

Extensions and angular heads

(with movement 4 or 10 mm)

For solving various measuring tasks it is necessary to extend, bypass or deviate the range between measuring position and the fixing of the probe (e.g. dial gauge, inductive probe).

Our extension or angular heads with movement 4 mm or alternatively 10 mm fix the necessary probe in a fixing boring of \varnothing 8 mm. Our extension insertions with movement 4 mm or alternatively 10 mm are screwed by means of a M 8 x 0,75-thread with extension (0°) or angular head (30°, 45°, 60° or 90°). The movable rod \varnothing 4 mm in the extension insertion is put against the part to be measured. The movement of the rod (movement 4 mm or 10 mm) will be transferred from a deviating element in the angular head to the probe.

Please mind on your order angular head and extension as well as the extension insertion having the same movement (4 mm or 10 mm).

Clamp shank \varnothing 8H7 for probe. The clamping screw to fix the probe in the extension respectively in the angular head is to be fixed from both sides. The plain insert is delivered with the angular heads. The spherical insert which is mounted usually in the probe has to be replaced by this plain insert to avoid transfer errors at the deviating element.



Angular heads and extensions

The following types are available:

Series 1123: Angular heads mov. 4 mm, insert. depth 33mm up to middle mov. (long version)

Series 1124: Angular heads mov. 4 mm, insert. depth 23mm up to middle mov. (short version)

Series 1125: Angular heads mov. 10 mm, insert. depth 33mm up to middle mov.

Series 1127: Extension insertion movement 4mm (matching series 1123 and 1124)

Series 1128: Extension insertion movement 10mm (matching series 1125)

Extensions and angular heads

The rod of the extension insertion is available alternatively

- **with thread M 2,5 (type G)**

or

- **plain (type P)**

Using type G, inserts with various touching geometries may be screwed in. Using type P, the part to be measured may be advanced directly or a probe may be mounted. The rod of the extension insertions (slip-in guide) is secured against turning.

The extension insertions are available with addition spring load on request, either

- **for pressure (type D, reinforcement of the measuring load)**
- **for traction (type Z, lifting load)**

When horizontal fitted the spring load is about 1 N.

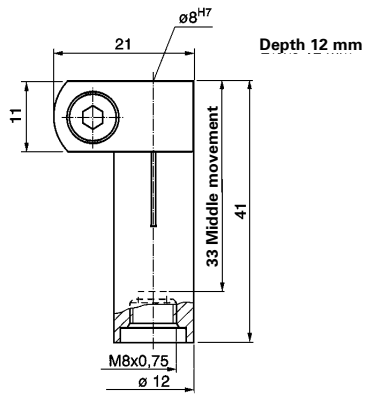
Error with movement 4 mm: max. 5µm

Error with movement 10 mm: max. 8µm

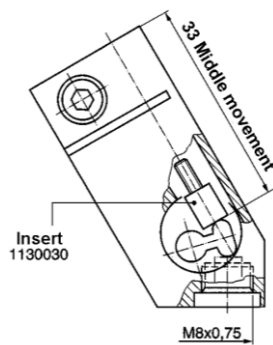
To avoid dirt accumulation, the extension insertions are available with expansion bellows (not for extension length 15 mm).

Extensions and angular heads series 1123 – mov. 4 mm

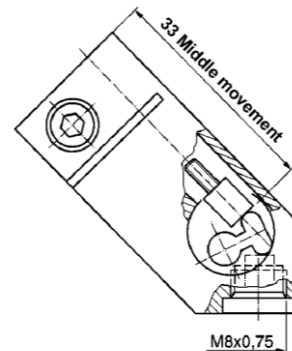
Extension and angular heads with insertion depth up to middle movement 33 mm



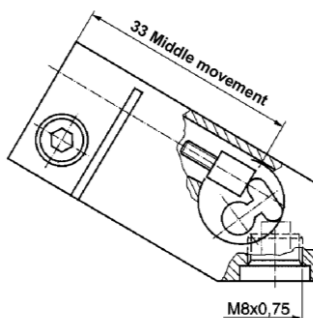
Article-No. 1123 01 (0°)



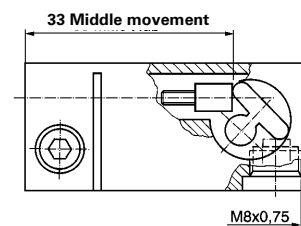
Article-No. 1123 02 (30°)



Article-No. 1123 03 (45°)



Article-No. 1123 04 (60°)



Article-No. 1123 05 (90°)

Art.-no. for angular heads series 1123 complete with ext. insertions

Angle	Type	Length L	Article-No.	Angle	Type	Length L	Article-No.
0°	G	15	1123 01 G 015	0°	P	15	1123 01 P 015
0°	G	25	1123 01 G 025	0°	P	25	1123 01 P 025
0°	G	50	1123 01 G 050	0°	P	50	1123 01 P 050
0°	G	75	1123 01 G 075	0°	P	75	1123 01 P 075
0°	G	100	1123 01 G 100	0°	P	100	1123 01 P 100
0°	G	125	1123 01 G 125	0°	P	125	1123 01 P 125
0°	G	150	1123 01 G 150	0°	P	150	1123 01 P 150
0°	G	175	1123 01 G 175	0°	P	175	1123 01 P 175
0°	G	200	1123 01 G 200	0°	P	200	1123 01 P 200
30°	G	15	1123 02 G 015	30°	P	15	1123 02 P 015
30°	G	25	1123 02 G 025	30°	P	25	1123 02 P 025
30°	G	50	1123 02 G 050	30°	P	50	1123 02 P 050
30°	G	75	1123 02 G 075	30°	P	75	1123 02 P 075
30°	G	100	1123 02 G 100	30°	P	100	1123 02 P 100
30°	G	125	1123 02 G 125	30°	P	125	1123 02 P 125
30°	G	150	1123 02 G 150	30°	P	150	1123 02 P 150
30°	G	175	1123 02 G 175	30°	P	175	1123 02 P 175
30°	G	200	1123 02 G 200	30°	P	200	1123 02 P 200
45°	G	15	1123 03 G 015	45°	P	15	1123 03 P 015
45°	G	25	1123 03 G 025	45°	P	25	1123 03 P 025
45°	G	50	1123 03 G 050	45°	P	50	1123 03 P 050
45°	G	75	1123 03 G 075	45°	P	75	1123 03 P 075
45°	G	100	1123 03 G 100	45°	P	100	1123 03 P 100
45°	G	125	1123 03 G 125	45°	P	125	1123 03 P 125
45°	G	150	1123 03 G 150	45°	P	150	1123 03 P 150
45°	G	175	1123 03 G 175	45°	P	175	1123 03 P 175
45°	G	200	1123 03 G 200	45°	P	200	1123 03 P 200
60°	G	15	1123 04 G 015	60°	P	15	1123 04 P 015
60°	G	25	1123 04 G 025	60°	P	25	1123 04 P 025
60°	G	50	1123 04 G 050	60°	P	50	1123 04 P 050
60°	G	75	1123 04 G 075	60°	P	75	1123 04 P 075
60°	G	100	1123 04 G 100	60°	P	100	1123 04 P 100
60°	G	125	1123 04 G 125	60°	P	125	1123 04 P 125
60°	G	150	1123 04 G 150	60°	P	150	1123 04 P 150
60°	G	175	1123 04 G 175	60°	P	175	1123 04 P 175
60°	G	200	1123 04 G 200	60°	P	200	1123 04 P 200
90°	G	15	1123 05 G 015	90°	P	15	1123 05 P 015
90°	G	25	1123 05 G 025	90°	P	25	1123 05 P 025
90°	G	50	1123 05 G 050	90°	P	50	1123 05 P 050
90°	G	75	1123 05 G 075	90°	P	75	1123 05 P 075
90°	G	100	1123 05 G 100	90°	P	100	1123 05 P 100
90°	G	125	1123 05 G 125	90°	P	125	1123 05 P 125
90°	G	150	1123 05 G 150	90°	P	150	1123 05 P 150
90°	G	175	1123 05 G 175	90°	P	175	1123 05 P 175
90°	G	200	1123 05 G 200	90°	P	200	1123 05 P 200

Information

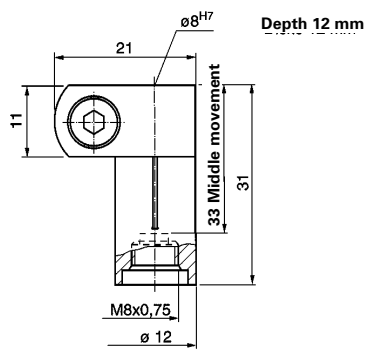
We provide also matching holders for dial indicator (see page 33) and extension insertions of series 1127 (see page 27).

Type with expansion bellows: Additional remark "F". Example: 1123 05 P 025 F

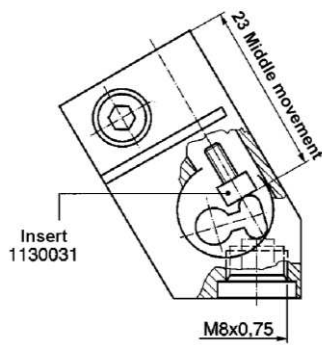
(Not for extension length 15 mm.)

Extensions and angular heads series 1124 – mov. 4 mm (short version)

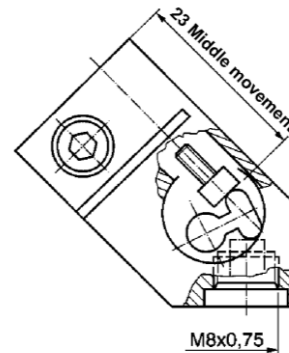
Extension and angular heads with insertion depth up to middle movement 23 mm



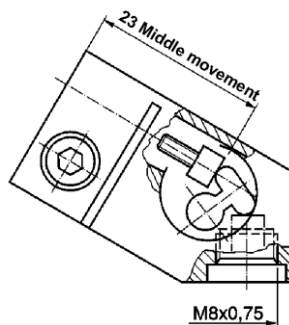
Article-No. 1124 01 (0°)



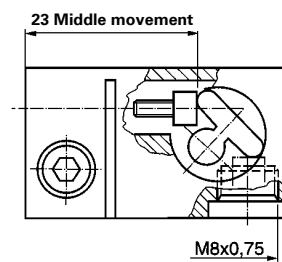
Article-No. 1124 02 (30°)



Article-No. 1124 03 (45°)



Article-No. 1124 04 (60°)



Article-No. 1124 05 (90°)

Art.-no. for angular heads series 1124 complete with ext. insertions

Angle	Type	Length L	Article-No.	Angle	Type	Length L	Article-No.
0°	G	15	1124 01 G 015	0°	P	15	1124 01 P 015
0°	G	25	1124 01 G 025	0°	P	25	1124 01 P 025
0°	G	50	1124 01 G 050	0°	P	50	1124 01 P 050
0°	G	75	1124 01 G 075	0°	P	75	1124 01 P 075
0°	G	100	1124 01 G 100	0°	P	100	1124 01 P 100
0°	G	125	1124 01 G 125	0°	P	125	1124 01 P 125
0°	G	150	1124 01 G 150	0°	P	150	1124 01 P 150
0°	G	175	1124 01 G 175	0°	P	175	1124 01 P 175
0°	G	200	1124 01 G 200	0°	P	200	1124 01 P 200
30°	G	15	1124 02 G 015	30°	P	15	1124 02 P 015
30°	G	25	1124 02 G 025	30°	P	25	1124 02 P 025
30°	G	50	1124 02 G 050	30°	P	50	1124 02 P 050
30°	G	75	1124 02 G 075	30°	P	75	1124 02 P 075
30°	G	100	1124 02 G 100	30°	P	100	1124 02 P 100
30°	G	125	1124 02 G 125	30°	P	125	1124 02 P 125
30°	G	150	1124 02 G 150	30°	P	150	1124 02 P 150
30°	G	175	1124 02 G 175	30°	P	175	1124 02 P 175
30°	G	200	1124 02 G 200	30°	P	200	1124 02 P 200
45°	G	15	1124 03 G 015	45°	P	15	1124 03 P 015
45°	G	25	1124 03 G 025	45°	P	25	1124 03 P 025
45°	G	50	1124 03 G 050	45°	P	50	1124 03 P 050
45°	G	75	1124 03 G 075	45°	P	75	1124 03 P 075
45°	G	100	1124 03 G 100	45°	P	100	1124 03 P 100
45°	G	125	1124 03 G 125	45°	P	125	1124 03 P 125
45°	G	150	1124 03 G 150	45°	P	150	1124 03 P 150
45°	G	175	1124 03 G 175	45°	P	175	1124 03 P 175
45°	G	200	1124 03 G 200	45°	P	200	1124 03 P 200
60°	G	15	1124 04 G 015	60°	P	15	1124 04 P 015
60°	G	25	1124 04 G 025	60°	P	25	1124 04 P 025
60°	G	50	1124 04 G 050	60°	P	50	1124 04 P 050
60°	G	75	1124 04 G 075	60°	P	75	1124 04 P 075
60°	G	100	1124 04 G 100	60°	P	100	1124 04 P 100
60°	G	125	1124 04 G 125	60°	P	125	1124 04 P 125
60°	G	150	1124 04 G 150	60°	P	150	1124 04 P 150
60°	G	175	1124 04 G 175	60°	P	175	1124 04 P 175
60°	G	200	1124 04 G 200	60°	P	200	1124 04 P 200
90°	G	15	1124 05 G 015	90°	P	15	1124 05 P 015
90°	G	25	1124 05 G 025	90°	P	25	1124 05 P 025
90°	G	50	1124 05 G 050	90°	P	50	1124 05 P 050
90°	G	75	1124 05 G 075	90°	P	75	1124 05 P 075
90°	G	100	1124 05 G 100	90°	P	100	1124 05 P 100
90°	G	125	1124 05 G 125	90°	P	125	1124 05 P 125
90°	G	150	1124 05 G 150	90°	P	150	1124 05 P 150
90°	G	175	1124 05 G 175	90°	P	175	1124 05 P 175
90°	G	200	1124 05 G 200	90°	P	200	1124 05 P 200

Information

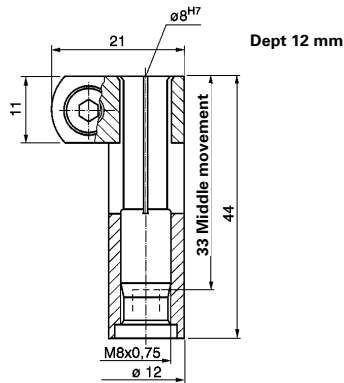
We provide also matching holders for dial indicator (see page 33) and extension insertions of series 1127 (see page 27).

Type with expansion bellows: Additional remark "F". Example: 1124 05 P 025 F

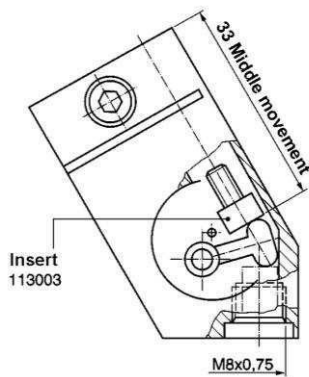
(Not for extension length 15 mm.)

Extension and angular heads of series 1125 – mov. 10 mm

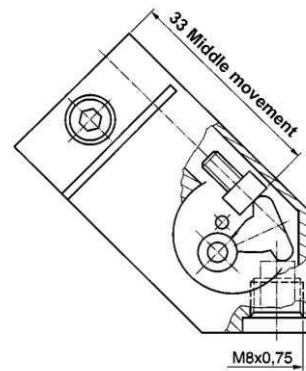
Extension and angular heads with insertion depth up to middle movement 33 mm



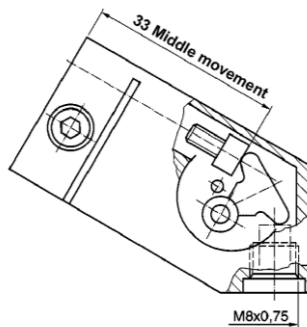
Article-No. 1125 01 (0°)



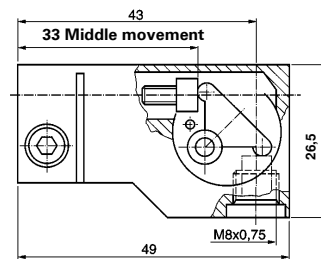
Article-No. 1125 02 (30°)



Article-No. 1125 03 (45°)



Article-No. 1125 04 (60°)



Article-No. 1125 05 (90°)

Art.-no. for angular heads series 1125 complete with ext. insertions

Angle	Type	Length L	Article-No.	Angle	Type	Length L	Article-No.
0°	G	25	1125 01 G 025	0°	P	25	1125 01 P 025
0°	G	50	1125 01 G 050	0°	P	50	1125 01 P 050
0°	G	75	1125 01 G 075	0°	P	75	1125 01 P 075
0°	G	100	1125 01 G 100	0°	P	100	1125 01 P 100
0°	G	125	1125 01 G 125	0°	P	125	1125 01 P 125
0°	G	150	1125 01 G 150	0°	P	150	1125 01 P 150
0°	G	175	1125 01 G 175	0°	P	175	1125 01 P 175
0°	G	200	1125 01 G 200	0°	P	200	1125 01 P 200
30°	G	25	1125 02 G 025	30°	P	25	1125 02 P 025
30°	G	50	1125 02 G 050	30°	P	50	1125 02 P 050
30°	G	75	1125 02 G 075	30°	P	75	1125 02 P 075
30°	G	100	1125 02 G 100	30°	P	100	1125 02 P 100
30°	G	125	1125 02 G 125	30°	P	125	1125 02 P 125
30°	G	150	1125 02 G 150	30°	P	150	1125 02 P 150
30°	G	175	1125 02 G 175	30°	P	175	1125 02 P 175
30°	G	200	1125 02 G 200	30°	P	200	1125 02 P 200
45°	G	25	1125 03 G 025	45°	P	25	1125 03 P 025
45°	G	50	1125 03 G 050	45°	P	50	1125 03 P 050
45°	G	75	1125 03 G 075	45°	P	175	1125 03 P 075
45°	G	100	1125 03 G 100	45°	P	100	1125 03 P 100
45°	G	125	1125 03 G 125	45°	P	125	1125 03 P 125
45°	G	150	1125 03 G 150	45°	P	150	1125 03 P 150
45°	G	175	1125 03 G 175	45°	P	175	1125 03 P 175
45°	G	200	1125 03 G 200	45°	P	200	1125 03 P 200
60°	G	25	1125 04 G 025	60°	P	25	1125 04 P 025
60°	G	50	1125 04 G 050	60°	P	50	1125 04 P 050
60°	G	75	1125 04 G 075	60°	P	75	1125 04 P 075
60°	G	100	1125 04 G 100	60°	P	100	1125 04 P 100
60°	G	125	1125 04 G 125	60°	P	125	1125 04 P 125
60°	G	150	1125 04 G 150	60°	P	150	1125 04 P 150
60°	G	175	1125 04 G 175	60°	P	175	1125 04 P 175
60°	G	200	1125 04 G 200	60°	P	200	1125 04 P 200
90°	G	25	1125 05 G 025	90°	P	25	1125 05 P 025
90°	G	50	1125 05 G 050	90°	P	50	1125 05 P 050
90°	G	75	1125 05 G 075	90°	P	75	1125 05 P 075
90°	G	100	1125 05 G 100	90°	P	100	1125 05 P 100
90°	G	125	1125 05 G 125	90°	P	125	1125 05 P 125
90°	G	150	1125 05 G 150	90°	P	150	1125 05 P 150
90°	G	175	1125 05 G 175	90°	P	175	1125 05 P 175
90°	G	200	1125 05 G 200	90°	P	200	1125 05 P 200

Information

We provide also matching holders for dial indicator (see page 33) and extension insertions of series 1128 (see page 28).

Type with expansion bellows: Additional remark "F". Example: 1125 05 P 025 F

Extension insertions

Product features

- Available optional with tread M2,5 (type G) or plain (type P)
- Using type G, inserts with various advancing geometries may be screwed in
- Using type P, the part to be measured may be advanced directly or a probe may be mounted
- Rod of the extension insertions (slip-in guide) is secured against turning



Extension insertions



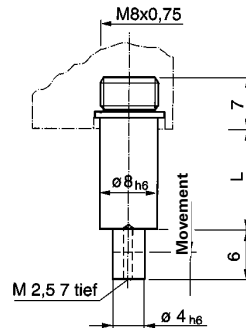
Example for field of application

Measuring task: Prolongation or bridging between measuring position and probe.

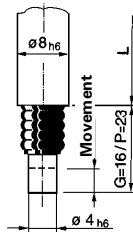
Extension insertions of series 1127 – movement 4 mm

Information

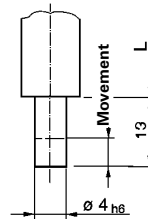
Matching the extension and angular heads of series 1123 (see page 20) and 1124 (see page 22)



Type G

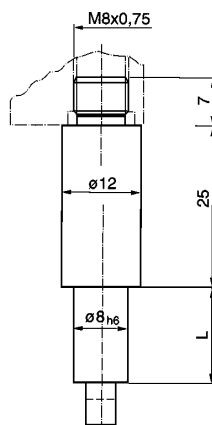


Type with expansion bellows carries additional remark "F" (length =15 mm not available)



Type P

Extension insertions with spring load for pressure (1127 D) or traction (1127 Z), spring load when horizontally mounted about 1N



Type P + G

Type	Length L	Article-No.
G	15	1127 G 015
G	25	1127 G 025
G	50	1127 G 050
G	75	1127 G 075
G	100	1127 G 100
G	125	1127 G 125
G	150	1127 G 150
G	175	1127 G 175
G	200	1127 G 200

Type	Length L	Article-No.
P	15	1127 P 015
P	25	1127 P 025
P	50	1127 P 050
P	75	1127 P 075
P	100	1127 P 100
P	125	1127 P 125
P	150	1127 P 150
P	175	1127 P 175
P	200	1127 P 200

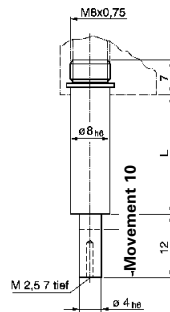
Type	Length L	Article-No.
G	15	1127 G 015 D
G	25	1127 G 025 D
G	50	1127 G 050 D
G	75	1127 G 075 D
G	100	1127 G 100 D
G	125	1127 G 125 D
G	150	1127 G 150 D
G	175	1127 G 175 D
G	200	1127 G 200 D
P	15	1127 P 015 D
P	25	1127 P 025 D
P	50	1127 P 050 D
P	75	1127 P 075 D
P	100	1127 P 100 D
P	125	1127 P 125 D
P	150	1127 P 150 D
P	175	1127 P 175 D
P	200	1127 P 200 D

Type	Length L	Article-No.
G	15	1127 G 015 Z
G	25	1127 G 025 Z
G	50	1127 G 050 Z
G	75	1127 G 075 Z
G	100	1127 G 100 Z
G	125	1127 G 125 Z
G	150	1127 G 150 Z
G	175	1127 G 175 Z
G	200	1127 G 200 Z
P	15	1127 P 015 Z
P	25	1127 P 025 Z
P	50	1127 P 050 Z
P	75	1127 P 075 Z
P	100	1127 P 100 Z
P	125	1127 P 125 Z
P	150	1127 P 150 Z
P	175	1127 P 175 Z
P	200	1127 P 200 Z

Extension insertions of series 1128 – movement 10 mm

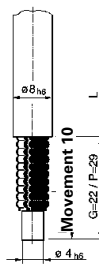
Information

Matching extension and angular heads of series 1125 (see page 24)



Type G

Type	Length L	Article-No.
G	25	1128 G 025
G	50	1128 G 050
G	75	1128 G 075
G	100	1128 G 100
G	125	1128 G 125
G	150	1128 G 150
G	175	1128 G 175
G	200	1128 G 200



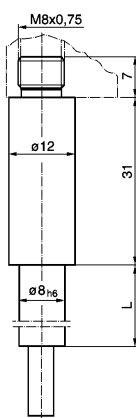
Type with expansion bellows with additional remark "F" (not available for length L=15)



Type P

Type	Length L	Article-No.
P	25	1128 P 025
P	50	1128 P 050
P	75	1128 P 075
P	100	1128 P 100
P	125	1128 P 125
P	150	1128 P 150
P	175	1128 P 175
P	200	1128 P 200

Extension insertion with spring load for pressure (1128 D) or traction (1128 Z), spring load when horizontally mounted about 1N



Type P + G

Type	Length L	Article-No.
G	25	1128 G 025 D
G	50	1128 G 050 D
G	75	1128 G 075 D
G	100	1128 G 100 D
G	125	1128 G 125 D
G	150	1128 G 150 D
G	175	1128 G 175 D
G	200	1128 G 200 D
P	25	1128 P 025 D
P	50	1128 P 050 D
P	75	1128 P 075 D
P	100	1128 P 100 D
P	125	1128 P 125 D
P	150	1128 P 150 D
P	175	1128 P 175 D
P	200	1128 P 200 D

Type	Length L	Article-No.
G	25	1128 G 025 Z
G	50	1128 G 050 Z
G	75	1128 G 075 Z
G	100	1128 G 100 Z
G	125	1128 G 125 Z
G	150	1128 G 150 Z
G	175	1128 G 175 Z
G	200	1128 G 200 Z
P	25	1128 P 025 Z
P	50	1128 P 050 Z
P	75	1128 P 075 Z
P	100	1128 P 100 Z
P	125	1128 P 125 Z
P	150	1128 P 150 Z
P	175	1128 P 175 Z
P	200	1128 P 200 Z