Drive layout

When laying out the system, make sure that there is enough driving power for the entire conveyor section.

The rollers are driven by the drive unit via a king shaft. A friction clutch on each roller prevents blocking of the drive. The maximum transferable total torque thus results from the torque present briefly before an individual clutch slides, multiplied by the total number of rollers in the section.

Example layout:

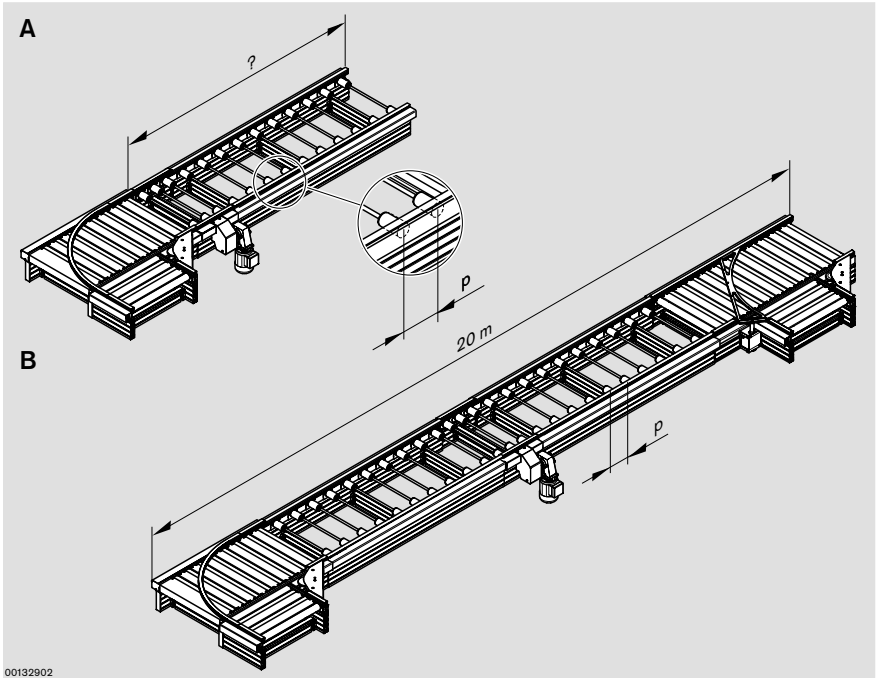
Drive torque 45 Nm, each roller loads the drive with 0.5 Nm (with a sliding clutch). Each curve, diverter, or junction loads the drive with 12 Nm.

Note:
Install the motor as close as possible to the center of the section.
The driven rollers of the drive module itself are included in the calculation (if p = 130 one drive module roller is not being driven).

Example A:
Section, b = 650 mm, with roller division p = 130 mm and a curve; 100% of the section in accumulation operation
Question: If one drive unit is used, how long may the straight section be?

Calculation:
45 Nm - 12 Nm (for curve) = 33 Nm remaining for the straight section
33 Nm ÷ 0.5 Nm = 66 (driven rollers)

66 x 130 mm = 8580 mm straight section.



Note:
If a section is not operated completely in accumulation operation, the section length can be multiplied by a corresponding factor. For example, with 50% accumulation operation in the case of example A the section length is doubled to 17160 mm (2 x 66 x 130 mm).

Example B:
Section, b = 650 mm, length 20 m, p = 130, includes 1 diverter and 1 curve; 100% of the section in accumulation operation
Question: Will one drive unit be sufficient?

Calculation:
45 Nm – 12 Nm (diverter) – 12 Nm (curve) = 21 Nm remaining for the straight section

20000 mm – 1560 mm (diverter) – 1149 mm (curve) = 17291 mm straight section

17291 mm ÷ 130 mm = 133 rollers
133 x 0.5 Nm = 66.5 Nm
66.5 Nm > 21 Nm, 2 drives are therefore needed in order to attain the torque to be transferred.

Note:
If a section is not operated completely in accumulation operation, the section length can be multiplied by a corresponding factor. For example, with 30% accumulation operation in the case of example B the required torque is reduced to:
66.5 Nm x 30% = 19.95 Nm < 21 Nm.
In this case, only one drive would be needed.