



# MAKER TELEX E

## Description

These oils are specially designed for use in hydraulic circuits requiring lubricants with marked anti-wear properties. Manufactured from carefully selected bases with specific to notably enhance their properties.

They are specially suitable for hydraulic circuits and civil works machines equipped with any type of pump, particularly working under high pressures and, in general for all kinds of mechanisms requiring stable oils and in those in which the maximum anti-wear levels required by international standards must be attained and exceeded.

## Properties

- High resistance to oxidation and sludge formation.
- High deaeration capacity.
- High viscosity index.
- Very good anti-foam and anti-rust properties.
- Excellent water separation.
- Excellent filterability.
- Very good compatibility with joints and retainers.
- Maximum anti-wear level.
- Excellent load capacity.
- High thermal and hydrolytic stability.

## Quality levels, approvals and recommendations

- |                                                          |                                                                    |
|----------------------------------------------------------|--------------------------------------------------------------------|
| • ABB: Turbocharger VTR304-11 / -21* (68)                | • DANIELI: STANDARD N. 0.000.001 - REV.15* (46, 68)                |
| • ENGEL: Engel Injection Moulding Machines* (46)         | • GIA: Extrusion Systems* (46, 68)                                 |
| • IBERCISA* (32, 46)                                     | • IMS DELTA MATIC* (32, 46, 68)                                    |
| • NEGRI BOSSI: ELEOS, eCANBIO JANUS Y VESTA series* (46) | • ORTLINGHAUS: Standard ON 9.2.19* (46)                            |
| • PARKER DENISON: HF0, HF1, HF2* (32, 46, 68)            | • Voith Turbo Variable Speed Drives* (22, 32, 46)                  |
| • WINTech* (32, 46)                                      | • AFNOR: NF ISO 11158 HM, 48-690, 48-691 (100, 15, 22, 32, 46, 68) |
| • BATTENFELD (32, 46)                                    | • BOSCH REXROTH: RDE 90235 (32, 46, 68)                            |
| • DIN: 51524-HLP (100, 15, 22, 32, 46, 68)               | • EATON VICKERS: I-286-S Y M2950-S (15, 22, 32, 46, 68, 100)       |
| • Fives Cincinnati: P-68 (32)                            | • Fives Cincinnati: P-69 (68)                                      |
| • Fives Cincinnati: P-70 (46)                            | • ISO: 6743/4 HM, 11158 HM (100, 15, 22, 32, 46, 68)               |
| • THYSSENKRUPP: (HLP)* (32, 46, 68)                      |                                                                    |

\*Formal approval



## MAKER TELEX E

## Technical specifications

|                                    | UNIT     | METHOD     | VALUE |       |       |       |       |            |
|------------------------------------|----------|------------|-------|-------|-------|-------|-------|------------|
| ISO Viscosity Grade                |          |            | 15    | 22    | 32    | 46    | 68    | 100        |
| Kinematic viscosity at 100 °C      | cSt      | ASTM D445  | 3.4   | 4,4   | 5,4   | 6.8   | 8.5   | 11.0       |
| Kinematic viscosity at 40 °C       | cSt      | ASTM D445  | 15    | 22    | 32    | 46    | 68    | 100        |
| Viscosity index                    | -        | ASTM D2270 | 113   | 107   | 100   | 98    | 98    | 97         |
| Density at 15 °C                   | g/cm3    | ASTM D4052 | 0,861 | 0.867 | 0.874 | 0.880 | 0.884 | 0.887      |
| Flash point, open cup              | °C       | ASTM D92   | 198   | 210   | 226   | 231   | 246   | 264        |
| Pour point                         | °C       | ASTM D97   | -27   | -27   | -24   | -24   | -24   | -21        |
| Corrosion Cu, 3hrs 100 °C          | -        | ASTM D130  | 1a    | 1a    | 1a    | 1a    | 1a    | 1a         |
| Water separability at 54 °C        | min      | ASTM D1401 | <20   | <20   | <25   | <30   | <45   | <30(82 °C) |
| Rust, Methods A and B              | -        | ASTM D665  | Pass  | Pass  | Pass  | Pass  | Pass  | Pass       |
| Air release at 50 °C               | min      | ASTM D3427 | 1     | 1     | 1.5   | 2.4   | 3,6   | 6          |
| FZG (A/8,3/90): Failure load stage | -        | ISO 14635  | -     | -     | 12    | 12    | 12    | 12         |
| TAN                                | mg KOH/g | ASTM D664  | 0,38  | 0,38  | 0,38  | 0,38  | 0,38  | 0,38       |
| RPVOT                              | min      | ASTM D2272 | 400   | 400   | 400   | 400   | 400   | 400        |

The above mentioned characteristics are typical values and should not be considered product specifications.