

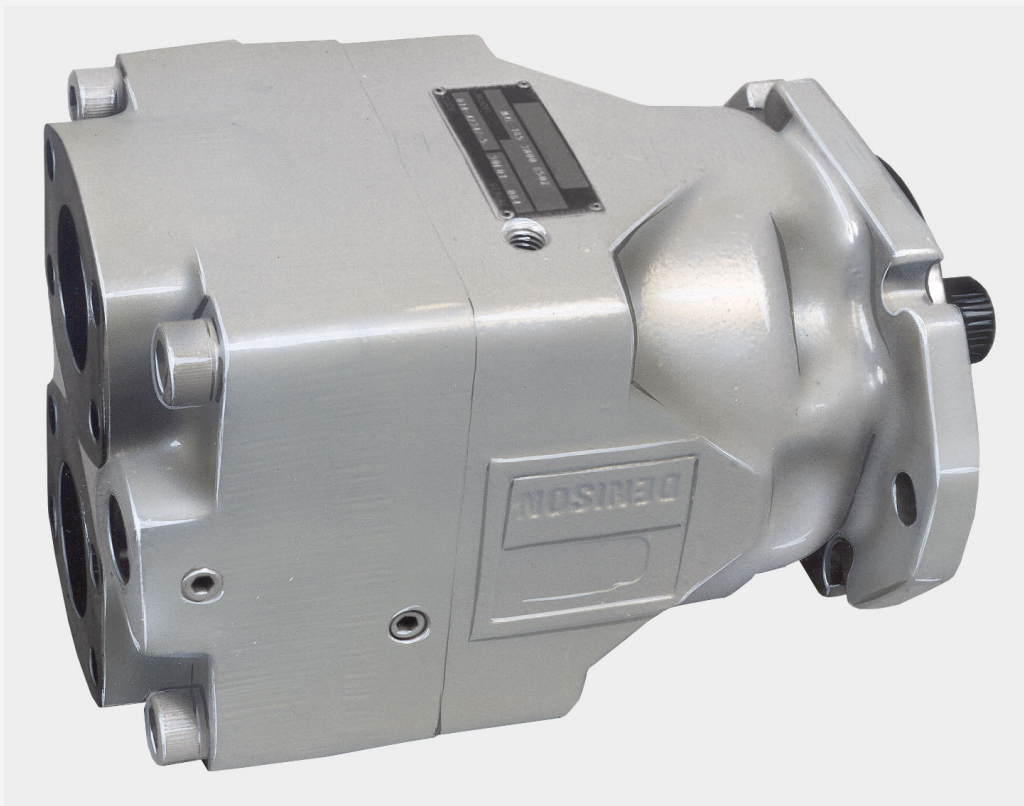
# DENISON HYDRAULICS M4E - M4SE - M4E1 - M4SE1

vane-type motor / Flügelzellen Motor

moteur à palettes / motore a palette

motore de paletas

## service information



Publ. S2 - ML1503 - B

03 / 2003 / FB

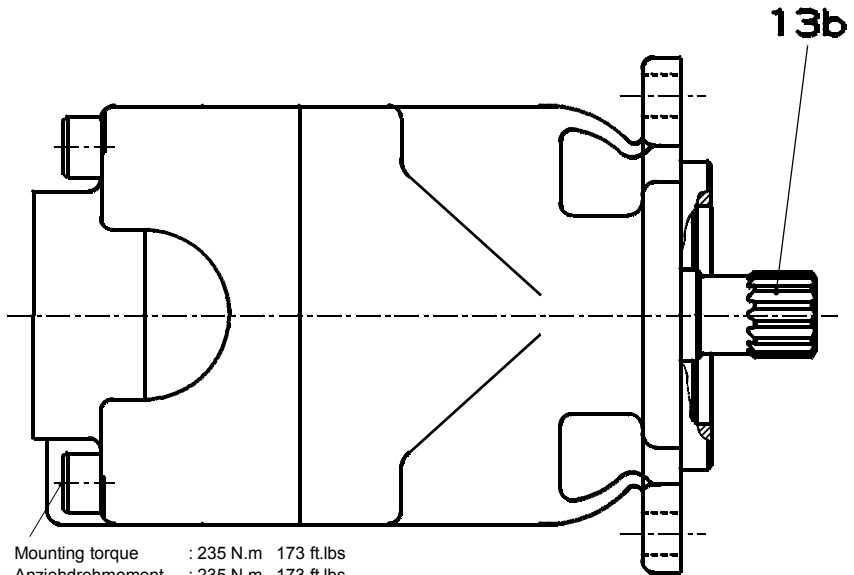
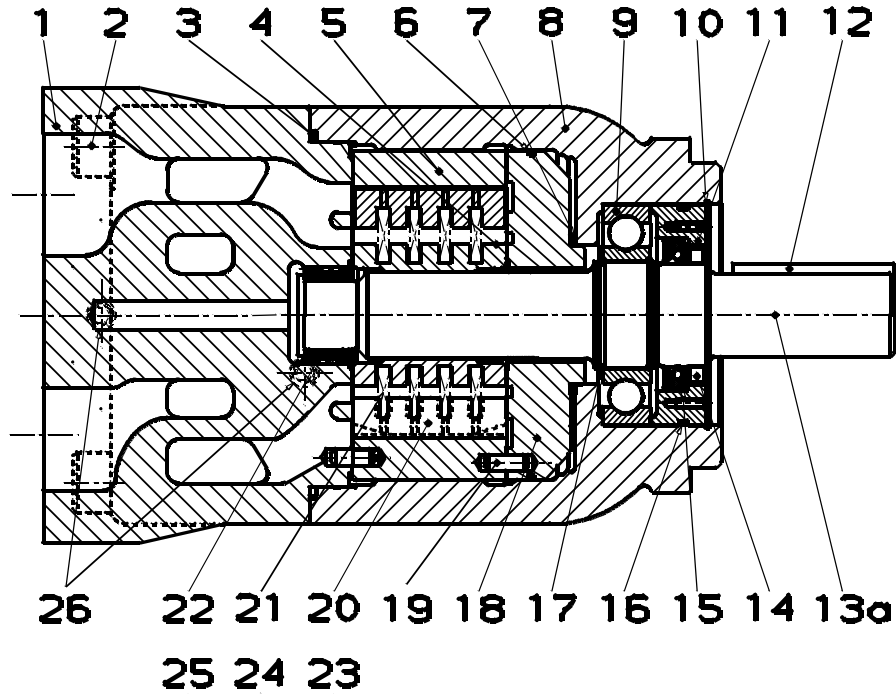
Replace : S2 - ML1503 - A

L25 - 21503 - 2

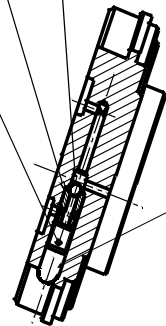
**DENISON** | **Hydraulics**

Recommended repair kits and assy's are bolt printed  
 Empfohlene Austausch - Baugruppen sind fett gedruckt  
 Les pochettes de rechange recommandées sont imprimées en caractères gras  
 I kit di ricambio consigliati sono indicati in grassetto  
 Los juegos de reparacion recomendados y los conjuntos, estan en negrita

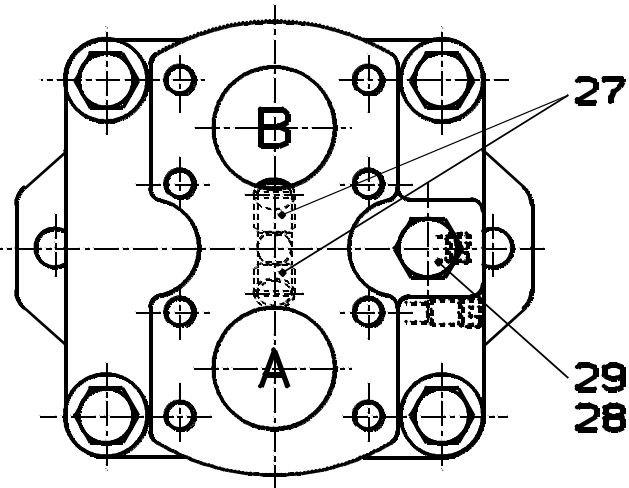
**M4E - M4E1  
 M4SE - M4SE1**



Mounting torque : 235 N.m 173 ft.lbs  
 Anziehdrehmoment : 235 N.m 173 ft.lbs  
 Couple de serrage : 235 N.m 173 ft.lbs  
 Coppia di serraggio : 235 N.m 173 ft.lbs  
 Par de apriete : 235 N.m 173 ft.lbs



Mounting torque : 11,5 to 12,6 N.m 8,5 to 9,3 ft.lbs  
 Anziehdrehmoment : 11,5 bis 12,6 N.m 8,5 bis 9,3 ft.lbs  
 Couple de serrage : 11,5 à 12,6 N.m 8,5 à 9,3 ft.lbs  
 Coppia di serraggio : 11,5 a 12,6 N.m 8,5 a 9,3 ft.lbs  
 Par de apriete : 11,5 a 12,6 N.m 8,5 a 9,3 ft.lbs



| Item Pos. Ref. Pos. Pos. | Description<br><i>Descrizione</i>   | Benennung<br><i>Descripción</i>   | Description  |    | Part N°<br>Teil Nr.<br>Code N°<br>Cod. N°<br>Referencia<br>M4E - M4E1 | Part N°<br>Teil Nr.<br>Code N°<br>Cod. N°<br>Referencia<br>M4SE - M4SE1 | Qty<br>Stück<br>Qté<br>Q.tà<br>Cant. |
|--------------------------|---|---|--|----|---|---|--------------------------------------|
| 1                        | End cap 4-bolts UNC (SAE drain) (M4E - M4SE)<br><i>Coperchio UNC 4 fori (drenaggio SAE) (M4E - M4SE)</i>            | Deckel UNC Flansch (SAE Leckölschluß) (M4E - M4SE)<br><i>Tapa UNC 4 agujeros (drenaje SAE) (M4E - M4SE)</i>     | Chapeau 4 trous UNC (drain SAE) (M4E - M4SE)             | F  | 034.71288   | 034.71288   | 1                                    |
|                          | End cap thd. port SAE (SAE drain) (M4E - M4SE)<br><i>Coperchio filettature SAE (drenaggio SAE) (M4E - M4SE)</i>     | Deckel SAE Gewinde (SAE Leckölschluß) (M4E - M4SE)<br><i>Tapa rosca SAE (drenaje SAE) (M4E - M4SE)</i>          | Chapeau orifices taraudés SAE (drain SAE) (M4E - M4SE)   | F  | 034.71290   | 034.71290   | 1                                    |
|                          | End cap 4-bolts UNC (BSPP drain) (M4E - M4SE)<br><i>Coperchio UNC 4 fori (drenaggio BSP) (M4E - M4SE)</i>           | Deckel UNC Flansch (R Leckölschluß) (M4E - M4SE)<br><i>Tapa UNC 4 agujeros (drenaje BSP) (M4E - M4SE)</i>       | Chapeau 4 trous UNC (drain BSPP) (M4E - M4SE)            | F  | 034.66375   | 034.66375   | 1                                    |
|                          | End cap 4-bolts UNC (SAE drain) (M4E1 - M4SE1)<br><i>Coperchio UNC 4 fori (drenaggio SAE) (M4E1 - M4SE1)</i>        | Deckel UNC Flansch (SAE Leckölschluß) (M4E1 - M4SE1)<br><i>Tapa UNC 4 agujeros (drenaje SAE) (M4E1 - M4SE1)</i> | Chapeau 4 trous UNC (drain SAE) (M4E1 - M4SE1)           | F  | 034.71289   | 034.71289   | 1                                    |
|                          | End cap thd. port SAE (SAE drain) (M4E1 - M4SE1)<br><i>Coperchio filettature SAE (drenaggio SAE) (M4E1 - M4SE1)</i> | Deckel SAE Gewinde (SAE Leckölschluß) (M4E1 - M4SE1)<br><i>Tapa rosca SAE (drenaje SAE) (M4E1 - M4SE1)</i>      | Chapeau orifices taraudés SAE (drain SAE) (M4E1 - M4SE1) | F  | 034.71291   | 034.71291   | 1                                    |
| 2                        | Screw<br><i>Vite</i>  | Schraube<br><i>Tornillo</i>   | Vis  |    | 358.24380   | 358.24380   | 4                                    |
| 3                        | O.ring<br><i>Guarnizione torica</i>   | Runddichtring<br><i>Anillo tórico</i>   | Joint torique  | D  | 675.00257   | 675.00257   | 1                                    |
| 4                        | Rotor<br><i>Rotore</i>  | Rotor<br><i>Rotor</i>   | Rotor  | A  | 034.70074   | 034.70074   | 1                                    |
| 5                        | Cam ring 153<br><i>Anello camma 153</i>   | Hubring 153<br><i>Aro volumetrico 153</i>   | Came 153   | A  | 034.70076   | 034.70417   | 1                                    |
|                          | Cam ring 185<br><i>Anello camma 185</i>   | Hubring 185<br><i>Aro volumetrico 185</i>   | Came 185   | A  | 034.70077   | 034.70418   | 1                                    |
|                          | Cam ring 214<br><i>Anello camma 214</i>   | Hubring 214<br><i>Aro volumetrico 214</i>   | Came 214   | A  | 034.70078   | 034.70419   | 1                                    |
| 6                        | Sq. section seal<br><i>Guarnizione</i>  | Dichtring<br><i>Junta seccion cuadrada</i>  | Joint section carrée                                     | D  | 695.10250   | 695.10250   | 1                                    |
| 7                        | Sq. section seal<br><i>Guarnizione</i>  | Dichtring<br><i>Junta seccion cuadrada</i>  | Joint section carrée                                     | D  | 695.10229   | 695.10229   | 1                                    |
| 8                        | Housing<br><i>Corpo</i>   | Gehäuse<br><i>Cuerpo</i>  | Carter   |    | 034.71278   | 034.71278   | 1                                    |
| 9                        | Ball bearing<br><i>Cuscinetto a sfera</i>   | Kugellager<br><i>Cojinete de bolas</i>  | Roulement à billes                                       | BC | 230.03308   | 230.03308   | 1                                    |
| 10                       | Retaining ring<br><i>Anello elastico</i>  | Sicherungsring<br><i>Aro retencion</i>  | Circlips   |    | 356.30354   | 356.30354   | 1                                    |
| 11                       | Retainer seal<br><i>Anello elastico</i>   | Dichtungsträger<br><i>Aro retencion</i>   | Chapeau porte joint                                      |    | 034.70069   | 034.70069   | 1                                    |
| 12                       | Key (code 1)<br><i>Chiavetta (codice 1)</i>   | Paßfeder (Typ 1)<br><i>Chaveta (codigo 1)</i>   | Clavette (code 1)  | B  | 034.46754   | 034.46754   | 1                                    |
| 13a                      | Shaft (keyed) (code 1)<br><i>Albero a chiavetta (codice 1)</i>  | Paßfederwelle (Typ 1)<br><i>Eje chaveteado (codigo 1)</i>   | Arbre à clavette (code 1)                                | B  | 034.71088   | 034.71088   | 1                                    |
| 13b                      | Shaft (splined) (code 3)<br><i>Albero scanalato (codice 3)</i>  | Vielkeilwelle (Typ 3)<br><i>Eje estriado (codigo 3)</i>   | Arbre à cannelures (code 3)                              | C  | 034.71089   | 034.71089   | 1                                    |
| 14                       | Felt wiper<br><i>Feltro pulitore</i>  | Filzring<br><i>Felpa</i>  | Joint feutre   | D  | 605.10020   | 605.10020   | 1                                    |

| Item Pos. Ref. Pos. | Description<br><i>Descrizione</i>                                      | Benennung<br><i>Descripcion</i>   | Description  |    | Part N°<br>Teil Nr.<br>Code N°<br>Cod. N°<br>Referencia<br>M4E - M4E1 | Part N°<br>Teil Nr.<br>Code N°<br>Cod. N°<br>Referencia<br>M4SE - M4SE1 | Qty<br>Stück<br>Qté<br>Qtá<br>Cant. |
|---------------------|--|---|--|----|---|---|-------------------------------------|
| 15                  | Shaft seal<br><i>Paraolio</i>  | Simmerring<br><i>Retén eje</i>  | Joint d'arbre  | D  | 637.00003   | 637.00003   | 1                                   |
| 16                  | O.ring<br><i>Guarnizione torica</i>                                    | Runddichtring<br><i>Anillo tórico</i>   | Joint torique  | D  | 675.00236   | 675.00236   | 1                                   |
| 17                  | Round section ring<br><i>Anello elastico</i>                           | Sicherungsring<br><i>Anillo tórico</i>  | Anneau   | BC | 034.70866   | 034.70866   | 2                                   |
| 18                  | Port plate pressure<br><i>Piatto distributore anter.</i>               | Steuerplatte<br><i>Plato de presion</i>                                       | Plaque pression                                      | E  | 034.53344   | 034.53344   | 1                                   |
| 19                  | Dowel pin<br><i>Spina</i>  | Fixierstift<br><i>Pasador</i>   | Goupille   |    | 324.22012   | 324.22012   | 2                                   |
| 20                  | Vane<br><i>Paletta</i>   | Flügel<br><i>Paleta</i>   | Palette  | A  | 034.70075   | 034.70075   | 10                                  |
| 21                  | Spring vane<br><i>Molla</i>  | Feder für Flügel<br><i>Muelle paleta</i>                                      | Ressort de palette                                   | A  | 034.49743   | 034.49743   | 40                                  |
| 22                  | Needle bearing<br><i>Cuscinetto a rulli</i>                            | Nadellager<br><i>Cojinete de agujas</i>                                       | Roulement à aiguilles                                |    | 230.82134   | 230.82134   | 1                                   |
| 23                  | Ball<br><i>Sfera</i>   | Kugel<br><i>Bola</i>  | Bille d'acier  | E  | 201.06001   | 201.06001   | 1                                   |
| 24                  | Adaptor valve<br><i>Adattatore</i>                                     | Kugel ventil<br><i>Valvula adaptadora</i>                                     | Adapteur valve                                       | E  | 034.53346   | 034.53346   | 1                                   |
| 25                  | Screw<br><i>Vite</i>   | Schraube<br><i>Tornillo</i>   | Vis  | E  | 312.35056   | 312.35056   | 1                                   |
| 26                  | Plug<br><i>Tappo</i>   | Stopfen<br><i>Tapon</i>   | Bouchon  | F  | 431.90400   | 431.90400   | 2                                   |
| 27                  | Check valve (M4E1 - M4SE1)<br><i>Valvola di ritegno (M4E1 - M4SE1)</i> | Rückschlagventil (M4E1 - M4SE1)<br><i>Valvula de retención (M4E1 - M4SE1)</i> | Clapet (M4E1 - M4SE1)                                | F  | S14.27259   | S14.27259   | 2                                   |
| 28                  | O.ring (M4E1 - M4SE1)<br><i>Guarnizione torica (M4E1 - M4SE1)</i>      | Runddichtring (M4E1 - M4SE1)<br><i>Anillo tórico (M4E1 - M4SE1)</i>           | Joint torique (M4E1 - M4SE1)                         | FD | 675.00908   | 675.00908   | 1                                   |
| 29                  | Plug (M4E1 - M4SE1)<br><i>Tappo (M4E1 - M4SE1)</i>                     | Stopfen (M4E1 - M4SE1)<br><i>Tapon (M4E1 - M4SE1)</i>                         | Bouchon (M4E1 - M4SE1)                               | F  | 488.35002   | 488.35002   | 1                                   |
|                     |  |   |  |    |   |   |                                     |
|                     | <b>REPAIR KIT<br/>KIT DI RICAMBIO</b>                                  | <b>AUSTAUSCH-BAUGRUPPEN<br/>CONJUNTO REPARACION</b>                           | <b>POCHETTES RECHANGES</b>                           |    |   |   |                                     |
| A                   | <b>Kit 153<br/>Cartuccia 153</b>                                       | <b>Pumpeneinsatz 153<br/>Juego 153</b>  | <b>Cartouche 153</b>                                 |    | S14.27464   | S14.28946   | 1                                   |
| A                   | <b>Kit 185<br/>Cartuccia 185</b>                                       | <b>Pumpeneinsatz 185<br/>Juego 185</b>  | <b>Cartouche 185</b>                                 |    | S14.27465   | S14.28947   | 1                                   |
| A                   | <b>Kit 214<br/>Cartuccia 214</b>                                       | <b>Pumpeneinsatz 214<br/>Juego 214</b>  | <b>Cartouche 214</b>                                 |    | S14.27466   | S14.28948   | 1                                   |
| B                   | <b>Shaft and bearing ass'y (code 1)<br/>Ins. albero (codice 1)</b>     | <b>Baugruppe (Welle u. Lager) (Typ 1)<br/>Conjunto eje (codigo 1)</b>         | <b>Arbre à clavette et roulement ass. (code 1)</b>   |    | S14.27469   | S14.27469   | 1                                   |
| C                   | <b>Shaft and bearing ass'y (code 3)<br/>Ins. albero (codice 3)</b>     | <b>Baugruppe (Welle u. Lager) (Typ 3)<br/>Conjunto eje (codigo 3)</b>         | <b>Arbre à cannelures et roulement ass. (code 3)</b> |    | S14.27470   | S14.27470   | 1                                   |
| D                   | <b>Seal kit (S5)<br/>Serie guarnizioni (S5)</b>                        | <b>Dichtringsatz (S5)<br/>Juego de juntas (S5)</b>                            | <b>Pochette de joints (S5)</b>                       |    | S14.42336.5   | S14.42336.5   | 1                                   |

| Item Pos. Ref. Pos. Pos. | Description<br><i>Descrizione</i>   | Benennung<br><i>Descripcion</i>   | Description                                      | Part N°<br>Teil Nr.<br>Code N°<br>Cod. N°<br>Referencia<br>M4E - M4E1 | Part N°<br>Teil Nr.<br>Code N°<br>Cod. N°<br>Referencia<br>M4SE - M4SE1 | Qty<br>Stück<br>Qté<br>Q.tà<br>Cant. |
|--------------------------|---|---|--|---|---|--------------------------------------|
| E                        | Port plate-pressure ass'y<br><i>Ins. piatto distributore anter.</i>                               | Steuerplatte<br><i>Conjunto plato dist.</i>   | Plaque pression ass.                             | S14.27471   | S14.27471   | 1                                    |
| F                        | End cap ass'y<br><i>Ins. coperchio</i>  | Gehäuse baugruppe<br><i>Conjunto tapa</i>   | Chapeau arrière ass.                             |   |   |                                      |
|                          | 4-bolts UNC (SAE drain) (M4E - M4SE)<br><i>UNC 4 fori (drenaggio SAE) (M4E - M4SE)</i>            | UNC Flansch (SAE Leckölanschluß) (M4E - M4SE)<br><i>UNC 4 agujeros (drenaje SAE) (M4E - M4SE)</i>     | 4 trous UNC (drain SAE) (M4E - M4SE)             | S14.42330   | S14.42330   | 1                                    |
|                          | SAE thd. port (SAE drain) (M4E - M4SE)<br><i>Filettature SAE (drenaggio SAE) (M4E - M4SE)</i>     | SAE Gewinde (SAE Leckölanschluß) (M4E - M4SE)<br><i>Rosca SAE (drenaje SAE) (M4E - M4SE)</i>          | Orifices taraudés SAE (drain SAE) (M4E - M4SE)   | S14.42331   | S14.42331   | 1                                    |
|                          | 4-bolts UNC (BSPP drain) (M4E - M4SE)<br><i>UNC 4 fori (drenaggio BSP) (M4E - M4SE)</i>           | UNC Flansch (R Leckölanschluß) (M4E - M4SE)<br><i>UNC 4 agujeros (drenaje BSP) (M4E - M4SE)</i>       | 4 trous UNC (drain BSPP) (M4E - M4SE)            | S14.97018   | S14.97018   | 1                                    |
|                          | 4-bolts UNC (SAE drain) (M4E1 - M4SE1)<br><i>UNC 4 fori (drenaggio SAE) (M4E1 - M4SE1)</i>        | UNC Flansch (SAE Leckölanschluß) (M4E1 - M4SE1)<br><i>UNC 4 agujeros (drenaje SAE) (M4E1 - M4SE1)</i> | 4 trous UNC (drain SAE) (M4E1 - M4SE1)           | S14.42332   | S14.42332   | 1                                    |
|                          | SAE thd. port (SAE drain) (M4E1 - M4SE1)<br><i>Filettature SAE (drenaggio SAE) (M4E1 - M4SE1)</i> | SAE Gewinde (SAE Leckölanschluß) (M4E1 - M4SE1)<br><i>Rosca SAE (drenaje SAE) (M4E1 - M4SE1)</i>      | Orifices taraudés SAE (drain SAE) (M4E1 - M4SE1) | S14.42333   | S14.42333   | 1                                    |
| Notes                    |   |   |  |   |   |                                      |

## Model Code

Model number :

Series external drain \_\_\_\_\_

Series internal drain \_\_\_\_\_

Torque (Nm/bar) \_\_\_\_\_

153 = 2,52

185 = 3,05

214 = 3,53

Type of shaft \_\_\_\_\_

1 = keyed (SAE C)

3 = splined (SAE C)

Direction of rotation \_\_\_\_\_

N = bi-directional

Porting combination \_\_\_\_\_

00 = standard

Design letter \_\_\_\_\_

Seal class \_\_\_\_\_

5 = S5

Mounting w/connection variables \_\_\_\_\_

01 = SAE threaded port

SAE drain

02 = SAE 4 bolts flange

UNC threaded - SAE drain

04 = SAE 4 bolts flange

UNC threaded - BSPP drain

Modifications \_\_\_\_\_

## Typenschlüssel

Typenbezeichnung :

Baureihe externer Leckölanschluß \_\_\_\_\_

Baureihe interner Leckölanschluß \_\_\_\_\_

Drehmoment (Nm/bar) \_\_\_\_\_

153 = 2,52

185 = 3,05

214 = 3,53

Art der Welle \_\_\_\_\_

1 = Paßfederwelle (SAE C)

3 = Vielkeilwelle (SAE C)

Drehrichtung \_\_\_\_\_

N = Rechts und Linkslauf

Lage der Anschlüsse \_\_\_\_\_

00 = standard

Ausführungsbuchstabe \_\_\_\_\_

Dichtungsklasse \_\_\_\_\_

5 = S5

Gehäuse-Anschlußgröße \_\_\_\_\_

01 = SAE-Gewinde

Leckölanschluß SAE

02 = 4 Loch-Flansch SAE

UNC-Gewinde - Leckölanschluß SAE

04 = 4 Loch-Flansch SAE

UNC-Gewinde - R-Leckölanschluß

Modifikationen \_\_\_\_\_

## Designation - type

Numéro du modèle :

M4\*E1 - 214 - 1 N 00 - B 5 02 ..

M4\*E - 214 - 1 N 00 - B 5 02 ..

Série drain externe \_\_\_\_\_

Série drain interne \_\_\_\_\_

Couple (Nm/bar) \_\_\_\_\_

153 = 2,52

185 = 3,05

214 = 3,53

Type d'arbre \_\_\_\_\_

1 = à clavette (SAE C)

3 = à cannelures (SAE C)

Sens de rotation \_\_\_\_\_

N = Bi-directionnel

Combinaison des orifices \_\_\_\_\_

00 = standard

Conception \_\_\_\_\_

Classe de joint \_\_\_\_\_

5 = S5

Option sur orifices \_\_\_\_\_

01 = taraudage SAE

drain SAE

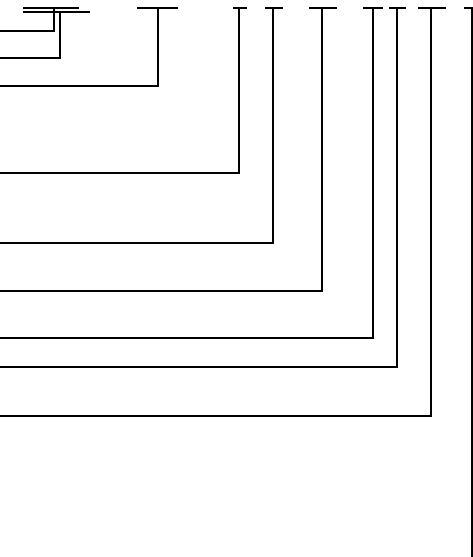
02 = bride SAE 4 trous

taraudage UNC - drain SAE

04 = bride SAE 4 trous

taraudage UNC - drain BSPP

Modifications \_\_\_\_\_



## Designazione

## Clave de designación

Sigla :

Referencia modelo :

M4\*E1 - 214 - 1 N 00 - B 5 02 ..  
M4\*E - 214 - 1 N 00 - B 5 02 ..

Serie drenaggio esterno \_\_\_\_\_

Serie drenaje externo \_\_\_\_\_

Serie drenaggio interno \_\_\_\_\_

Serie drenaje interno \_\_\_\_\_

Coppia (Nm/bar) \_\_\_\_\_

Aro volumetrico (Nm/bar) \_\_\_\_\_

153 = 2,52

153 = 2,52

185 = 3,05

185 = 3,05

214 = 3,53

214 = 3,53

Tipo di albero \_\_\_\_\_

Tipo de eje \_\_\_\_\_

1 = a chiavetta (SAE C)

1 = chaveteado (SAE C)

3 = scanalato (SAE C)

3 = estriado (SAE C)

Senso di rotazione \_\_\_\_\_

Sentido de giro \_\_\_\_\_

N = bidirezionale

N = bi-direccional

Orientamento delle bocche \_\_\_\_\_

Posición de bocas \_\_\_\_\_

00 = standard

00 = estándar

Disegno \_\_\_\_\_

Letra de diseño \_\_\_\_\_

Tipo di guarnizioni \_\_\_\_\_

Clase de juntas \_\_\_\_\_

5 = S5

5 = S5

Dimensioni delle bocche \_\_\_\_\_

Opciones de las bocas \_\_\_\_\_

01 = filettature SAE

01 = rosca SAE

drenaggio SAE

drenaje SAE

02 = flange SAE 4 fori - filettature UNC

02 = SAE 4 agujeros - rosca UNC

drenaggio SAE

drenaje SAE

04 = flange SAE 4 fori - filettature UNC

04 = SAE 4 agujeros - rosca UNC

drenaggio BSP

drenaje BSP

Modifiche \_\_\_\_\_

Modificaciones \_\_\_\_\_

