ELECTRONIC SYSTEMS

TL 421

chapter: 5.1.5

Application

- elevated high intensity directional lights suitable for CAT I-III
  - APP approach centre line and crossbars light
  - ASR approach side row light
  - END runway end light
  - THR runway threshold light
  - THRWB runway threshold and wing bar light

Certificate basis

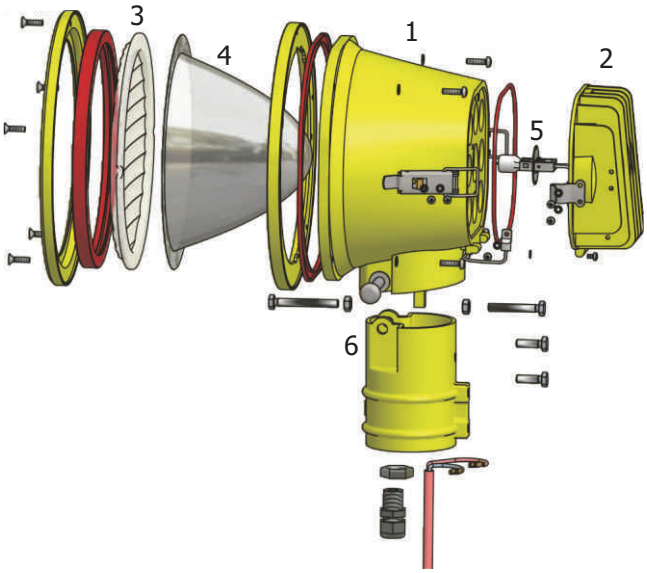
- ICAO Annex 14, Vol. 1, App. 1 a App. 2
- EASA CS ADR-DSN.U.930 a 940
- ICAO Doc 9157, Part 4, 18.2.14
- ICAO Doc 9157, Part 6, 4.9.1

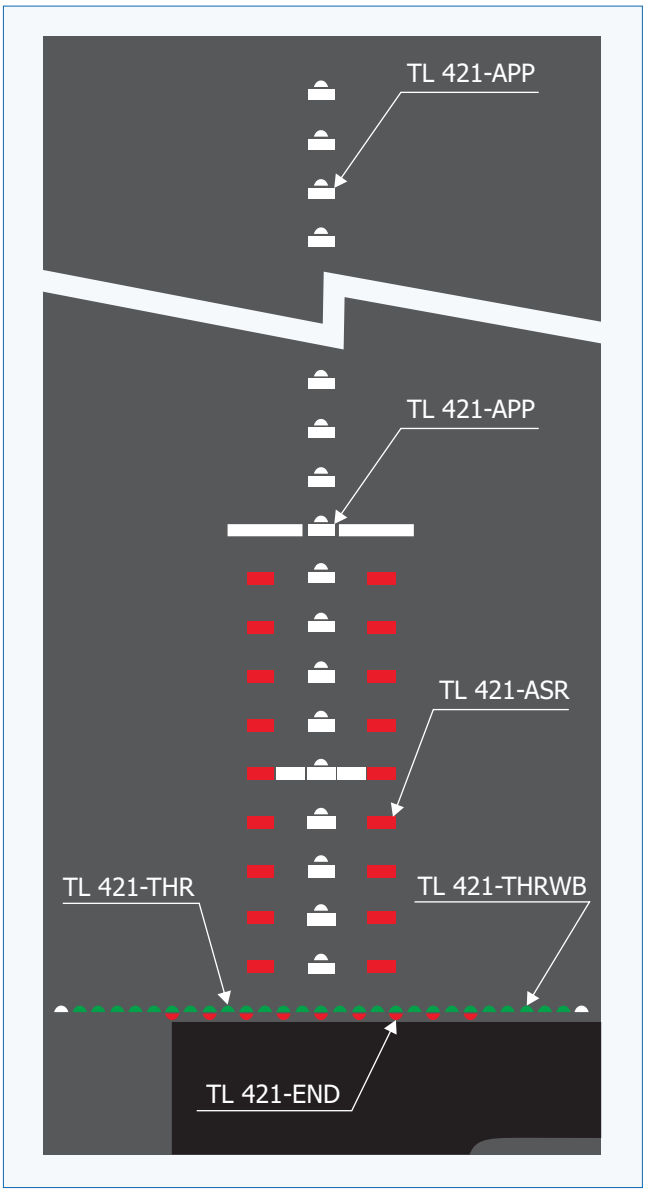
Description/properties

- robust all-metal construction ensures high durability
- high degree of protection IP 67
- light construction allows easy elevation adjustment (-10 ° to + 14 °)
- removable rear cover allows easy bulb replacement
- all main parts are painted on RAL 1021

Construction

1 light body
2 back cover
3 diopter (spreader lens)
4 parabolic mirror
5 bulb (lamp) Pk30d
6 elevation adjustment part





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➡Connection / supplying:

- instalation on fixing elements Ø 60 mm
  - breakable coupling 001 057.1
  - breakable coupling 001 057 and tube (Ø 60 mm)
  - crossbar with peg (Ø 60 mm)
- power-ups by isolating transformer with 6,6 A on secondary output (transformer power according to used lamp/lamps)
- standard light includes lamp and power-ups cabel for instalation directly on breakable coupling, connector L-823 Type II, Class B, Style 5
- optional cable lenghts 0,5; 1,0; 1,5; 2,0; 2,5; 3,0 m

➡Mechanical parameters

• dimensions	214×292×179 mm
• dimensions (cardboard box) (packed in 2 pieces)	320×320×270 mm
• light weight	2,3 kg
• adjustability	
- horizontal	0 to 360°
- vertical	-10 to +14°

➡Operating conditions

• level of protection	IP 67
• temperature	-50 to +55 °C
• humidity	up to 95 % at +55 °C
• wind resistance	up to 480 km/h

➡Source of light / optical system

- halogen airport bulb PK30d 6,6 A
- lamp power
  - TL 421-END 65/100 W
  - TL 421-APP/ASR/THR 150 W
  - TL 421-THRWB 200 W

➡Accessories

- fixing elements (tubes, breakable couplings, base plates, etc.) and extension cables of the secondary wiring must be ordered separately

Ordering codes

TL 421-APP-150-W
TL 421-THR-150-G

light fixture function
APP - approach centre line and crossbars light
ASR - approach side row light
END - runway end light
THR - runway threshold light
THRWB - runway threshold and wing bar light

lamp power
65 - END
100 - END
150 - APP, ASR, THR
200 - THRWB
* for "END" light - it is necessary to set the required lamp power

beam color
G - green | R - red | W - white

Note:
- spaces in examples above used for clarity only
- optional parameters used only if necessary
- lamp power is optional part of ordering code, except for "END" light

Ordering code examples:

TL 421-APP	approach centre line or crossbars light
TL 421-ASR	approach side row light
TL 421-END-65	runway end light, 65 W
TL 421-END-100	runway end light, 100 W
TL 421-THR	runway threshold light
TL 421-THRWB	runway threshold or wing bar light

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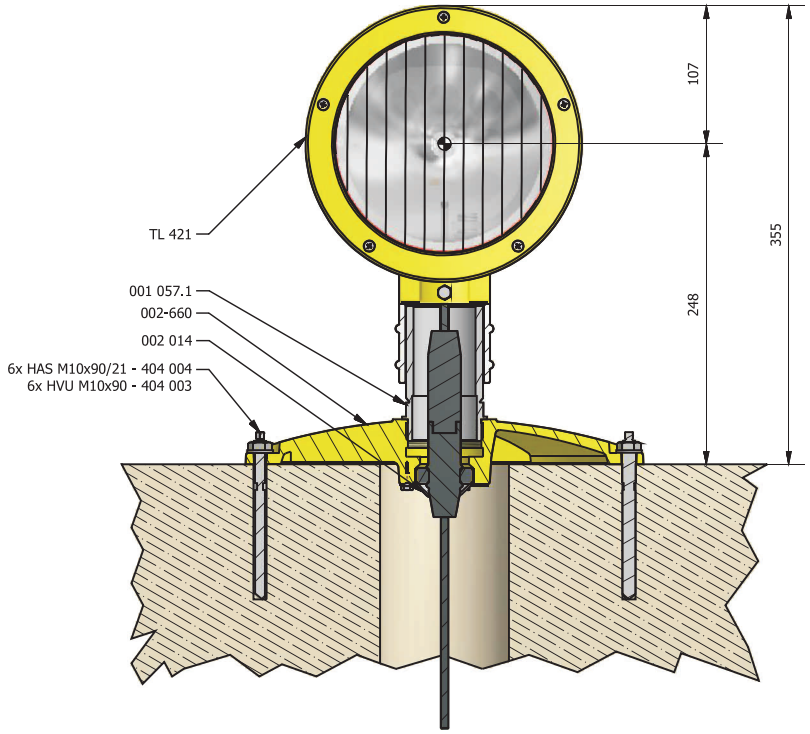
assembly on base plate

optical centre

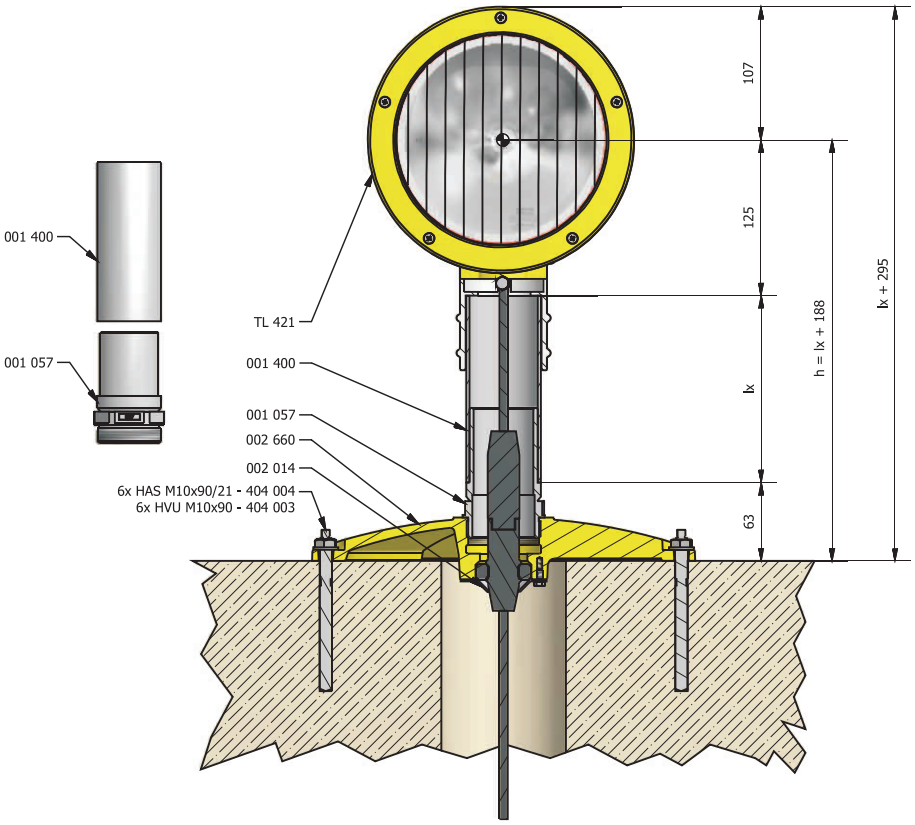


assembly on base plate with tube (stake)

optical centre

h - optical height
h = lx + 188
248 ≤ h ≤ 1999

lx - tube length 001 400
lx = h - 188 mm
(60 ≤ lx ≤ 1811)



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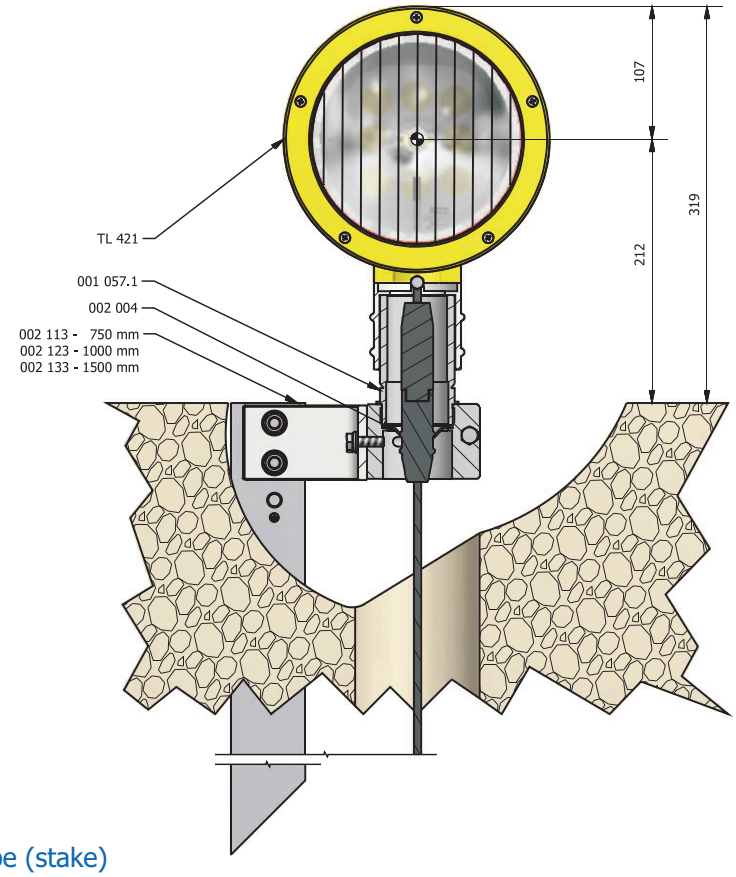
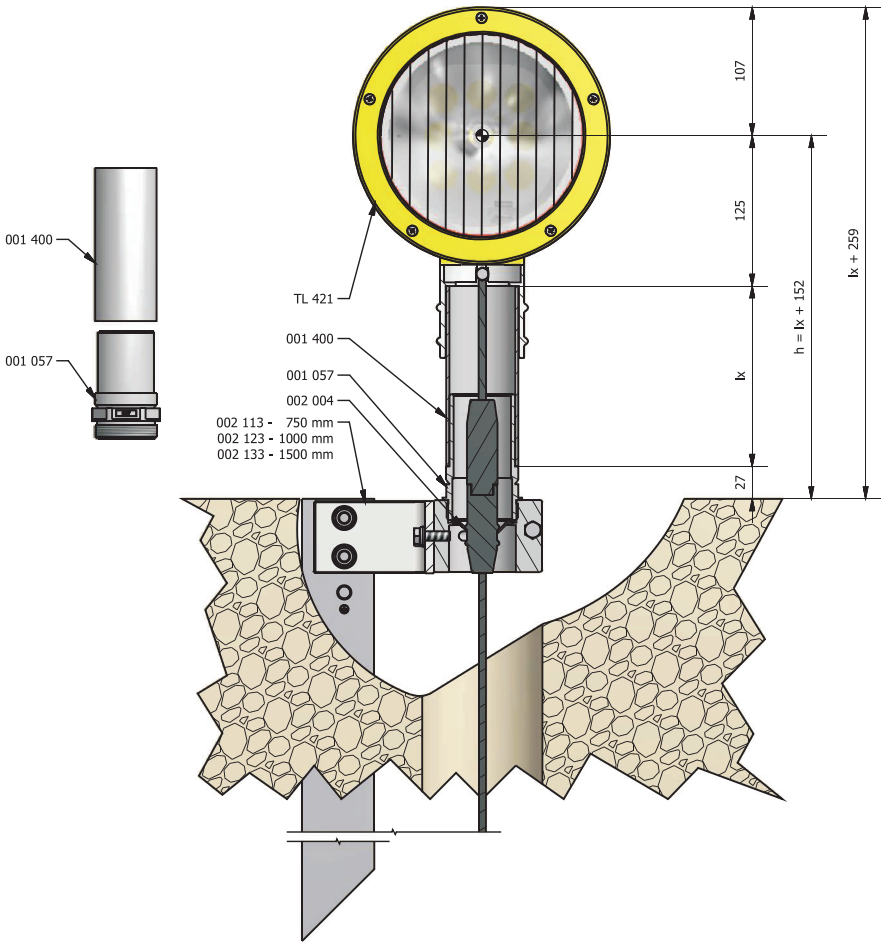
assembly on needle

◒ optical centre



assembly on needle with tube (stake)



◒ optical centre

h - optical height
h = lx + 152
212 ≤ h ≤ 1999

lx - tube length 001 400
lx = h - 152 mm
(60 ≤ lx ≤ 1847)

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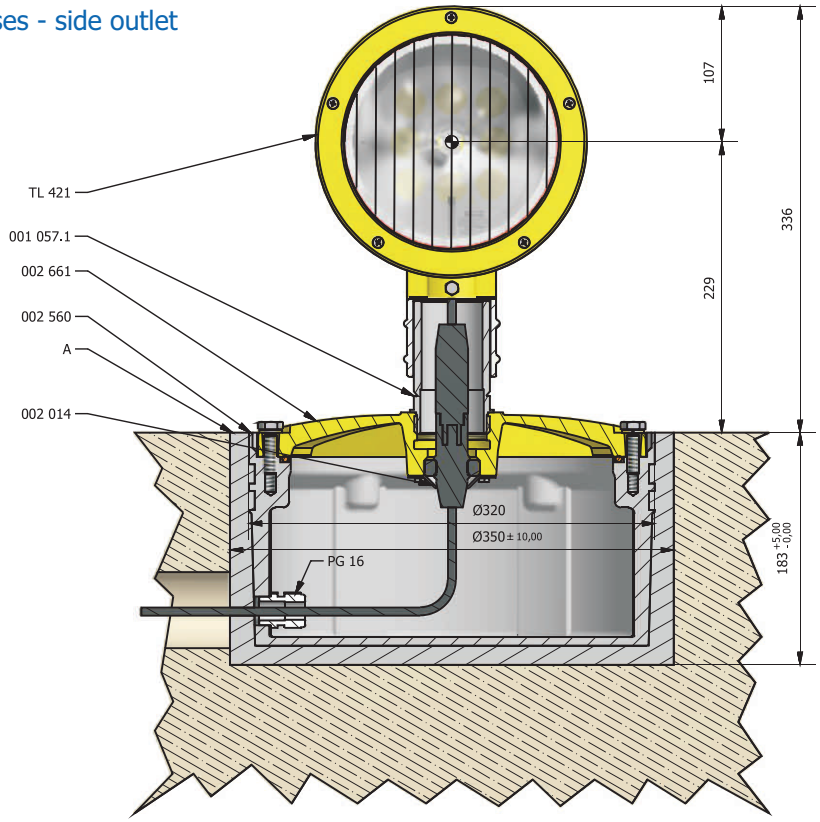
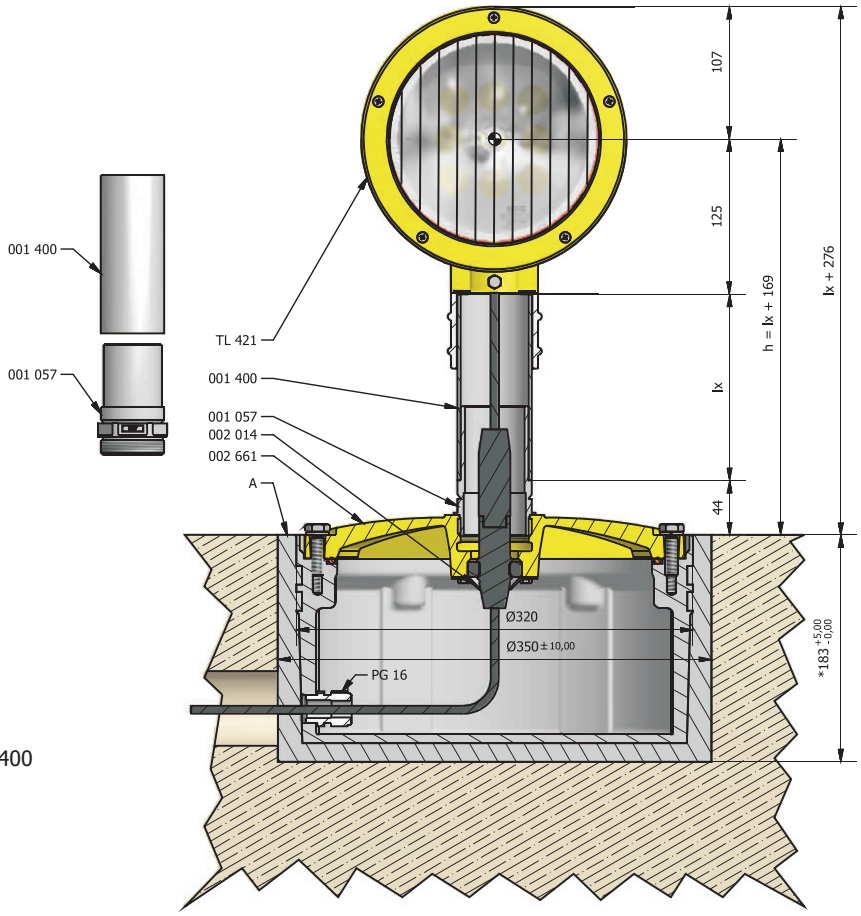
assembly on shallow bases - side outlet

◓ optical centre
* recommended size
A pouring concrete



assembly on shallow bases with tube - side outlet



◓ optical centre
* - recomended size
A - pouring concrete
h - optical height
h = lx + 169
229 ≤ h ≤ 1999
lx - tube length 001 400
lx = h - 169 mm
(60 ≤ lx ≤ 1830)

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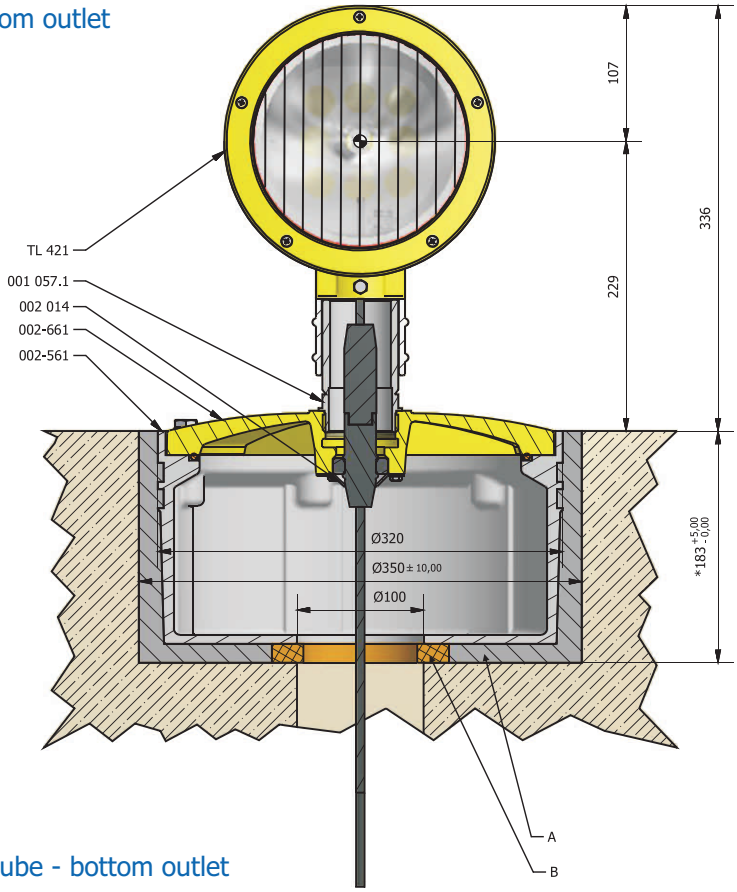
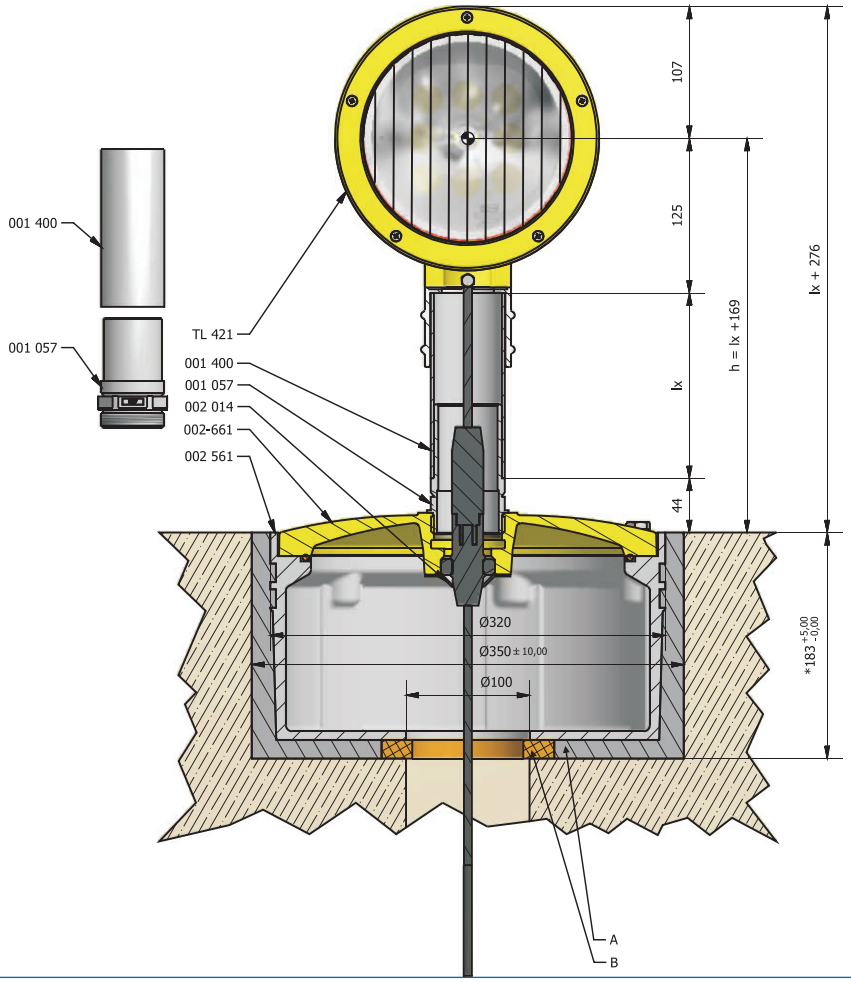
assembly on shallow bases - bottom outlet

◔ optical centre
* - recomended size
A - pouring concrete
B - sealing insert



assembly on shallow bases with tube - bottom outlet



◔ optical centre
* - recomended size
A - pouring concrete
B - sealing insert
h - optical height
h = lx + 169
229 ≤ h ≤ 1999
lx - tube length 001 400
lx = h - 169 mm
(60 ≤ lx ≤ 1830)

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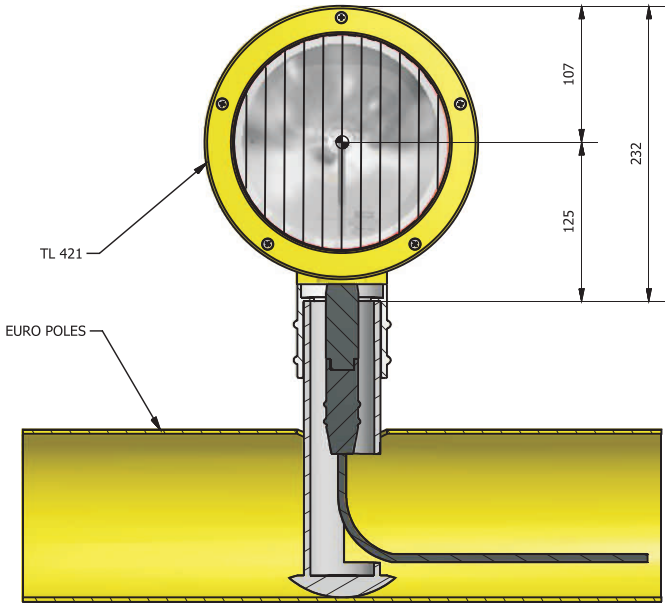
assembly on crossbar with peg

optical centre



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