



### 12090

PULL BACK INSERTS

#### Material

Steel version: heat treated steel, tempered and blackened.

Stainless steel version: precipitation hardened stainless steel (17-4PH, AISI 630).

#### Technical Notes

By tightening the clamping screw, the

positioning clamping pin is centered and clamped via the four balls, into the locating bush.

The clamping screw can be operated manually via a removable handle or hex. key.

#### Tips

For removable handle see part no. 12091.

#### Important Notes

The positioning clamping pin allows fast clamping, fastening, adjusting, changing and securing of workpieces, plates, fixture systems etc.

Order No.	Material	$l_1$ +0.6	$l_2$ $\pm 1$	$d_1$ -0.02   - 0.05	$d_2$	$d_3$	$d_4$	For clamping plate thickness $\pm 0.05$	$h_1$	Holding force kN	Stroke $s_1$ max.	A/F <sub>1</sub>	A/F <sub>2</sub>	Weight g
12090.W0016	Steel	25	13,6	16	18,7	32	M 4	20	10	5	9	30	6	105
12090.W0018	Steel	30	13,6	16	18,7	32	M 4	25	10	5	9	30	6	115
12090.W0020	Steel	25	13,6	20	23,6	40	M 4	20	10	6	9	38	6	170
12090.W0022	Steel	30	13,6	20	23,6	40	M 4	25	10	6	9	38	6	185
12090.W0025	Steel	25	18,6	25	29,0	45	M 4	20	10	8	9	43	10	255
12090.W0027	Steel	30	18,6	25	29,0	45	M 4	25	10	8	9	43	10	275
12090.W0030	Steel	25	18,6	30	34,6	55	M 4	20	10	10	9	53	10	375
12090.W0032	Steel	30	18,6	30	34,6	55	M 4	25	10	10	9	53	10	400
12090.W0116	Stainless Steel	25	13,6	16	18,7	32	M 4	20	10	5	9	30	6	105
12090.W0118	Stainless Steel	30	13,6	16	18,7	32	M 4	25	10	5	9	30	6	115
12090.W0120	Stainless Steel	25	13,6	20	23,6	40	M 4	20	10	6	9	38	6	170
12090.W0122	Stainless Steel	30	13,6	20	23,6	40	M 4	25	10	6	9	38	6	185
12090.W0125	Stainless Steel	25	18,6	25	29,0	45	M 4	20	10	8	9	43	10	255
12090.W0127	Stainless Steel	30	18,6	25	29,0	45	M 4	25	10	8	9	43	10	275
12090.W0130	Stainless Steel	25	18,6	30	34,6	55	M 4	20	10	10	9	53	10	375
12090.W0132	Stainless Steel	30	18,6	30	34,6	55	M 4	25	10	10	9	53	10	400



By tightening the clamping screws, the positioning clamping pin is centered and clamped with four balls in the locating bush. The clamping screw can be operated manually via a removable handle or via an hex. key.

## Advantages

### Overview

- Advantages of initial spring tension:
  - Abrasion resistant.
  - Clamping ball and location hole are protected from overload.
  - No seizing of the pin through overloading.
  - Reduces vibration during machining.
  - Eliminates unintentional unlocking of the system (e.g. due to system vibration).
- High repeatability of  $\pm 0.03\text{mm}$ .
- Simple installing /uninstalling using a spanner faces and knurling.
- Low construction height.
- Operation via hex. key or optional handle.

