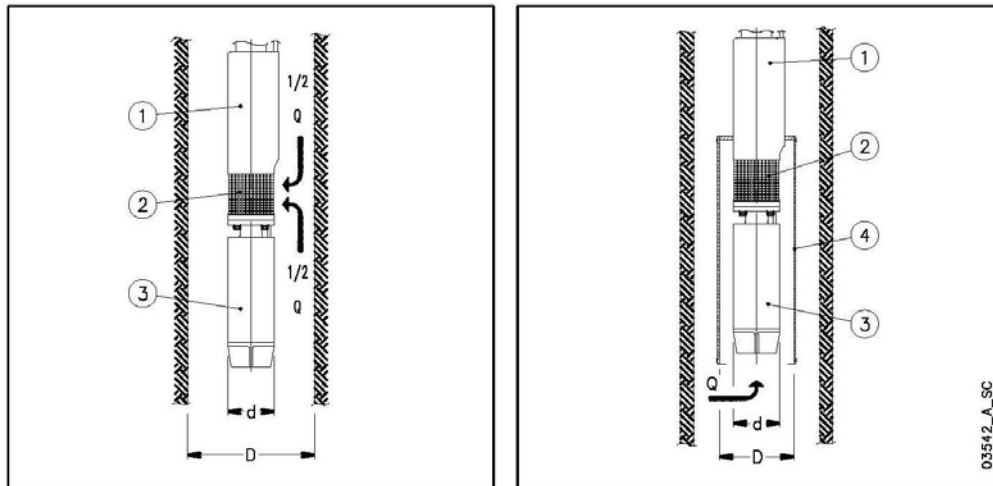


COOLING SHROUD DIAMETER DETERMINATION



Legend. (1) - pump / (2) - filter / (3) - motor / (4) - cooling shroud

A] Formula to verify if motor cooling is sufficient without shroud cooling

$$v = \frac{\frac{Q}{2}}{\pi \cdot \left(\frac{D^2}{4} - \frac{d^2}{4} \right)}$$

References in formula

v [m/s] – speed of fluid around motor
 Q [mc/s] - flow delivery; ---> electropump features
 D [m] - well diameter; ---> pump features
 d [m] - motor diameter; ---> motor catalogue

If (v) calculated speed is lower than (v_min) minimum declared speed required for correct cooling of motor will be necessary to mount a cooling shroud.

v_min - minimum speed of fluid around motor ---> motor catalogue.

B] Formula to determine maximum diameter of a cooling sleeve mounted on motor:

$$D = \sqrt{4 \cdot \left(\frac{Q}{v \cdot \pi} + \frac{d^2}{4} \right)}$$

References in formula:

D [m] - cooling shroud diameter ;
 Q [m³/s] - minimum flow delivery; ---> electropump features
 d [m] - motor diameter; ---> motor catalogue
 v [m/s] - minimum speed of fluid around motor. ---> motor catalogue



Cooling shroud A304 with bands A321
Motor centring ring A304
Pump centring ring SBR/NBR rubber
with cutouts for motor cable (s)



Filter A304
with bands A321



Brackets horizontal setting
A304 and screws A321

bands = tension rings