

VETUS[®]

Installatie instructies
Installation instructions
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Instructions d'installation
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Flexibele schroefaskoppeling

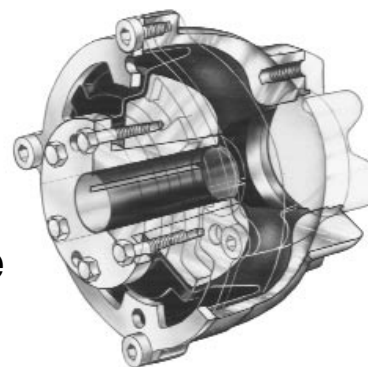
Flexible propeller shaft coupling

Flexible Schraubenwellenkupplung

Accouplement flexible d'arbre porte-hélice

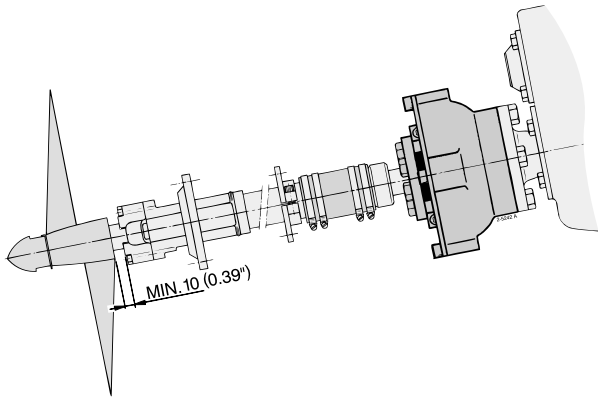
Acoplamiento flexible del árbol porta-hélice

Giunto di accoppiamento flessibile dell'albero dell'elica



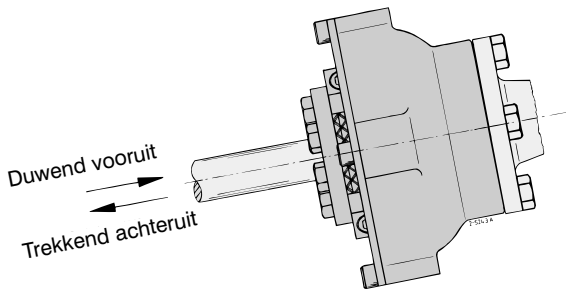
Uniflex

Opstelling

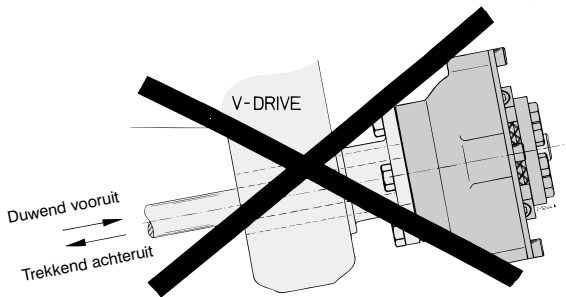


In verband met de axiale beweging van de schroefas moet er tussen het buitenlager en de naaf van de schepsschroef een minimale vrije ruimte zijn. ◀

Stuwkracht

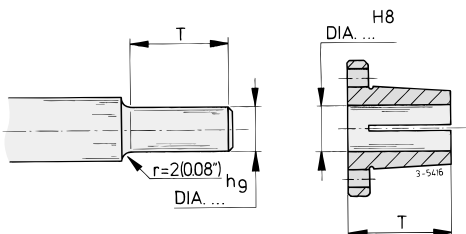


N.B. Bij vooruit varen moet het rubberdeel worden ingedrukt. ◀



Toepassing van de Uniflex in combinatie met een V-drive keer-koppeling is niet toegestaan! ◀

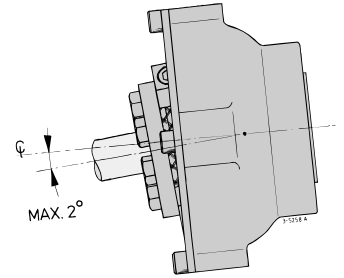
Afwijkende (grotere) schroefas diameter



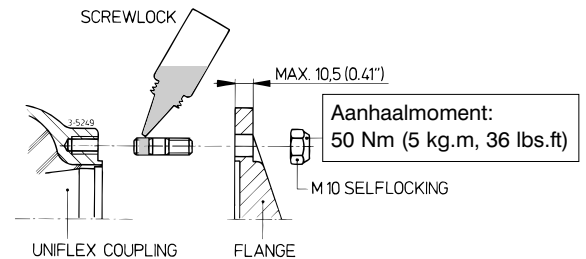
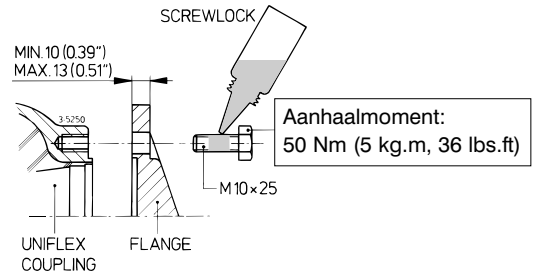
Verklein de schroefas diameter over de lengte van de klembus (afmeting 'T') naar afmeting 'd' van de koppeling, zie 'Hoofdafmetingen'. Radius 'r' minimaal 2 mm. ◀

Uitlijnfout

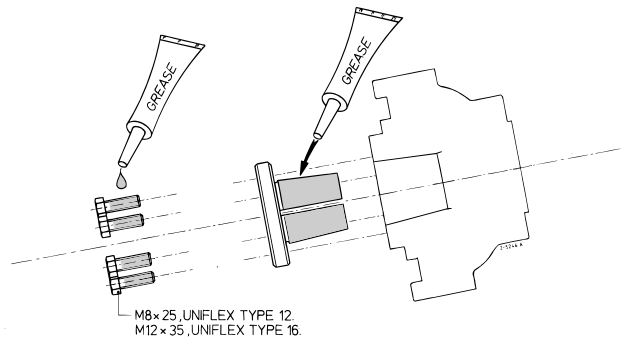
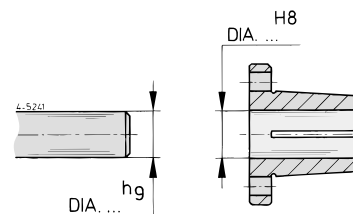
De maximaal toelaatbare uitlijnfout van de schroefas is 2°. ◀



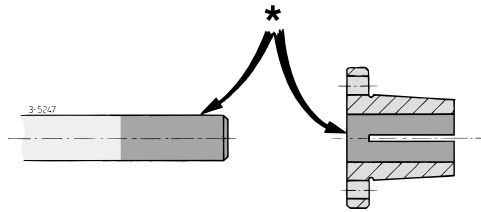
Montage algemeen



Om een betrouwbaar functionerende koppeling te verkrijgen dienen alle bouten en moeren met de opgegeven momenten te worden aangebracht. Gebruik hiervoor een momentsleutel; het 'op gevoel' aantrekken leidt niet tot bevredigende resultaten. ◀

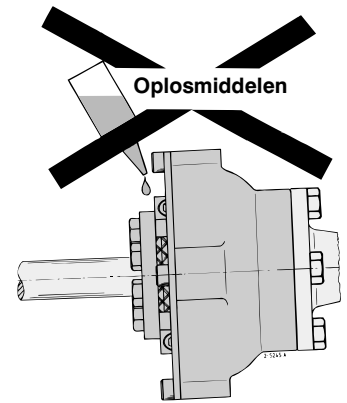


Vet de buitenzijde van de klemconus en de bouten in. ◀

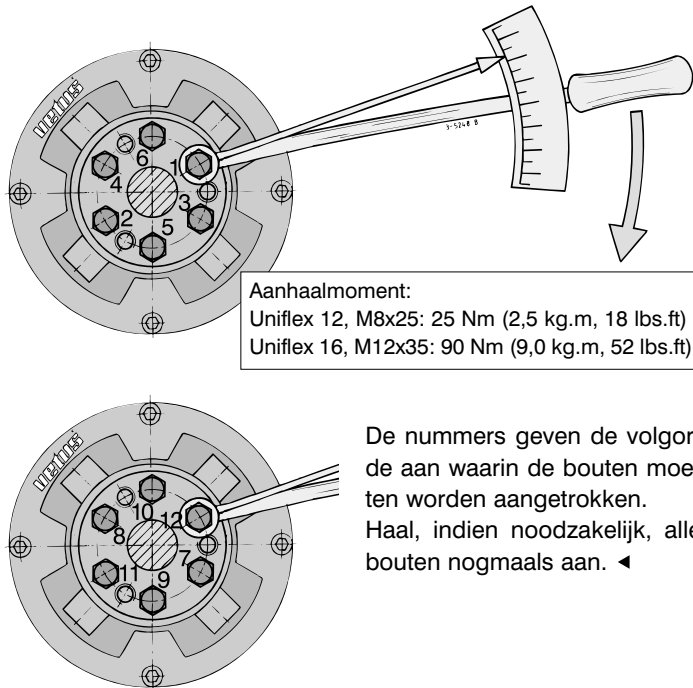


Om slip tussen de klemnaaf en de schroefas te voorkomen dienen deze vrij van vet en vuil (*) te zijn. ◀

Zorg er voor dat de rubberdelen niet worden aangetast door oplosmiddelen. ◀

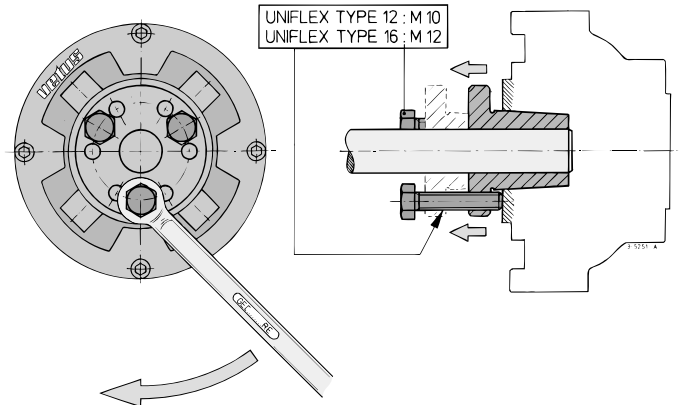


Demontage



Aanhaalmoment:
 Uniflex 12, M8x25: 25 Nm (2,5 kg.m, 18 lbs.ft)
 Uniflex 16, M12x35: 90 Nm (9,0 kg.m, 52 lbs.ft)

De nummers geven de volgorde aan waarin de bouten moeten worden aangetrokken. Haal, indien noodzakelijk, alle bouten nogmaals aan. ◀



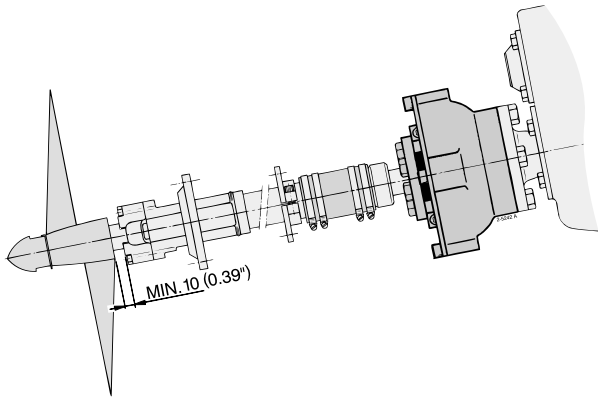
Technische gegevens

Uniflex	:	12		16	
Gewicht	:	2,8 kg		6,9 kg	
Max. koppel volg. DIN6270B	:	200 N.m	20 kgf.m	400 N.m	40 kgf.m
Max. koppel volg. DIN6270A	:	175 N.m	17,5 kgf.m	350 N.m	35 kgf.m
Max. vermogen volg. DIN6270B *	:	2,1 kW/100 min ⁻¹	2.8 hp/100 RPM	4,2 kW/100 min ⁻¹	5.6 hp/100 RPM
Max. vermogen volg. DIN6270A *	:	1,8 kW/100 min ⁻¹	2.5 hp/100 RPM	3,6 kW/100 min ⁻¹	5 hp/100 RPM
Massatraagheidsmoment	J	399 . 10 ⁻⁵ kg.m ²		1723 . 10 ⁻⁵ kg.m ²	
	GD ²	0,016 kgf.m ²		0,069 kgf.m ²	
Dyn. torsiestijfheid	:	900 N.m/rad	6,37 °/100 N.m	1900 N.m/rad	3,02 °/100 N.m
Axiale trekstijfheid	:	1,7 kN/mm	170 kgf/mm	1,9 kN/mm	190 kgf/mm
Axiale drukstijfheid	:	2,8 kN/mm	280 kgf/mm	5,3 kN/mm	530 kgf/mm
Max. toerental bij	2° **	1500 min ⁻¹	1500 RPM	1500 min ⁻¹	1500 RPM
	0°	4500 min ⁻¹	4500 RPM	3500 min ⁻¹	3500 RPM

* Max. vermogen $M_{max} = M_{max} \cdot 2 \cdot \pi \cdot n$ (M_{max} is het max. koppel en n het toerental)

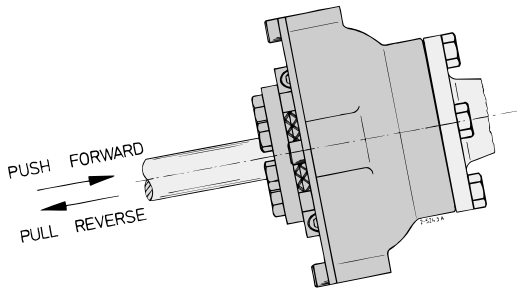
** Maximale hoekverplaatsing voor beide types Uniflex is 2°.

Mounting

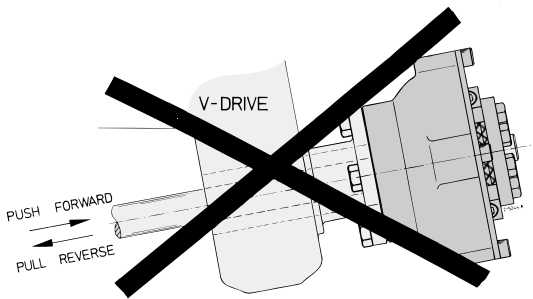


In connection with the axial movement of the propeller shaft a minimum free space between outer bearing and propeller hub is required. ◀

Propeller-thrust

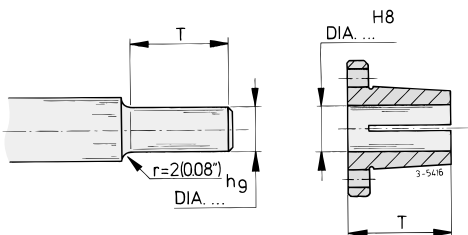


N.B. When sailing in forward direction the rubber part must be compressed. ◀



Using the Uniflex in combination with a V-drive type gearbox is not allowed! ◀

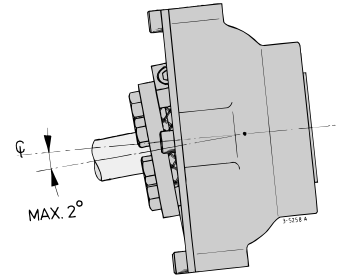
Over-size (larger) propeller shaft diameter



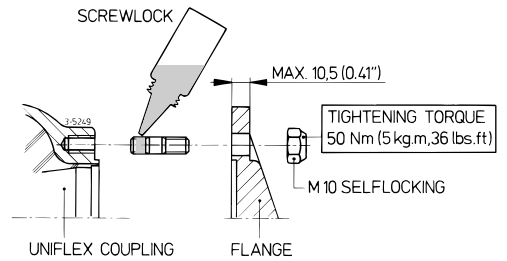
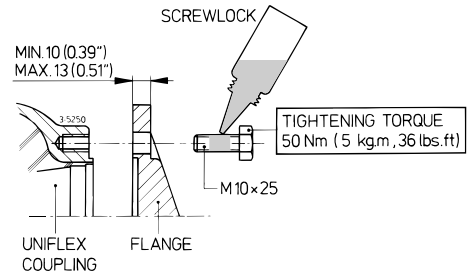
Reduce the propeller shaft diameter for the taper length (dimension 'A') to the given dimension 'd' of the coupling, see 'Overall dimensions'. Radius 'r' minimal 2 mm (0.08"). ◀

Misalignment

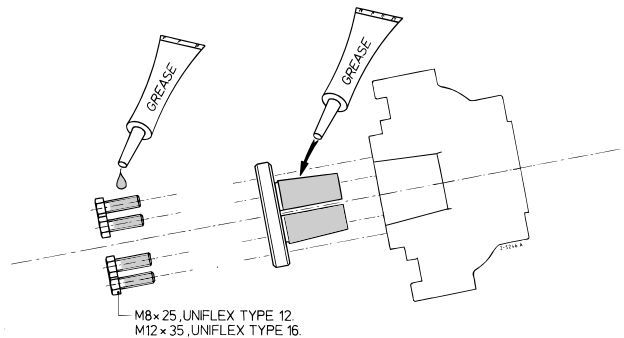
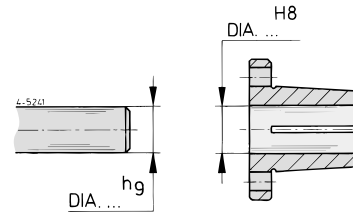
The maximum allowable misalignment of the propeller shaft is 2°. ◀



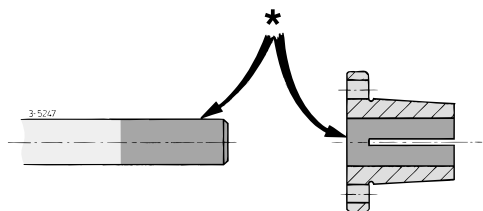
General assembly



To achieve a reliably operating coupling all the bolts and nuts must be tightened with the torques given. Use a torque wrench; tightening it 'in the blind' will not lead to satisfying results. ◀

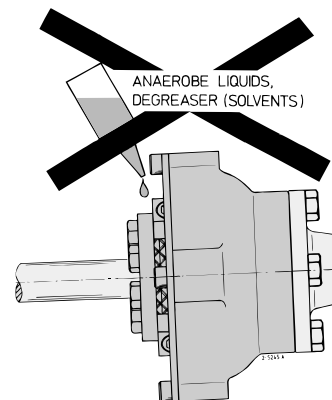


Grease the outside of the taper and the bolts. ◀

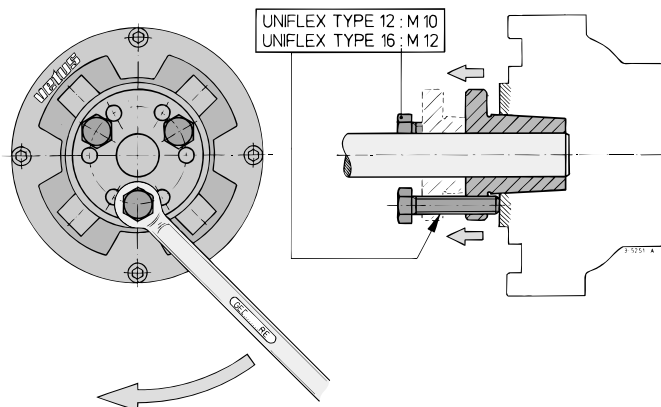
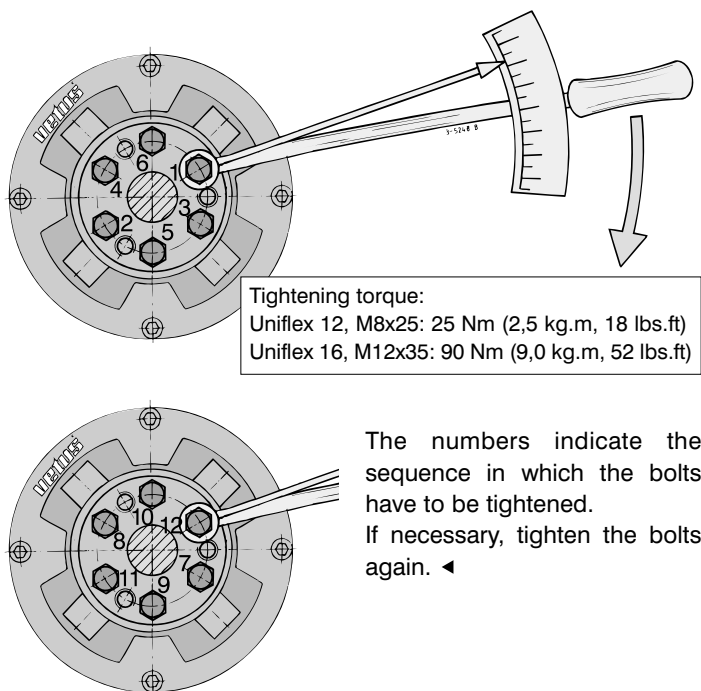


To prevent slipping between the clamping-joint and the propeller shaft, they must be free of grease and dirt (*). ◀

Take care that the rubber parts are not affected by solvents. ◀



Disassembling



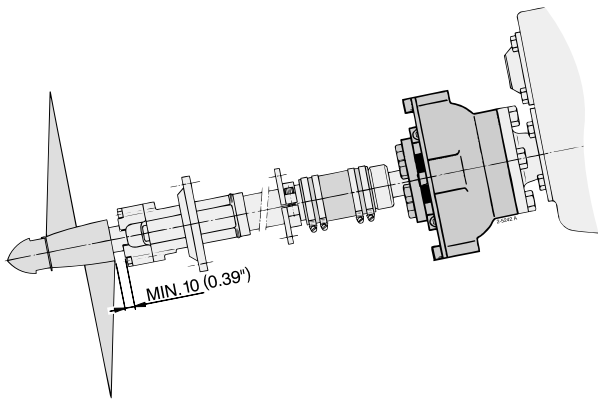
Technical data

Uniflex	:	12	16
Weight	:	2,8 kg	6.2 lbs
Max. torque to DIN6270B	:	200 N.m	144.6 lbs.ft
Max. torque to DIN6270A	:	175 N.m	126.5 lbs.ft
Max. power to DIN6270B *	:	2,1 kW/100 min ⁻¹	2.8 hp/100 RPM
Max. power to DIN6270A *	:	1,8 kW/100 min ⁻¹	2.5 hp/100 RPM
Mass moment of inertia	J	399 . 10 ⁻⁵ kg.m ²	1723 . 10 ⁻⁵ kg.m ²
	GD ²	0,016 kgf.m ²	0,069 kgf.m ²
Dyn. torsional stiffness	:	900 N.m/rad	8.63 °/100 lbs.ft
Axial pull stiffness	:	1,7 kN/mm	0.0105 "/100 lbs
Axial push stiffness	:	2,8 kN/mm	0.0064 "/100 lbs
Max. rpm at	2° **	1500 min ⁻¹	1500 RPM
	0°	4500 min ⁻¹	4500 RPM
			3500 min ⁻¹
			3500 RPM

* Max. Power $P_{max} = M_{max} \cdot 2 \cdot \pi \cdot n$ (M_{max} is the max. torque and n the RPM)

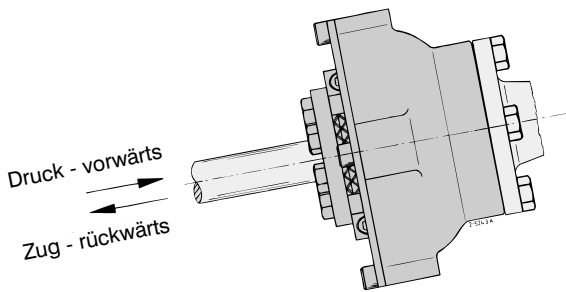
** Maximum angular displacement for both Uniflex models is 2°.

Aufstellung

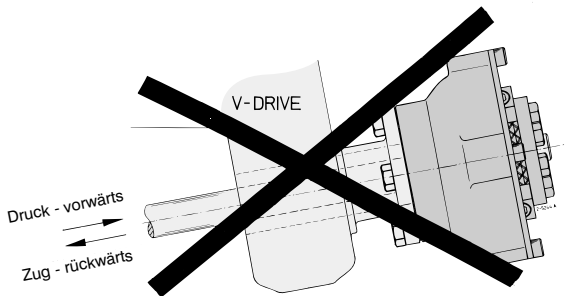


Aufgrund der Achsialbewegung der Schraubenwelle muß zwischen dem äußeren Wellenlager und der Nabe der Schiffsschraube ein minimaler freier Raum sein. ◀

Schubkraft

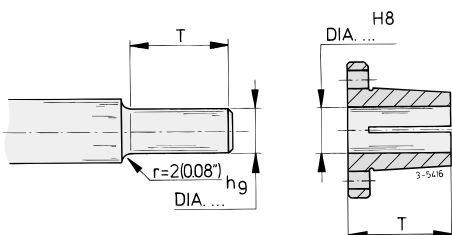


Achtung: Beim Vorwärtsfahren soll das Gummitteil zusammengedrückt werden. ◀



Der Einsatz der Uniflex in Kombination mit einem Vdrive-Wendegetriebe ist nicht gestattet! ◀

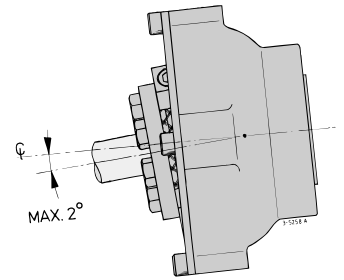
Abweichender (größerer) Durchmesser der schraubenwelle



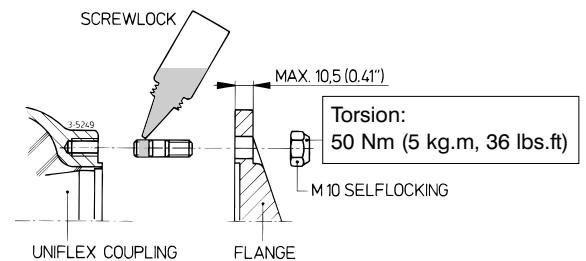
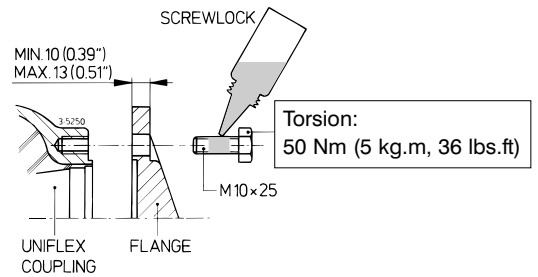
Den Durchmesser der Schraubenwelle über die Länge der Klemmbuchse (Maß 'A') auf Maß 'd' der Kupplung verkleinern, siehe 'Hauptabmessungen'. Radius 'r' sollte mindestens 2 mm betragen. ◀

Versatz

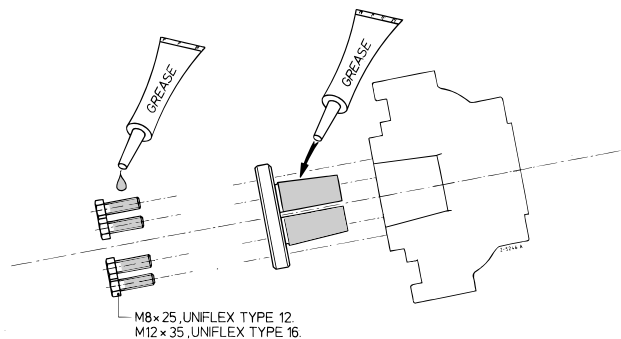
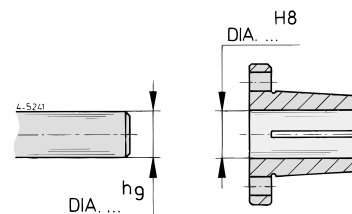
Der max. zulässiger Versatz der Schraubenwelle beträgt 2°. ◀



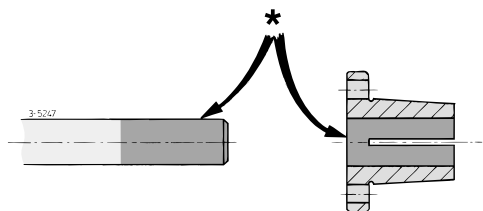
Montage allgemein



Damit eine zuverlässig funktionierende Kupplung erreicht wird, sollten alle Bolzen und Muttern nach den angegebenen Drehmomenten angezogen werden. Verwenden Sie dazu einen Drehmomentschlüssel; das 'Anziehen nach Gefühl' führt nicht zu befriedigenden Ergebnissen. ◀

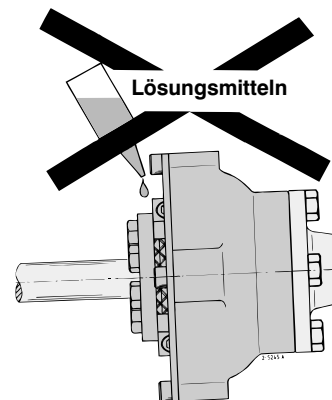


Fetten Sie die Außenseite der Klemmbuchse und der Bolzen ein. ◀

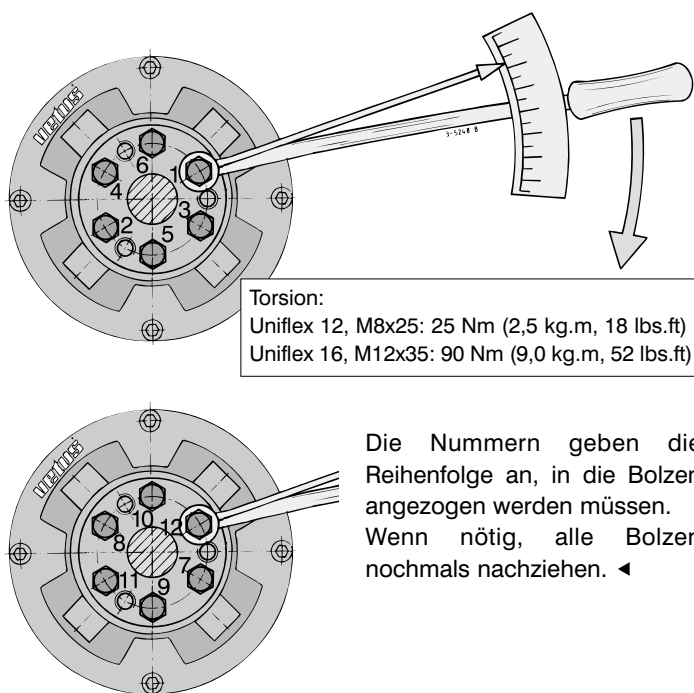


Um Schlupf zwischen Klemmnabe und Schraubenwelle zu verhindern, müssen diese schmutz- und fettfrei (*) sein. ◀

Sorgen Sie dafür, daß die Gummitteile nicht von Lösungsmitteln angegriffen werden. ◀

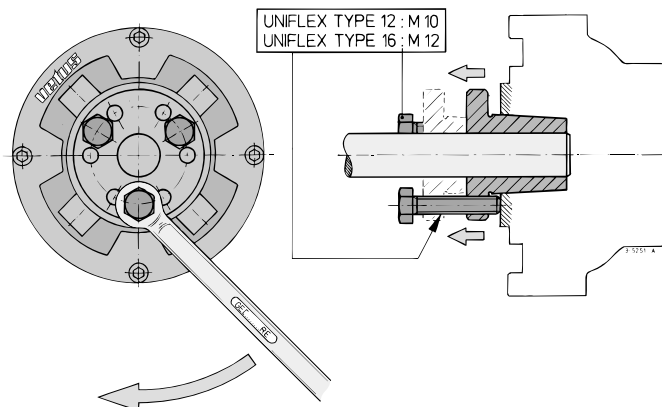


Ausbauen



Torsion:
 Uniflex 12, M8x25: 25 Nm (2,5 kg.m, 18 lbs.ft)
 Uniflex 16, M12x35: 90 Nm (9,0 kg.m, 52 lbs.ft)

Die Nummern geben die Reihenfolge an, in die Bolzen angezogen werden müssen. Wenn nötig, alle Bolzen nochmals nachziehen. ◀



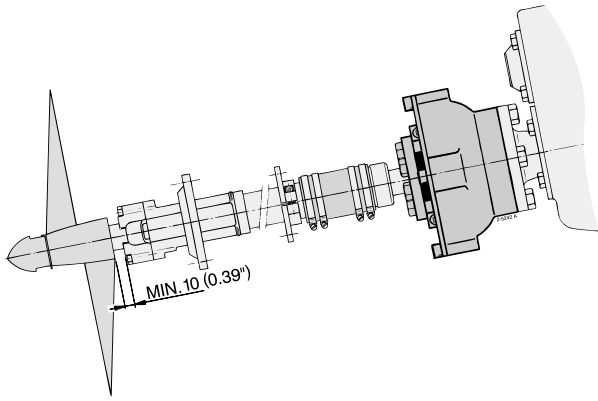
Technische Daten

Uniflex	:	12	16
Gewicht	:	2,8 kg	6,9 kg
Max. Drehmoment gem. DIN6270B	:	200 N.m	400 N.m
Max. Drehmoment gem. DIN6270A	:	175 N.m	350 N.m
Max. Leistung gem. DIN6270B *	:	2,1 kW/100 min ⁻¹	4,2 kW/100 min ⁻¹
Max. Leistung gem. DIN6270A *	:	1,8 kW/100 min ⁻¹	3,6 kW/100 min ⁻¹
Massenträgheitsmoment	J	399 · 10 ⁻⁵ kg.m ²	1723 · 10 ⁻⁵ kg.m ²
	GD ²	0,016 kgf.m ²	0,069 kgf.m ²
Dyn. Drehsteifigkeit	:	900 N.m/rad	1900 N.m/rad
Axiale steifigkeit zug	:	1,7 kN/mm	1,9 kN/mm
Axiale steifigkeit druck	:	2,8 kN/mm	5,3 kN/mm
Max. Drehzahl bei	2° **	1500 min ⁻¹	1500 min ⁻¹
	0°	4500 min ⁻¹	3500 min ⁻¹

* Max. Leistung $P_{max} = M_{max} \cdot 2 \cdot \pi \cdot n$ (M_{max} ist das max. Drehmoment und n die Drehzahl)

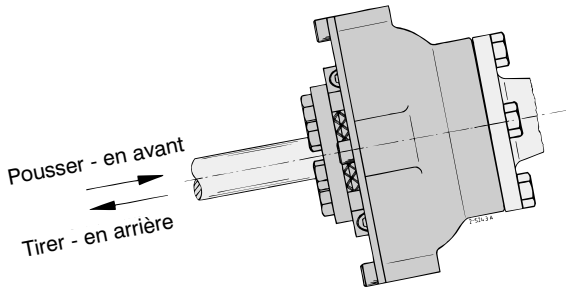
** Maximale Winkelverschiebung für beide Typen Uniflex ist 2°.

Montage

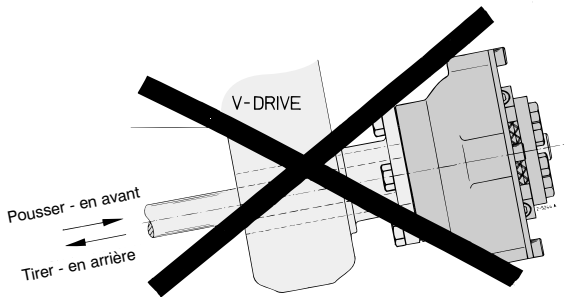


Etant donné le mouvement axial de l'arbre porte-hélice, il est nécessaire de laisser un espace libre minimum entre le support extérieur et le moyeu de l'hélice. ◀

Force de propulsion

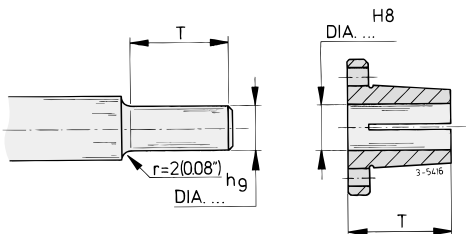


N.B. Lors de la marche avant, la partie caoutchouc doit être comprimée. ◀



Il est interdit d'utiliser le Uniflex en combinaison avec un inverseur à entraînement en V ! ◀

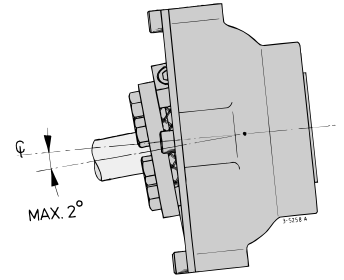
Autre diamètre (plus grand) de l'arbre porte-hélice



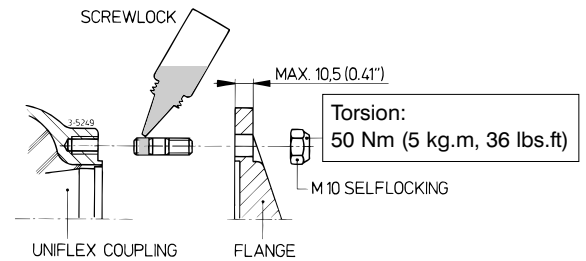
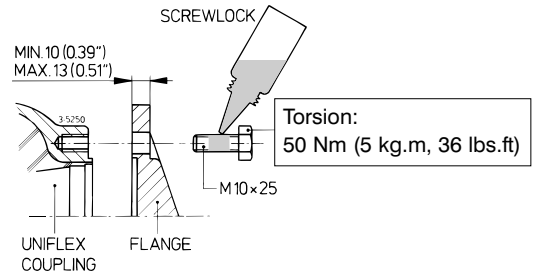
Réduire, sur la longueur de la bague de serrage (dimension 'A'), le diamètre de l'arbre porte-hélice à la dimension 'd' du couplage. Voir les 'dimensions principales'. Rayon 'r' minimum 2 mm. ◀

Desalignement

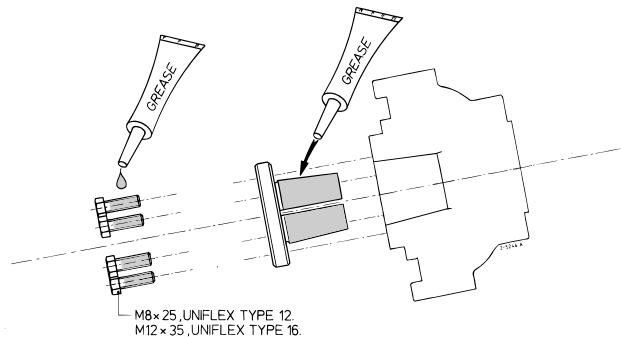
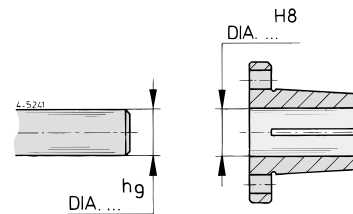
Le désalignement maximum autorisé de l'arbre porte-hélice est de 2°. ◀



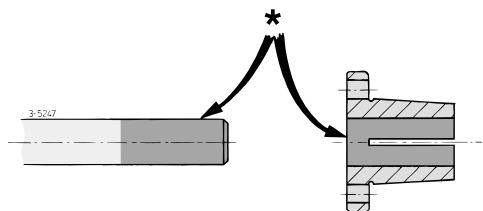
Assemblage generalites



Pour obtenir un accouplement au fonctionnement fiable, il est nécessaire de serrer tous les boulons et écrous selon les moments indiqués. Utiliser pour cela une clef dynamométrique; un serrage approximatif ne donne pas de résultats satisfaisants. ◀

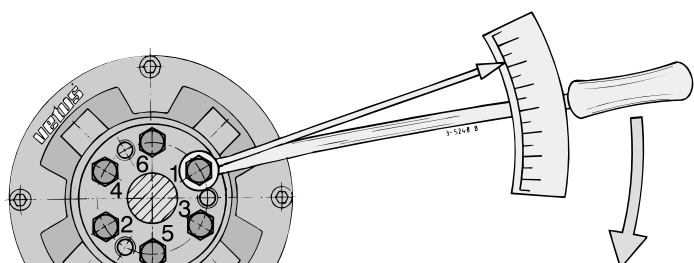
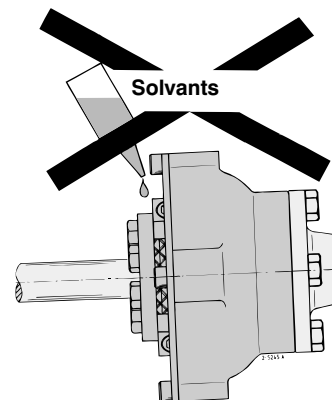


Graisser la partie extérieure du cône de serrage et des boulons. ◀

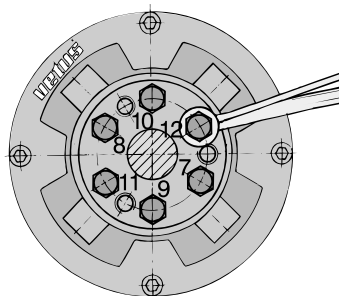


Pour éviter tout glissement entre le moyeu de serrage et l'arbre porte-hélice, veiller à ce que ceux-ci soient exempts de graisse et de saleté (*). ◀

Veiller à ce que les parties caoutchouc ne soient pas attaquées par des solvants. ◀

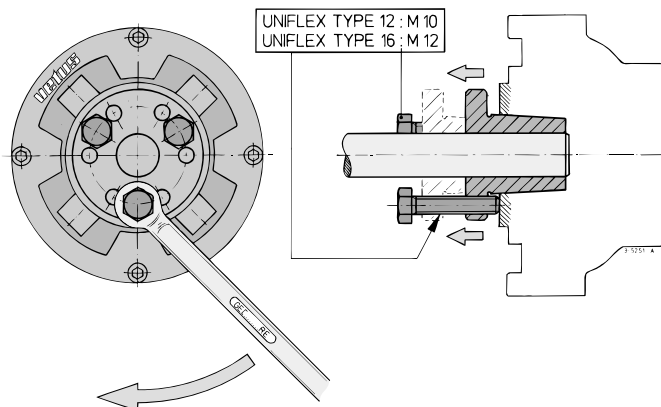


Torsion:
Uniflex 12, M8x25: 25 Nm (2,5 kg.m, 18 lbs.ft)
Uniflex 16, M12x35: 90 Nm (9,0 kg.m, 52 lbs.ft)



Les numéros indiquent l'ordre dans lequel les boulons doivent être serrés.
Serrer encore une fois tous les boulons si nécessaire. ◀

Demontage



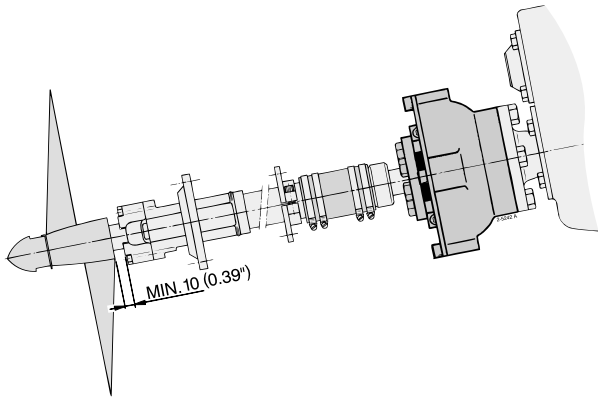
Specifications techniques

Uniflex	:	12	16
Poids	:	2,8 kg	6,9 kg
Couple max. selon DIN6270B	:	200 N.m	400 N.m
Couple max. selon DIN6270A	:	175 N.m	350 N.m
Puissance max. selon DIN6270B *	:	2,1 kW/100 min ⁻¹	4,2 kW/100 min ⁻¹
Puissance max. selon DIN6270A *	:	1,8 kW/100 min ⁻¹	3,6 kW/100 min ⁻¹
Moment d'inertie	J	399 . 10 ⁻⁵ kg.m ²	1723 . 10 ⁻⁵ kg.m ²
	GD ²	0,016 kgf.m ²	0,069 kgf.m ²
Rigidite dyn. a la torsion	:	900 N.m/rad	1900 N.m/rad
Rigidez axial de tracción	:	1,7 kN/mm	1,9 kN/mm
Rigidez axial de compresión	:	2,8 kN/mm	5,3 kN/mm
Nombre de tours max. á	2° **	1500 min ⁻¹	1500 min ⁻¹
	0°	4500 min ⁻¹	3500 min ⁻¹

* Puissance max. $P_{max} = M_{max} \cdot 2 \cdot \pi \cdot n$ (M_{max} est le couple max. et n le nombre de tours)

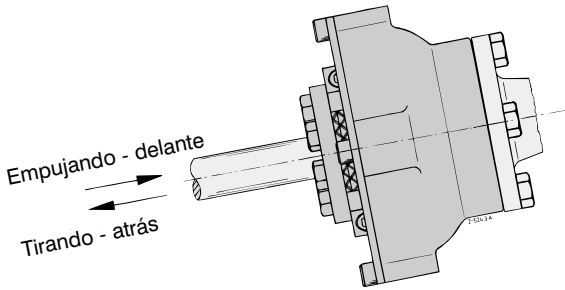
** Le déplacement angulaire maximum pour les deux types Uniflex est de 2°.

Montaje

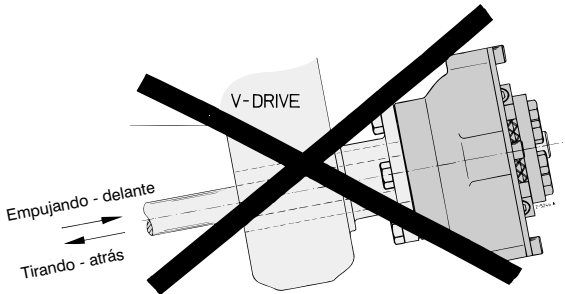


Dado el movimiento axial del árbol porta-hélice, es necesario dejar un espacio libre mínimo entre el soporte exterior y el cubo de hélice. ◀

Fuerza de propulsión

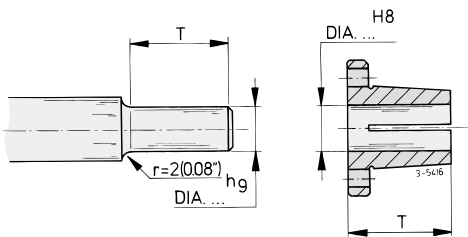


Nota: ¡Navegando hacia delante la parte de caucho se debe comprimir! ◀



¡No se permite aplicar el Uniflex en combinación con la caja de velocidades del tipo de transmisión en V! ◀

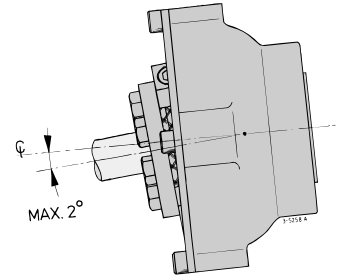
Otro diámetro (mayor) del árbol porta-hélice



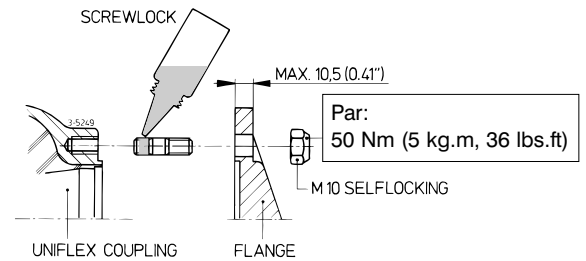
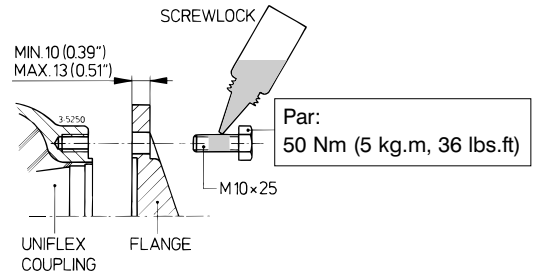
Redúzcase el diámetro del árbol porta-hélice a lo largo del cono (dimensión 'A') hacia dimensión 'd' del acoplamiento, véanse las 'Dimensiones Principales'. El radio 'r' será de 2 mm como mínimo. ◀

Mal alineamiento

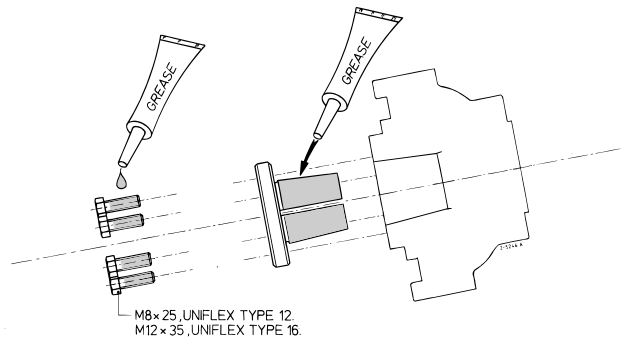
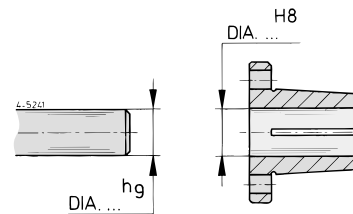
Se admite un mal alineamiento máximo de 2° del árbol porta-hélice. ◀



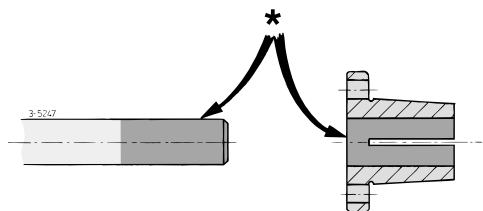
Montaje en general



Para obtener una acoplamiento de funcionamiento fiable se apretarán todos los tornillos y tuercas según los pares indicados. Utilizar para ello una llave de torsión; apretar 'a tuestas' no dará resultados satisfactorios. ◀

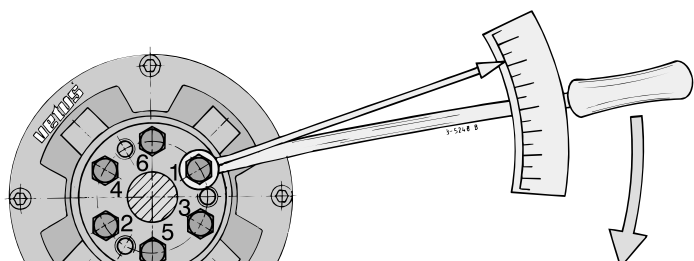
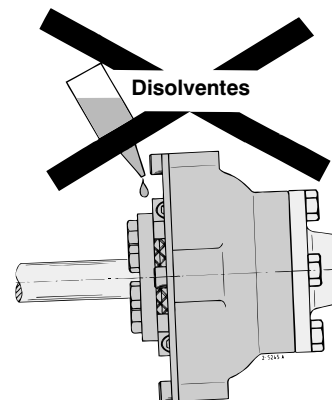


Engrase el exterior del cono de sujeción y de los tornillos. ◀

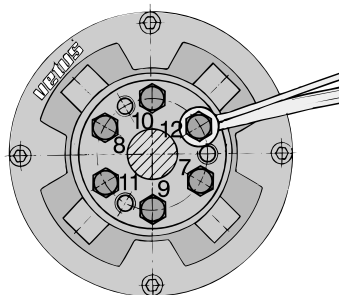


Para evitar holgura entre el cubo de sujeción y el eje de hélice, los mismos han de estar sin grasa y suciedad (*). ◀

Asegurar que las partes de caucho no sean afectadas por disolventes. ◀

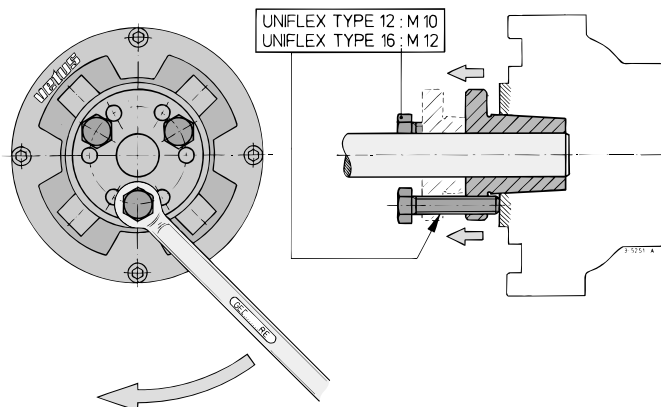


Par:
Uniflex 12, M8x25: 25 Nm (2,5 kg.m, 18 lbs.ft)
Uniflex 16, M12x35: 90 Nm (9,0 kg.m, 52 lbs.ft)



Los números indican el orden de apriete de los tornillos. Si fuera necesario, vuelva a apretar todos los tornillos. ◀

Desmontaje



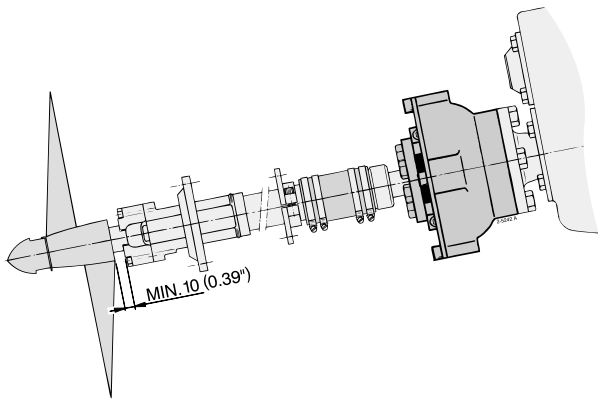
Especificaciones técnicas

Uniflex	:	12	16
Peso	:	2,8 kg	6,9 kg
Pár máximo según DIN6270B	:	200 N.m	400 N.m
	:	20 kgf.m	40 kgf.m
Pár máximo según DIN6270A	:	175 N.m	350 N.m
	:	17,5 kgf.m	35 kgf.m
Potencia máxima según DIN6270B *	:	2,1 kW/100 min ⁻¹	4,2 kW/100 min ⁻¹
	:	2.8 hp/100 RPM	5.6 hp/100 RPM
Potencia máxima según DIN6270A *	:	1,8 kW/100 min ⁻¹	3,6 kW/100 min ⁻¹
	:	2.5 hp/100 RPM	5 hp/100 RPM
Momento de inercia	J	399 . 10 ⁻⁵ kg.m ²	1723 . 10 ⁻⁵ kg.m ²
	GD ²	0,016 kgf.m ²	0,069 kgf.m ²
Rigidez dyn. de torsión	:	900 N.m/rad	1900 N.m/rad
	:	6,37 °/100 N.m	3,02 °/100 N.m
Rigidite axiale a la traction	:	1,7 kN/mm	1,9 kN/mm
	:	170 kgf/mm	190 kgf/mm
Rigidite axiale a la compression	:	2,8 kN/mm	5,3 kN/mm
	:	280 kgf/mm	530 kgf/mm
Número de revoluciones máx. con 2° **	:	1500 min ⁻¹	1500 min ⁻¹
	:	1500 RPM	1500 RPM
	0°	4500 min ⁻¹	3500 min ⁻¹
	:	4500 RPM	3500 RPM

* Potencia máxima: $P_{max} = M_{max} \cdot 2 \cdot P \cdot n$ (siendo 'M_{max}' el par máximo y 'n' el número de revoluciones)

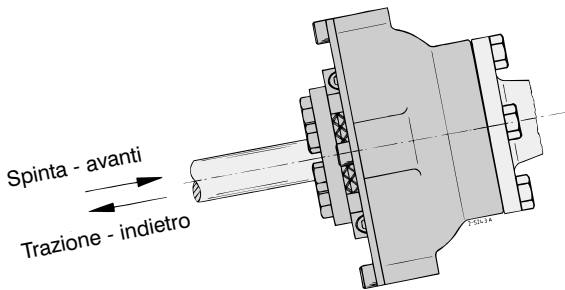
** El desplazamiento máximo de ángulo para ambos tipos de Uniflex es de 2°.

Montaggio

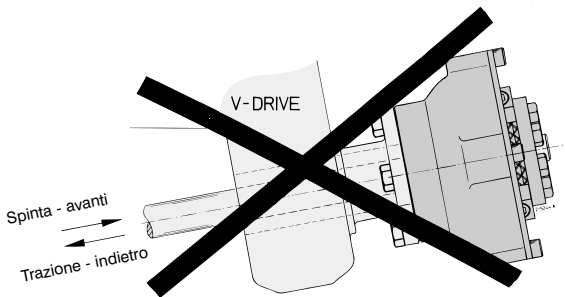


Tenendo conto del movimento assiale dell'albero dell'elica, è necessario lasciare uno spazio libero minimo fra la sospensione esterna e il mozzo dell'elica. ◀

Forza di propulsione

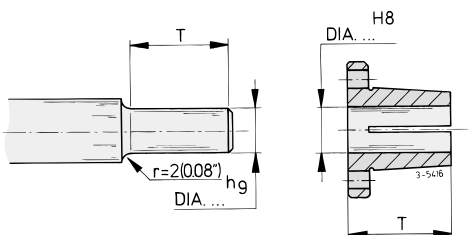


N.B. Durante la marcia in avanti la parte in gomma deve essere premuta! ◀



L'uso del Uniflex in combinazione con una trasmissione tipo V-drive non è permesso! ◀

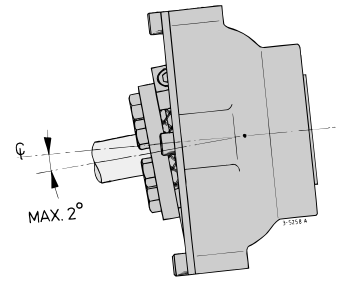
Diametro diverso (più grande) dell'albero dell'elica



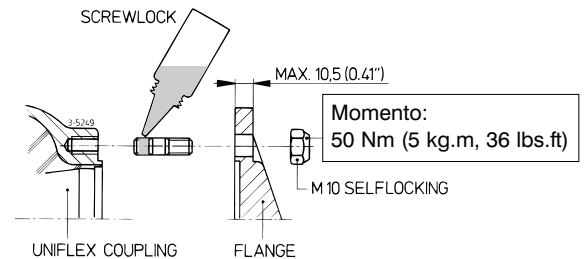
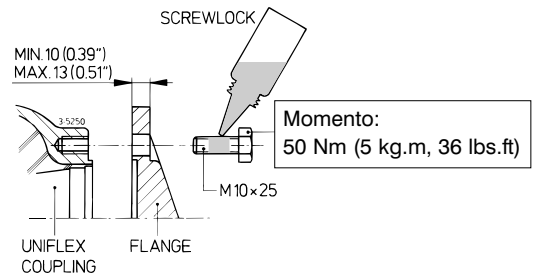
Ridurre il diametro dell'albero dell'elica sulla lunghezza del fermo (dimensione 'A') fino a raggiungere la dimensione 'd' dell'accoppiamento, vedi 'Dimensioni Principali'. Raggio 'r' minimo 2 mm. ◀

Errore di allineamento

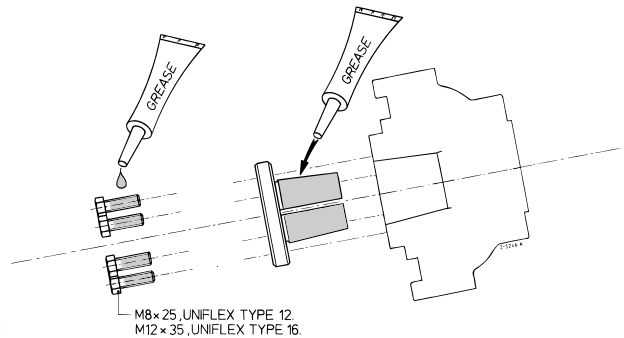
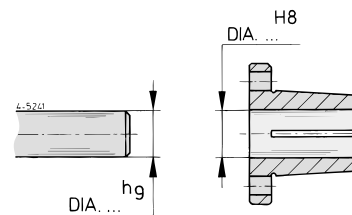
L'errore di allineamento massimo consentito dell'albero dell'elica è di 2°. ◀



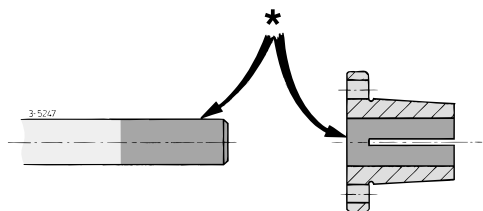
Montaggio, generalità



Per ottenere un giunto di accoppiamento che funzioni in modo affidabile, tutti i bulloni e tutti i dadi devono essere avvitati con il momento indicato. A questo scopo utilizzare una chiave dinamometrica; avvitando in modo approssimativo non si ottengono risultati soddisfacenti. ◀

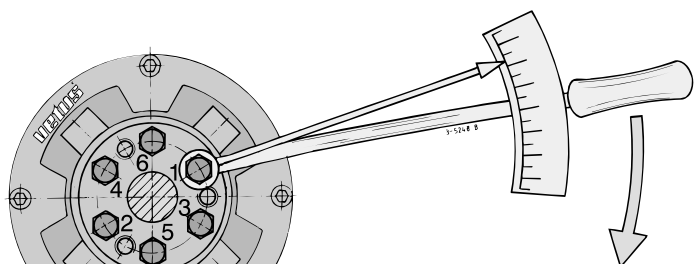
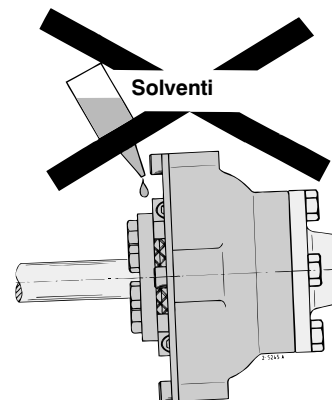


Lubrificare la superficie esterna del cono di bloccaggio e dei bulloni. ◀

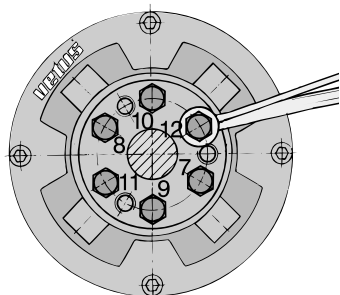


Il mozzo e l'albero dell'elica devono essere privi di grasso e sporco (*), onde evitare che slittino tra loro. ◀

Assicurarsi che le parti in gomma non vengano corrose dai solventi. ◀

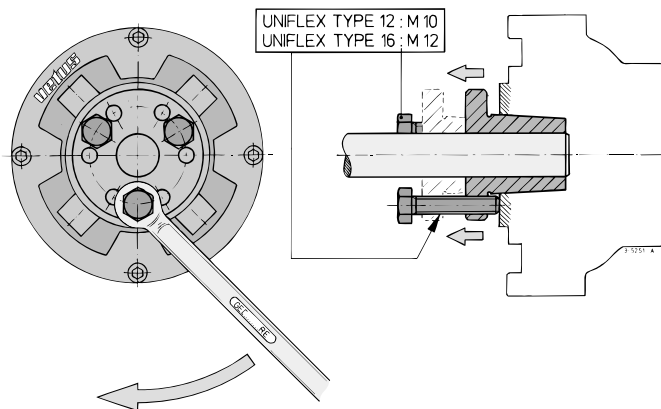


Momento:
Uniflex 12, M8x25: 25 Nm (2,5 kg.m, 18 lbs.ft)
Uniflex 16, M12x35: 90 Nm (9,0 kg.m, 52 lbs.ft)



I numeri indicano la sequenza di serraggio dei bulloni. Se necessario, serrare tutti i bulloni una seconda volta. ◀

Smontaggio



UNIFLEX TYPE 12 : M 10
UNIFLEX TYPE 16 : M 12

Dati tecnici

Uniflex	:	12	16
Peso	:	2,8 kg	6,9 kg
Momento max. secondo DIN6270B	:	200 N.m	400 N.m
		20 kgf.m	40 kgf.m
Momento max. secondo DIN6270A	:	175 N.m	350 N.m
		17,5 kgf.m	35 kgf.m
Potenza max. secondo DIN6270B *	:	2,1 kW/100 min ⁻¹	4,2 kW/100 min ⁻¹
		2.8 hp/100 RPM	5.6 hp/100 RPM
Potenza max. secondo DIN6270A *	:	1,8 kW/100 min ⁻¹	3,6 kW/100 min ⁻¹
		2.5 hp/100 RPM	5 hp/100 RPM
Momento d'inerzia	J	399 . 10 ⁻⁵ kg.m ²	1723 . 10 ⁻⁵ kg.m ²
	GD ²	0,016 kgf.m ²	0,069 kgf.m ²
Rigidità torsionale din.	:	900 N.m/rad	1900 N.m/rad
		6,37 °/100 N.m	3,02 °/100 N.m
Rigidità assiale alla trazione	:	1,7 kN/mm	1,9 kN/mm
		170 kgf/mm	190 kgf/mm
Rigidità assiale alla compressione	:	2,8 kN/mm	5,3 kN/mm
		280 kgf/mm	530 kgf/mm
Numero max. di giri a	2° **	1500 min ⁻¹	1500 min ⁻¹
	0°	4500 min ⁻¹	3500 min ⁻¹
		1500 RPM	1500 RPM
		4500 RPM	3500 RPM

* Potenze massima: $P_{max} = M_{max} \cdot 2 \cdot P \cdot n$ (dove M_{max} indica la coppia massima ed 'n' il numero di giri)

** Lo spostamento angolare massimo per entrambi i modelli Uniflex è 2°

Hoofdafmetingen

Hauptabmessungen

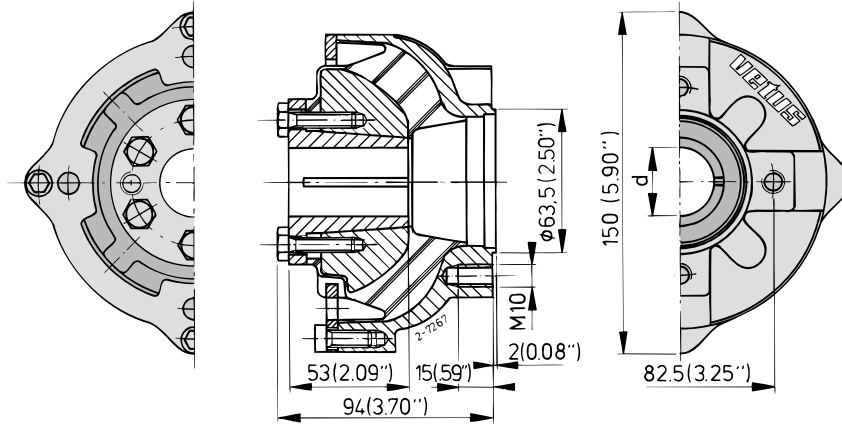
Dimensiones principales

Overall dimensions

Dimensions principales

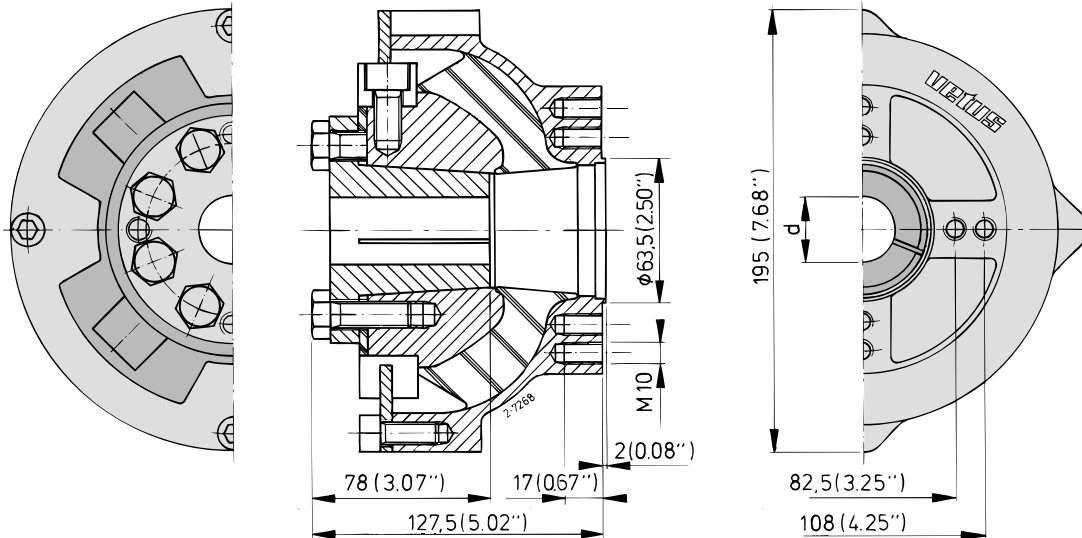
Dimensioni principali

UNIFLEX12



d
20 mm
25 mm
30 mm

UNIFLEX16



d
30 mm
35 mm
40 mm

Verloopflenzen

Zwischenflanschen

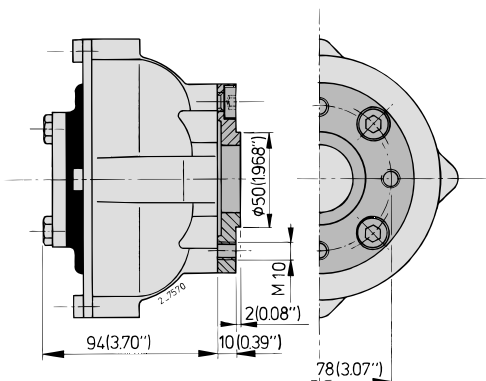
Bridas de adaptación

Adapter flanges

Brides d'adaptation

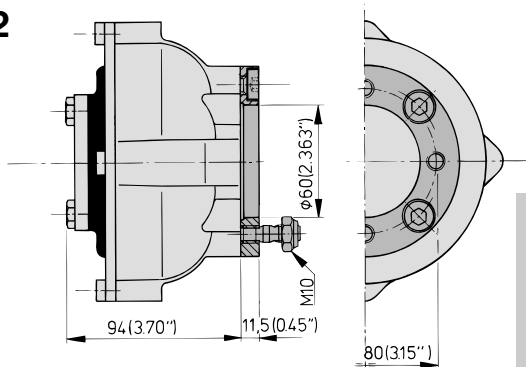
Flange di adattamento

FLANGE1



- KANZAKI KC30
 KC100
- YANMAR 1GM10
 2GM20
 3GM30
 3HM

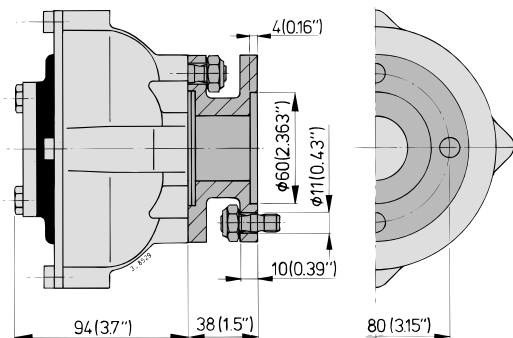
FLANGE2



- VOLVO MS2L *
 MS2B in line *
- MS10A MS10L
- MS15A MS15L

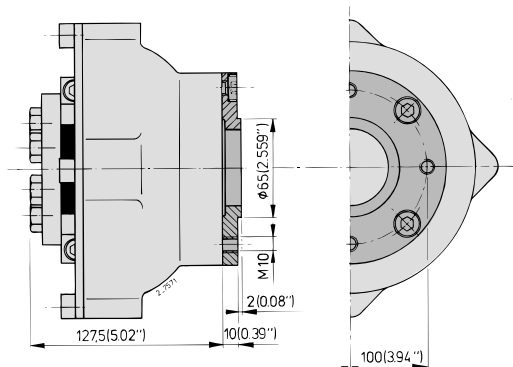
* Draadgaten van de keerkoppeling opboren naar ø 10,5 mm.	* Gewindebohrungen des Getriebeflansches auf ø 10,5 mm aufbohren.	* Retaladrar los orificios de rosca del cárter de transmisión hasta ø 10,5 mm.
* Rebores threaded holes of gearbox to 10.5 mm diam.	* Refaire trou fileté de l'accouplement jusqu'à ø 10,5 mm.	* Ripraticare i fori filetati della transmission con ø 10,5 mm.

FLANGE2A



- VOLVO MS2A
 MS2B down angle

FLANGE3



- KANZAKI KC180
- YANMAR 4JH-TE

vetus den ouden n.v.

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