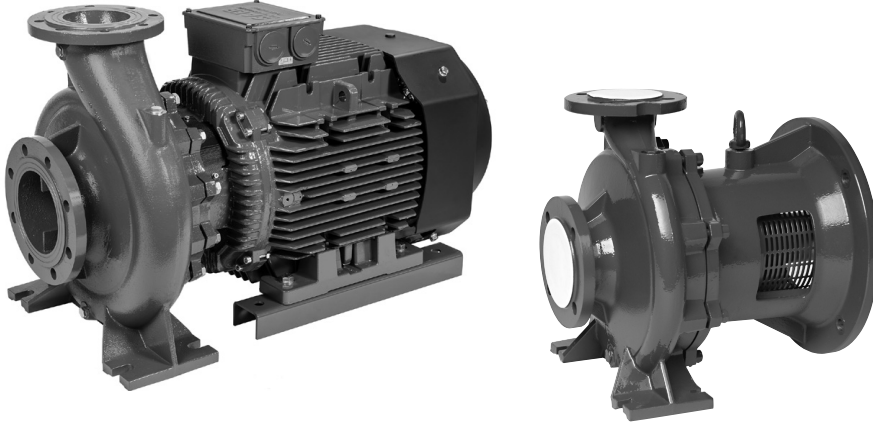


SAER®

ELETTROPOMPE



IR MG

IR

Elettropompe monoblocco ad aspirazione assiale normalizzate EN733

Close-coupled end-suction electric pumps according to EN733

Electrobombas monobloque a succion axial normalizadas EN733

Electropompes monobloc à aspiration axiale normalisées EN733

Monoblock -Elektropumpen mit axialer Ansaugung nach EN733

Моноблочные электронасосы осевого всасывания согласно EN733

MG

Pompe ad aspirazione assiale normalizzate EN733 con giunto rigido

Close-coupled end-suction pumps according to EN733 with stab shaft

Bombas monobloque a succion axial normalizadas EN733 con acoplamiento rígido

Pompes monobloc à aspiration axiale normalisées EN733 avec accouplement rigide

Pumpen mit axialer Ansaugung nach EN733 mit starrer Kupplung

Насосы осевого всасывания согласно EN733 с жесткой муфтой

Manuale uso e manutenzione

Use and maintenance manual











Manual de empleo y mantenimiento

Manuel de emploi et de entretien

Betriebs und Wartungsanleitung

Инструкция по эксплуатации и обслуживанию

I	Questo manuale é da considerarsi parte integrante della fornitura del prodotto; qualora risultasse rovinato o illeggibile in qualsiasi parte occorre richiederne immediatamente una copia. Ogni operatore addetto all'uso del prodotto, o responsabile della manutenzione, deve conoscerne la collocazione e deve avere la possibilità di consultarlo in ogni momento.
GB	This manual is to be considered an integral part of the supply of the product; in the event it is ruined or any part is illegible, you should immediately request a copy. Every operator assigned to use the product or responsible for its maintenance must know its location and must be able to consult it at any time.
E	El presente manual deberá considerarse parte integrante del suministro del producto; en caso de que éste estuviera en malas condiciones o fuera ilegible en cualquier parte, deberá solicitarse inmediatamente una copia del mismo. Todo operador encargado del uso del producto, o responsable del mantenimiento, deberá conocer su ubicación, así como tener la posibilidad de consultarlo en todo momento.
FR	Ce manuel doit être considéré comme partie intégrante de la fourniture du produit; s'il devait s'abîmer ou devenir illisible, en demander immédiatement une copie. Tout opérateur chargé d'utiliser le produit ou responsable de la maintenance doit en connaître l'emplacement et doit avoir la possibilité de le consulter à tout moment.
D	Dieses Handbuch ist Bestandteil der Produktlieferung, sollte es beschädigt oder unleserlich sein, ist umgehend eine Kopie anzufordern. Jeder Bediener des Produktes oder Verantwortliche für die Wartung muss ihren Aufbewahrungsort kennen und die Möglichkeit haben, jederzeit in der Anleitung nachzusehen.
RUS	Настоящее руководство является неотделимой частью поставки данного товара, в случае, если руководство испорчено или часть его нечитаемая, вам следует незамедлительно запросить новую копию. все работники, ответственные за работу или обслуживание данного товара, должны знать расположение Руководства и иметь к нему свободный доступ.

	I	Prima di eseguire qualsiasi operazione, leggere attentamente il presente manuale
	GB	Before performing any operation on the machine, it is indispensable that you be completely familiar with the entire use and maintenance manual
	E	Antes de ejecutar cualquier operación, leer muy atentamente este manual.
	F	Avant de commencer l'installation, lire attentivement ce manuel.
	D	Vor dem Ausführen jeglichen Vorgangs lesen Sie bitte aufmerksam die vorliegende Anleitung.
	RUS	Прежде чем производить какие-либо операции с прибором, важно полностью ознакомиться со всеобъемлющей инструкцией по его использованию и обслуживанию.
	I	L'apparecchiatura non deve essere utilizzata da bambini o persone con ridotte capacità fisiche, sensoriali o mentali o senza la necessaria esperienza o conoscenza, a meno che non venga fornita la necessaria istruzione e supervisione.
	GB	The appliance is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
	E	El aparato no debe ser manipulado o usado por niños o por personas con dificultades físicas, sensoriales o funciones mentales, o falta de experiencia y conocimientos, aunque bajo supervisión o instrucción.
	F	L'appareil ne peut pas être utilisé par les enfants ou par personnes avec capacités physiques, sensorielles et mentales réduites, ou par ceux qui manquent d'expérience et connaissance, sauf qu'ils soient contrôlés ou qu'ils aient été instruits avant.
	D	Das Gerät soll von Kindern, physisch, geistig behinderten Personen, Personen mit Sinnesbehinderungen oder ohne entsprechende Erfahrungen oder Kenntnisse nicht benutzt werden, mit Ausnahme der Fälle, in denen sie beaufsichtigt oder instruiert werden.
	RUS	Прибор не должен использоваться детьми, лицами с ограниченными физическими, сенсорными, умственными способностями, некомпетентными или неопытными людьми, за исключением случаев, когда они находятся под надзором или же им даны инструкции.
	I	Installare la pompa fuori dalla portata dei bambini
	GB	Install the pump out of children's reach
	E	Instalar la electrobomba fuera del alcance de niños
	F	Installer la pompe loin de la portée des enfants
	D	Die Pumpe an der Stelle einsetzen, wo sie für die Kinder unzugänglich ist.
	RUS	Устанавливайте насос в недоступном для детей месте.
	I	Collegare l'elettropompa alla rete tramite un interruttore onnipolare, in grado di interrompere tutti i fili di alimentazione, per isolare il motore in caso di malfunzionamenti o piccoli interventi di manutenzione. Il dispositivo di disconnessione dalla rete di alimentazione deve essere di categoria di sovratensione III.
	GB	Connect the pump to the feeding line through an omni-polar switch that can disconnect all the feeding cables to insulate the motor in case of malfunction or small maintenance operations. The disconnection device from the supply mains must be over-voltage III category
	E	Conectar la electrobomba a la red de alimentación a través de un interruptor onnipolar, que sea en condición de interrumpir todos los cables de alimentación, para aislar el motor en caso de falla y/o pequeñas intervenciones de mantenimiento. El dispositivo de desconexión a la red de alimentación tiene que ser de categoría de sobretensión III
	F	Connecter l'électropompe au réseau à travers un interrupteur onnipolaire, capable d'interrompre tous les fils d'alimentation, pour isoler le moteur en cas de mauvais fonctionnement ou petites interventions d'entretien. Le dispositif de déconnexion du réseau d'alimentation doit être de catégorie de surtension III
	D	Die Elektropumpe ans Netz mit Hilfe eines Schalters anschließen, der die Netzkabel im Fall des Schlechtfunktionierens oder nicht bedeutender Wartungsarbeiten unterbrechen könnte. Die Einrichtung für die Ausschaltung vom Netz der elektrischen Speisung sollte der Kategorie der Ueberspannung III entsprechen.
	RUS	Подсоединяйте электронасос к сети посредством переключателя, способного прервать кабели питания с целью изоляции двигателя в случае неполадок или незначительного сервисного вмешательства. Устройство для отключения от сети питания должно соответствовать категории перенапряжения III.
	I	Installare un interruttore differenziale ad alta sensibilità (0,03 A)
	GB	Install a residual current device (RCD) with rated residual operating current not exceeding 0,03 A.
	E	Instalar un interruptor diferencial de alta sensibilidad (max 0,03 A).
	F	Monter un interrupteur différentiel d'haute sensibilité (max 0,03 A).
	D	Montieren Sie den hochempfindlichen Frequenzinverter (0, 03A).
	RUS	Установите дифференциальный преобразователь высокой чувствительности (0, 03A)
	I	Per pompe trifase e per pompe senza dispositivo di protezione integrato: utilizzare un dispositivo di protezione termica regolato su una corrente massima assorbita non superiore al 5% della corrente di targa e con tempo di intervento inferiore a 30 secondi.
	GB	For three-phase pumps and for pumps without integrated protection device: use a thermal protection device adjusted on a maximum absorbed current not higher than 5% the current stated in the label and with an operating time lower than 30 seconds.
	E	Para las bombas trifásicas y para bombas sin el dispositivo de protección integrado: utilizar un dispositivo de protección térmica regulado sobre una corriente máxima absorbida no superior al 5% de la corriente de placa y con un tiempo de intervención inferior a los 30 segundos.
	F	Pour pompes triphasées et pour pompes sans dispositif de protection intégré: utiliser un dispositif de protection thermique calibré sur un courant maximum absorbé pas supérieure au 5% de la courante de plaque et avec un temps d'intervention inférieur au 30 seconds.
	D	Für dreiphasige Pumpen und für die Pumpen ohne eingebaute Schutzeinrichtung: gebrauchen Sie termische Schutzeinrichtung, die auf den maximal verbrauchten Strom eingestellt ist, der nicht höher als 5% vom auf dem Typenschild angegebenen Strom ist, mit der Eingriffszeit weniger als 30 Sekunden.
	RUS	Для трёхфазных насосов без встроенного защитного устройства: следует использовать тепловое защитное устройство, установленное на максимальный потребляемый ток, не превышающий 5% от тока указанного на идентификационной табличке, со временем вмешательства менее 30 секунд
	I	Eseguire il collegamento di messa a terra
	GB	Make the earthing connection
	E	Ejecutar las conexiones con tierra
	F	Executer la connection de mise à la terre
	D	Erdungsanschluss ausführen.
	RUS	Осуществите заземление.
	I	Evitare che il cavo di alimentazione possa toccare parti soggette a riscaldamento.
	GB	Pay attention that the feeding cable doesn't touch parts subject to heating.
	E	Evitar que el cable de alimentación pueda venir a contacto con partes sujetas a recalentamiento
	F	Eviter que le cable d'alimentation puisse toucher les parties sujets au surchauffage
	D	Darauf achten, dass das Netzkabel die erwärmten Teile nicht berührt.
	RUS	Избегайте прикосновения кабеля к нагревающимся частям.
	I	Garantire la libera ventilazione del motore
	GB	Grant the free ventilation of the motor
	E	Garantizar libre ventilación al motor
	F	Garantir la libre aération du moteur
	D	Freie Motorlüftung gewährleisten.
	RUS	Обеспечьте свободную вентиляцию двигателя.
	I	Evitare che eventuali perdite accidentali possano causare danni
	GB	Avoid that any casual leak causes damages
	E	Evitar que algunas pérdidas puedan causar daños
	F	Eviter que des pertes accidentelles puissent causer des dommages
	D	Vermeiden, dass eventuelle zufällige Verluste Schaden verursachen
	RUS	Избегайте повреждений, вызванных возможными случайными утечками.

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FIG. 1 : Targa identificativa / Nameplate / Табличка

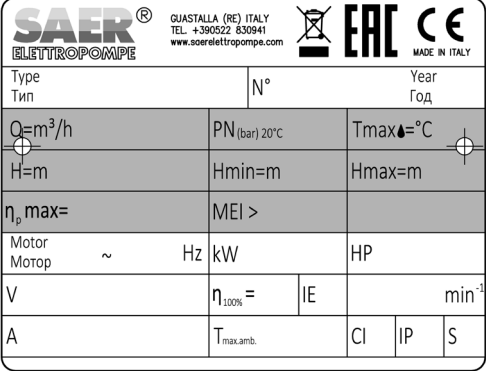
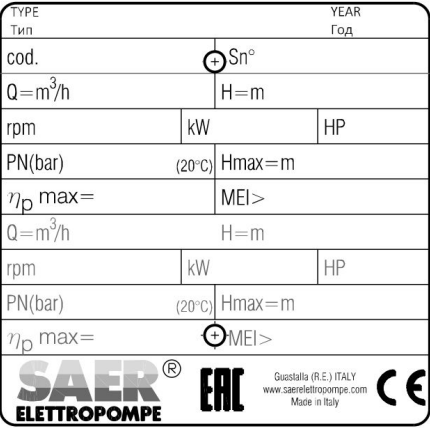
Versioni monoblocco / Close coupled versions / Моноблочное исполнение		TYPE		Tipo / Pump model/ Модель насоса	
		YEAR		Anno di costruzione / Year of manufacturing / Год выпуска	
		N°		Numero di matricola / Serial number / Серийный номер	
		Q		Campo di portata / Flow range / Диапазон расхода	
		H		Campo di prevalenza/ Head range / Диапазон напора	
		Pn		Max working pressure of the pump / Massima pressione di lavoro della pompa / Максимальное рабочее давление	
		T _{max}		Temperatura massima del liquido / Maximum liquid temperature / Максимальная температура жидкости	
		H _{min}		Prevalenza minima / Minimum head / Минимальный напор	
		H _{max}		Prevalenza a mandata chiusa / Close delivery head / Высота закрытой подачи	
		η _{pmax}		Efficienza idraulica / Pump's hydraulic eff. / гидравлика КПД	
		MEI		Indice MEI / MEI Index / Индекс MEI	
Versioni con giunto rigido / Stub shaft versions / Исполнение с жёсткой муфтой		Motor		Numero di fasi e frequenza / Number of phases and frequency / Количество фаз и частота	
		kW		Potenza richiesta / Power required (max or duty point) / Необходимая мощность кВт (макс. и в рабочей точке)	
		HP		Tensione / Voltage / Напряжение	
		V		Classe di efficienza del motore / Motor efficiency class / Класс энергоэффективности двигателя	
		IE		Velocità di rotazione / Speed / Скорость	
		min ⁻¹		Corrente / Current / Ток	
		A		Temperatura ambiente massima / Maximum ambient temperature / Максимальная температура окружающей среды	
		T _{max.amb}		Classe di isolamento / Insulation class / Класс изоляции	
		CI		Grado di protezione / Protection grade / Класс защиты	
		IP		Servizio / Service / Режим	
		S			

Fig. 2 : Movimentazione / Handling / Перемещение

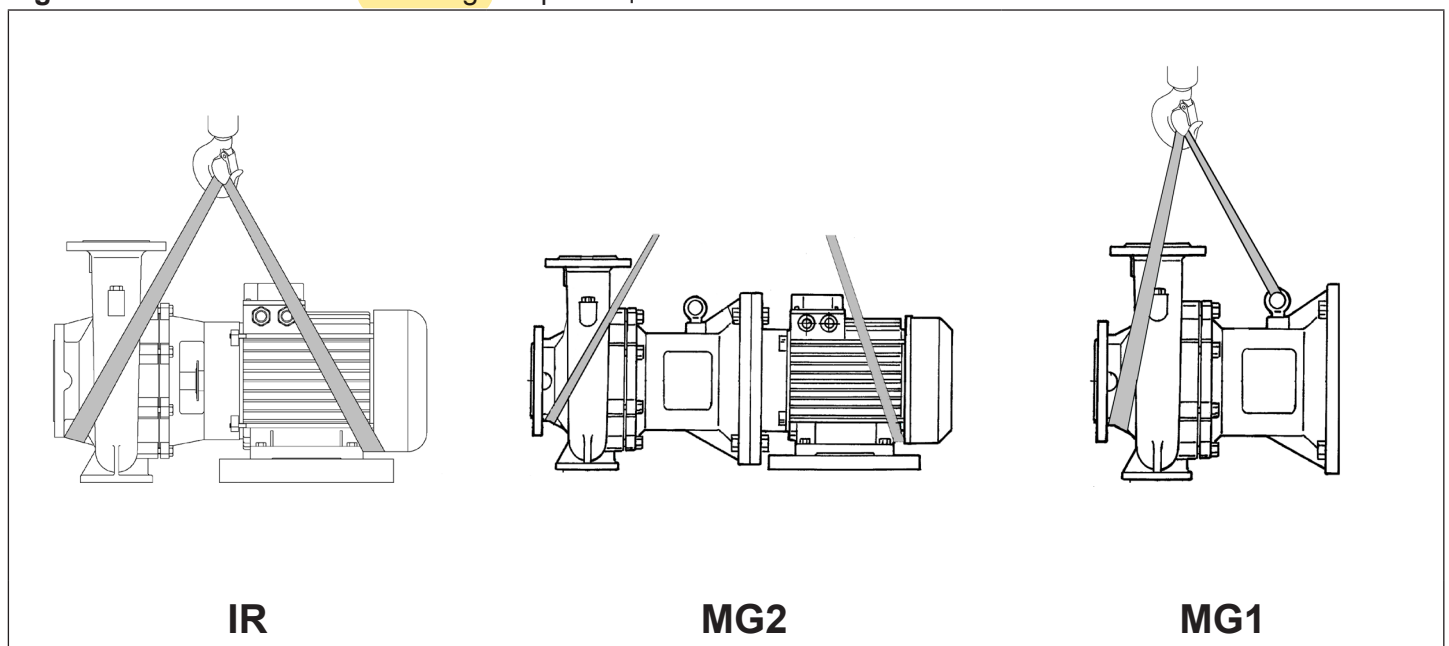


Fig. 3 : Posizioni di installazione / Installation positions / Расположение установки

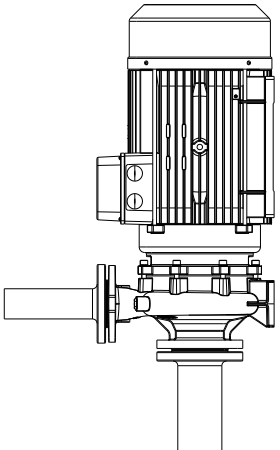
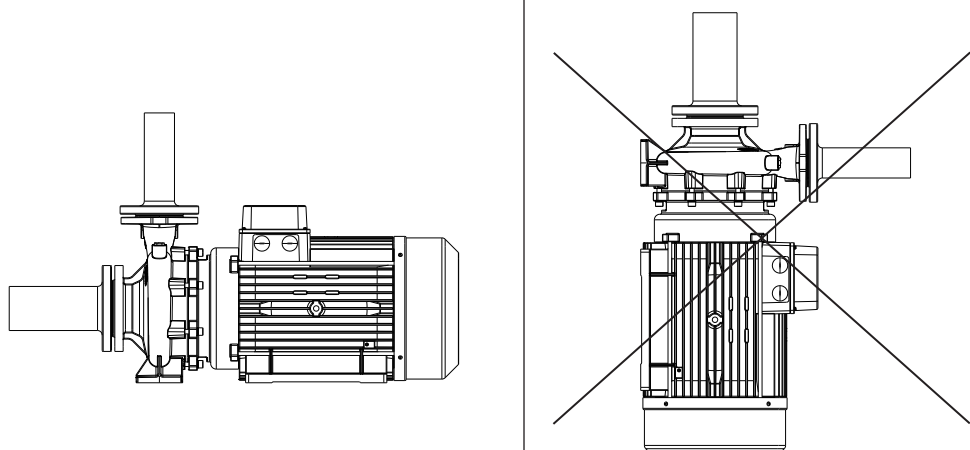
Consentita / Allowed / Разрешена	Non consentita / Not allowed / Не разрешена
	

FIG. 4 : Connessioni ausiliarie / Pump's auxiliary connections / Соединения вспомогательных

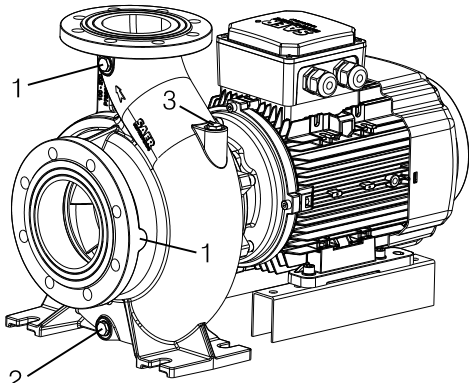


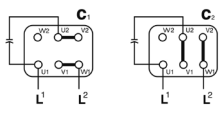
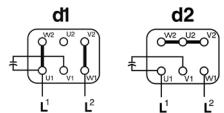
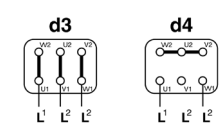
	1	Connessione per trasduttori di pressione / Connection for pressure transducers
	2	Tappo di scarico per svuotamento / Pump's draining cap / Пробка сливного отверстия для опорожнения
	3	Tappo per riempimento / Filling cap / Пробка для заливки

FIG. 5 : COLLEGAMENTO ELETTRICO

Electrical connection / Conexión eléctrica / Branchement électrique / Elektrischen Anschluss / Подсоединение электрической

	1~ a) monofase per alimentazione a tensione unica senza condensatore / single-phase for a single voltage power supply without condenser / monofásica para alimentación de tensión única sin condensador / monophasée pour alimentation à tension inique sans condensateur / Einphasig zur Speisung mit einer einzigen Spannung ohne Kondensator. / Однофазное питание, без конденсатора.
	b) monofase per alimentazione a tensione unica con condensatore / single-phase for a single voltage power supply with condenser / monofásica para alimentación de tensión única con condensador / monophasée pour alimentation à tension unique avec condensateur / Einphasig zur Speisung mit einer einzigen Spannung mit Kondensator / Однофазное питание, с конденсатором.
	c) monofase per alimentazione a tensione unica con condensatore per potenze 3 e 4 kW / single-phase for single voltage power supply with condenser for power of 3 and 4 kW / monofásica para alimentación de tensión única con condensador para potencias de 3 y 4 kW / monophasée pour alimentation à tension unique avec condensateur pour puissances 3 et 4 kW / Einphasig zur Speisung mit einer einzigen Spannung mit Kondensator für 3 und 4 kW Leistungen / Однофазное питание 3-4 кВт, с конденсатором.
	d) monofase per alimentazione a due possibili tensioni con condensatore (d1= tensione bassa; d2= tensione alta) / single-phase for power supply with two possible voltages with condenser (d1= low voltage; d2= high voltage) / monofásica para alimentación de dos posibles tensiones con condensador (d1 = tensión baja; d2= tensión alta) / monophasée pour alimentation à deux tensions possibles avec condensateur (d1= tension basse; d2=tension élevée) / Einphasig für Speisung mit zwei möglichen Spannungen mit Kondensator (d1=Niederspannung d2=Hochspannung); /
	3~ d) trifase per alimentazione a due possibili tensioni (d3=tensione bassa; d4= tensione alta) / three-phase for power supply with two possible voltages (d3= low voltage; d4=high voltage) / trifásica para alimentación de dos posibles tensiones (d3 = tensión baja; d4 = tensión alta) / triphasée pour alimentation à deux tensions possibles (d3= tension basse; d4= tension élevée) / Dreiphasig zur Speisung mit zwei möglichen Spannungen (d3=Niederspannung, d4=Hochspannung) / Трёхфазное питание при двухзначениях напряжения (d3 низкое напряжение, d4 высокое напряжение).

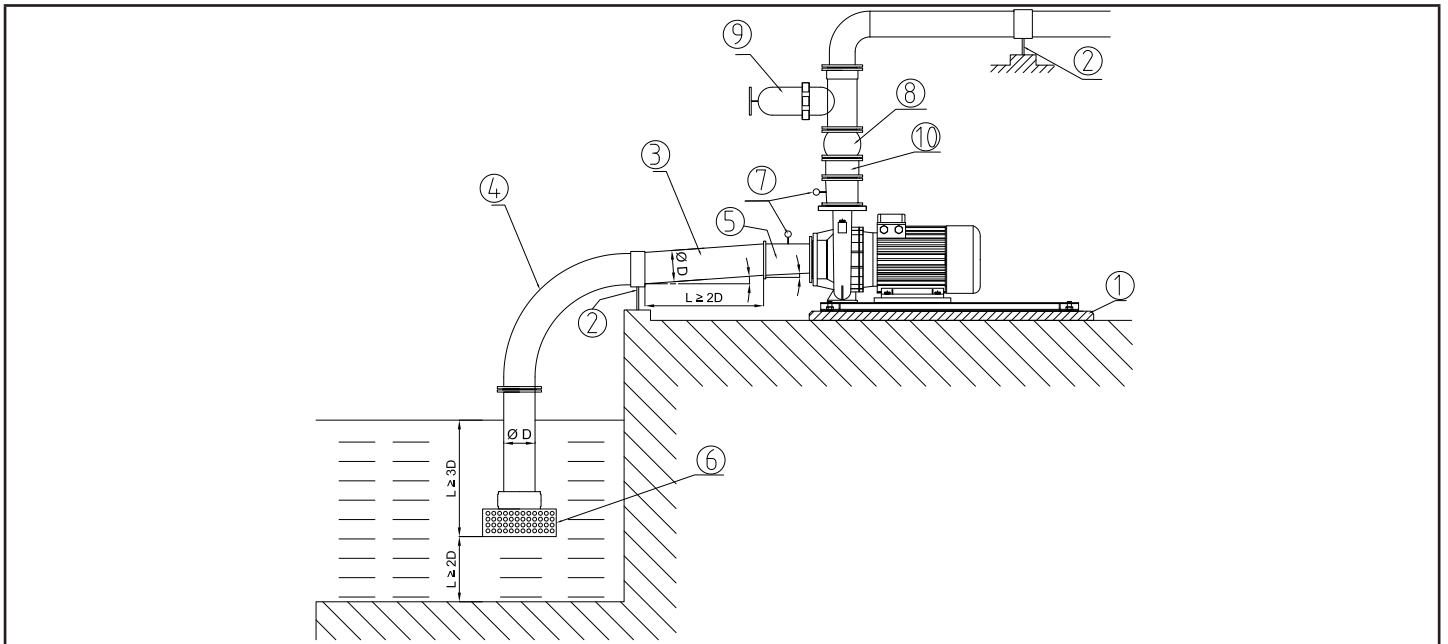


FIG. 9a

Raccomandazioni per installazione con aspirazione negativa ("soprabattente")

Recommendations for suction lift installation ("negative suction")

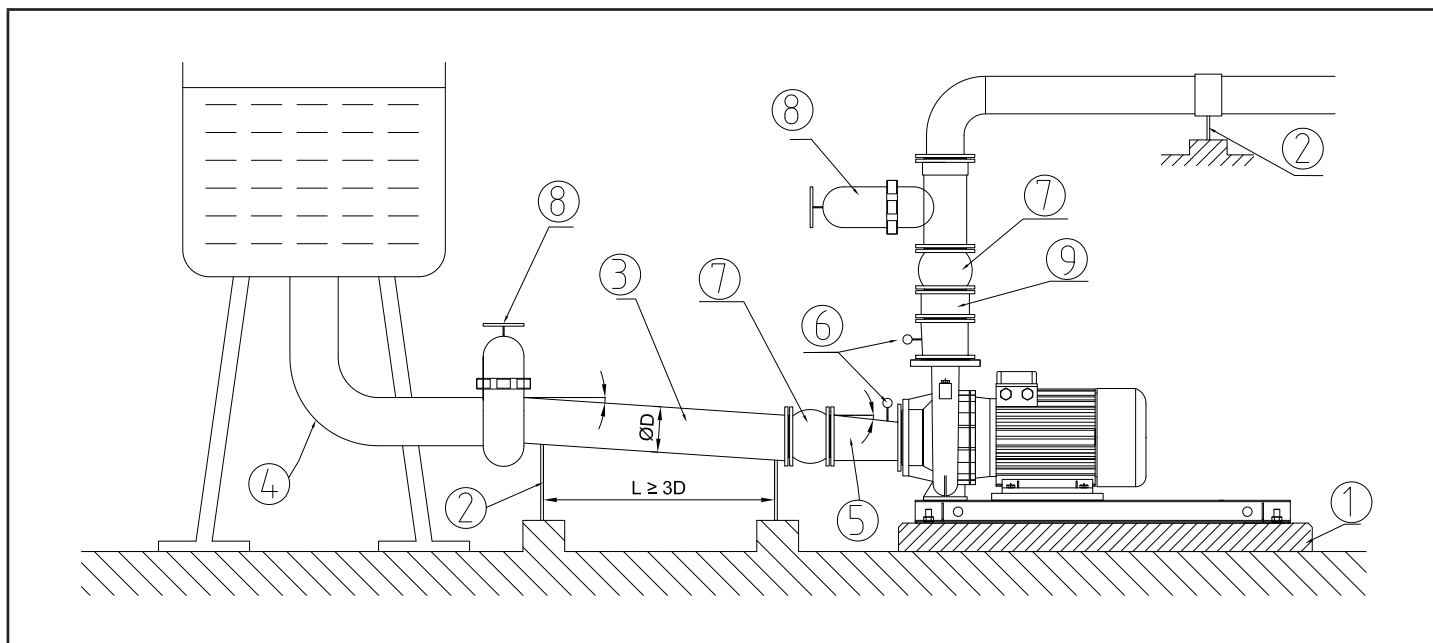
Recomendaciones para instalación con succión negativa ("sobre del nivel del agua")

Recommandations pour l'installation avec aspiration négative ("sur le niveau de l'eau")

Empfehlungen für die Installation mit negativer Ansaugung ("Saughöhe")

Рекомендации для установки с негативным давлением на всасывании („над уровнем перекачиваемой жидкости“)

1. **Fondazioni e base di appoggio** → Cap. 5 / Foundations and base plate → Cap. 5 / Fundaciones y base de apoyo → Cap. 5 / Fondations et base d'appui → Cap. 5 / Fundamente und Stützbasis → Cap. 5 / Фундаменты и опора → Глава 5
2. **Ancoraggi delle tubazioni** → Cap. 5 / Anchoring the pipes → Cap. 5 / Anclajes de las tuberías → Cap. 5 / Connexions des tuyaux → Cap. 5 / Die Verankerung der Rohre → Cap. 5 / Укрепления трубопровода → Глава 5
3. **Linea di aspirazione / Suction pipe** / Línea de succión / Ligne d'aspiration / Saugleitung / Линия всасывания
 - i. **Diametro tubazione in aspirazione / Suction diameter** / Diámetro tubería de succión / Diamètre du tuyau en aspiration / Durchmesser des Saugrohres / Диаметр трубопровода на всасывании: D → TAB.IX
 - ii. **Velocità del liquido / Liquid velocity** / Velocidad del líquido / Vitesse du liquide / Flüssigkeitsgeschwindigkeit / Скорость потока жидкости: ≤ 2 m/s
 - iii. **Inclinazione positiva / positive slope** / Inclinación positiva / Pente positive / positive Steigung / Положительный наклон
 - iv. **Tratto rettilineo / Stright lenght** / Tramo recto / Partie tout droit / Gerade Strecke / Прямолинейный отрезок : ≥ 2D
4. **Utilizzare raggi di curvatura ampi / Elbow with high curvature radius** / Utilizar radios de flexión grande / Utiliser de grands rayons de courbure / Verwenden Sie große Biegeradien/ Использовать изгибы с широкими радиусами
5. **Installare un adattatore eccentrico come in figura / Install an eccentric adapter as in Figure** / Instalar un adaptador excéntrico / Installer un adaptateur excentrique comme dans la figure / Installieren Sie einen exzentrischen Adapter wie in Abbildung / Установить внецентричный переходник, как на рисунке
6. **Griglia di aspirazione / Suction strainer** / Rejilla de succión / Grille d'aspiration / Einlassgitter / Всасывающая решётка :
 - i. **Area ≥ 4 Sezione tubazione / Area ≥ 4 Pipe area** / Área ≥ 4 sección tubería / Area ≥ 4 section conduite / Bereich ≥ 4 Rohr Abschnitt / Площадь ≥ 4 Секция трубопровода
 - ii. **Immersione / Depth** / Inmersión / Eintauchen / Погружение ≥ 3D
 - iii. **Distanza dal fondo / Distance from the floor** / Distancia del fondo / Distance du fond / Abstand vom Boden / Расстояние от пола: ≥ 2D
7. **Installare un vuotometro sulla bocca di aspirazione e un manometro su quella di mandata / Install a vacuum gauge on the suction side and a pressure gauge on the discharge** / Instalar un vacuómetro sobre la boca de succión y un manómetro sobre la boca de descarga / Installer un vacuomètre sur l'aspiration et un manomètre sur le refoulement / Installieren Sie ein Voltmeter auf der Ansaugseite und ein Manometer am Druckstutzen / Установить вакуумметр на всасывающем патрубке и манометр на нагнетательном патрубке
8. **Installare un giunto antivibrante sulla tubazione di mandata e in aspirazione (se non ostacola l'aspirazione) / Install an antivibration joint on the delivery pipe and on the suction (only if it not obstruct the suction)** / Instalar una junta antivibración sobre la tubería de descarga y succión (si eso no dificulta la succión) / Installer un joint anti-vibrations sur le tuyau de refoulement et en aspiration (si on n'obstacle pas l'aspiration) / Installieren Sie eine flexible Verbindung auf das Rohr des Druckstutzens und der Absaugung (wenn die Ansaugung nicht behindert) / Установить антивибрационную муфту на нагнетательном трубопроводе и на всасывании (если не является помехой всасыванию)
9. **Installare una valvola di regolazione in mandata / Install a gate valve on the delivery** / Instalar una válvula de control en la succión / Installer une soupape de décharge sur le refoulement / Installieren Sie ein Ablassventil / Установить регулирующий клапан на нагнетании
10. **Installare una valvola di non ritorno in mandata / Install a check valve on the delivery** / Instalar una válvula de retención sobre la descarga / Installer un clapet anti-retour sur le refoulement / Installieren Sie ein Rückschlagventil am Druckstutzen / Установить обратный клапан на нагнетании / Установить обратный клапан на нагнетании
11. **Riallineare il giunto dopo aver installato la pompa / Realign the coupling after installing the pump** / Realinear la junta después de la instalación de la bomba / Réaligner le joint après avoir installé la pompe / Richten Sie die Verbindung nach der Einbau der Pumpe / Выравнить муфты после установки насоса
12. **Verificare che / Always check** / Verificar que / Vérifiez que / Überprüfen Sie, ob / Проверить, что : NPSHa > NPSHr

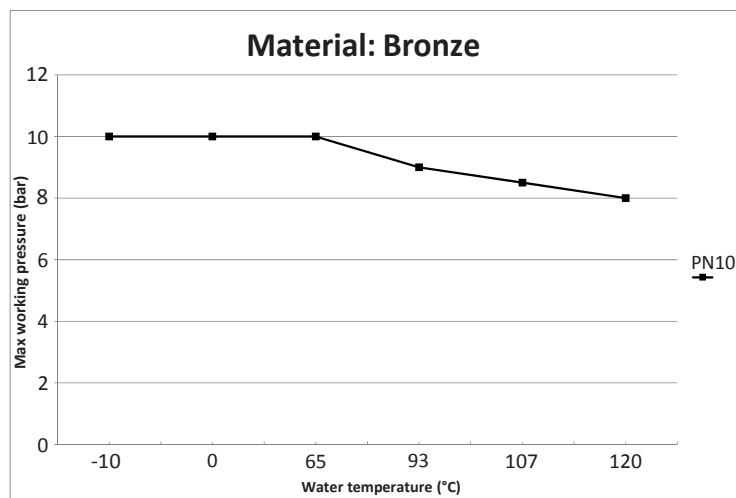
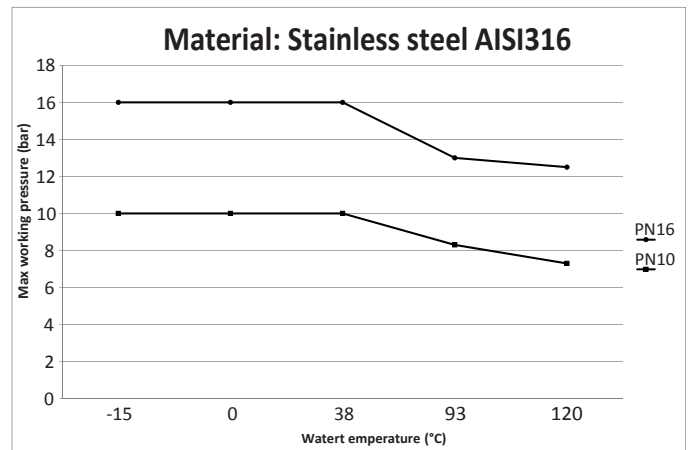
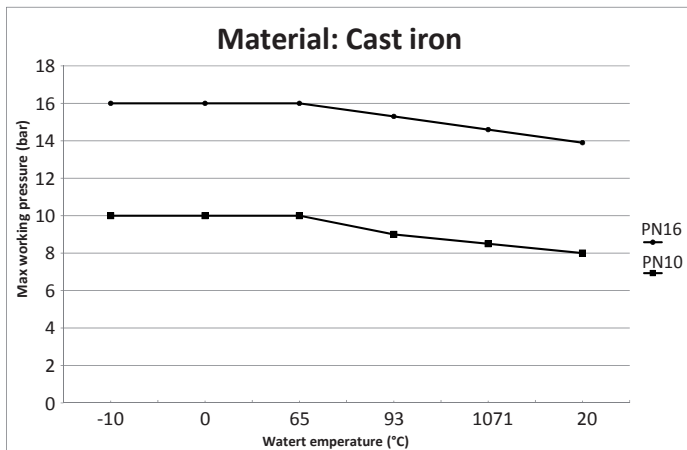

FIG. 9b
Raccomandazioni per installazione con aspirazione positiva (“sottobattente”)
Recommendations for under head installation (positive suction)
Recomendaciones para instalación con succión positiva (“sobre el nivel del agua”)
Recommandations pour l’installation avec aspiration positive (“sous le niveau de l’eau”)
Empfehlungen für den Einbau mit positiven Saugleitung (“unter der Wasserlinie”)
Рекомендации для установки с положительным давлением на всасывании („под уровнем перекачиваемой жидкости“)

1. **Fondazioni e base di appoggio** → Cap. 5 / **Foundations and base plate** → Cap. 5 / Fundaciones y base de apoyo → Cap. 5 / Fondations et base d’appui → Cap. 5 / Fundamente und Stützbasis → Cap. 5 / Фундаменты и опора → Глава 5
2. **Ancoraggi delle tubazioni** → Cap. 5 / **Anchoring the pipes** → Cap. 5 / Anclajes de las tuberías → Cap. 5 / Connexions des tuyaux → Cap. 5 / Die Verankerung der Rohre → Cap. 5 / Укрепления трубопровода → Глава 5
3. **Linea di aspirazione / Suction pipe / Línea de succión / Ligne d’aspiration / Saugleitung / Линия всасывания**
 - i. **Diametro tubazione in aspirazione / Suction diameter / Diámetro tubería de succión / Diamètre du tuyau en aspiration / Durchmesser des Saugrohres / Диаметр трубопровода на всасывании: D** → TAB. IX
 - ii. **Velocità del liquido / Liquid velocity / Velocidad del líquido / Vitesse du liquide / Flüssigkeitsgeschwindigkeit / Скорость потока жидкости: ≤ 3 m/s**
 - iii. **Inclinazione positiva / positive slope / Inclinación positiva / Pente positive / positive Steigung / Положительный наклон**
 - iv. **Tratto rettilineo / Stright lenght / Tramo recto / Partie tout droit / Gerade Strecke / Прямолинейный отрезок: ≥ 3D**
4. **Utilizzare raggi di curvatura ampi / Elbow with high curvature radius / Utilizar radios de flexión grande / Utiliser de grands rayons de courbure / Verwenden Sie große Biegeradien/ Использовать изгибы с широкими радиусами**
5. **Installare un adattatore eccentrico come in figura / Install an eccentric adapter as in Figure / Instalar un adaptador excéntrico / Installer un adaptateur excentrique comme dans la figure / Installieren Sie einen exzentrischen Adapter wie in Abbildung / Установить внецентричный переходник, как на рисунке**
6. **Installare un manometro sulla bocca di aspirazione e uno su quella di mandata / Install a pressure gauge on the suction flange and on the discharge flange / Instalar un manómetro en succión y uno en descarga / Installer un manomètre sur l’aspiration et l’un sur le refoulement / Installieren Sie eines Druckmesser auf der Saugseite und einer auf dem Druckstutzen/ Установить один манометр на всасывающем патрубке и другой на нагнетательном патрубке**
7. **Installare un giunto antivibrante sulla tubazione di mandata e in aspirazione / Install an antivibration joint on the delivery pipe and on the suction / Instalar una junta antivibración sobre la tubería de descarga y succión / Installer un joint anti-vibrations sur le tuyau de refoulement et en aspiration / Installieren Sie eine flexible Verbindung auf das Rohr des Druckstutzens und der Absaugung / Установить антивибрационную муфту на нагнетательном трубопроводе и на всасывании**
8. **Installare una valvola di regolazione in mandata e una saracinesca in aspirazione (per sezionare la condotta in caso di manutenzione) / Install a gate valve on the delivery and a isolation valve on the suction pipe (to be used in case of maintenance) / Instalar una válvula de control en descarga y un cierre en succión (para seccionar la tubería en caso de mantención) / Installer une vanne de régulation sur le refoulement et une vanne sur l’aspiration (pour disséquer la conduite en cas d’entretien) / Installieren Sie ein Regelventil in der Strömung und eine Saugwirkung Absperrschieber (für das Verhalten bei der Wartung Sezieren) / Установить рекулировочный клапан на нагнетании и задвижку на всасывании (для разделения на части трубопровода на случай проведения ремонтных работ)**
9. **Installare una valvola di non ritorno in mandata / Install a check valve on the delivery / Instalar una válvula de retención sobre la descarga / Installer un clapet anti-retour sur le refoulement / Installieren Sie ein Rückschlagventil am Druckstutzen / Установить обратный клапан на нагнетании / Установить обратный клапан на нагнетании**
10. **Riallineare il giunto dopo aver installato la pompa / Realign the coupling after installing the pump / Realigner la junta después de la instalación de la bomba / Réaligner le joint après avoir installé la pompe / Richten Sie die Verbindung nach der Einbau der Pumpe / Выравнить муфту после установки насоса**
11. **Verificare che / Always check / Verificar que / Vérifiez que / Überprüfen Sie, ob / Проверить, что : NPSHa > NPSHr**

TAB.I – Limiti di impiego e condizioni ambientali di funzionamento

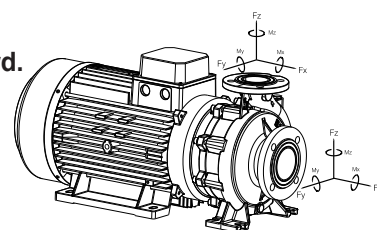
Temperatura ambiente / Ambient Temperature / Temperatura ambiente / Température ambiante / Umgebungstemperatur / Температура окружающей среды	-10° / + 40°C
Umidità relativa / Relative humidity / Humedad relativa / Humidité relative / Relative Feuchte / Относительная влажность	60% (@ + 40°C)
Altitudine / Altitude / Altitud / Altitude / Höhe / Высота	max 1.000 m s.l.m.
Temperatura del liquido pompato / Water temperature / Temperatura del liquido bombeado / Température du liquide pompé / Temperatur des Fördermediums / Температура перекачиваемой жидкости	-15° / + 120°C
Massimo numero avviamenti/ora distribuiti uniformemente / Max starts/h equally distributed / Cantidad maxima de arranques por hora distribuidos igualmente / Max mises en route / l'heure egalement distribues / Maximale Quantilit der Anlassen pro Stende gleichermaßen verteilt / Максимальное количество запусков в час, распределённое равномерно	Max 30 / P ≤ 15 kW Max 15 / 15 < P ≤ 22 kW Max 10 / 30 ≤ P ≤ 37 kW Max 7 / 45 ≤ P ≤ 55 kW
Tempo massimo di funzionamento a bocca chiusa / Max. working time with closed delivery / Tiempo maximo de funcionamiento con boca cerrada / Temps maximum de fonctionnement avec sortie fermée / Maximale Betriebszeit bei der geschlossenen Eröffnung / Максимальное время работы при закрытом патрубке	2'
Contenuto massimo di corpi solidi / Maximum content of solids / Contenido maximo de solidos / Teneur maximale de solides / Maximale Mender der Festkörper / Максимальное содержание твёрдых частиц	85 g/m ³ (n≤ 1750 rpm), 65 g/m ³ (n>1750 rpm)
Passaggio corpi solidi / Solids passage / Pasaje de solidos / Passage solides / Durchgang der Festkörper / Пропускная способность твёрдых частиц	max 2 mm

Pressione massima d'esercizio: massima pressione ammissibile considerando la somma della pressione massima in aspirazione e della prevalenza a portata nulla / **Max operation pressure (max allowed pressure in consideration of the sum of max. suction pressure and of the head with null flow rate / Presión máxima de funcionamiento: máxima presión admitida en consideración de la suma de la presión máxima en aspiración y de la carga hidrostática con caudal nulo / Pression max. d'emploi: pression max. admissible en considération de la somme de la pression max. en aspiration et de l'hauteur avec débit nul / Max. Betriebsdruck: Max. erlaubter Druck unter Berücksichtigung der Summe des Max. Saugdrucks und der Förderhöhe mit Null-Fördermenge / Макс. Рабочее давление: под максимальным рабочим давлением подразумевается сумма давления на входе в насос и давления развиваемого насосом при нулевой подаче.**



TAB. II - Intervalli di sostituzione dei cuscinetti prelubrificati a vita (ingrassaggio permanente) - principio L₁₀
Terms of replacements for pre-lubricated bearings for life (permanent greasing) - principle L₁₀
Intervalos de sustitucion de los cojinetes prelubricado a vida (engrase permanente)- principio L₁₀
Intervalles de remplacement des roulements lubrifiés à vie (graissage permanent) - principe L₁₀
Intervalle von Ersatz von Lagern prelubrificati Leben (gefettet) - L₁₀ Prinzip
Перерывы между заменами подшипников с перманентной смазкой - принцип L₁₀

Velocità di rotazione max. Max rotational speed Макс. скорость вращения	Temperatura ambiente max. Max ambient temperature Макс. окружающая температура	Intervallo di sostituzione Terms of replacement Сроки замены смазки	
1/min (rpm)	°C	O	V
1500	40	50.000 h	40.000 h
1800	40	50.000 h	40.000 h
3000	40	40.000 h	30.000 h
3600	40	40.000 h	30.000 h

O: funzionamento in orizzontale / Horizontal mounting / горизонтальное исполнение
V: funzionamento in verticale / Vertical mounting / вертикальный исполнение
TAB.III Tabella/figura sforzi ammessi sulle flange per macchine in metallurgia standard.
Permissible forces and moments at pump nozzles – standard cast iron flange.
Tabla/ figura esfuerzos permitidos sobre las bridas para los equipos de material estandard.
Forces et moments admissibles à buses de pompe en matériaux standards
Tabelle / Abbildung Bemühungen gelassen in den Standard metallurgischen Ausrüstung Flansche.
Таблица / рисунок допустимых усилий на фланцы для агрегатов в стандартном исполнении.


MANDATA - OUTLET - НАГНЕТАНИЕ								
DN	Forze / Forces / прочность (N)				Momenti / Momentum / Моменты (Nm)			
	Fy	Fz	Fx	ΣF	My	Mz	Mx	ΣM
32	300	370	320	580	270	300	390	560
40	350	440	390	690	320	370	460	670
50	480	580	530	910	350	410	490	720
65	600	740	650	1160	390	420	530	770
80	720	880	790	1390	410	460	560	830
100	950	1180	1050	1840	440	510	620	910
125	1120	1390	1250	2170	530	670	740	1070
150	1420	1750	1580	2750	620	720	880	1280
200	1890	2350	2100	3660	810	930	1140	1680
250	2370	2930	2610	4570	1110	1280	1560	2300
300	2820	3500	3140	5480	1510	1740	2120	3120

ASPIRAZIONE - SUCTION - ВСАСЫВАНИЕ								
DN	Forze / Forces / прочность (N)				Momenti / Momentum / Моменты (Nm)			
	Fy	Fz	Fx	ΣF	My	Mz	Mx	ΣM
25	425	350	375	650	300	350	450	650
32	525	425	450	825	375	425	550	800
40	625	500	550	975	450	525	650	950
50	825	675	750	1300	500	575	700	1025
65	1050	850	925	1650	550	600	750	1100
80	1250	1025	1125	1975	575	650	800	1175
100	1675	1350	1500	2625	625	725	875	1300
125	1975	1600	1775	3100	750	950	1050	1525
150	2500	2025	2250	3925	875	1025	1250	1825
200	3350	2700	3000	5225	1150	1325	1625	2400
250	4175	3375	3725	6525	1575	1825	2225	3275
300	5000	4025	4475	7825	2150	2475	3025	4450

TAB.IV Diametri raccomandati per la tubazione in aspirazione
Recomended diameters for suction pipe
Diametros recomendados para la tuberia de succion
Diametres recommandes pour la tuyauterie en aspiration
Empfohlene durchmesser fuer das saugrohr
Рекомендованные диаметры для всасывающего трубопровода

DN [mm]	DN [mm]
Aspirazione pompa / Pump suction / Aspiración de la bomba / Aspiration de la pompe / Saugen der Pumpe / Всасывание насоса	Tubo aspirazione / Suction pipe / Tubos de aspiración / Tuyauteries d'aspiration / Ansaugleitungen / Трубопроводы всасывания
50	80
65	100
80	150
100	200
125	250
150	300
200	350
250	400
300	500
350	600

TAB. V Livelli di rumorosità In condizioni di funzionamento normale (esente da cavitazione). Valori indicativi e soggetti a tolleranza e al motore accoppiato.

Noise level under normal operating conditions (without cavitation). Indicative values, subject to tolerance and dependent from the motor coupled.

Niveles de ruidosidad: En condiciones de funcionamiento normal (libre de cavitación). Valores indicativos que dependen de la tolerancia y del acoplamiento del motor.

Niveaux sonores: Dans des conditions de fonctionnement normal (sans cavitation). Valeurs indicatives, sous réserve de la tolérance et de la dépendance du moteur couplé.

Geräuschpegel: Unter normalen Betriebsbedingungen (ohne Hohlsgbildung). Richtlinien und unterliegen nicht der Toleranz und der Motor gekoppelt.

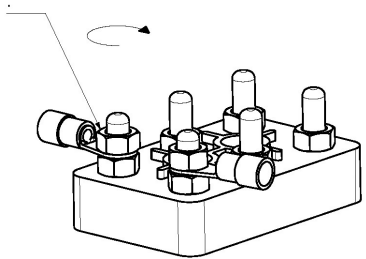
Уровень шума: При обычных условиях эксплуатации (без кавитации). Ориентировочные значения, подлежащие толерантности в зависимости от используемого двигателя

Potenza nominale del motore Rated power of motor Двигатель kW	Livello pressione sonora (L _{PA}) – 1m Noise Pressure level (L _{PA}) – 1m Уровень шума (L _{PA}) – 1m dBA		Livello potenza sonora (L _{WA}) – 1m Noise power level (L _{WA}) – 1m Уровень звуковой мощности (L _{WA}) – 1m dBA	
	1450 1/min	2900 1/min	1450 1/min	2900 1/min
≤ 2,2	≤ 65	≤ 70	≤ 75	≤ 80
3 ÷ 7,5	≤ 70	≤ 80	≤ 80	≤ 88
9,2 ÷ 18,5	≤ 75	≤ 80	≤ 85	≤ 88
22 ÷ 45	≤ 85	≤ 85	≤ 95	≤ 95

TAB. VI Coppie di serraggio / Tightening torques / Pares de aprietes / Couples de serrage / Anziehdrehmomente / Степень затягивания

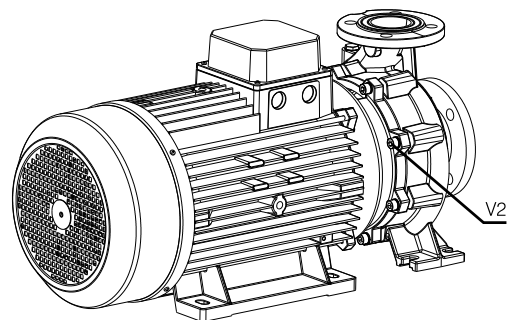
V-1 Coppie serraggio per collegamento in morsettiera / Tightening torque for connection in terminal board / Pares de aprietes para la conexión en el terminal / Couples de serrage pour la connexion dans la borne / Anziehdrehmomente fuer den Anschluss in der Klemmenplatte / Степень затягивания для подсоединения в клемной коробке

Perno Stud Шпилька	Coppia di serraggio Tightening torques Степень затягивания (Nm)
M4	2 ÷ 4
M5	3 ÷ 5
M6	6 ÷ 8
M8	15 ÷ 22
M10	25 ÷ 40
M12	45 ÷ 60



V-2 Coppie serraggio per viti di connessione del corpo pompa / Tightening torque for the pump body screws / Pares de aprietes para los tornillos de conexión del cuerpo bomba / Couples de serrage pour les vis du corps de pompe / Anziehdrehmomente fuer die Schrauben, die zum Anschluss des Pumpenkoerpers dienen / Степень затягивания соединительных винтов корпуса насоса

Bullone Bolt Болт	Coppia di serraggio Tightening torques Степень затягивания (Nm)
M6	6
M8	1€
M10	2€
M12	Ĝ
M16	î €



1. GENERAL INFORMATION

Before performing any operation on the machine, it is indispensable that you be completely familiar with the entire use and maintenance manual. The manufacturer declines all responsibility for improper use of the product, for damage caused following operations not contemplated in this manual or unreasonable interventions. Instructions and limitations contained in this manual are in reference to standard models. For all other versions and all other situation non contemplated in the manual you should contact the technical service.

2. SAFETY INFORMATION



This symbol indicates that failure to comply with warnings entails the risk of damage to people and / or things



This symbol indicates that failure to comply with warnings entails electrical risk

WARNING!

Failure to comply with instructions may result in damage to the pump or to the system.

Failure to heed the instructions will result in::

- The loss of warranty;
- Various types of risks (electrical, mechanical, thermal, chemical etc ...) for persons;
- Risks of damage to equipment and plant;
- Risks arising from failure or incorrect operation of the equipment;
- Environmental risks.



- Each transport, installation, connection, setting at work, control and eventual maintenance or stop operation shall be executed by trained and qualified staff. Furthermore, possible local regulations or directions not mentioned in this manual must be taken into consideration as well.
- The task of the plant manager is to assign to a sufficient qualified personnel the operations listed in this manual, indicating activities and responsibilities.
- The appliance is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.
- Install the electric pump so as to avoid accidental contacts with people, animals or property.
- It is forbidden to use the pump / electric pump in case of damages or anomalous operations.
- Tampering with the product is prohibited.
- The user is responsible for dangers or accidents in relation to other persons and their property: it must be taken all the necessary precautions to avoid risks or consequent damages to the inadequate or inefficient operation of the product.
- Use the pump / electric pump only for the purposes described in Paragraph 4. Any other use can be a cause of accidents.
- Verify the conformity of the product to the local prescriptions in force.



Use, during any operations, the necessary individual devices of protection:

- Protective glasses
- Protective gloves for mechanical , electrical, thermal and chemical risks



Before executing any operation, the feeder cables shall be disconnected.
Never touch the electric pump while it is working.



- The pumps are capable of operating properly with no problems only if the installation is correct and the required maintenance is guaranteed. Carefully follow the instructions of this manual.
- Use the pump/group only when in perfect condition and correctly assembled. Must also be applied to the relevant National and Local Regulations in force regarding safety, during transport, installation, electric connection, installation, operation and eventual maintenance or demounting.

3. TRANSPORT, HANDLING AND INTERMEDIATE STORAGE

RECEIVING THE PRODUCT

When receiving the product it is necessary to verify that:

- During the transportation it have not restored damages: in case of damages, even if exterior, write a note of reserve on the documents of transportation and inform the conveyer.
- The supply correspond to the order: in case of deficiencies, write a note of reserve on the documents of transportation and inform the conveyer.

HANDLING
General provisions



- Use suitable means for lifting and transporting the pump / electric pump: it may be damaged if it is knocked or if it falls, even if there is no apparent external damage, and it may also damage things or persons.
- Use ropes, straps or chains suitable for the purpose: for the weights of the complete set or of the individual components (pump, motor ...), refer to the drawings and technical documentation. If necessary, contact the technical support service.
- Make sure that the lifting means adopted have a capacity adequate to the load to be lifting and that they are in good condition.
- Do not pause or pass under the load during lifting or transport.
- Always comply with general and local regulations in force.
- The pump is supplied packed in protective packaging which must be removed just before installation.
- Appropriate measures must be taken to prevent contamination of materials and articles themselves, in order not to deteriorate the water quality post then in contact with them.

STORING

WARNING!

- Storage conditions: store the pump / set in a covered and dry place, lacking dust, freeze and vibrations.
- Storage temperature= min 0°C - max 50°C
- Metallic exposed surfaces (flanges) must be protected in a suitable way to prevent corrosion.
- If you plan to store the pump or the complete set, for a long period of time (more than one month), it is necessary to perform the following operations monthly:
 - Verify that the preservation status of the pump / complete set and paying more attention to the non-painted surfaces;
 - Check with the appropriate tools, the free rotation of the shaft;
 - Once a month, rotate shaft by hand, in order to keep the bearings protected by the lubricant.
 - For any problem replace or recondition the damaged parts prior the use.

4. TECHNICAL SPECIFICATIONS AND USE

PRODUCT DESCRIPTION

IR: Close-coupled end-suction electric pumps according to EN733

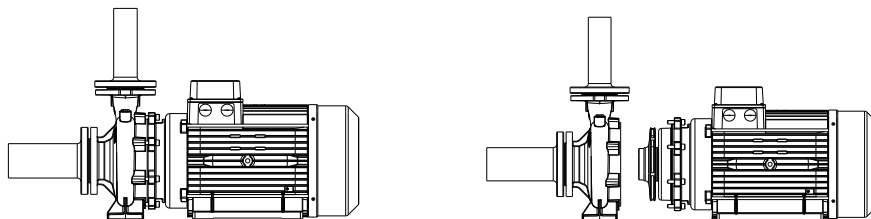
MG1: Close-coupled end-suction pumps according to EN733 with stab shaft

MG2: Close-coupled end-suction electric pumps according to EN733 with stab shaft

Sizes up to DN65: one-piece construction with the pump shaft / single motor.

Sizes DN80 and bigger : normalized motor mounting position V1, coupled to the pump through the shaft coupling of the pump.

“Back pull out” system: the hydraulic part can be removed without removing the pump body from the piping.



Horizontal or vertical installation (always with the motor upwards).

Hydraulic seal: mechanical seal with single spring.

Closed impeller with several rooms.

Ball bearings, permanent grease lubrication.

Motors: asynchronous induction fan cooled electric motors (TEFC)

Standard voltages:

- Frequency 50 Hz: 1~: 220-240V up to 4 kW; 3~: 220-240/380-415V up to 4 kW and 380-415V / 660-720V starting from 5,5 kW.

- Frequency 60 Hz: 1~: 220V up to 4 kW; 3~: 220/380 V or 255-278/440-480 V up to kW 4; 380/660 V or 440-480/760-

830V starting from 5,5 kW. Allowable voltage variation: $\pm 5\%$ Un

Motor protection against overloads: protections have to be provided by the customer (see paragraph 5).

Degree of protection (IP) and insulation class: Refer to the motor nameplate.

The pump / electric pump's identification and technical data are listed on the name plate which certify the conformity to CE norms (**FIG.1**).

WARNING!

- For versions equipped with on-board motor inverter, the requirements of this manual must be integrated with those of the inverter manual supplied with the pump unit.
- If necessary, contact technical assistance..

USE – STANDARD VERSIONS

Pumping of clean liquids and without solid bodies.

Fluid: chemically and mechanically non-aggressive, with a maximum solid substance content equal to the hardness and grain size of silt.

WARNING!

- For pumping water / glycol mixtures with different density and viscosity of the water:
 - recalculate the pump performance;
 - verify the required power to the motor in function of the characteristics of the liquid.

Don't use the electric pump with liquids with different chemicals characteristics from those of the water ones (demineralized or treated water, food liquids, dangerous liquids, ecc..) unless you have contacted the technical assistance before.

Use the pump / electric pump only for the purposes described in this manual. Any other use can be a cause of accidents.

For the special versions, refer to the specific technical literature (technical data, drawings, etc. ...).

The pumps requested and built for pumping potable water should only be used for this purpose. Verify that the pump is suitable for this application according to the requirements of local regulations. For such applications, the pumps should be cleaned before their first commissioning and after the replacement of one or more components that come into contact with the pumped liquid. SAER is not liable for contamination caused by transport, storage, installation or arising from the system on which the pump is installed. For correct installation and use, follow the requirements of local regulations.

LIMITATION FOR USE

Refer to TAB.1



- Do not use the pump for rotating speeds higher than those indicated on the data plate.
- Never use the pump for operating pressures higher than those indicated on the data plate.

NOT FORESEEN AND IMPROPER USES

- Don't use the pump/electric pump for applications not covered from EN 809 standard.
- Never use the pump/electric pump in explosive atmospheres, hazardous area or to pump inflammable or dangerous liquids.
- Do not use the electric pumps in swimming areas. (swimming pools, basins etc...).
- Do not use the pump / group for liquids that crystallize or polymerize.
- Don't use the pump in case of abnormal pressure (ex: water hammer)
- Avoid dry operation of the pump.
- It is forbidden to use the pump / electric pump in case of damages or anomalous operations.
- Always use the pump with a delivery (flow and head) included in the working diagram.
- Pumps already used to pump toxic or harmful liquids or other liquids other than potable water may not be used for pumping water intended for human consumption.

PREVENTION OF FORESEEABLE MISUSE**WARNING!**

- Always use the pump with a delivery (flow and head) included in the working diagram. Do reference to the name plate and the technical documentation.
- Do not operate the pump under the minimum head.
- Do not use the pump beyond the limits specified.

5. INSTALLATION

- Never use the electric pump in explosive atmospheres, hazardous area or to pump inflammable or dangerous liquids. For the classification of the risky places, refer to local regulations .



- Use suitable means for lifting and transporting the pump / electric pump.



- Before executing any operation, turn off the power and prevent it from being reconnected.

PRELIMINARY VERIFICATIONS

WARNING!

- Verify that the data shown on the plate, and in particular, power, frequency, voltage, absorbed current, are compatible with the characteristics of the electric line or current generator available. In particular, the voltage of the line voltage can have a variance of $\pm 5\%$ from the nominal voltage value on the plate.
- Verify that the chemical/physical characteristics of the liquid to be moved correspond to those specified on the order.
- Verify that the product has not been exposed to the weather inclemency.
- For electric pumps: verify that the protection and insulation grade indicated on the plate are compatible with the environmental conditions.
- Verify the environmental conditions: SAER pumps can be installed in enclosed or, at any rate, protected areas, with maximum ambient temperature of $+40\text{ }^{\circ}\text{C}$ in a non-explosive atmosphere.
- For electric pumps: Contact the customer care in case of ambient temperature $+40\text{ }^{\circ}\text{C}$ or altitude over 1000m above sea level.
- The connection to the water supply must be done in the respect of the local and national standards of the place where the pump is installed.
- Verify that the pump's flow rate and head correspond to the required characteristics.
- Before connecting the pipes to the relative openings, make sure that the rotating part of the pump turns freely and is not hindered. In case of problems please contact our technical assistance servicing.

INSTALLATION POSITIONS

The installation positions allowed are shown in **Fig. 3**.

WARNING!

- The pipes must be fixed immediately before and after the pump.

WARNING!

- Installation with the motor down is not permitted

PLACE OF INSTALLATION

WARNING!

- Verify that the surrounding area is sufficient for ventilation and allows movement in the case of maintenance.
- Select suitable point and area of fixing: verify the prevention of possible vibrations to the surrounding structures.
- The pump/electric pump must be installed as close as possible to the suction point of the liquid.
- The available NPSH value in the lifting plant must be always bigger than the pump's NPSH, both in installation under head and over head in order to avoid cavitation.
- As far as hot liquids are concerned, NPSH must be re-calculated, in order to obtain the required head in any case.



- If you pump toxic or harmful liquids or at high temperatures, it is important to taken all necessary precautions to avoid any loss and/or leakage that could cause damage to persons, animals, property or to the environment.

For installations with support base:

WARNING!

- Make sure that the pump's support surface is solid and even (so that it rests on all the feet) and that the load capacity of the surface is adequate for the weight shown on the plate.
- Check that the strength of the concrete foundations is appropriate and complies with current relevant regulations.

CONNECTING THE PIPES (Fig.*)

WARNING!

The pump maximum working pressure can't be bigger than the PN pump nominal pressure. Pipes must be suitable for the pump maximum working pressure.

WARNING!

The intake and delivery pipes must not transmit forces to the pumps/ electric pump due to their own weight and/or heat expansion, at the risk of possible liquid leaks or breaking the pump. For this reason, the pipes must be supported by anchorages and, if necessary, expansion joints must be inserted in the appropriate positions.

Refer to TAB.II for permissible forces and moments at pump nozzles.

Pumps don't have to transmit vibrations to the pipes, therefore insert anti-vibration couplings in delivery and, if it is possible, in suction.

WARNING!

Install non return valve on the discharge side.
Install gate valve both in suction and discharge side.

The intake pipe must always be perfectly air tight and not positioned horizontally, but must always rise towards the pump. On the other hand, in the case of operation under water head, the intake pipe must always slope down towards the pump. For this reason, any fitting cones must be eccentric and oriented to avoid the formation of bubbles during priming or operation.

It is a good idea to protect the pump by inserting a filter on the intake pipe; especially during the initial period of operation, the pipes release slugs capable of damaging the pump seals. The filter must have a mesh less than 2 mm and a free passage area of at least 3 times the section area of the pipe so as to avoid excessive losses of head.

To adjust the flow rate, it is a good idea to install a shutter on the delivery pipe.

The diameter of the pipe must be such that the speed of the liquid never exceeds 1,5 - 2 m/s at intake and 3 – 3,5 m/s at the delivery.

In any case, the diameter of the pipe must not be less than the diameter of the pump openings. The suction piping must be absolutely hermetic and for the catalogue data it must have the diameters of TAB.IX (pipes of smaller diameters reduce the delivery values).

After having performed the controls listed, connect the pipelines to the pump.

AUXILIARY CONNECTIONS

WARNING!

- Verify the presence and proper installation of the necessary auxiliary connections.

ELECTRICAL CONNECTIONS



- The connection to the power grid must be done in the respect of the local and national standards of the electric system of the place where the pump is installed.
- Furthermore, respect the connection diagrams supplied with the motor and with the control panel.
- Perform the earth connection before all the other connections.
- Verify the correct operation of the electric equipment (control panel etc...).

CHECKS ON THE ELECTRICAL SYSTEM



- Verify that the electrical system corresponds to the IEC 60204-1 standard and to the local and national standards.
- Verify:
 - the existence of an earth connection,
 - the presence of an omni-polar switch disconnecter that can disconnect all the feeding cables to insulate the motor in case of malfunction or small maintenance operations (the disconnection device from the supply mains must be over-voltage III category)
 - the presence of an emergency stop button.
 - The presence of a residual current device (RCD) with rated residual operating current not exceeding 0,03 A.
 - the presence of a thermal protection device adjusted on a maximum absorbed current not higher than 5% the current stated in the label and with an operating time lower than 30 seconds.
- The feeding cable must have adequate section in order to avoid a voltage drop greater than 3 % of the nominal voltage and to operate within the rated temperature.

ELECTRICAL CONNECTION**WARNING!**

- Set properly the values of the electrical devices (protections, electronic devices etc...).

WARNING!

- For star/delta Y/Δ starting, use a switching time between star and delta less than 3 s.

6. SETTING AT WORK, OPERATION AND STOP**FILLING AND PRIMING THE PUMP****Priming over head (liquid level on the suction side lower than the pump).**

- Close the gate valve on the delivery side
- Open the gate valve on the suction side
- Unscrew the venting cap on the pump (Fig. 4) and on the pipes, if present.
- Fill the pump and the suction pipe
- Make sure that all the air is leaked out from the pump and the suction pipe.
- Once the filling is finished, close completely the caps.

Priming under head (liquid level on the suction side higher than the pump)

- Close the gate valve on the delivery side
- Unscrew the venting caps (Fig. 4)
- Open the gate valve on the suction side
- Waiting for the exit of the water from the venting caps.
- Once that the water exits without air presence, close the caps

WARNING!

- The priming operation must be repeated in case of long periods of inactivity and whenever necessary.

WARNING!

- Check the right setting for auxiliary connection:
- Venting and drain holes must be closed

CHECKING OF THE ROTATION WAY

Remove any lifting device before starting the pump.

WARNING!

- Verify that the rotation direction of the electric pump corresponds to that indicated by the arrow on the pump body. Rapidly apply and remove voltage and observe the rotation direction of the motor cooling fan through the holes of fan guard. In the event that the pump is rotating in reverse, reverse two phases on the terminal board.
- The checking of the rotation way must be repeat every time the motor is connected.

Do the starting as shown in the paragraph Starting



- Rinse the pump after installation and before operating it with the same fluid to be pumped into operation. Repeat this operation for ordinary or extraordinary maintenance, which involves extracting the pump from its seat.

STARTING

- Before starting the group be sure that all the prescriptions and the controls described in the previous paragraphs are respected.

In order to avoid serious damages to the components we recommend:

WARNING!

- do not leave the pump run without liquid;
- do not run the pump for a long period with the delivery valve closed;
- do not run the pump in cavitation.

F. Fully open the gate valve in suction.

G Keeping the gauge valve closed on the delivery side, feed current, waiting for the pump to reach full operating speed.

H Slowly open the valve on the delivery until you achieve the desired flow rate.

CHECKS WHILE RUNNING

After a sufficient period of time to reach normal operating conditions, verify that:

- There are no liquid leaks.
- There are no vibrations or anomalous noises.
- There are no oscillations of the flow rate.
- Ambient temperature does not exceed 40 °C
- The temperature of the bearings, measured on the housing, does not exceed 90 °C.
- The motor's current absorption does not exceed that shown on the plate.

In the presence of even only one of these conditions, stop the pump and find the cause.



- In the event that the surface of the pump is hotter than 50 °C, we recommend protecting it against accidental contact, such as using grates, shielding or insulating coatings, in such a way that however does not affect correct ventilation.
- The same precautions should be taken when pumping cold liquids.

WARNING!

- The pump maximum working pressure can't be bigger than the PN pump nominal pressure.

CHECKING OF THE SEAL

MECHANICAL SEAL

The mechanical seal does not require regulations and/or maintenance. It's possible a loss of liquid during the first instants of operation due to the arrangement of the seal. If the loss should not stop, stop the group and research the cause.

STOP THE PUMP/ELECTRIC PUMP

- i. If the non-return valve is not present, close the gate valve on the delivery pipe.
- ii. If there is no foot valve present, close the gate valve on the suction pipe.
- iii. Stop the electrical feeding

WARNING!

If the pump / electric pump remains inactive at low temperatures or, at any rate, for a period exceeding three months, it is a good idea to empty the pump through the specific cap.

STORAGE

Pump installed, not in operation but ready to be started up: operate the pump for at least 10 minutes once a month.

Pump removed from the system and put into storage: clean the pump and protect its surfaces from corrosion by applying appropriate products.

WARNING!

- The pump restart after idle periods must be carried out in accordance with the requirements of the previous paragraphs.

7. MAINTENANCE



- Before executing any operation, turn off the power and prevent it from being reconnected.



- Do not make changes to the product without authorization.
- In the event it is necessary to perform any type of maintenance, the following precautions must be observed:
 - disconnect the pump motor from the electrical system;
 - wait until the temperature of the liquid is such not to create a danger of burns;
 - if the liquid handled by the pump is harmful for one's health, it is indispensable to observe the following warnings:
 - the liquid must be carefully collected and disposed of with respect for current law;
 - the pump must be washed inside and out, disposing of the residues as said above.



- The surfaces of pump and motor can reach high temperatures. Wait to cool before handling and use appropriate personal protection.



For product handling, follow all the instructions in the previous sections.

WARNING! Schedule a regular cycle of maintenance based on the type of employment and conditions of use.

OPERATIONS NEEDED EVERY 1500 WORKING HOURS AND NOT LESS THAN ONCE A YEAR

- Check:
- the state and the temperature of the bearings: the bearings temperature, measured on the housing, does not exceed 90°C;
 - the level of vibrations at the bearing housings;
 - seals conditions:
 - mechanical seals must not have any leaks;
 - the gaskets conditions: there must be no leakages;
 - performances of the pump (flow / head);
 - the condition of all electrical connections (terminal, grounding, control panel, etc. ...);

Record data and keep them for future reference.

WARNING! • Perform measurements with appropriate instruments.

OPERATIONS NEEDED EVERY 3000 WORKING HOURS

- Check:
- The conditions of the shaft protections: wear rings and bushings, if present;
 - The conditions of the shaft;
 - The conditions of the impeller.

If necessary, replace the components listed above.

LUBRICATING THE BEARINGS

The type of the bearing is indicated in technical documentation of reference.

Pumps with the bearings permanently lubricated with grease

The bearings are of the permanently lubricated type (with grease) and they do not request any maintenance. The intervals of the indicative changing are indicated in the **TAB.II** (foreseen duration according to L10).

PUMP DISASSEMBLY

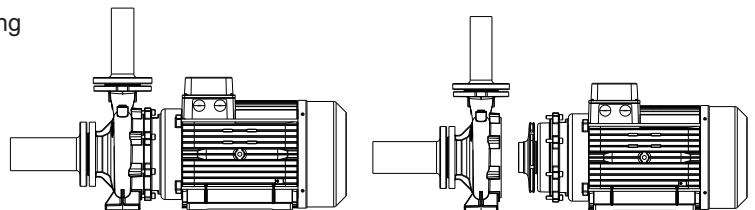
Refer to specific literature, and require it to the manufacturer (section, instructions etc ...) Execute the pump stop as indicated above.



- Before executing any operation, turn off the power and prevent it from being reconnected.
- Assure that the pump cannot be started accidentally.
- Follow all safety rules, listed in the previous paragraphs and those, pertaining the country where it operates.

The rotating part of the pump, can be removed without removing the pump body from the piping.

- Before proceeding with disassembly:
- Disconnect the motor from the main supply;
 - Close all valves;
 - Empty the pump from the liquid using the caps.



8. DECOMMISSIONING AND DISPOSAL

At the end of the operating life of the pump/electropump or any of its parts, it must be disposed of in observance of current regulations. This is valid also for the contained liquid, with particular regards for toxic or harmful liquids, and for the package.

- In case you need to return the material to the supplier :
- completely empty the pump from the liquid and wash it carefully;
 - if necessary, provide for a complete decontamination of the product;
 - remove any liquids or grease residues (lubricants etc ...);
 - protect the pump from corrosion and pack it carefully;
 - indicate to the supplier any security measure applied.



It is the responsibility of who returns the materials to take all measures necessary to ensure the safety of the product and that the return is in accordance with the regulations of applicable law.

9. TROUBLESHOOTING

FAILURES OR MALFUNCTIONS	ID	PROBABLE REASONS	REMEDY ACTIONS
! No flow	A.1	→ Wrong direction of rotation	✓ Verify the rotation direction of the motor. If correct, verify the right assembly of the impeller with the pump body.
	A.2	→ Pump not filled with the fluid	✓ Fill the pump and the suction pipe, with the fluid.
	A.3	→ Air presence in the pump or in the suction pipeline	✓ Verify the possible losses of the pipeline. Breathe the pump in order to get out the air.
	A.4	→ Suction pipeline not enough immersed.	✓ Increase the immersion of the suction, that is sublevelled
	A.5	→ Suction head too raised	✓ Low the level of the pump
	A.6	→ Impeller or suction line clogged.	✓ Check any eventual obstruction of the suction filters and of the impeller. Remove the obstruction.
	A.7	→ Insufficiency of the motor rotation speed.	✓ Check the motor rotation speed. For motors powered by inverter, check the feed frequency.
	A.8	→ Head of the pumping plant too high.	✓ Check the outlet valves holes. Make a calculation of the pumping plant and compare it with the one of the pump. Use a pump with higher head.
! Insufficient flow rate		Reasons already listed on previous points	Consider points: from A.1 to A.7
	B.1	→ Cavitation functioning. NPSHa insufficient.	✓ Increase the pumping plant NPSHa, reducing the suction losses, or approaching the pump to the fluid that has to be aspirated.
	B.2	→ Losses from the seals.	✓ Replace the seals
	B.3	→ Damaged impellers.	✓ Replace the impeller.
	B.4	→ Damaged wear rings.	✓ Replace the wear rings.
	B.5	→ Foot valve too slim	✓ Replace the foot valve .
! Outlet pressure too low		Reasons already listed on previous points	Consider points: A.1, A.3 ÷ A.7, B.2 ÷ B.4
	C.1	→ Outlet line obstructions	✓ Remove the obstructions
	C.2	→ Pressure gauge wrong positioning	✓ Position the outlet pressure gauge on the outlet and the inlet pressure gauge on the inlet
! High absorption		Reasons already listed on previous points.	Consider points: A.1, B.1 ÷ B.3
	D.1	→ Usury or mechanical seizure	✓ Check and, where necessary, replace seals, bearings and wear rings.
	D.2	→ Functioning out of performance curves. The head is lower than the minimum head allowed	✓ Act on the outlet regulation valve to increase the head and low the flow rate.
	D.4	→ Excessive speed of the motor speed rotation.	✓ Check the correspondence between motor speed and pump. When the motor is powered by inverter, low the frequency
	D.5	→ Fluid density / viscosity higher than of the contractual ones	✓ Low the flow rate. Call the technical assistance
	D.7	→ Motor problems	✓ Refer to motor informations.
! Vibrations or high noise		Reason already listed on previous points.	Consider points: a3-a6, b1,b3-b4,d1,d2,d3, d5,d6, d7
	E.1	→ Pump, motor or basement not properly setted	✓ Check the tightening of all anchor bolts
	E.2	→ Pipeline misaligned or imposed on the pump	✓ Support the pipes checking their alignment with the pump.
	E.3	→ Damaged bearings	✓ Replace the bearings

10. SPARE PARTS

Use only original spare parts. To order spare parts, refer to the catalogues or contact the SAER Technical assistance specifying the kind of the motor, the serial number and the year of manufacture (all these data are to be found in the identification plate). This product is free from the manufacturing defects.

11. INFORMATIONS ABOUT PUMP'S EFFICIENCY

Product Information as per Regulation No. 547/2012 Implementing "Ecodesign" Directive 2009/125/EC

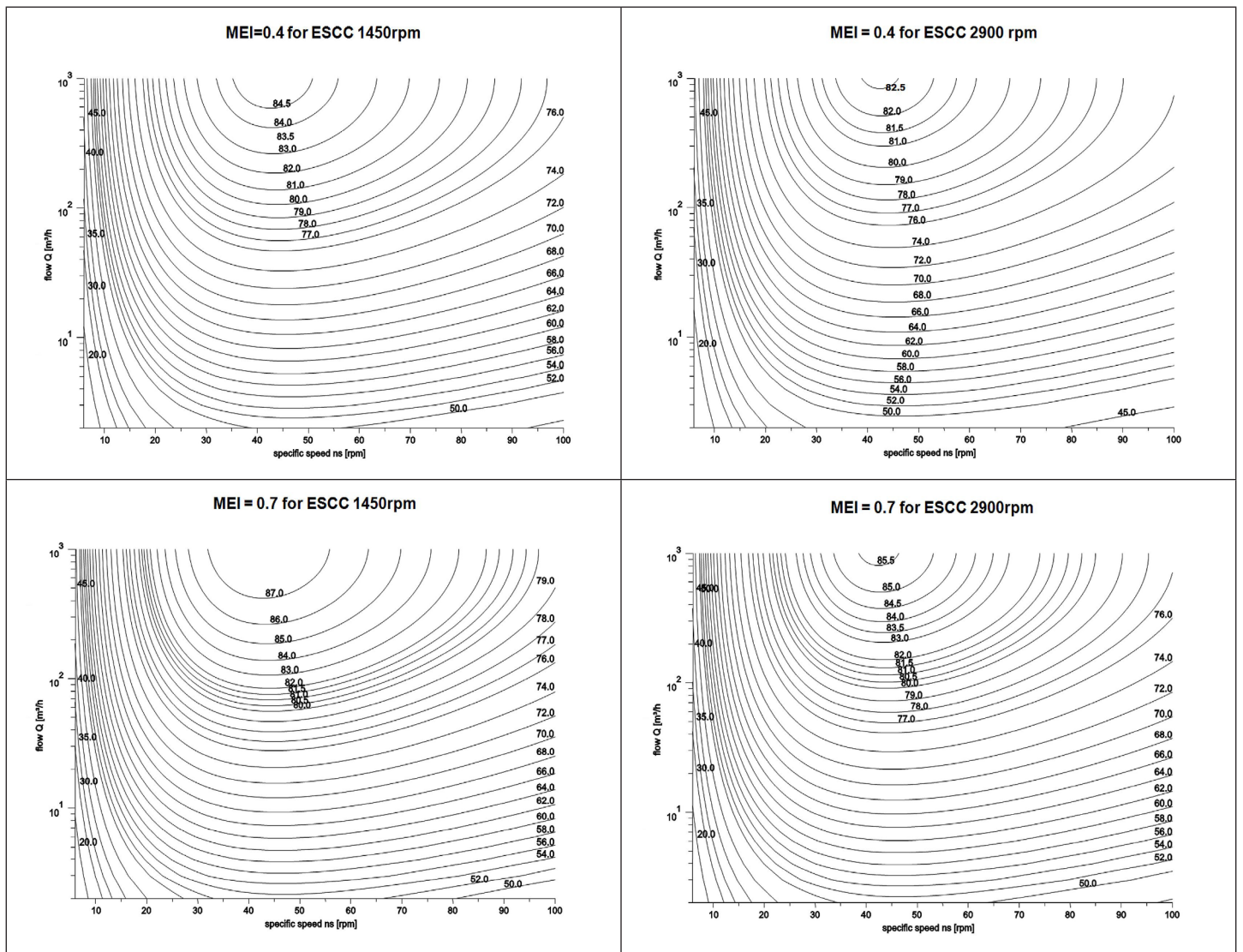
- MEI (Minimum Efficiency Index): on pump's name plate;
- Year of manufacture, informations about the manufacturer, product's type and size identifier: pump's name plate or order documentation;
- Hydraulic pump efficiency, performance curves for the pump, including efficiency characteristics: data sheet, catalogue;
- Information relevant for disassembly, recycling or disposal at end-of-life: use and maintenance manual.

The benchmark for most efficient water pumps is $MEI \geq 0,70$

The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.

The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.

Information on benchmark efficiency is available at www.europump.org/efficiencycharts



DICHIARAZIONE DI CONFORMITA'

La Ditta SAER Elettropompe S.p.A. con sede in via Circonvallazione, 22 - 42016 Guastalla (RE) - Italy, dichiara che le pompe / elettropompe a cassa divisa ad aspirazione assiale per il sollevamento di acque pulite serie

IR...

MG...

sono conformi alle prescrizioni della

Direttiva macchine (2006/42/ CE)

Direttiva Ecodesign- ErP (2009/125/CE)

Direttiva Compatibilita Elettromagnetica (2014/30/UE)

Direttiva RoHS (2011/65/EU - 2015/863/EU)

DECLARATION OF CONFORMITY

SAER Elettropompe S.p.A. with headquarters at Via Circonvallazione, 22 - 42016 Guastalla (RE) - Italy, hereby declares that the bareshaft end-suction centrifugal pumps, for clean water raising, series

IR...

MG...

are in conformity with the relevant provisions of the

Machinery Directive (2006/42/EC)

Energy-related products- directive ErP (2009/125/EC)

Electromagnetic compatibility- directive (2014/30/EU)

RoHS Directive (2011/65/EU - 2015/863/EU)

DECLARACIÓN DE CONFORMIDAD

La empresa SAER Elettropompe S.p.A., con sede en calle Circonvallazione n° 22 - 42016 Guastalla (Reggio nell'Emilia) - Italia, declara que las bombas / electrobombas con impulsor individual, para la elevación de aguas limpias, de las series

IR...

MG...

Cumplen la

Directiva Máquinas (2006/42/EC)

Directiva sobre diseno ecologico (2009/125/EC)

Directiva Compatibilidad electromagnetica (2014/30/EU)

Directiva RoHS (2011/65/EU - 2015/863/EU)

DÉCLARATION DE CONFORMITÉ

La Société SAER Elettropompe S.p.A. dont le siège se trouve à via Circonvallazione, 22 - 42016 Guastalla (Reggio Emilia) - Italie, déclare que les pompes / électropompes avec un seul turbine, pour l'élévation d'eau claire, série

IR...

MG...

sont conformes aux directive

Directive Machines (2006/42/EC)

Directive des produits lies a l'énergie (2009/125/EC)

Directive Compatibilite electromagnetique (2014/30/EU)

Directive RoHS (2011/65/EU - 2015/863/EU)

KONFORMITÄTSEKTLÄRUNG

Die Firma SAER ELETTROPOMPE S.p.A. mit Sitz in Via Circonvallazione, 22 - 42016 Guastalla (RE), erklärt, dass die pumpen / elektropumpen mit einzelner Laufrad für das Absaugen vom sauberen Wasser, serie

IR...

MG...

mit den Vorschriften der

Maschinenrichtlinie übereinstimmen (2006/42/EC)

Richtlinie energieverbrauchsrelevanter Produkte (2009/125/EC)

Elektromagnetische Vereinbarkeit Richtlinie (2014/30/EU)

RoHS Richtlinie (2011/65/EU - 2015/863/EU)

СВИДЕТЕЛЬСТВО О СООТВЕТСТВИИ ТРЕБОВАНИЯМ

SAER Elettropompe S.p.A., via Circonvallazione, 22-42016 Guastalla (RE) - Italy, данным заявляет, что моноблочные электронасосы с одним рабочим колесом предназначенные для подъема чистой воды серии

IR...

MG...

соответствуют предписаниям

Директивы по машиностроению (2006/42/EC)

Директивы ЕС по устройствам, связанным с потреблением энергии (2009/125/EC)

Директивы ЕС по электромагнитной совместимости (2014/30/EU)

Директивы RoHS (2011/65/EU - 2015/863/EU)

Legale rappresentante - Legal representative • Representante legal • Représentant légal

Legaler Vertreter • Законный представитель: Favella Franco



Persona autorizzata a costituire il fascicolo tecnico - Person authorised to compile the technical file - Persona facultada para elaborar el expediente técnico - Personne autorisée à constituer le dossier technique - Der Befugte für die Zusammenstellung der technischen Unterlagen - Уполномоченный по составлению технической документации

SAER Elettropompe S.p.A., via Circonvallazione, 22 - 42016 Guastalla (RE) - Italy

IT**Questo prodotto è conforme alla Direttiva RAEE 2012/19/UE**

Il simbolo del cestino barrato riportato sulla targa dell'apparecchio indica che il prodotto, alla fine della propria vita utile, dovendo essere trattato separatamente dai rifiuti domestici, deve essere conferito in un centro di raccolta differenziata per apparecchiature elettriche ed elettroniche oppure riconsegnato al rivenditore al momento dell'acquisto di una nuova apparecchiatura equivalente. L'utente e responsabile del conferimento dell'apparecchio a fine vita alle appropriate strutture di raccolta. Presso i rivenditori di prodotti elettronici con superficie di vendita di almeno 400 m² è inoltre possibile consegnare gratuitamente, senza obbligo di acquisto, i prodotti elettronici da smaltire con dimensioni inferiori a 25 cm.

L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchio dismesso al riciclaggio, al trattamento e allo smaltimento ambientalmente compatibile contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il riciclo dei materiali di cui è composto il prodotto. Per informazioni più dettagliate inerenti i sistemi di raccolta disponibili, rivolgersi al servizio locale di smaltimento rifiuti, o al negozio in cui è stato effettuato l'acquisto.

EN**This product complies with 2012/19/EU WEEE Directive**

The barred bin symbol on the appliance and its packaging indicates that the product must be scrapped separately from other waste at the end of its service life. The user must therefore hand the equipment over to a sorted waste disposal facility for electro-technical and electronic equipment at the end of its service life. Alternatively, the equipment may be returned to the retailer at the time of purchase of a new equivalent type of appliance. Electronic equipment of size less than 25 cm can be handed over to any electronics equipment retailer whose sales area is at least 400 m² for disposal free of charge and without any obligation to purchase new product. Sorted waste collection for recycling, treatment and environmentally compatible scrapping contributes to the prevention of damage to the environment and promotes reuse/recycling. For more detailed information on the collection systems available, contact the local waste disposal service or the shop where the product was purchased.

FR**Ce produit est conforme à la directive WEEE 2012/19/UE**

Le symbole de la poubelle barrée présent sur l'équipement ou sur l'emballage indique que le produit, à la fin de sa vie utile, doit être collecté séparément des autres déchets. L'utilisateur devra donc remettre l'appareil en fin de vie aux centres municipaux de tri sélectif des déchets électrotechniques et électroniques. Comme alternative à la gestion autonome, l'appareil à éliminer peut être remis au revendeur, au moment de l'achat d'un nouvel appareil de type équivalent. Il est également possible de remettre gratuitement, sans obligation d'achat, les produits électroniques à éliminer ayant une dimension inférieure à 25 cm, aux revendeurs de produits électroniques disposant d'une surface de vente d'au moins 400 m². La collecte séparée correcte, permettant de confier l'équipement éliminé au recyclage, au traitement et à l'élimination compatible avec l'environnement, contribue à éviter les effets négatifs possibles sur la nature et sur la santé, et favorise la réutilisation et/ou le recyclage des matériaux dont l'équipement est fait. Pour des informations plus détaillées concernant les systèmes de collecte disponibles, s'adresser au service local d'élimination des déchets, ou au magasin où l'achat a eu lieu.

ES**Este producto es conforme con la Directiva WEEE 2012/19/UE**

El símbolo del contenedor tachado que aparece en el aparato o en su embalaje indica que el producto, al final de su vida útil, debe recogerse de manera separada y sin mezclarse con otros residuos. Por lo tanto, el usuario deberá entregar el aparato que haya alcanzado el final de su vida útil a los centros municipales encargados de la recogida separada de residuos eléctricos y electrónicos. Como alternativa a la gestión autónoma, es posible entregar el equipo que se quiere eliminar al distribuidor cuando se adquiera un nuevo equipo de tipo equivalente. Además es posible entregar los productos electrónicos que deben eliminarse cuya dimensión sea inferior a 25 cm, de modo gratuito y sin obligación de compra, a los distribuidores de productos electrónicos con una superficie destinada a la venta de 400 m² como mínimo. Una adecuada recogida separada para un sucesivo envío del aparato al reciclado, al tratamiento y a la eliminación compatible con el medio ambiente, contribuye a evitar posibles efectos negativos para la salud y el medio ambiente y favorece la reutilización y/o el reciclado de los materiales que componen el aparato. Para informaciones más detalladas relativas a los sistemas de recogida disponibles, diríjase al servicio de eliminación de residuos local o a la tienda donde ha adquirido el producto.

DE**Dieses Produkt entspricht der WEEE-Richtlinie 2012/19/UE**

Das auf dem Gerät oder der Verpackung aufgedruckte Symbol der durchgestrichenen Mülltonne bedeutet, dass das Produkt getrennt vom allgemeinen Hausmüll entsorgt werden muss. Der Benutzer muss daher das Gerät nach Ablauf ihrer Lebensdauer der entsprechenden Sammelstelle für die getrennte Entsorgung von Elektroschrott zuführen. Als Alternative zur selbstständigen Entsorgung, ist es möglich, das Altgerät beim Kauf eines neuen Geräts derselben Art an den Händler abzugeben. Bei Elektronikhändlern mit einer Verkaufsfläche von mindestens 400 m² ist es außerdem möglich, elektronische Altgeräte, die kleiner als 25 cm sind, kostenlos und ohne Kaufverpflichtung abzugeben. Die ordnungsgemäße Entsorgung und darauf folgende Zuführung des Altgeräts zum Recycling sowie einer umweltfreundlichen Behandlung und Entsorgung trägt dazu bei, eventuell negative Auswirkungen auf die Umwelt und die Gesundheit zu vermeiden und fördert das Recycling der Materialien, aus denen das Gerät besteht. Weitere Informationen hinsichtlich der bei Ihnen verfügbaren Entsorgungsmöglichkeiten können Sie bei Ihrer Gemeinde oder im Geschäft, in dem das Gerät gekauft wurde, einholen.

IT

In conformità con il regolamento REACH (CE) n. 1907/2006, SAER è tenuta ad informare circa alcune sostanze contenute nei suoi prodotti. Quando un prodotto contiene qualsiasi sostanza altamente preoccupante (SVHC) in una concentrazione al di sopra dello 0,1% in peso/peso, SAER deve fornire informazioni sufficienti a consentire la sicurezza d'uso dell'articolo e comprendenti, quanto meno, il nome della sostanza.

E' disponibile nell'area Download del nostro sito www.saerelettropompe.com la Dichiarazione in conformità con l'articolo 33 del Regolamento REACH (CE) n. 1907/2006 e sostanze altamente preoccupanti (Substances of Very High Concern, SVHC) contenente tutte la informazioni necessarie per i prodotti SAER che possono contenere piombo in concentrazioni superiori allo 0,1% in peso/peso. Per ulteriori informazioni contattare l'assistenza tecnica SAER.

EN

According to the REACH Regulation (EC) n. 1907/2006, SAER is required to inform about some substances contained in its products. When a product contains any Substance of Very High Concern (SVHC) with a concentration higher than 0,1% in weight/weight, SAER shall provide sufficient information to allow a safe use of the article and including at least the name of the substance.

The Declaration according to the 33th article of REACH (CE) n. 1907/2006 Regulation and Substances of Very High Concern (SVHC), with all the necessary informations for SAER products, that may contain lead with a concentration higher than 0,1% in weight/weight, is available on our website www.saerelettropompe.com in the Download page.

For further information contact the SAER technical assistance.

ES

En conformidad con el reglamento REACH (CE) n. 1907/2006, SAER debe informar sobre algunas sustancias contenidas en sus productos. Cuando un producto contiene alguna Sustancia Altamente Preocupante (SVHC) en una concentración superior al 0,1% en peso / peso, SAER debe proporcionar información suficiente para permitir el uso seguro del artículo e incluir, al menos, el nombre de la sustancia.

Está disponible en el área de descargas de nuestro sitio web www.saerelettropompe.com la Declaración en conformidad con el artículo 33 del Reglamento REACH (EC) no. 1907/2006 y Sustancias Altamente Preocupantes (Substances of Very High Concern, SVHC) que contiene toda la información necesaria para los productos SAER que pueden contener plomo en concentraciones superiores al 0,1% en peso / peso.

Por más información contactar con la asistencia técnica de SAER.

FR

En conformité avec le règlement REACH (CE) n. 1907/2006, SAER est tenue d'informer de certaines substances contenues dans ses produits. Lorsqu'un produit contient une substance extrêmement préoccupante (SVHC) à une concentration supérieure à 0,1% en poids / poids, SAER doit fournir des informations suffisantes pour permettre l'utilisation sans danger de l'article, y compris, au minimum, le nom. de la substance.

Sur notre site internet www.saerelettropompe.com dans la section de téléchargement est disponible La Déclaration conformément à l'article 33 du règlement REACH (CE) n °. 1907/2006 et substances extrêmement préoccupantes (SVHC) contenant toutes les informations nécessaires pour les produits SAER pouvant contenir du plomb à des concentrations supérieures à 0,1% en poids / poids. Pour plus d'informations, contactez l'assistance technique SAER

DE

Gemäß der REACH (CE) Verordnung n. 1907/2006 ist SAER verpflichtet, über die einigen, in den eigenen Erzeugnissen erhaltenen Stoffe, zu informieren. Wenn ein Produkt beliebige, als höchstens besorgnissvoll geltende, Stoffe mit einem Gewichtsanteil von 0,1% oder mehr enthält, soll SAER genug Informationen liefern, die eine sichere Benutzung des Produktes ermöglichen und wenigstens den Namen des Stoffes selbst enthalten. Im Download-Bereich auf unserer Webseite www.saerelettropompe.com finden Sie die Konformitätserklärung gemäß der REACH (CE) Verordnung n. 1907/2006 und höchstens besorgnissvoll geltenden Stoffe mit allen notwendigen Informationen über die SAER Erzeugnisse, die Blei in der Konzentration von mehr als 0,1% in Gewicht/ Gewicht enthalten können.

Für mehr Informationen wenden Sie sich an den technischen Kundendienst an.

RU

Согласно предписанию REACH (CE) n. 1907/2006, SAER обязан уведомлять о некоторых веществах, содержащихся в его изделиях. Когда изделие содержит любые вещества, вызывающие сильное беспокойство (SVHC) в концентрации, превышающей 0,1 % в весе/ весе, SAER должен предоставить достаточную информацию, позволяющую безопасно использовать изделие и включающую, по крайней мере, название самого вещества. В разделе для скачивания документации на нашем сайте www.saerelettropompe.com имеется Декларация соответствия статье 33 Предписания REACH (CE) n. 1907/2006 и вещества, вызывающие сильное беспокойство (Substances of Very High Concern, SVHC), содержащая всю необходимую информацию о изделиях SAER, в состав которых может входить свинец в концентрации, превышающей 0,1% в весе/ весе. При необходимости более подробной информации просьба обращаться в службу технической поддержки SAER.

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Cod. 211/IX - 80003001/BBE/0920



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