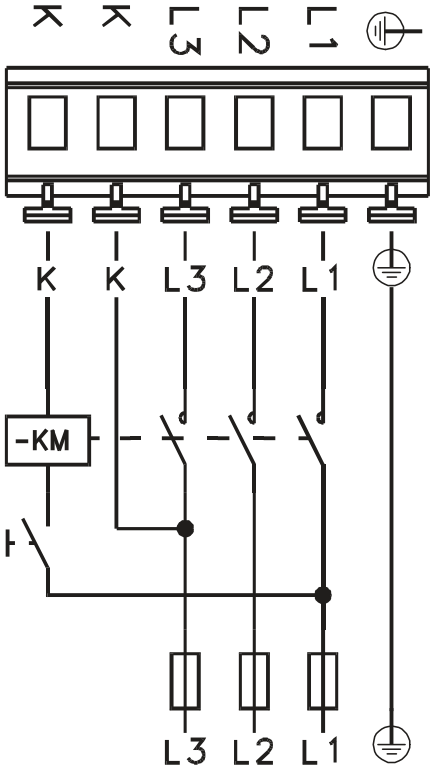
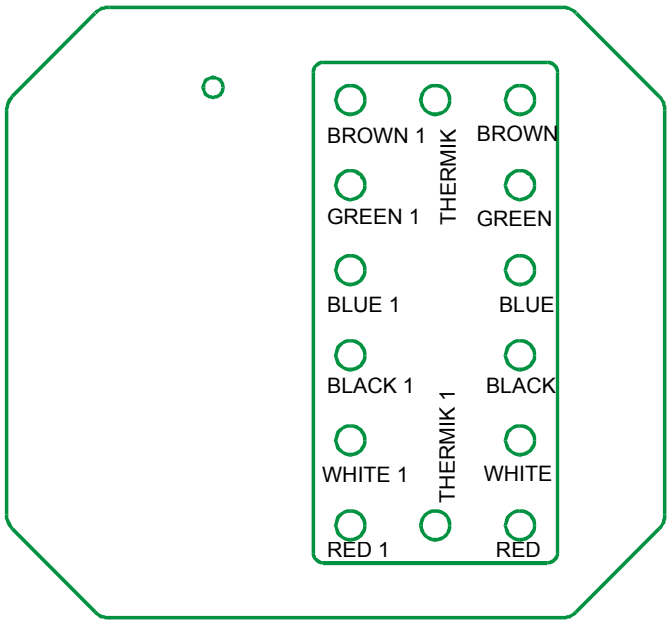
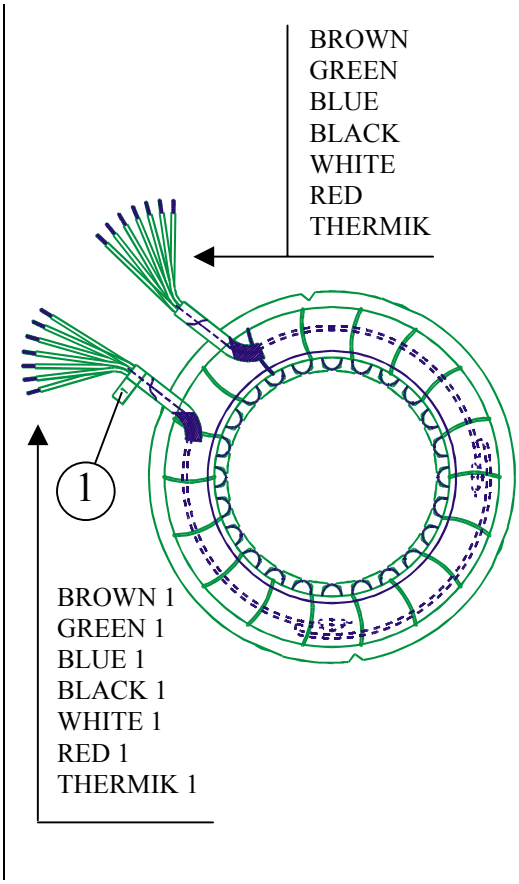
BPH 150/360.80 T – DPH 150/360.80 T
BPH 180/360.80 T – DPH 180/360.80 T



COLLEGAMENTO MOTORE-MORSETTIERA / CONNEXION MOTEUR-BOÎTE À BORNES / MOTOR-TERMINAL BOARD CONNECTION / ANSCHLUSS MOTOR-KLEMMENBRETT / AANSLUITING MOTOR-KLEMMENBORD / CONEXION MOTOR-TERMINAL DE BORNES / ANSLUTNING MOTOR-KOPPLINGSPLINT / LIGAÇÃO MOTOR-QUADRO DE TERMINAIS / СОЕДИНЕНИЕ ДВИГАТЕЛЬ-ЗАЖИМНАЯ КОРОБКА / PROPOJENÍ MOTOR-SVORKOVNICE / ΣΥΝΔΕΣΗ ΚΙΝΗΤΗΡΑ–ΚΛΕΜΜΑΣ / POŁĄCZENIE SILNIK–LISTWA ZACISKÓW / MOTOR-TERMINAL KUTUSU BAĞLANTISI / ZAPOJENIE MOTORA-VARIKLIO / IR KONTAKTŲ DĖŽUTĖS SUJUNGIMAS / MOTORA - SPAIĻU KĀRBAS PIESLĒGUMS





DICHIARAZIONE DI CONFORMITÀ

La Ditta DAB PUMPS s.p.a. – Via M. Polo,14 – Mestrino (PD) – ITALY – sotto la propria esclusiva responsabilità dichiara che i prodotti summenzionati sono conformi a:

- Direttiva del Consiglio n° 98/37/CE concernente il riavvicinamento delle legislazioni degli Stati membri CEE relative alle macchine e successive modifiche.
- Direttiva della Compatibilità elettromagnetica 89/336 e successive modifiche.
- Direttiva Bassa Tensione 73/23 e successive modifiche.

DÈCLARATION DE CONFORMITÈ

L'entreprise DAB PUMPS s.p.a. – Via M. Polo,14 – Mestrino (PD) – ITALIE – déclare sous sa responsabilité exclusive que les produits susmentionnés sont conformes à:

- la Directive du Conseil n° 98/37/CE concernant l'harmonisation des législations des Etats membres de la CEE relatives aux machines et ses modifications successives .
- la Directive de la compatibilité électromagnétique 89/336 et ses modifications successives .
- la Directive basse tension 73/23 et ses modifications successives.

DECLARATION OF CONFORMITY

The Company DAB PUMPS s.p.a. – Via M. Polo,14 – Mestrino (PD) - ITALY – declares under its own responsibility that the above-mentioned products comply with:

- Council Directive no. 98/37/CE concerning the reconciliation of the legislations of EEC Member Countries with relation to machines and subsequent modifications .
- Directive on electromagnetic compatibility no. 89/336 and subsequent modifications .
- Directive on low voltage no. 73/23 and subsequent modifications .

KONFORMITÄTSERKLÄRUNG

Die Firma DAB PUMPS s.p.a. – Via M. Polo,14 – Mestrino (PD) – ITALY – erklärt unter ihrer eigenen, ausschließlichen Verantwortung, daß die genannten Produkte den folgenden Verordnungen entsprechen:

- Ratsverordnung Nr. 98/37/CE über die Angleichung der Gesetzgebung der CEE-Staaten über Maschinen und folgende Abänderungen
- Verordnung über die elektromagnetische Kompatibilität 89/336 und folgende Abänderungen.
- Verordnung über Schwachstrom 73/23 und folgende Abänderungen.

CONFORMITEITSVERKLARING

De firma DAB PUMPS s.p.a. – Via M. Polo, 14 Mestrino (PD) – Italië, verklaart hierbij onder haar verantwoording dat hierbovengenoemde produkten conform zijn aan

- de Richtlijn van de Raad nr. 98/37/CE betreffende harmonisatie van de wetgeving in de EEG-lidstaten t.a.v. machines en daaropvolgende wijzigingen.
- De richtlijnen van de elektromagnetische overeenstemming 89/336 en latere veranderingen.
- De richtlijnen voor lage druk 73/23 en latere veranderingen

DECLARACION DE CONFORMIDAD

La Empresa DAB PUMPS s.p.a. – Via M. Polo,14 – Mestrino (PD) – ITALY – bajo su propia y exclusiva responsabilidad declara que los productos anteriormente mencionados respetan:

- Las Directrices del Consejo n° 98/37/CE referentes a la homogeneización de las legislaciones de los Estados miembros de la CEE relativas a las máquinas y sucesivas modificaciones
- Directriz de la Compatibilidad electromagnética 89/336 y sucesivas modificaciones
- Directriz Baja Tensión 73/23 y sucesivas modificaciones

FÖRSÄKRAN OM ÖVERENSSTÄMMELSE

Bolaget DAB PUMPS s.p.a. – Via M. Polo,14 – Mestrino (PD) – ITALIEN – intygar på eget ansvar att ovannämnda produkter är i enlighet med:

- Rådets direktiv nr. 98/37/CE och efterföljande ändringar som innehåller en jämkning av EU-ländernas lagstiftning beträffande maskiner.
- EMC-direktivet nr. 89/336 och efterföljande ändringar.
- Lågspänningsdirektiv nr. 73/23 och efterföljande ändringar.

DECLARACAO DE CONFORMIDADE

A firma DAB PUMPS s.p.a. – Via M. Polo,14 – Mestrino (PD), declara sob a pr**ó**pria responsabilidade que os produtos abaixo indicados e aos quais a presente declaração se refere, são conformes às seguintes normas harmonizadas:

- Directiva do Conselho n°98/37/CE relativa à adequação das legislações dos estados membros relativas às máquinas e sucessivas modificações.
- Directiva do Conselho n°73/23/CEE relativa à limites de tensão" e sucessivas modificações.
- Directiva do Conselho das Comunidades Europeias 89/336/CEE relativa à compatibilidade electromagnetica e sucessivas modificações.

ЗАЯВЛЕНИЕ О СООТВЕТСТВИИ

Фирма DAB PUMPS A.o. – вия M. Поло, 14 – Местрино (ПД) – ИТАЛИЯ – под собственную исключительную ответственность заявляет, что вышеуказанные изделия соответствуют:

- Директиве Совета n° 98/37/CE о сближении законодательств Государств, членов ЕЭС, касающихся оборудования, и последующим поправкам.
- Директиве об Электромагнитной совместимости 89/336 и последующим поправкам.
- Директиве о Низком напряжении 73/23 и последующим поправкам.

PROHLÁŠENÍ O KONFORMITĚ

Firma DAB PUMPS s.p.a. - Via M.Polo, 14 - Mestrino (PD) - ITALY - prohlašuje na vlastní zodpovědnost, že výše uvedené výrobky odpovídají těmto směrnicím:

- Směrnice č. 98/37/CE a jejich pozdních úprav ze Správní rady , týkající se sblížení se zákonodárství jednotlivých členů CEE s ohledem na strojní zařízení
- Směrnice č. 89/336 o elektromagnetické kompatibilitě a následující změny
- Směrnice č. 73/23 o nízkém napětí a následující změny.

Δήλωση Συμμόρφωσης

Η εταιρεία DAB PUMPS A.E., μέ έδρα στο Mestrino (PD) - Ιταλία, στην οδό M. Polo 14, δηλώνει υπεύθυνα πως τα παραπάνω προϊόντα τηρούν τις διατάξεις που προβλέπονται από:

- την υπ' αρ. 98/37/CE Οηγγία του Συμβουλίου μηχανές και τις επόμενες τροποποιήσεις, περί εναρμόνισης των κανονισμών των Κρατών μελών της ΕΟΚ, σχετικά με τις μηχανές
- την υπ' αρ. 89/336 Οδηγία και τις επόμενες τροποποιήσεις περί ηλεκτρομαγνητικής Συμβατότητας,
- την υπ' αρ. 73/23 Οδηγία και τις επόμενες τροποποιήσεις, περί Χαμηλής Τάσης.

ŚWIADECTWO ZGODNOŚCI

Firma DAB PUMPS s.p.a. - Via M. Polo,14 – Mestrino (PD) - ITALY – na wyłącznie własną odpowiedzialność zaświadcza że wyżej wymienione produkty są zgodne z:

- Wytyczną Rady Ministrów nr 98/37/CE w sprawie ujednolicania przepisów dotyczących maszyn wraz z późniejszymi zmianami, obowiązujących w państwach członkowskich UE.
- Wytyczną odnośnie Współdziałania elektromagnetycznego nr 89/336 z późniejszymi zmianami.
- Wytyczną odnośnie Niskiego Napięcia nr 73/23 z późniejszymi zmianami.

UYGUNLUK BEYANNAMESİ

Via M.Polo, 14 – Mestrino (PD) – ITALY – adresinde yerleşik DAB PUMPS s.p.a. Şirketi sadece kendi sorumluluğu altında olarak sözü geçen ürünlerin aşağıdaki yönetmeliklere uygun olduğunu beyan etmektedir:

- Makinelere ilişkin AET üyeleri Devletlerin yasalarını birbirlerine yaklaştırmak hususunda tarihli 98/37/CE sayılı Konsey Yönergesi ve daha sonraki değişiklikler.
- 89/336 sayılı elektromanyetik Uygunluk Yönergesi ve daha sonraki değişiklikler.
- 73/23 sayılı Alçak Gerilim Yönergesi ve daha sonraki değişiklikler.

VYHLÁSENIE O ZHODNOSTI

Spoločnosť DAB PUMPS, s.p.a. so sídlom na Via Marco Polo, 14, Mestrino (PD), Taliansko, vyhlasuje na vlastnú výhradnú zodpovednosť, že uvedené výrobky zodpovedajú:

- Smernici Rady č. 98/37/CE o približovaní legislatív členských štátov EHS v oblasti strojov a nasledujúcim úpravám.
- Smernici Elektromagnetická kompatibilita 89/336 a nasledujúcim úpravám.
- Smernici Nízke napätie 73/23 a nasledujúcim úpravám.

ATITIKTIES DEKLARACIJA

DAB PUMPS s.p.a. – Via M. Polo, 14 – Mestrino (PD) - Italija - garantuoja, kad šiame leidinyje išvardyti produktai atitinka šias ES direktyvas:

- 98/37/CE, bei jos pataisas - mašinų detalių atitikimas ES šalyse.
- 89/336, bei jos pataisas – elektromagnetinis suderinamumas.
- 73/23, bei jos pataisas – elektrotechniniai gaminiai skirti naudoti esant tam tikroms įtampos riboms.

ATBILSTĪBAS DEKLARĀCIJA

Kompānija DAB PUMPS s.p.a. – Via M. Polo,14 – Mestrino (PD) - ITĀLIJA – paziņo, ka uzņemas pilnu atbildību par to, ka augstāk minētie produkti atbilst:

- Eiropas Padomes direktīvai nr. 98/37/CEE ar sekojošiem labojumiem par ES dalībvalstu likumdošanas saskaņošanu, kas attiecas uz iekārtām.
- Direktīvai nr. 89/336 ar sekojošiem labojumiem par Elektromagnētisko savietojamību.
- Direktīvai nr. 73/23 ar sekojošiem labojumiem par Zemo spriegumu.

Mestrino (PD), 07 Gennaio 1998

Attilio Conca
Legale Rappresentante
Legal Representative

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1. WARNINGS

1.1 

Read this documentation carefully before installation.
It is indispensable to have the electrical and hydraulic connections made by skilled personnel in possession of the technical requirements indicated by the safety regulations in force in the country in which the product is installed.
Failure to comply with the safety regulations not only causes risk to personal safety and damage to the equipment, but invalidates every right to assistance under guarantee.

1.2 

The term **skilled personnel** means persons whose training, experience and instruction, as well as their knowledge of the respective standards and requirements for accident prevention and working conditions, have been approved by the person in charge of plant safety, authorizing them to perform all the necessary activities, during which they are able to recognize and avoid all dangers. (Definition for technical personnel IEC 364).

1.3 

Check that no damage has been done during transport or storage. In particular, ensure that the external casing is perfectly entire and in excellent condition.

2. RESPONSIBILITY

The Manufacturer does not ensure good operation of the circulator if it is tampered with or modified or made to operate at values beyond the data on the plate.
The Manufacturer also declines all responsibility for possible errors in this booklet, if due to misprints or errors in copying. The company reserves the right to make any modifications to products that it may consider necessary or useful, without affecting the essential characteristics.

3. APPLICATIONS

The single version circulators in series A, B, BMH, BPH, and the twin versions in series D, DMH, DPH have been designed for the circulation of:

- hot water in heating systems.
- water in industrial hydraulic circuits.
- water in conditioning circuits.

No circulator may be used for circulating domestic water or liquid foodstuffs.

4. TECHNICAL DATA AND RANGE OF USE

Maximum temperature of the fluid TF as a function of the air temperature TA:

Community and small community installations

(BPH 150….T, DPH 150…T BPH…M, DPH….M excluded)

TA °C	30	40	55	70
TF °C	120	110	95	80

Only BPH 150….T, DPH 150…T BPH…M, DPH….M

TA °C	30	40	55	70
TF °C	110	100	85	70

Minimum pressure required at intake to avoid cavitation phenomena, (values for the maximum flow rate):

SMALL COMMUNITY CIRCULATORS: SERIES A, B, D

Models	Minimum head in metres at a temperature of 90°C
A20 – A50 – B50 – D50 – A56 – B56 – D56	1.5
A80 – B80 – D80	2.5

COMMUNITY CIRCULATORS: SERIES BMH, BPH, DMH, DPH

Models	Minimum head in metres at a temperature of:			
	75°C	90°C	110°C	120°C
BMH 30/250.40 T – DMH 30/250.40 T BMH 30/280.50 T – DMH 30/280.50 T	0.9	4	—	18
BPH 60/250.40 M – DPH 60/250.40 M	1,6	4	14	—
BPH 60/250.40 T – DPH 60/250.40 T	1,6	4	—	19
BPH 120/250.40 T – DPH 120/250.40 T	6	9	—	23
BPH 120/250.40 M – DPH 120/250.40 M	6	9	18	—
BPH 120/280.50 M – DPH 120/280.50 M	2	5	—	—
BMH 60/280.50 T – DMH 60/280.50 T BMH 30/340.65 T – DMH 30/340.65 T BMH 60/340.65 T – DMH 60/340.65 T BMH 30/360.80 T – DMH 30/360.80 T	4	7,5	—	21
BPH 60/280.50 M – DPH 60/280.50 M	1,6	6	14	—
BPH 60/280.50 T – DPH 60/280.50 T	1,6	6	—	19
BPH 120/280.50 T – DPH 120/280.50 T BMH 60/360.80 T – DMH 60/360.80 T	2	5	—	20
BPH 60/340.65 M – DPH 60/340.65 M	1	4	13	—
BPH 60/340.65 T – DPH 60/340.65 T	1	4	—	18
BPH 120/340.65 T – DPH 120/340.65 T	6	9	—	22
BPH 120/360.80 T – DPH 120/360.80 T	6	10	—	22
BPH 180/280.50 T – DPH 180/280.50 T	4	7	16	—
BPH 150/280.50 T – DPH 150/280.50 T BPH 150/340.65 T – DPH 150/340.65 T BPH 150/360.80 T – DPH 150/360.80 T BPH 180/340.65 T – DPH 180/340.65 T BPH 180/360.80 T – DPH 180/360.80 T	7	11	18	—

- **Supply voltage:** see electric data plate
- **Absorbed power:** see electric data plate
- **Pumped fluid:** clean, free from solids or abrasive substances, non aggressive.
- **Flow rate:** small community circulators: from 1 to 12 m^3/h
community circulators: from 1.5 m^3/h to 78 m^3/h
- **Hmax (m) - Head:** small community circulators: 8 m.
community circulators: 18 m.
- **Degree of motor protection:** IP44; small community circulators
IP42; community circulators
- **Degree of terminal board protection:** IP44 small community and single-phase community circulators
IP55 three-phase community circulators

- **Protection class:** H
- **Cable clamp:** PG 11 and/or PG 13,5 a depending on models
- **Line fuses class AM:**

Small community circulators

Model	Line fuses (Amps)	
	1x220-240V 50Hz	3x380V 50Hz
A 20	1	
A 50	1	1
B 50	1	1
D 50	1	1
A 56	1.5	1
B 56	1.5	1
D 56	1.5	1
A 80	1.5	1
B 80	1.5	1
D 80	1.5	1

Community circulators

Model	Line fuses (Amps)		
	1x220-240V 50Hz	3x230V 50Hz	3x400V 50Hz
BMH 30/250.40 T – DMH 30/250.40 T		1	1
BMH 30/280.50 T – DMH 30/280.50 T		1	2
BPH 60/250.40 M – DPH 60/250.40 M	2		
BPH 60/250.40 T – DPH 60/250.40 T		2	2
BPH 120/250.40 T – DPH 120/250.40 T BMH 60/280.50 T – DMH 60/280.50 T BMH 30/340.65 T – DMH 30/340.65 T BMH 60/340.65 T – DMH 60/340.65 T BMH 30/360.80 T – DMH 30/360.80 T BPH 60/340.65 T – DPH 60/340.65 T BPH 60/280.50 T – DPH 60/280.50 T		2	2
BPH 60/280.50 M – DPH 60/280.50 M	4		
BPH 120/280.50 T – DPH 120/280.50 T		4	2
BPH 120/280.50 M – DPH 120/280.50 M	4		
BMH 60/360.80 T – DMH 60/360.80 T		2	2
BPH 60/340.65 M – DPH 60/340.65 M	4		
BPH 120/340.65 T – DPH 120/340.65 T BPH 150/280.50 T – DPH 150/280.50 T		4	4
BPH 120/360.80 T – DPH 120/360.80 T		6	4
BPH 150/340.65 T – DPH 150/340.65 T		6	4
BPH 150/360.80 T – DPH 150/360.80 T		6	6
BPH 180/280.50 T – DPH 180/280.50 T		4	4
BPH 180/340.65 T – DPH 180/340.65 T		6	6
BPH 180/360.80 T – DPH 180/360.80 T		6	4

- **Maximum working pressure:** 10 bar
- **Storage temperature:** -10°C +40°C
- **Relative humidity of the air:** MAX 95%
- **Noise level:** The noise level falls within the limits envisaged by EC Directive 89/392/EEC and subsequent modifications.

Motor construction: in accordance with standards CEI 2-3 - CEI 61-69 (EN 60335-2-41)

5. MANAGEMENT

5.1 Storage

All the circulators must be stored indoors, in a dry place, possibly with constant air humidity, free from vibrations and dust.
They are supplied in their original packaging and must remain there until the time of installation. If this is not possible, the intake and delivery openings must be accurately closed.

5.2 Transport

Avoid subjecting the products to needless jolts or collisions.
To lift and transport the circulator use fork-lift trucks and the pallet supplied (if contemplated).

5.3 Weight

The adhesive label on the package indicates the total weight of the circulator.

6. INSTALLATION

6.1 The installation personnel must be qualified.

The terminal board must never be turned downward. To position it, follow the diagrams on page 1 - 2.

6.2 The circulator may be installed in heating systems either on the delivery pipe or on the return pipe; the arrow stamped on the pump body indicates the direction of flow.

6.3 Install the circulator as high as possible above the minimum level of the boiler, and as far as possible from bends, elbows, derivations, as they could cause turbulence in the water entering the circulator, with consequent noisy operation.

6.4 To facilitate control and maintenance operations, install an on-off valve on both the intake and the delivery pipe.

6.5 Fit the circulator on the system only after having completed the welding jobs.

6.6 Before installing the circulator, accurately flush the system with only water at 80°C, Then completely drain the system to eliminate any harmful substance that may have got into circulation.

Always fit the circulator with the motor shaft in a horizontal position (fig. 4 on page 3).

6.7 Assemble it in such a way as to avoid the dripping of water onto the water and onto the terminal board during both installation and maintenance.

6.8 Avoid mixing hydrocarbon-derived additives and aromatic products with the circulating water. The addition of antifreeze, where necessary, must not exceed the maximum of 30%.

6.9 **Caution!!** in the presence of thermal insulation, ensure that the holes for discharging condensate from the motor casing are not closed or partly blocked.
(see Fig. 3 page 2)

7. ELECTRICAL CONNECTION:

Caution: always follow the safety regulations!

Scrupulously follow the wiring diagrams on page 4, 5.

7.1 **The electrical connections must be made by a skilled, authorised electrician, who assumes all the responsibility.**

7.2 Ensure that the mains voltage is the same as the value shown on the motor data plate and that it is possible to MAKE A GOOD EARTH CONNECTION.

7.3 In fixed installations, International Standards require the use of insulating switches with a fuse-carrier base.

7.4 All the single-phase motors are provided with built-in overload protection and they may be connected directly to the mains. All the three-phase motors have a built-in probe for connection to the external protection relay and to the environment thermostat as indicated on page 4, 5. (to be connected by the user.)

7.5 When making the electrical connection to the supply line, fit a two-pole switch (M single-phase versions), three-pole or four-pole if there is a neutral lead (T three-phase versions) with contact opening distance of at least 3 mm, and with AM type fuses (motor start) with a suitable current value for the motor that is to be fed.

7.6 After making the electrical connection of three-phase circulators, before filling the system, always check the direction of rotation of the motor, unscrewing the breather cap and letting the cap run for a few seconds.

7.7 If the motor is turning in the opposite direction to the arrows on the motor plate, this indicates an incorrect electrical connection.

7.8 To connect the motor protector to the outside of the terminal box, it is necessary to drill a hole in the box at the level of the niche and to apply a cable grommet (not supplied as standard).

7.9 For the connection between the motor and the terminal box, follow the diagram on page 5. ATTENTION: the bundle of cables for group N°1 must be connected to the respective connections of group N°1 on the terminal box. The coloured cables in the bundles must be connected to the connections marked with the respective colour.

8. STARTING UP

8.1 After installation and after having checked the direction of rotation, fill and bleed the system before running the circulator. (fig.1)

Avoid running the circulator when there is no water in the system.

8.2 As well as being at high temperature and high pressure, the fluid in the system may also be in the form of steam. DANGER OF BURNING.

8.3 It is dangerous to touch the circulator. DANGER OF BURNING.

8.4 If it is necessary to bleed air from the motor, slowly slacken the breather cap and let the fluid flow out for a few seconds. (fig.1)

8.5 It is dangerous to unscrew the cap quickly; the fluid in the system is at a high temperature and high pressure and can cause burns.

Protect the electrical components during bleeding operations.

9. SPEED ADJUSTMENT

9.1 For **single-phase** circulators the speed is adjusted by turning the knob of the three-position switch and it may be done when the motor is live.

The operations for changing the speed of three-phase circulators must be carried out when the power supply is disconnected.

9.2 To set the speed of three-phase **small community** circulators, proceed as follows:

1. Ensure that the circulator is not receiving power from the mains.
2. Slacken the retaining screws of the terminal board cover.
3. Make the electrical connection according to the desired speed, as indicated on page 4.
4. Accurately tighten the retaining screws.
5. Reconnect the electric power supply.

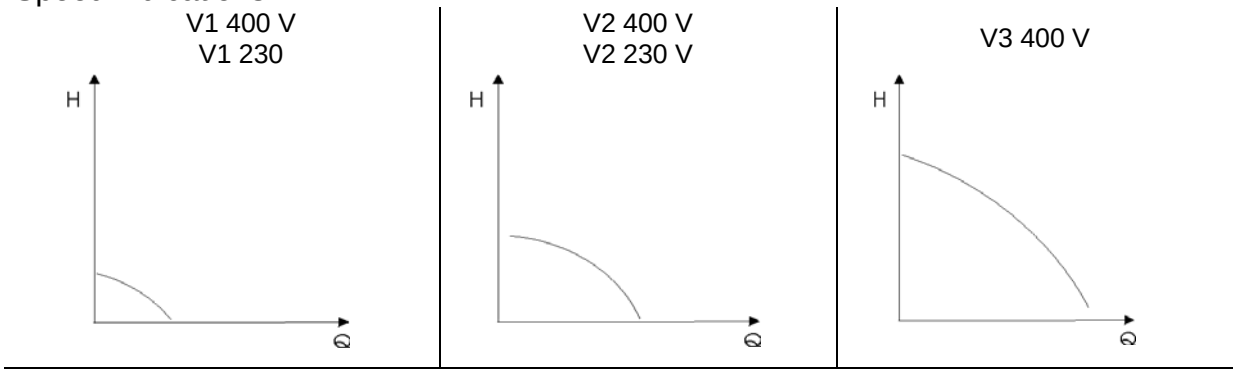
9.3 To set the speed of three-phase **community** circulators, refer to the figure on page 3 and perform the following operations:

1. Ensure that the circulator is not receiving power from the mains.
2. Remove the terminal board cover.
3. Slip out the speed selector module and replace it so that the number corresponding to the speed and the required voltage value are visible through the window of the terminal board.
   ATTENTION: To change over from setting speed at 400 V to setting speed at 230V, it is necessary to slip out the selector module, remove the spacer, turn it upside down and position it so that, after replacing the module, the speeds for 230 V power supply are visible in the window of the terminal board.
   TAKE CARE not to position the module so that the danger warning is visible in the window. ⚠
4. Put the cover back on the terminal board.
5. Reconnect the electric power supply.

9.4 **The speeds for voltages 230 V and 400 V must be associated respectively with the mains voltage.**

9.5 For 400 V three-phase community circulators it is possible to set 3 speeds, while at 230 V it is possible to set 2.

Speed indications:



9.6 If a lower speed is selected, considerable energy saving may be obtained and less noise.

9.7 **Twin circulators must have their motors set at the same speed.**

10. MAINTENANCE

⚠ **Maintenance must be entrusted to qualified personnel and carried out respecting the warnings given in this manual.**

10.1 When correctly installed, the circulator does not require any maintenance during operation.

10.2 From time to time it is recommended to check the absorbed current and the head, so as to prevent malfunctions.

10.3 Before restarting the circulator after the summer season, ensure that motor shaft is not blocked by scale deposits. If this should occur, unscrew the breather cap when the system is cold and turn the motor shaft with a screwdriver (fig.2).

10.4 In the bottom of the pump body there are drainage holes for water that forms due to condensation. Ensure that these holes are not blocked by foreign bodies or dirt deposits.

10.5 If the motor has to be dismantled from the pump body, it is recommended to replace the seal, ensuring that is correctly positioned during reassembly.

11. TROUBLESHOOTING

FAULT	CHECK (possible cause)	REMEDY
1. The circulator does not start.	A. No supply voltage. B. Incorrect supply voltage. C. Faulty capacitor (single-phase motors). D. Rotor blocked by deposits on the bushes.	A. Check the electric connections and the fuses. B. Check the data on the plate and apply the correct voltage. Check the window in the terminal board to ensure that the set voltage is the same as the mains voltage. C. Change the capacitor. D. Select the maximum speed and/or free the rotor with a screwdriver.
2. The system is noisy.	A. Flow rate too high. B. Air in the system.	A. Select a lower speed. B. Bleed the system.
3. The circulator is noisy.	A. Air in the pump. B. Intake pressure too low. C. The pump is turning in the wrong direction (three-phase pumps).	A. Bleed the circulator. B. Increase the intake pressure. C. Invert the electrical connection of the terminal board.
4. The circulator starts and then stops after a short time.	A. No power supply on one phase (three-phase motors). B. Dirt or scale between the rotor and the stator lining or between the impeller and the pump body.	A. Check the connections and correct supply of the 3 phases. B. Check that the shaft is turning freely. Remove any dirt and/or scale.

02/05 cod.0013.596.50

DAB PUMPS S.p.A.
Via M. Polo, 14-35035 Mestrino (PD) - Italy
Tel. +39 049 90 48811 - Fax + 39 049 9048847
http://www.dabpumps.com
Vendite Italia Area Nord:
tel. 049 9048873 Fax 049 9048888
Vendite Italia Area Centro Sud:
tel. 049 9048874 Fax 049 9048888
Gestione Depositi:
tel. 049 9048875 Fax 049 9048888
Assistenza Tecnica Clienti:
tel. 049 9048911 Fax 049 9048920

DAB PUMPS Ltd
Unit 4,Stortford Hall Industrial Park,
Dunmow Road, Bishops Stortford,
Hertfordshire,
CM23 5GZ
Tel. 01279 652776

DAB PUMPEN DEUTSCHLAND GmbH
Tackweg 11
D – 47918 Tönisvorst
Tel. 0049 2151 82136 0
Fax 0049 2151 82136 36

DAB PUMPS B.V.
Albert Einsteinweg, 4
NL - 5151 DRUNEN
Tel. 0031 4163 80408
Fax 0031 4163 80181

DAB POMPES S.A.
Brusselstraat, 150
B-1702 Groot-Bijgaarden
Tel. 0032 2 4668353
Fax 0032 2 4669218