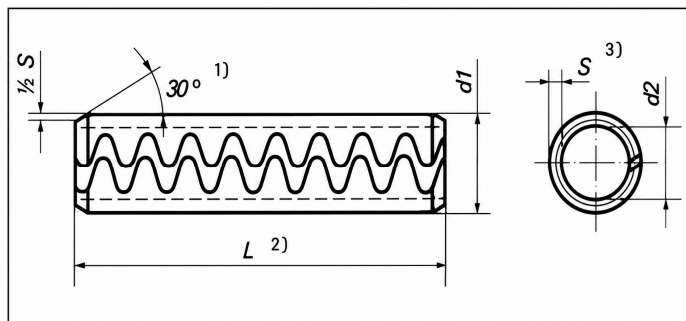




## Q/PES 003-2026 Slotted Tooth Spring Pins-light duty

Designed in accordance with ISO 8752 and DIN EN ISO 13337 standards for thickness, length, and nominal diameter, this product features a wave-shaped open design. It fulfills the end customers' requirements for lightweight construction and automated assembly, while combining the dual advantages of both solid pins and spring pins.

Cross-reference: DIN EN ISO 13337: Wave spring pin-light duty

Naming convention for gear pins: d=10, L= ①, stainless steel, MaNo: 1.4310, Q/PES 003 -M10\*L -1.4310

Table 1 — Dimensions

| nominal diameter<br>$d$             | 2    | 2,5  | 3    | 3,5  | 4    | 4,5  | 5    | 6    | 8    | 10   | 12   | 13    |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|------|-------|
| s ②                                 | 2,4  | 2,9  | 3,5  | 4,0  | 4,6  | 5,1  | 5,6  | 6,7  | 8,8  | 10,8 | 12,8 | 13,8  |
| $d_1$ bevor mounting                | 2,3  | 2,8  | 3,3  | 3,8  | 4,4  | 4,9  | 5,4  | 6,4  | 8,5  | 10,5 | 12,5 | 13,5  |
| $d_1$ perm. deviation               | 1,9  | 2,3  | 2,7  | 3,1  | 3,4  | 3,9  | 4,4  | 4,9  | 7,0  | 8,5  | 10,5 | 11,0  |
| $d_2$                               | 0,4  | 0,45 | 0,45 | 0,5  | 0,7  | 0,7  | 0,7  | 0,9  | 1,8  | 2,4  | 2,4  | 2,4   |
| for screws                          | 0,2  | 0,25 | 0,25 | 0,3  | 0,5  | 0,5  | 0,5  | 0,7  | 1,5  | 2,0  | 2,0  | 2,0   |
| perm. statically loda single shear  | 0,2  | 0,25 | 0,3  | 0,35 | 0,5  | 0,5  | 0,5  | 0,75 | 0,75 | 1,0  | 1,0  | 1,2   |
| per shear plane(KN)<br>double shear | 1,5  | 2,4  | 3,5  | 4,6  | 8    | 8,8  | 10,4 | 18   | 24   | 40   | 48   | 66    |
| nominal diameter<br>$d$             | 14   | 16   | 18   | 20   | 21   | 25   | 28   | 30   | 35   | 40   | 45   | 50    |
| s ②                                 | 14,8 | 16,8 | 18,9 | 20,9 | 21,9 | 25,9 | 28,9 | 30,9 | 35,9 | 40,9 | 45,9 | 50,9  |
| $d_1$ bevor mounting                | 14,5 | 16,5 | 18,5 | 20,5 | 21,5 | 25,5 | 28,5 | 30,5 | 35,5 | 40,5 | 45,5 | 50,5  |
| $d_1$ perm. deviation               | 11,5 | 13,5 | 15,0 | 16,5 | 17,5 | 21,5 | 23,5 | 25,5 | 28,5 | 32,5 | 37,5 | 40,5  |
| $d_2$                               | 2,4  | 2,4  | 2,4  | 2,4  | 2,4  | 3,4  | 3,4  | 3,4  | 3,6  | 4,6  | 4,6  | 4,6   |
| for screws                          | 2,0  | 2,0  | 2,0  | 2,0  | 2,0  | 3,0  | 3,0  | 3,0  | 3,0  | 4,0  | 4,0  | 4,0   |
| perm. statically loda single shear  | 1,5  | 1,5  | 1,7  | 2,0  | 2,0  | 2,0  | 2,5  | 2,5  | 3,5  | 4,0  | 4,0  | 5,0   |
| per shear plane(KN)<br>double shear | 84   | 98   | 126  | 158  | 168  | 202  | 280  | 302  | 490  | 634  | 720  | 1 000 |

Table 2 — Requirements and reference International Standards

| Material③         | steel                                                                                                                                                                                                                                                                   |        | stainless steel                                    |                                                                                  |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------------------------------------------------|----------------------------------------------------------------------------------|
|                   | DIN EN 10132-4                                                                                                                                                                                                                                                          |        | DIN EN 10088-1                                     | 10088-2                                                                          |
|                   | C67S orC75S                                                                                                                                                                                                                                                             | 51CrV4 | X10CrNi18-8<br>MaNo: 1.4310<br>Cold worked         | X7CrNiAl17-7<br>MaNo: 1.4568<br>aging treatment of<br>stainless steel: 400-480HV |
|                   | Hardened and tempered to a Vickers hardness<br>of: 420HV~510HV Hardened: see ISO                                                                                                                                                                                        |        |                                                    | Hardened: see ISO<br>6507-1                                                      |
| Surface condition | Plain, i.e. pins to be supplied in natural finish,<br>treated with a protective lubricant,unless<br>otherwise specified by agreementbetween<br>customer and supplier.                                                                                                   |        | Plain, i.e. pins to be supplied in natural finish. |                                                                                  |
| Applications      | The diameter of the hole into which the spring pin is to be inserted shall be equal to the nominal<br>diameter, of the mating pin and to tolerance class H12.<br>When the elastic pin is inserted into the minimum allowable hole, the slot should not be fully closed. |        |                                                    |                                                                                  |
| Appearance        | scratches,rust,irregular or harmful defects are allowed.There must be no burrs, cracks or other defects.                                                                                                                                                                |        |                                                    |                                                                                  |

① Lengths refer to DIN EN ISO 13337, see Table 1. ② Wall thickness tolerance according to EN 10140.

③ Other materials as agreed between customer and supplier.