



WITTENSTEIN

alpha

Geradverzahnte Abtriebsritzel *Straight-toothed output pinions*

Systemlösungen
System solutions

Ergänzende Informationen
zum Produktkatalog
*Additional information
to Product Catalog*



TP⁺/TPK⁺ HIGH TORQUE mit Premium Class⁺ Ritzel TP⁺/TPK⁺ HIGH TORQUE with Premium Class⁺ Pinion

| Getriebe- baugröße / Gearhead Size ^{b)} | Modul | z | A ±0,3 ^{a)} | b | B | d _a | d | x | L12 | L13 | x2 | L15 | L16 | L17 |
|--|-------|----|-------------------------|----|----|----------------|-------|-----|-------|-------|------|------|------|------|
| TP ⁺ /TPK ⁺ 010 | 2 | 22 | 44,6 | 26 | 24 | 49,5 | 44,0 | 0,3 | 71,0 | 50,5 | 20,5 | 8,5 | 38,5 | 7,5 |
| TP ⁺ /TPK ⁺ 025 | 2 | 22 | 44,6 | 26 | 24 | 49,5 | 44,0 | 0,3 | 73,5 | 53,0 | 24,0 | 12,0 | 41,0 | 7,5 |
| | 3 | 21 | 58,7 | 31 | 29 | 71,7 | 63,0 | 0,4 | 76,0 | 52,5 | 23,5 | 9,0 | 38,0 | 8,0 |
| TP ⁺ /TPK ⁺ 050 | 3 | 21 | 58,7 | 31 | 29 | 71,7 | 63,0 | 0,4 | 89,5 | 66,0 | 28,0 | 13,5 | 51,5 | 8,0 |
| | 4 | 22 | 79,8 | 41 | 39 | 97,9 | 88,0 | 0,2 | 97,0 | 67,5 | 29,5 | 10,0 | 48,0 | 9,0 |
| TP ⁺ /TPK ⁺ 110 | 4 | 22 | 79,8 | 41 | 39 | 97,9 | 88,0 | 0,2 | 112,5 | 83,0 | 33,0 | 13,5 | 63,5 | 9,0 |
| | 5 | 21 | 88,5 | 51 | 49 | 119,3 | 105,0 | 0,4 | 120,0 | 85,0 | 35,0 | 10,5 | 60,5 | 9,5 |
| TP ⁺ /TPK ⁺ 300 | 5 | 21 | 88,5 | 51 | 49 | 119,3 | 105,0 | 0,4 | 139,0 | 104,0 | 38,0 | 13,5 | 79,5 | 9,5 |
| | 6 | 20 | 105,4 | 61 | 59 | 137,1 | 120,0 | 0,4 | 142,5 | 106,0 | 40,0 | 10,5 | 76,5 | 6,0 |
| | 8 | 19 | 150,2 | 81 | 79 | 174,7 | 152,0 | 0,4 | 174,0 | 125,0 | 50,0 | 10,5 | 85,5 | 10,5 |
| TP ⁺ /TPK ⁺ 500 | 6 | 20 | 105,4 | 61 | 59 | 137,1 | 120,0 | 0,4 | 155,0 | 118,5 | 43,5 | 14,0 | 89,0 | 6,0 |
| | 8 | 19 | 150,2 | 81 | 79 | 174,7 | 152,0 | 0,4 | 174,0 | 128,5 | 53,5 | 14,0 | 89,0 | 5,0 |

Alle Abmessungen in [mm] / All dimensions in [mm]

^{a)} Zustellmechanismus empfohlen (Zustellmaß ±0,3 mm)

Align mechanism recommended (alignment dimension ± 0.3 mm)

^{b)} Form des Abtriebs: 3 – System Abtrieb

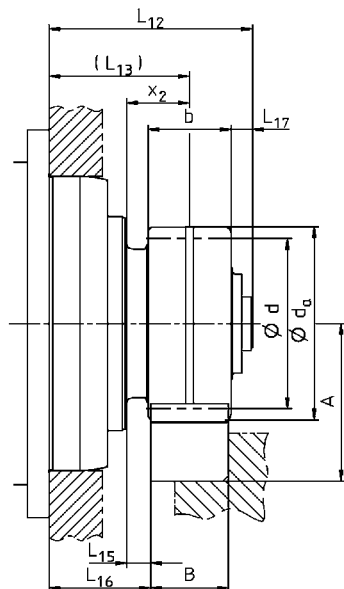
Output type: 3 – system output

z = Zähnezahl / Number of teeth

d_a = Kopfkreisdurchmesser / Tip diameter

d = Teilkreisdurchmesser / Partial circle diameter

x = Profilverchiebungsfaktor / Profile correction factor



TP⁺/TPK⁺ mit Premium Class⁺ Ritzel
 TP⁺/TPK⁺ with Premium Class⁺ Pinion

| Getriebebaugröße / Gearhead Size | Modul | z | F _{2T} | | T _{2B} | | v _{max} | | m _{Ritzel/Pinion} | |
|---------------------------------------|-------|----|-----------------|------|-----------------|--------------------|------------------|---------|----------------------------|----------|
| | | | [mm] | [] | [N] | [lb _f] | [Nm] | [in.lb] | [m/min] | [in/sec] |
| TP ⁺ /TPK ⁺ 010 | 2 | 22 | 2460 | 554 | 54 | 479 | 207 | 136 | 0,4 | 0,8 |
| TP ⁺ /TPK ⁺ 025 | 2 | 22 | 3500 | 788 | 77 | 682 | 156 | 102 | 0,4 | 0,8 |
| | 3 | 21 | 3500 | 788 | 110 | 976 | 223 | 146 | 1,0 | 2,1 |
| TP ⁺ /TPK ⁺ 050 | 3 | 21 | 11490 | 2585 | 362 | 3203 | 198 | 130 | 1,0 | 2,1 |
| | 4 | 22 | 11320 | 2547 | 498 | 4408 | 276 | 181 | 1,9 | 4,3 |
| TP ⁺ /TPK ⁺ 110 | 4 | 22 | 22050 | 4961 | 970 | 8587 | 242 | 159 | 1,9 | 4,3 |
| | 5 | 21 | 21720 | 4887 | 1140 | 10093 | 289 | 189 | 3,0 | 6,6 |
| TP ⁺ /TPK ⁺ 300 | 5 | 21 | 20520 | 4617 | 1077 | 9535 | 165 | 108 | 3,0 | 6,6 |
| | 6 | 20 | 20300 | 4568 | 1218 | 10780 | 188 | 124 | 5,7 | 12,6 |
| | 8 | 19 | 19210 | 4322 | 1460 | 12922 | 239 | 157 | 13,6 | 30,0 |
| TP ⁺ /TPK ⁺ 500 | 6 | 20 | 25770 | 5798 | 1546 | 13685 | 188 | 124 | 5,7 | 12,6 |
| | 8 | 19 | 27110 | 6100 | 2060 | 18236 | 239 | 157 | 13,6 | 30,0 |

Die Tragfähigkeit des Gegenrades/der Zahnstange ist bei der Antriebsauslegung zu berücksichtigen.

Please attend in sizing the load capacity of counter wheel/rack.

F_{2T} = Max. Vorschubkraft / Max. moving force

T_{2B} = Max. Beschleunigungsmoment / Max. acceleration torque

z = Zähnezahl / Number of teeth

v_{max} = Max. Vorschubgeschwindigkeit / Max. movement speed

m_{Ritzel/Pinion} = Masse des Ritzels / Pinion mass

TP⁺/TPK⁺ HIGH TORQUE mit Premium Class⁺ Ritzel
 TP⁺/TPK⁺ HIGH TORQUE with Premium Class⁺ Pinion

| Getriebebaugröße / Gearhead Size | Modul | z | F _{2T} | | T _{2B} | | v _{max} | | m _{Ritzel/Pinion} | |
|---------------------------------------|-------|----|-----------------|-------|-----------------|--------------------|------------------|---------|----------------------------|----------|
| | | | [mm] | [] | [N] | [lb _f] | [Nm] | [in.lb] | [m/min] | [in/sec] |
| TP ⁺ /TPK ⁺ 010 | 2 | 22 | 3640 | 819 | 80 | 709 | 38 | 25 | 0,4 | 0,8 |
| TP ⁺ /TPK ⁺ 025 | 2 | 22 | 4360 | 981 | 96 | 849 | 38 | 25 | 0,4 | 0,8 |
| | 3 | 21 | 4380 | 986 | 138 | 1221 | 54 | 35 | 1,0 | 2,1 |
| TP ⁺ /TPK ⁺ 050 | 3 | 21 | 9780 | 2201 | 308 | 2727 | 45 | 29 | 1,0 | 2,1 |
| | 4 | 22 | 11320 | 2547 | 498 | 4408 | 63 | 41 | 1,9 | 4,3 |
| TP ⁺ /TPK ⁺ 110 | 4 | 22 | 22050 | 4961 | 970 | 8587 | 57 | 37 | 1,9 | 4,3 |
| | 5 | 21 | 21720 | 4887 | 1140 | 10093 | 68 | 44 | 3,0 | 6,6 |
| TP ⁺ /TPK ⁺ 300 | 5 | 21 | 34200 | 7695 | 1796 | 15892 | 52 | 34 | 3,0 | 6,6 |
| | 6 | 20 | 33840 | 7614 | 2030 | 17971 | 60 | 39 | 5,7 | 12,6 |
| | 8 | 19 | 32040 | 7209 | 2435 | 21552 | 76 | 50 | 13,6 | 30,0 |
| TP ⁺ /TPK ⁺ 500 | 6 | 20 | 44580 | 10031 | 2675 | 23674 | 60 | 39 | 5,7 | 12,6 |
| | 8 | 19 | 46840 | 10539 | 3560 | 31507 | 76 | 50 | 13,6 | 30,0 |

Die Tragfähigkeit des Gegenrades/der Zahnstange ist bei der Antriebsauslegung zu berücksichtigen.

Please attend in sizing the load capacity of counter wheel/rack.

F_{2T} = Max. Vorschubkraft / Max. moving force

T_{2B} = Max. Beschleunigungsmoment / Max. acceleration torque

z = Zähnezahl / Number of teeth

v_{max} = Max. Vorschubgeschwindigkeit / Max. movement speed

m_{Ritzel/Pinion} = Masse des Ritzels / Pinion mass

TP⁺/TK⁺/TPK⁺ mit RTP Ritzel TP⁺/TK⁺/TPK⁺ with RTP Pinion

| Getriebebaugröße / Gearhead Size ^{b)} | Modul | z | A ±0,3 ^{a)} | b | B | d _a | d | x | L12 | L13 | x2 | L15 | L16 |
|--|-------|----|-------------------------|----|----|----------------|-------|---|------|------|------|------|------|
| TP ⁺ /TK ⁺ /TPK ⁺ 004 | 2 | 26 | 48,0 | 26 | 24 | 56,2 | 52,0 | 0 | 45,5 | 32,5 | 13,0 | 1,0 | 20,5 |
| TP ⁺ /TK ⁺ /TPK ⁺ 010 | 2 | 36 | 48,0 | 26 | 24 | 76,2 | 72,0 | 0 | 56,0 | 43,0 | 13,0 | 1,0 | 31,0 |
| TP ⁺ /TK ⁺ /TPK ⁺ 025 | 2 | 36 | 48,0 | 26 | 24 | 76,2 | 72,0 | 0 | 65,0 | 52,0 | 23,0 | 11,0 | 40,0 |
| TP ⁺ /TK ⁺ /TPK ⁺ 050 | 3 | 37 | 81,5 | 31 | 29 | 117,2 | 111,0 | 0 | 69,0 | 53,5 | 15,5 | 1,0 | 39,0 |
| TP ⁺ /TK ⁺ /TPK ⁺ 110 | 4 | 40 | 115,0 | 41 | 39 | 168,2 | 160,0 | 0 | 91,0 | 70,5 | 20,5 | 1,0 | 51,0 |

Alle Abmessungen in [mm] / All dimensions in [mm]

^{a)} Zustellmechanismus empfohlen (Zustellmaß ± 0,3 mm)

Align mechanism recommended (alignment dimension ± 0.3 mm)

^{b)} Form des Abtriebs: 0 – Flansch

Output type: 0 – Flange

z = Zähnezahl / Number of teeth

d_a = Kopfkreisdurchmesser / Tip diameter

d = Teilkreisdurchmesser / Partial circle diameter

x = Profilverchiebungsfaktor / Profile correction factor

TP⁺/TK⁺/TPK⁺ HIGH TORQUE mit RTP Ritzel TP⁺/TK⁺/TPK⁺ HIGH TORQUE with RTP Pinion

| Getriebebaugröße / Gearhead Size ^{b)} | Modul | z | A ±0,3 ^{a)} | b | B | d _a | d | x | L12 | L13 | x2 | L15 | L16 |
|---|-------|----|-------------------------|-----|----|----------------|-------|---|-------|-------|------|-----|-------|
| TP ⁺ /TK ⁺ /TPK ⁺ 050 | 3 | 37 | 81,5 | 31 | 29 | 117,2 | 111,0 | 0 | 69,0 | 53,5 | 15,5 | 1,0 | 39,0 |
| TP ⁺ /TK ⁺ /TPK ⁺ 4000 | 10 | 36 | 269,0 | 101 | 99 | 380,1 | 360,0 | 0 | 236,0 | 185,5 | 50,5 | 1,0 | 136,0 |

Alle Abmessungen in [mm] / All dimensions in [mm]

^{a)} Zustellmechanismus empfohlen (Zustellmaß ± 0,3 mm)

Align mechanism recommended (alignment dimension ± 0.3 mm)

^{b)} Form des Abtriebs: 0 – Flansch

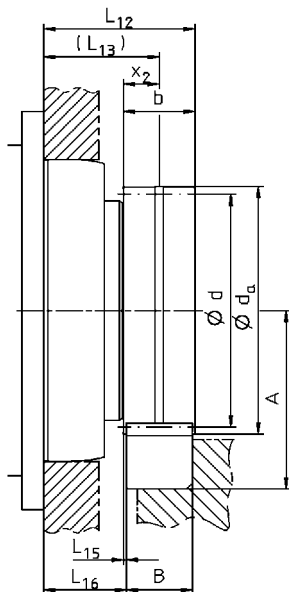
Output type: 0 – Flange

z = Zähnezahl / Number of teeth

d_a = Kopfkreisdurchmesser / Tip diameter

d = Teilkreisdurchmesser / Partial circle diameter

x = Profilverchiebungsfaktor / Profile correction factor



TP⁺/TK⁺/TPK⁺ mit RTP Ritzel
TP⁺/TK⁺/TPK⁺ with RTP Pinion

| Getriebebaugröße / Gearhead Size | Modul | z | F _{2T} | | T _{2B} | | v _{max} | | m _{Ritzel/Pinion} | |
|--|-------|----|-----------------|--------------------|-----------------|---------|------------------|----------|----------------------------|--------------------|
| | [mm] | | [N] | [lb _f] | [Nm] | [in.lb] | [m/min] | [in/sec] | [kg] | [lb _m] |
| TP ⁺ /TK ⁺ /TPK ⁺ 004 | 2 | 26 | 1460 | 329 | 38 | 336 | 245 | 161 | 0,5 | 1,0 |
| TP ⁺ /TK ⁺ /TPK ⁺ 010 | 2 | 36 | 2640 | 594 | 95 | 841 | 339 | 223 | 0,5 | 1,2 |
| TP ⁺ /TK ⁺ /TPK ⁺ 025 | 2 | 36 | 3550 | 799 | 128 | 1131 | 254 | 167 | 0,8 | 1,8 |
| TP ⁺ /TK ⁺ /TPK ⁺ 050 | 3 | 37 | 11530 | 2594 | 640 | 5664 | 349 | 229 | 1,5 | 3,3 |
| TP ⁺ /TK ⁺ /TPK ⁺ 110 | 4 | 40 | 20000 | 4500 | 1600 | 14161 | 440 | 289 | 5,8 | 12,8 |

Die Tragfähigkeit des Gegenrades/der Zahnstange ist bei der Antriebsauslegung zu berücksichtigen.
 Please attend in sizing the load capacity of counter wheel/rack.

F_{2T} = Max. Vorschubkraft/ Max. moving force
 T_{2B} = Max. Beschleunigungsmoment/ Max. acceleration torque
 z = Zähnezahl/ Number of teeth
 v_{max} = Max. Vorschubgeschwindigkeit/ Max. movement speed
 m_{Ritzel/Pinion} = Masse des Ritzels/ Pinion mass

TP⁺/TK⁺/TPK⁺ HIGH TORQUE mit RTP Ritzel
TP⁺/TK⁺/TPK⁺ HIGH TORQUE with RTP Pinion

| Getriebebaugröße / Gearhead Size | Modul | z | F _{2T} | | T _{2B} | | v _{max} | | m _{Ritzel/Pinion} | |
|---|-------|----|-----------------|--------------------|-----------------|---------|------------------|----------|----------------------------|--------------------|
| | [mm] | | [N] | [lb _f] | [Nm] | [in.lb] | [m/min] | [in/sec] | [kg] | [lb _m] |
| TP ⁺ /TK ⁺ /TPK ⁺ 050 | 3 | 37 | 12970 | 2918 | 720 | 6371 | 79 | 52 | 1,8 | 4,0 |
| TP ⁺ /TK ⁺ /TPK ⁺ 4000 | 10 | 36 | 200000 | 45000 | 36000 | 318629 | 31 | 20 | 66,9 | 147,5 |

Die Tragfähigkeit des Gegenrades/der Zahnstange ist bei der Antriebsauslegung zu berücksichtigen.
 Please attend in sizing the load capacity of counter wheel/rack.

F_{2T} = Max. Vorschubkraft/ Max. moving force
 T_{2B} = Max. Beschleunigungsmoment/ Max. acceleration torque
 z = Zähnezahl/ Number of teeth
 v_{max} = Max. Vorschubgeschwindigkeit/ Max. movement speed
 m_{Ritzel/Pinion} = Masse des Ritzels/ Pinion mass

SP⁺/SK⁺/SPK⁺/VDS mit RSP Ritzel SP⁺/SK⁺/SPK⁺/VDS with RSP Pinion

| Getriebebaugröße / Gearhead Size ^{b)} | Modul | z | A ±0,3 ^{a)} | b | B | d _a | d | x | L12 | L13 | x2 | L15 | L16 |
|---|-------|----|-------------------------|----|----|----------------|------|-----|------|------|------|------|------|
| SP ⁺ /SK ⁺ 060 | 2 | 16 | 39,0 | 26 | 24 | 38,3 | 32,0 | 0,5 | 52,0 | 39,0 | 19,0 | 7,0 | 27,0 |
| SP ⁺ /SK ⁺ /SPK ⁺ 075 VDS 050 | 2 | 19 | 41,8 | 26 | 24 | 43,9 | 38,0 | 0,4 | 53,0 | 40,0 | 20,0 | 8,0 | 28,0 |
| SP ⁺ /SK ⁺ /SPK ⁺ 100 VDS 063 | 3 | 17 | 52,7 | 31 | 29 | 59,6 | 51,0 | 0,4 | 64,0 | 48,5 | 18,5 | 4,0 | 34,0 |
| SP ⁺ /SK ⁺ /SPK ⁺ 140 VDS 080 | 3 | 22 | 59,6 | 31 | 29 | 73,4 | 66,0 | 0,2 | 81,0 | 65,5 | 35,5 | 21,0 | 51,0 |
| | 4 | 19 | 74,2 | 41 | 39 | 86,6 | 76,0 | 0,3 | 81,0 | 60,5 | 30,5 | 11,0 | 41,0 |
| SP ⁺ /SK ⁺ /SPK ⁺ 180 VDS 100 | 4 | 22 | 79,8 | 41 | 39 | 97,8 | 88,0 | 0,2 | 84,0 | 63,5 | 33,5 | 14,0 | 44,0 |
| | 5 | 19 | 83,5 | 51 | 49 | 109,2 | 95,0 | 0,4 | 84,0 | 58,5 | 28,5 | 4,0 | 34,0 |

Alle Abmessungen in [mm] / All dimensions in [mm]

^{a)} Zustellmechanismus empfohlen (Zustellmaß ± 0,3 mm)
Align mechanism recommended (alignment dimension ± 0.3 mm)

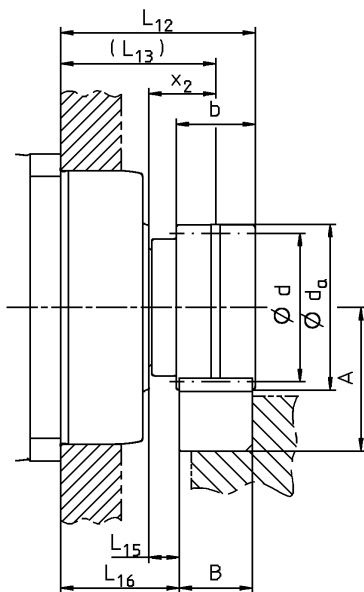
^{b)} Form des Abtriebs: 2 - Evolvente nach DIN 5480
Output type: 2 - Involute as per DIN 5480

z = Zähnezahl / Number of teeth

d_a = Kopfkreisdurchmesser / Tip diameter

d = Teilkreisdurchmesser / Partial circle diameter

x = Profilverschiebungsfaktor / Profile correction factor



SP⁺/SK⁺/SPK⁺/VDS mit RSP Ritzel
SP⁺/SK⁺/SPK⁺/VDS with RSP Pinion

| Getriebebaugröße / Gearhead Size | Modul | z | F _{2T} | | T _{2B} | | v _{max} | | m _{Ritzel/Pinion} | |
|--|-------|----|-----------------|--------------------|-----------------|---------|------------------|----------|----------------------------|--------------------|
| | [mm] | | [N] | [lb _f] | [Nm] | [in.lb] | [m/min] | [in/sec] | [kg] | [lb _m] |
| SP⁺/SK⁺ 060 | 2 | 16 | 2320 | 522 | 37 | 329 | 201 | 132 | 0,2 | 0,4 |
| SP⁺/SK⁺/SPK⁺ 075 VDS 050 | 2 | 19 | 3420 | 770 | 65 | 575 | 239 | 157 | 0,3 | 0,7 |
| SP⁺/SK⁺/SPK⁺ 100 VDS 063 | 3 | 17 | 6630 | 1492 | 169 | 1496 | 240 | 158 | 0,4 | 0,9 |
| SP⁺/SK⁺/SPK⁺ 140 VDS 080 | 3 | 22 | 9090 | 2045 | 300 | 2655 | 276 | 181 | 0,9 | 2,0 |
| | 4 | 19 | 9580 | 2156 | 364 | 3222 | 318 | 209 | 1,7 | 3,7 |
| SP⁺/SK⁺/SPK⁺ 180 VDS 100 | 4 | 22 | 13340 | 3002 | 587 | 5195 | 322 | 212 | 1,8 | 4,0 |
| | 5 | 19 | 13960 | 3141 | 663 | 5869 | 348 | 228 | 2,1 | 4,6 |

Die Tragfähigkeit des Gegenrades/der Zahnstange ist bei der Antriebsauslegung zu berücksichtigen.
 Please attend in sizing the load capacity of counter wheel/rack.

F_{2T} = Max. Vorschubkraft / Max. moving force
 T_{2B} = Max. Beschleunigungsmoment / Max. acceleration torque
 z = Zähnezahl / Number of teeth
 v_{max} = Max. Vorschubgeschwindigkeit / Max. movement speed
 m_{Ritzel/Pinion} = Masse des Ritzels / Pinion mass

SP⁺/SK⁺/SPK⁺/VDS mit Value Class Ritzel SP⁺/SK⁺/SPK⁺/VDS with Value Class Pinion

| Getriebe- baugröße / Gearhead Size ^{b)} | Modul | z | A ±0,3 ^{a)} | b | B | d _a | d | x | L12 | L13 | x2 | L15 | L16 | L17 |
|---|-------|----|-------------------------|----|----|----------------|------|-----|-------|------|------|------|------|------|
| SP ⁺ /SK ⁺ 060 | 2 | 19 | 41,8 | 26 | 24 | 43,6 | 38,0 | 0,4 | 54,0 | 39,0 | 19,0 | 7,0 | 27,0 | 2,0 |
| SP ⁺ /SK ⁺ /SPK ⁺ 075 VDS 050 | 2 | 22 | 44,0 | 26 | 24 | 48,0 | 44,0 | 0 | 62,0 | 40,0 | 20,0 | 8,0 | 28,0 | 9,0 |
| SP ⁺ /SK ⁺ /SPK ⁺ 100 VDS 063 | 3 | 22 | 59,0 | 31 | 29 | 71,9 | 66,0 | 0 | 95,5 | 48,5 | 18,5 | 4,0 | 34,0 | 31,5 |
| SP ⁺ /SK ⁺ /SPK ⁺ 140 VDS 080 | 3 | 25 | 63,5 | 31 | 29 | 80,9 | 75,0 | 0 | 122,0 | 65,5 | 35,5 | 21,0 | 51,0 | 41,0 |
| | 4 | 20 | 75,0 | 41 | 39 | 87,9 | 80,0 | 0 | 122,0 | 65,5 | 35,5 | 16,0 | 46,0 | 36,0 |

Alle Abmessungen in [mm]/All dimensions in [mm]

^{a)} Zustellmechanismus empfohlen (Zustellmaß ±0,3 mm)
Align mechanism recommended (alignment dimension ± 0.3 mm)

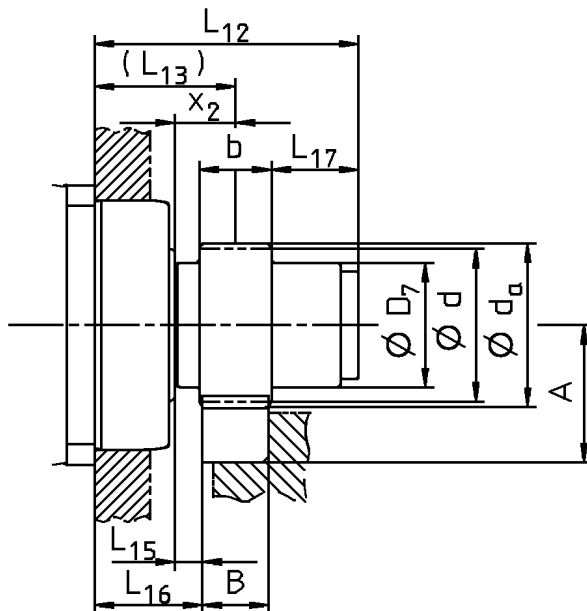
^{b)} Form des Abtriebs 1 - Welle mit Passfeder
Output type: 1 - Shaft with key

z = Zähnezahl / Number of teeth

d_a = Kopfkreisdurchmesser / Tip diameter

d = Teilkreisdurchmesser / Partial circle diameter

x = Profilverschiebungsfaktor / Profile correction factor



SP⁺/SK⁺/SPK⁺/VDS mit Value Class Ritzel
SP⁺/SK⁺/SPK⁺/VDS with Value Class Pinion

| Getriebebaugröße / Gearhead Size | Modul | z | F _{2T} | | T _{2B} | | v _{max} | | m _{Ritzel/Pinion} | |
|---|-------|----|-----------------|--------------------|-----------------|---------|------------------|----------|----------------------------|--------------------|
| | [mm] | | [N] | [lb _f] | [Nm] | [in.lb] | [m/min] | [in/sec] | [kg] | [lb _m] |
| SP ⁺ /SK ⁺ 060 | 2 | 19 | 1580 | 356 | 30 | 266 | 239 | 157 | 0,3 | 0,7 |
| SP ⁺ /SK ⁺ /SPK ⁺ 075 VDS 050 | 2 | 22 | 3410 | 767 | 75 | 664 | 276 | 181 | 0,4 | 0,9 |
| SP ⁺ /SK ⁺ /SPK ⁺ 100 VDS 063 | 3 | 22 | 6640 | 1494 | 219 | 1939 | 311 | 204 | 0,7 | 1,5 |
| SP ⁺ /SK ⁺ /SPK ⁺ 140 VDS 080 | 3 | 25 | 9090 | 2045 | 341 | 3017 | 314 | 206 | 1,5 | 3,3 |
| | 4 | 20 | 9100 | 2048 | 364 | 3222 | 335 | 220 | 1,9 | 4,2 |

Die Tragfähigkeit des Gegenrades/der Zahnstange ist bei der Antriebsauslegung zu berücksichtigen.
 Please attend in sizing the load capacity of counter wheel/rack.

F_{2T} = Max. Vorschubkraft / Max. moving force
 T_{2B} = Max. Beschleunigungsmoment / Max. acceleration torque
 z = Zähnezahl / Number of teeth
 v_{max} = Max. Vorschubgeschwindigkeit / Max. movement speed
 m_{Ritzel/Pinion} = Masse des Ritzels / Pinion mass

LP+/LK+/LPK+ mit Value Class Ritzel LP+/LK+/LPK+ with Value Class Pinion

| Getriebe- baugröße / Gearhead Size ^{b)} | Modul | z | A ±0,3 ^{a)} | b | B | d _a | d | x | L12 | L13 | x2 | L15 | L16 | L17 |
|--|-------|----|-------------------------|----|----|----------------|------|-----|-------|------|------|------|------|------|
| LP+/LK+/LPK+ 070 | 2 | 19 | 41,8 | 26 | 24 | 43,6 | 38,0 | 0,4 | 42,0 | 27,0 | 19,0 | 7,0 | 15,0 | 2,0 |
| LP+/LK+/LPK+ 090 | 2 | 22 | 44,0 | 26 | 24 | 48,0 | 44,0 | 0 | 52,0 | 30,0 | 20,0 | 8,0 | 18,0 | 9,0 |
| LP+/LK+/LPK+ 120 | 3 | 22 | 59,0 | 31 | 29 | 71,9 | 66,0 | 0 | 77,5 | 30,5 | 18,5 | 4,0 | 16,0 | 31,5 |
| LP+/LK+/LPK+ 155 | 3 | 25 | 63,5 | 31 | 29 | 80,9 | 75,0 | 0 | 107,0 | 50,5 | 35,5 | 21,0 | 36,0 | 41,0 |
| | 4 | 20 | 75,0 | 41 | 39 | 87,9 | 80,0 | 0 | 107,0 | 50,5 | 35,5 | 16,0 | 31,0 | 36,0 |

Alle Abmessungen in [mm] / All dimensions in [mm]

^{a)} Zustellmechanismus empfohlen (Zustellmaß ±0,3 mm)

Align mechanism recommended (alignment dimension ± 0.3 mm)

^{b)} Form des Abtriebs 1 - Welle mit Passfeder

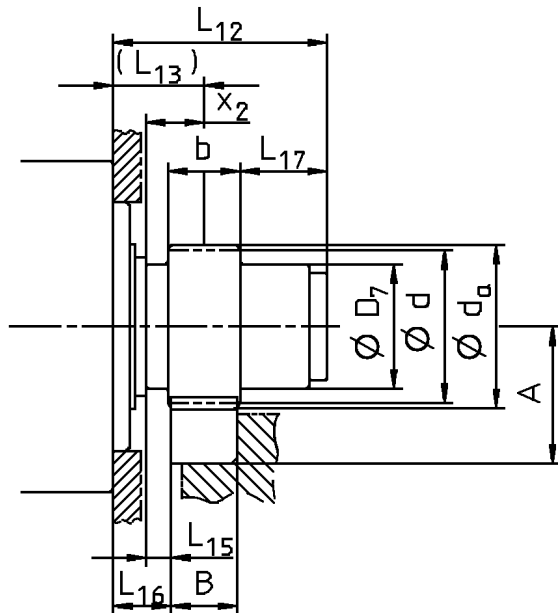
Output type: 1 - Shaft with key

z = Zähnezahl / Number of teeth

d_a = Kopfkreisdurchmesser / Tip diameter

d = Teilkreisdurchmesser / Partial circle diameter

x = Profilverschiebungsfaktor / Profile correction factor



LP⁺/LK⁺/LPK⁺ mit Value Class Ritzel
LP⁺/LK⁺/LPK⁺ with Value Class Pinion

| Getriebebaugröße / Gearhead Size | Modul | z | F _{2T} | | T _{2B} | | v _{max} | | m _{Ritzel/Pinion} | |
|--|-------|----|-----------------|--------------------|-----------------|---------|------------------|----------|----------------------------|--------------------|
| | [mm] | | [N] | [lb _f] | [Nm] | [in.lb] | [m/min] | [in/sec] | [kg] | [lb _m] |
| LP ⁺ /LK ⁺ /LPK ⁺ 070 | 2 | 19 | 1360 | 306 | 26 | 229 | 239 | 157 | 0,3 | 0,7 |
| LP ⁺ /LK ⁺ /LPK ⁺ 090 | 2 | 22 | 2260 | 509 | 50 | 440 | 276 | 181 | 0,4 | 0,9 |
| LP ⁺ /LK ⁺ /LPK ⁺ 120 | 3 | 22 | 4320 | 972 | 143 | 1262 | 332 | 218 | 0,7 | 1,5 |
| LP ⁺ /LK ⁺ /LPK ⁺ 155 | 3 | 25 | 7050 | 1586 | 264 | 2340 | 283 | 186 | 1,5 | 3,3 |
| | 4 | 20 | 7050 | 1586 | 282 | 2496 | 302 | 198 | 1,9 | 4,2 |

Die Tragfähigkeit des Gegenrades/der Zahnstange ist bei der Antriebsauslegung zu berücksichtigen.
 Please attend in sizing the load capacity of counter wheel/rack.

F_{2T} = Max. Vorschubkraft / Max. moving force
 T_{2B} = Max. Beschleunigungsmoment / Max. acceleration torque
 z = Zähnezahl / Number of teeth
 v_{max} = Max. Vorschubgeschwindigkeit / Max. movement speed
 m_{Ritzel/Pinion} = Masse des Ritzels / Pinion mass



alpha

WITTENSTEIN alpha GmbH
Walter-Wittenstein-Straße 1
97999 Igersheim
Germany

Zentrale: Tel. +49 7931 493-0
24h-Service-Hotline: Tel. +49 7931 493-12900
speedline®: Tel. +49 7931 493-10333 oder 10444
info-alpha@wittenstein.de

Technische Änderungen vorbehalten. Technical changes reserved.
WITTENSTEIN alpha_Gerädev Zahnte Abtriebsritzel / Straight-toothed output pinions
Broschüre / Brochure_2015_d/en_1

WITTENSTEIN alpha – intelligente Antriebssysteme

www.wittenstein-alpha.de · www.wittenstein-alpha.com

