NUTSERT

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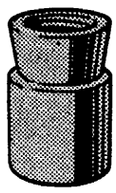
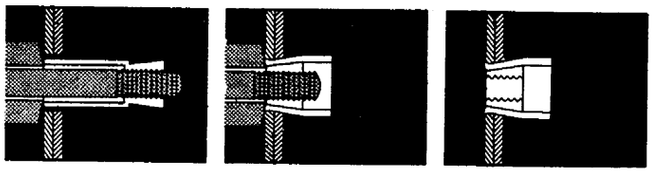
The AVDEL NUTSERT is an entirely new concept in threaded insert type fasteners. It is a steel insert bush which can be placed *from one side of the work only* by a lightweight power installation tool. Unskilled labour can place up to 1200 per hour.

The AVDEL NUTSERT is manufactured from medium carbon steel with a zinc plated and passivated finish and may be used in virtually any material.

The fastening sequence . . .





NUTSERT .... A method of placing nuts into most materials working from one side of the material only.
Simple to use - drill or punch a hole . . . insert the NUTSERT . . . and secure with a hand operated tool.
Saves press work - no welding or securing by conventional means.
Nutserts can be installed at any stage of manufacturing process without damage to coated or painted surfaces. Nutserts, because of the simplicity of placing, eliminate many production processes and blind nut failures.

AVDEL

FASTENERS DIVISION OF

ZIP WHOLESALERS (WGTN) LTD

WELLINGTON
P.O. BOX 30-446 LOWER HUTT
TELEPHONE 60-125

AUCKLAND
P.O. BOX 8037 NEWTON
TELEPHONE 362-480

NUTSERTS can be placed in

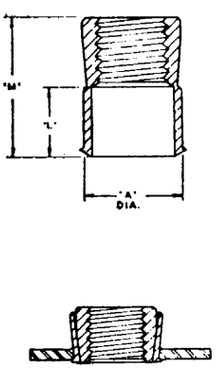
Sheet Steel	Hardboard
Sheet Aluminium	Timber
Fibre Glass	Perspex
Steel or Iron	Chipboard
Aluminium Castings	Plastic
Hollow Tubes	Square section extrusions

All Nutserts, either steel or brass, are Cadmium Plated.

AVDEL LIMITED

NUTSERT (R)
BLIND ANCHOR NUT
Registered Trad Mark

Commercial
9500 Series
Fractional
B.A. & Unified



1

PROD. CODE	THREAD	MATERIAL	FINISH
9501	B.S.W.	STEEL	CAD.PLATED
9521	B.S.W.	BRASS 60/40	CAD. PLATED
9502	B.S.F.	STEEL	CAD. PLATED
9522	B.S.F.	BRASS 60/40	CAD. PLATED
9503	B.A.	STEEL	CAD. PLATED
9523	B.A.	BRASS 60/40	CAD. PLATED
9504	UNC FRACTIONAL	STEEL	CAD. PLATED
9524	UNC FRACTIONAL	BRASS 60/40	CAD. PLATED
9505	UNC NUMBER	STEEL	CAD. PLATED
9525	UNC NUMBER	BRASS 60/40	CAD. PLATED
9506	UNF FRACTIONAL	STEEL	CAD. PLATED
9526	UNF FRACTIONAL	BRASS 60/40	CAD. PLATED
9507	UNF NUMBER	STEEL	CAD. PLATED
9527	UNF NUMBER	BRASS 60/40	CAD. PLATED

Call-up Explanation *Avdel Part Numbers consist of eight figures*
First four figures (Table One) define fastener type, thread form, material and finish
Next two figures (Table Two) define thread size in $\frac{1}{32}$ ins. or thread number.
Last two figures (Table Three) define overall length in $\frac{1}{32}$ ins. before placing.

2

Example: 9523-0212 Nutsert B.A. BRASS Cad. plated 2B.A. $\frac{3}{8}$ ins. long
9503-0212 Nutsert B.A. STEEL Cad. plated 2B.A. $\frac{3}{8}$ ins. long.

PROD. CODE	SIZE	CODE	SIZE	CODE	SIZE	CODE	SIZE	CODE	SIZE	CODE	SIZE	CODE
9501 9521							$\frac{3}{16}$	06	$\frac{1}{4}''$	08	$\frac{5}{16}''$	10
9502 9522									$\frac{1}{4}''$	08	$\frac{5}{16}''$	10
9503 9523	6BA	06	4BA	04			2BA	02	OBA	00		
9504 9524									$\frac{1}{4}''$	08	$\frac{5}{16}''$	10
9505 9525			6UNC	06	8UNC	08	10UNC	10				
9506 9526									$\frac{1}{4}''$	08	$\frac{5}{16}''$	10
9507 9527			6UNF	06	8UNF	08	10UNF	10				
DIM A	.187″ .185″		.218″/.216″		.249″/.247″		.280″/.278″		.374″/.372″		.499″/.497″	
DIM L	.19″		.19″		.19″		.19″		.25″		.32″	
DIM M	.38″		.38″		.38″		.38″		.51″		.63″	
DRILL SIZE	$\frac{3}{16}''$		$\frac{7}{32}''$		$\frac{1}{4}''$		$\frac{9}{32}''$		$\frac{3}{8}''$		$\frac{1}{2}''$	
LGTH. Code	12		12		12		12		16		20	
COLUMN	1		2		3		4		5		6	

3

NOTES: 1. Hole sizes are for sheet thickness $\frac{1}{32}''-\frac{1}{8}''$, above $\frac{1}{8}''$ thickness hole size depends on sheet hardness.
2. Thread forms marked * are non stock but would be supplied against special order and quotation only.
3. Nutserts in Column 1 are available in Brass only.
4. Nutserts in Columns 2, 3 and 4 available in Brass and Steel.
5. Nutserts in Columns 5 and 6 available in Steel only.

NUTSERT PLACING TOOLS

Two types are available — (1) Pneumatic Tools
(2) Manual Tools

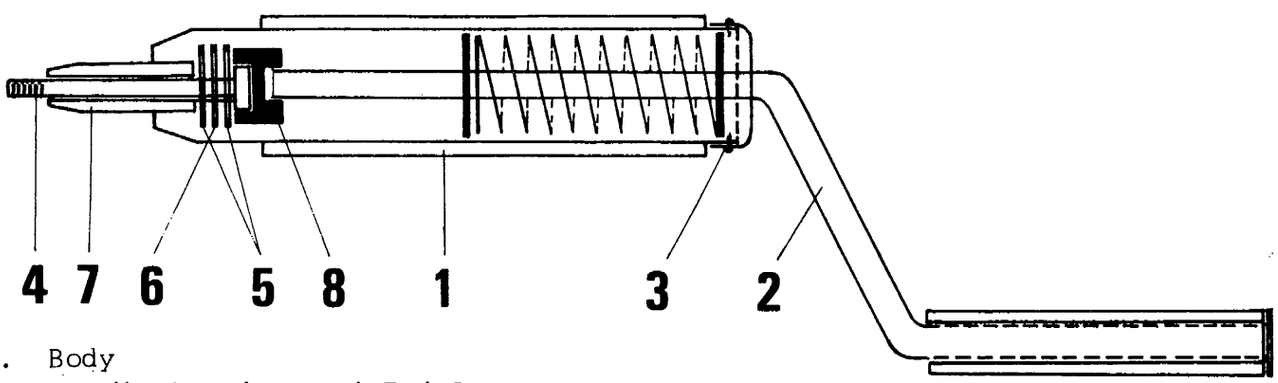
Both basic tools have been designed to place Nutserts quickly and efficiently.

Manual Hand Tools

A lightweight tool for placing Nutserts.
Four basic models are available plus additional equipment to convert any model tool to place all sizes of Nutserts except 5/16" diameter.

To Operate

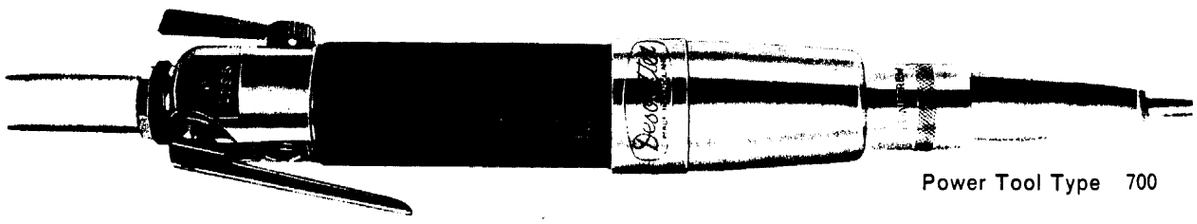
(1) Fit required Nose assembly. (2) By turning handle engage threads of Nutsert on drive screw. (3) Continue motion of handle until Nutsert is clenched tight. (4) Reverse movement of handle until drive screw is clear from Nutsert.



1. Body
2. Handle Complete with End Cap
3. End Cap Screws - 2
4. Screw
5. Steel Washers - 2
6. Brass Washer
7. Nose Cone
8. Connector

Equipment	Item 4	Item 5	Item 6	Item 7	Item 8	Complete
Thread	Screw	2 Steel Washers	Brass Washer	Nose Cone	Connector	Equipment
3/16" Whit	800-110	800-120	800-130	800-140	800-150	800-010
1/4" Whit	800-111	800-121	800-131	800-141	800-151	800-011
1/4" BSF	800-112	800-121	800-131	800-141	800-151	800-012
6 BA	800-113	800-122	800-132	800-142	800-152	800-013
4 BA	800-114	800-123	800-133	800-143	800-153	800-014
2 BA	800-115	800-120	800-130	800-144	800-150	800-015
0 BA	800-116	800-121	800-131	800-141	800-151	800-016
1/4" UNC	800-117	800-121	800-131	800-141	800-151	800-017
6 UNC	800-118	800-123	800-133	800-143	800-153	800-018

TOOL MODEL NUMBERS	
THREAD	MODEL No.
3/16" Whit	X 12
1/4" Whit	X 13
6 BA	X 17
4 BA	X 18
ALL OTHER NUTSERTS CAN BE PLACED WITH THE ADDITION OF THE CORRECT EQUIPMENT	



Power Tool Type 700

NUTSERT TOOL - TYPE 700

PNEUMATIC TOOL FOR PLACING NUTSERTS

Preparation for Operation

Daily, before putting tool into service, comply with the instructions under lubrication. Always blow out air line to clear it of all accumulated dirt or water before connecting air hose to tool. Check to see if the tool is equipped with the correct size drive screw and nose housing before attempting to place Nutserts.

Changing Nose Equipment

1. To remove Attachment assembly unscrew item 2 (left hand thread)
2. To remove Nose piece (1) unscrew small locking screw on Nose Collar (2)
3. Drive Screw (5)
4. Drive Shaft (6)
5. Reverse Lever. Fits on to reverse knob.
6. To assemble tool for operation, select correct Drive Shaft (6) and fit to tool. Assemble required Nose piece (1) to Nose Collar (2). Fit correct Drive Screw (5) to Drive Shaft (6). Fit Washers (3) and (4), and tighten Nose assembly (1) and (2) to tool.

OPERATING INSTRUCTIONS

Description

The Pneumatic Tool, Type 700, is a robust, high production tool which has been prepared for the easy and rapid installation of AVDEL Nutserts. A compressed air supply of between 70 and 100 lbs/in^2 (4.92 and 7.04 kg/cm^2) is required for placing Nutserts. The air consumption being approximately 20 cubic feet (576 litres) of free air at 80 lbs/in^2 (5.62 kg/cm^2) per minute.

Operation

Nutserts can be placed with the Power Tool Type 700 in the following manner.

1. Insert Nutserts into prepared holes.
2. Apply 700 Tool and depress the throttle lever which will commence drive of the tool to pick up threads in the Nutsert.
3. Keep throttle lever depressed until ratcheting of clutch is felt and heard. (This indicates that the Nutsert is fully placed and the tool has reached its pre-set torque value).
4. Continue with throttle lever depressed and simultaneously operate reverse lever control until the drive screw is completely free from Nutsert threads.
5. Repeat the above sequence on the next Nutsert.

NUTSERT EQUIPMENT PART NUMBERS

NOSE EQUIPMENT: Item 7

THREAD SIZE		ITEM 1	ITEM 2	ITEM 3	ITEM 4	ITEM 5	ITEM 6	COMPLETE ASSEMBLY LESS LEVEL
3/16"	BSW*	700-200	700-100	700-010	700-001	700-220	700-225	700-110
1/4"	BSW	700-400	700-100	700-011	700-002	700-420	700-425	700-111
5/16"	BSW	700-401	700-100	700-015	700-006	700-421	700-422	700-124
1/4"	BSF	700-400	700-100	700-011	700-002	700-430	700-425	700-112
6	BA *	700-800	700-100	700-012	700-003	700-820	700-825	700-113
4	BA *	700-700	700-100	700-013	700-004	700-720	700-725	700-114
2	BA *	700-900	700-100	700-010	700-001	700-230	700-225	700-115
0	BA	700-400	700-100	700-011	700-002	700-440	700-425	700-116
1/4"	UNC	700-400	700-100	700-011	700-002	700-450	700-425	700-117
6	UNC*	700-700	700-100	700-013	700-004	700-730	700-725	700-118
8	UNC	700-600	700-100	700-014	700-005	700-620	-	700-119
10	UNC	700-200	700-100	700-010	700-001	700-240	700-225	700-220
6	UNF *	700-700	700-100	700-013	700-004	700-740	700-725	700-221
8	UNF	700-600	700-100	700-014	700-005	700-630	-	700-222
10	UNF	700-200	700-100	700-010	700-001	700-250	700-225	700-223

* Preferred tool for placing is Type 700-500
Item 7 Reverse Lever
5/16" Must be placed with 700-300 tool filled with Blue Spring E.P.733A

CLUTCH ADJUSTMENT INSTRUCTIONS

Various Nutserts require different settings of the clutch unit. The unit is correctly set when the clutch does not slip until the Nutsert has been driven flush and tight. This adjustment can be easily achieved by altering the tension of the clutch spring until the correct setting is obtained.

To adjust the clutch unit, unscrew the clutch case from the tool (left-hand thread) and remove the unit. Hold one of the spanners in the left hand. With the second spanner it will now be possible to tighten or slacken the clutch adjusting nut (7/16" Whit.) until the estimated tension is obtained. The unit should then be replaced in the clutch case and screwed back on the nose of the tool.

A trial run with the required Nutsert in the appropriate workpiece will then show whether the estimated adjustment is correct or whether greater or lesser tension is required. If necessary, a further adjustment of the clutch unit can be made to compensate for any error. The tool is now ready for use.

ROUTINE FAULT FINDING

1. Tool Ratchets before placing Nutsert.
   a. The most likely cause for this is lack of lubrication on the drive bits.
   b. Failing this, check to ensure that the clutch setting is correct or if the clutch is damaged in any way.
   c. Check for damaged drive screw (5).
2. Tool Runs Slowly.
   a. Check air pressure is within 70-100 psi.
   b. Check to ensure that $\frac{1}{4}$" diameter bore hose is being used.
   c. Check to ensure that there is no restriction in the air hose connection of the tool.
   d. Carry out lubrication process under item 2 of lubrication detail.
3. Tool Fails to Start.
   a. Open the throttle lever and reverse lever simultaneously.
   b. Check to ensure there is no restriction in the immediate system, i.e. air filters or air cocks.
   c. If this fails to start it will be necessary to move the main rotor manually.

ROUTINE SERVICING INSTRUCTIONS : LUBRICATION

1. Drive Assembly.
   Daily before using or when putting the power tool into service, apply a few drops of clean light lubricating oil to the nose assembly. This is to prevent an excessive build up of friction in the drive and screw assembly which, if not serviced regularly, will upset the torque value of the pre-set slipping clutch.

2. Pneumatic Tool (Light oil lubrication).
   Periodically, or when putting the power tool into service, carry out the following:
   a. With the tool disconnected from air hose, pour a liberal amount of lubricating oil into the air inlet.
   b. Blow out air hose to remove any accumulation of moisture, scale, dirt, and connect it to the tool.

NOTE: The bearings should be cleaned and repacked with grease whenever tool is dismantled for inspection purposes.

QUICK REFERENCE OF SIZES AVAILABLE

Product Code	SIZES	MATERIAL
9501 0612	3/16" BSW	Steel C/Plated
9501 0816	1/4" BSW	"
9501 1020	5/16" BSW	"
9502 0816	1/4" BSF	"
9502 1020	5/16" BSF	"
9523 0612	6 BA	Brass C/Plated
9503 0412	4 BA	Steel C/Plated
9523 0412	4 BA	Brass C/Plated
9503 0212	2 BA	Steel C/Plated
9503 0016	0 BA	"
9504 0816	1/4" UNC	"
9504 1020	5/16" UNC	"
9505 0612	6 UNC	"
9505 0816	8 UNC	"
9505 1012	10 UNC	"
9506 0816	1/4" UNF	"
9506 1020	5/16" UNF	"
9507 0612	6 UNF	"
9507 0812	8 UNF	"
9507 1012	10 UNF	"
9508 0412*	4 M/M	"
9508 0512*	5 M/M	"
9508 0820	8 M/M	"
9508 0312	3 M/M	Brass C/Plated

Although drill or punch sizes are quoted, it may be found necessary to open the hole slightly when placing Nut-serts into thick material or tubes.

A wide selection of standard or Phillips screwdriver bits are available for use in conjunction with the basic pneumatic power tool.

PRICES AND SIZES
ON REQUEST