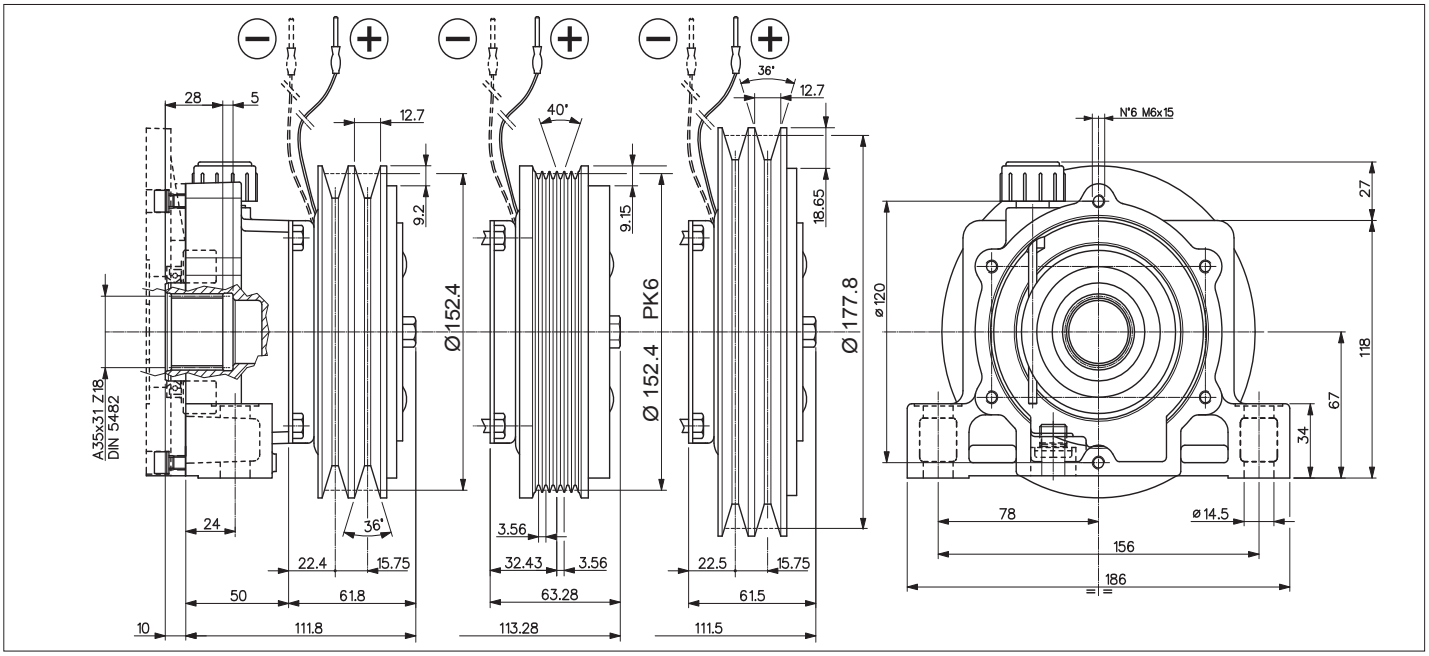
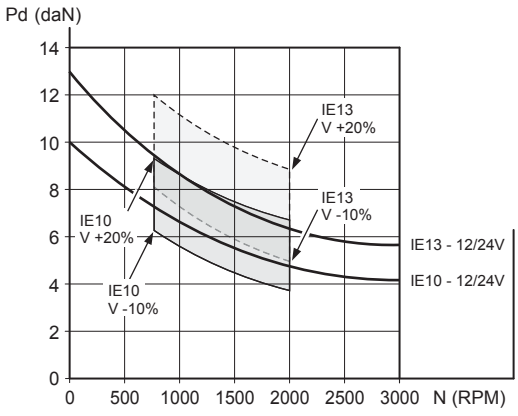
# IE10 Series

Electromagnetic Clutch - Oil Lubrication




## Maximum Load On The Shaft




Approximate calculation of drive torque

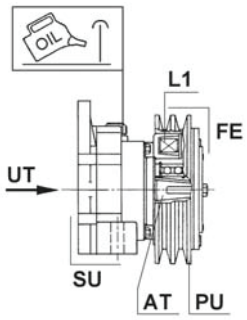
P (daNm) = c • p • 0.0017

P < Pd

where:
p = pump pressure in BAR
c = pump displacement in cc/revolution

from diagram:
Pd = Max. torque allowed by the coupling in daNm
n = Motor rotation speed in rpm.

An electromagnetic clutch is a unit designed to convey movement to a UT hydraulic pump through an electrically controlled on/off pulley.
An electromagnetic clutch is composed of:
- an electromagnetic friction clutch (FE)
- an aluminium support (SU) with a conical (AT) and splined (UT) shaft mounted on oil-bath bearings.
- coupling to be ordered separately




Description
This type of clutch expolits the force of attraction of an electromagnetic field generated by a solenoid that, after being energised (L1 in ON position), connects a pulley to a driving shaft. The electromagnetic friction clutch is composed of two separate parts:
- a solenoid L1, mounted on the support;
- a pulley PU, mounted on the conical shaft AT.
Operations are as follows:
- under non operating conditions with L1 in OFF position: the pulley, driven by the “V” belt, turns idle on its own bearing,
- under operating conditions with L1 in ON position: the pulley, driven by the “V” belt, conveys movement to the shaft, then to the user UT.

*Input tension and operating temperature considerably influence the correct operation of the clutch. At temperatures above 70°C the dynamic torque rating is reduced by 20%. To reach the maximum torque, run the clutch in through repeated working cycles (ON/OFF).

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## Technical Specifications

| | |
|---|---|
| RPM Maximum | 5000 RPM |
| Static nominal torque (*) (at 12/24V ± 0.5%) | 10.2 daNm (pulley Ø152.4 - 2 races)<br>10.2 daNm (pulley Ø152.4 - 6 races)<br>12.2 daNm (pulley Ø177.8 - 2 races) |
| Power supply (*) | 12V DC - 50 W<br>24V DC - 60 W |
| Rotation (pulley side) | CW |
| Working temperature | -10°C ÷ +45°C |
| Maximum working temperature coil (*) | 100°C |
| Oil quantity | 0.07 ltrs |
| Type of oil | Type: ISO 19378:2003<br>Viscosity: ISO VG 150 (ISO 3448:1992) |
| Oil replacement | After first 500 hours then every 12 months |

## HOW TO ORDER

| IE | ** | ** | ** | * | * |
|---|---|---|---|---|---|

**Series**
IE = Electromagnetic Clutch

**Torque**
10 = 10 daN
13 = 13 daN

**Flange**
1 = Pump GR. 1
2/3 = Pump GR. 2-3
SA = Pump SAE A
SB = Pump SAE B

**Voltage**
12 = 12V DC
24 = 24V DC

**Pulley**
A* = Ø152.4 at 2 races (only for IE10)
B = Ø152.4 PK6 at 6 races (only for IE10)
C* = Ø177.8 at 2 races (only for IE13)
* Pulley with section SPA

**Optional**
N = Clutch with 2 wires