



12058

PULL BACK INSERTS

Material

Stainless steel (17-4PH) or steel (12L14). Pin and screw supplied together. Replacement pins can be ordered separately, see parts 12058.W5030-W5060. Supplied as one pin and one tapered screw.

Technical Notes

XYZ Xpansion pins provide a cost-effective workholding solution for tombstones, grid and fixture plates, enabling full tool access to the work surface with no external clamping interference.

Unique design provides accurate location and repeatability with high holding forces to secure parts on an internal diameter.

Press-fit XYZ Xpansion pins are for installation into a precision bored hole, with a centred threaded hole to receive tapered screw.

Easy to use installation/removal tool available, please order separately.

Tips

Designed for applications requiring quick set-up on secondary operation, water jetting or even non-machining applications where discrete location and clamping of parts is required.

Important Notes

Clamping of component achieved via tight-

tening of tapered screw to expand the XYZ pin collet; expansion of 0,7mm is possible. The top of the pin has been slightly tapered to maximise line contact in the mounting bore and to provide adequate clearance during workpiece loading and unloading. If recessing pin into a fixture at a depth below the collet slits, be sure to provide sufficient clearance to allow for expansion of clamp (approx. 0,7mm).

d₁ min. is the minimum diameter to which the pin can be machined down. The tapered screws listed on the data table are for replacement purposes.

Order No.	Type	Material	For pin dia.	l_1	d_1 +0.00 -0.025	d_1 min.	d_2	h_1	h_2	h_3	h_4	Weight g
12058.W0030	Pin	17-4PH	-	16	6	5.5	-	13	7.0	5.8	7.3	2.7
12058.W0040	Pin	17-4PH	-	22	10	7.5	-	19	12.7	6.4	8.4	9.5
12058.W0050	Pin	17-4PH	-	22	12	10.5	-	19	12.7	6.4	11.1	17
12058.W0060	Pin	17-4PH	-	22	16	12.0	-	19	12.7	6.4	13.0	27
12058.W0130	Pin	12L14	-	16	6	5.5	-	13	7.0	5.8	7.3	2.7
12058.W0140	Pin	12L14	-	22	10	7.5	-	19	12.7	6.4	8.4	9.5
12058.W0150	Pin	12L14	-	22	12	10.5	-	19	12.7	6.4	11.1	17.2
12058.W0160	Pin	12L14	-	22	16	12.0	-	19	12.7	6.4	13.0	27.2
12058.W5030	Tapered Screw	-	-	-	-	-	M 3x0,5	-	-	-	-	-
12058.W5040	Tapered Screw	-	-	-	-	-	M 4x0,7	-	-	-	-	4.5
12058.W5050	Tapered Screw	-	-	-	-	-	M 6x1,0	-	-	-	-	-
12058.W5060	Tapered Screw	-	-	-	-	-	M 8x1,25	-	-	-	-	13.6
12058.W6030	Inst. Tool	-	6	-	-	-	-	-	-	-	-	-
12058.W6040	Inst. Tool	-	10	-	-	-	-	-	-	-	-	-
12058.W6050	Inst. Tool	-	12	-	-	-	-	-	-	-	-	-
12058.W6060	Inst. Tool	-	16	-	-	-	-	-	-	-	-	63.5



Expansion pins are the ideal solution for securing parts on the inside diameter on tombstones, grid and fixture plates.

The unique design achieves accurate location, repeatability and high holding forces for securing parts and provide discrete workholding and full accessibility to the work surface with no external clamping interference.

Location accuracy is achieved through the close tolerance between the Xpansion pin's locating diameter and busing internal diameter. The top of the pins have a slight taper to maximise line contact in the bore, and to provide clearance during loading and unloading.

Pins expand up to 0.7mm, with the pin's diameter machinable to your specific application.

Ideal for quick set-up on secondary operation, water jetting operations, or even applications outside of a machining centre.

Available in long threaded version, or shorter press fit model. Serrated and smooth finish in both M12 and M16 threads.

Easy to Install



Design simple fixture plate with Xpansion pins located to suit your component, the same hole spacing will be used in the workpiece/raw stock for mounting bolt holes.



Install the Xpansion pin into the fixture plate.



Install the Xpansion pin's tapered drive screw into fixture plate.



Load workpiece raw stock onto Xpansion pins and tighten tapered drive screws to clamp.



Run first operation – note the clear tooling path possible with no noticeable external clamping interference.

- Flip the part and locate on the same Xpansion pins for operation two.
- Xpansion pins provide a quick, accurate and low cost fixture solution.