

91990

HEX KEYS & WRENCHES

Material

Steel, zinc plated.

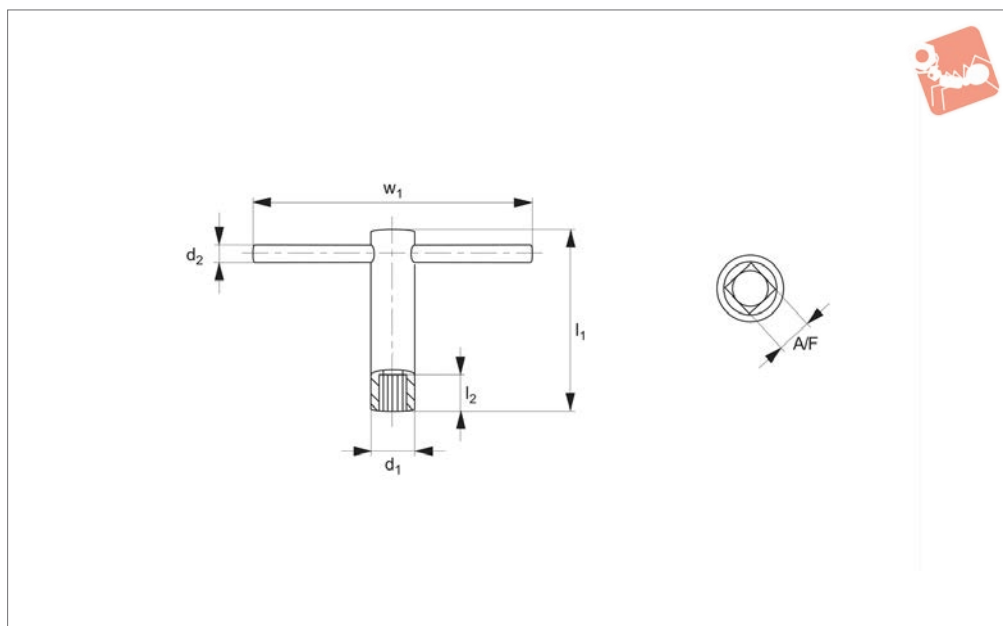
Technical Notes

For use with triangular screws to DIN 22424, and triangular nuts to DIN 22425.

Order No.	For thread	d ₁	d ₂	l ₁	l ₂	w ₁	w ₂	w ₃	Weight g
91990.W0004	M 4	9	4	90	4	50	7.7	6.8	20
91990.W0005	M 5	12	6	100	5	65	9.4	8.3	30
91990.W0006	M 6	14	6	115	6	80	11.4	10.1	60
91990.W0008	M 8	16	8	125	8	100	13.7	12.1	80
91990.W0010	M10	20	8	140	10	125	17.1	15.1	160
91990.W0012	M12	20	10	160	12	160	18.9	16.6	240
91990.W0016	M16	25	12	180	16	200	23.5	20.6	400



92000



Material

Steel (C35/C45).

Body and socket: tempered, hardened and

brown finish.

Technical Notes

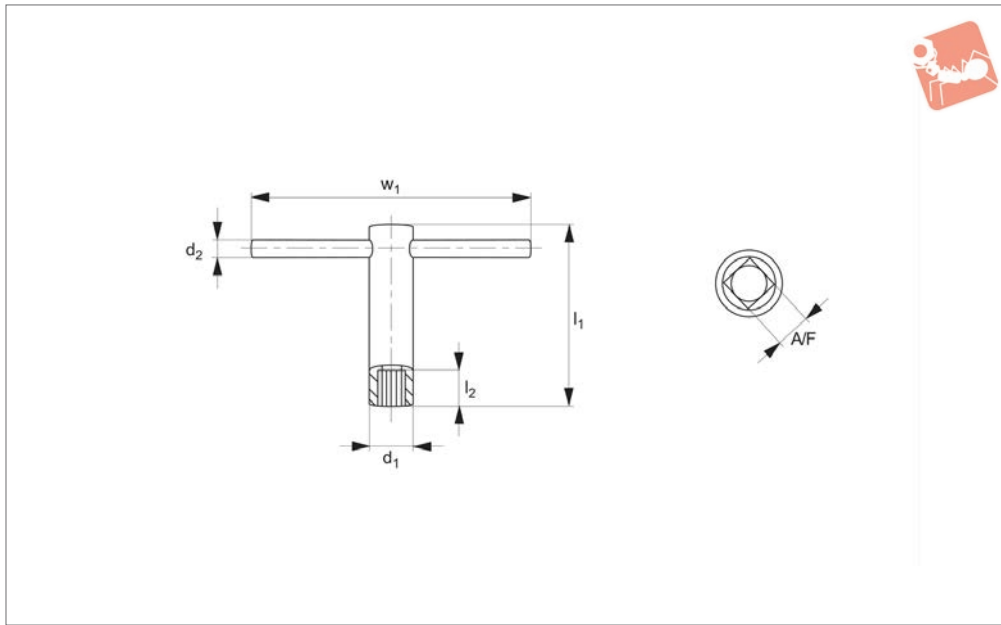
Produced to DIN 904.

Order No.	A/F	d ₁	d ₂	l ₁	l ₂	w ₁	Weight g
92000.W0004	4	12.0	6.0	60	11	160	85
92000.W0005	5	12.0	6.0	60	11	160	85
92000.W0006	6	12.0	6.0	80	12	160	100
92000.W0007	7	14.6	6.0	80	15	160	130
92000.W0008	8	16.0	9.0	80	15	180	180
92000.W0009	9	18.0	9.0	100	18	180	245
92000.W0010	10	20.0	11.0	100	18	200	340
92000.W0012	12	24.0	12.0	100	21	250	520
92000.W0013	13	24.0	12.0	100	22	250	520
92000.W0014	14	28.0	14.6	120	24	320	875
92000.W0017	17	34.0	16.0	160	28	400	1625
92000.W0019	19	36.0	16.0	200	30	400	2035
92000.W0022	22	42.0	18.0	200	34	500	2900
92000.W0024	24	45.0	20.0	250	36	630	4270



Square Drive Socket T-Wrench - Long

long - female



92010

HEX KEYS & WRENCHES

Material

Body: steel (C35/C45).

Socket: tempered, hardened and brown

finish.

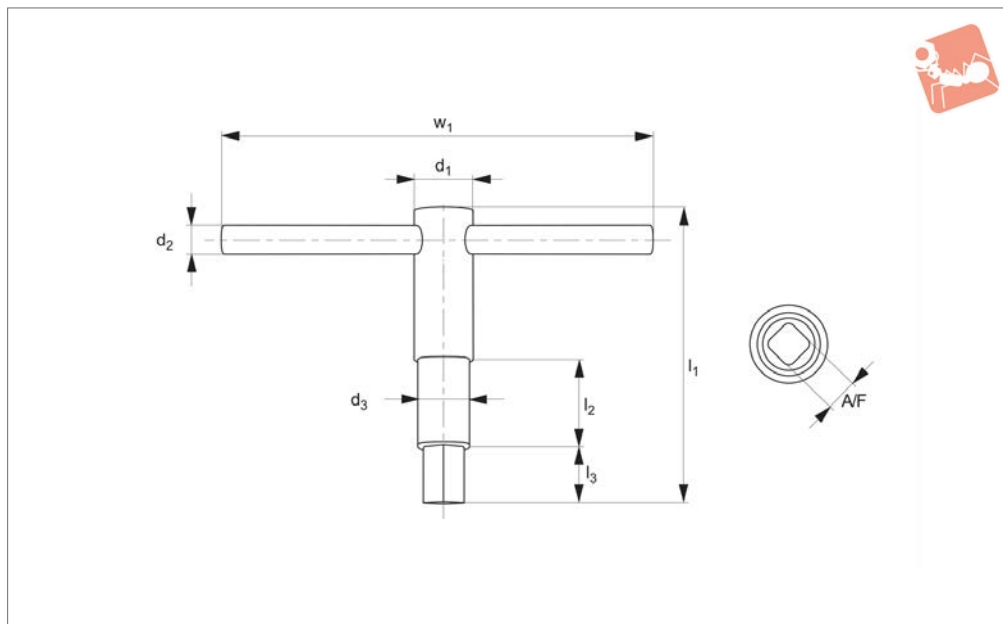
Technical Notes

Produced to DIN 904L.

Order No.	A/F	d ₁	d ₂	l ₁	l ₂	w ₁	Weight g
92010.W0005	5	12	6.0	120	11	160	100
92010.W0006	6	12	6.0	160	12	160	110
92010.W0008	8	16	9.0	160	15	180	210
92010.W0009	9	18	9.0	200	18	200	390
92010.W0010	10	20	11.0	200	18	200	390
92010.W0012	12	24	12.0	200	21	250	600
92010.W0013	13	24	12.0	200	22	250	600
92010.W0014	14	28	14.6	200	24	320	795
92010.W0017	17	34	16.0	250	28	400	1500
92010.W0019	19	36	16.0	320	30	400	1700



92050



Material

Body and socket; steel (C35/C45), tempered, hardened and with brown finish.

Technical Notes

Produced to DIN 905.
92050.W0004 and 92050.W0007 are not to

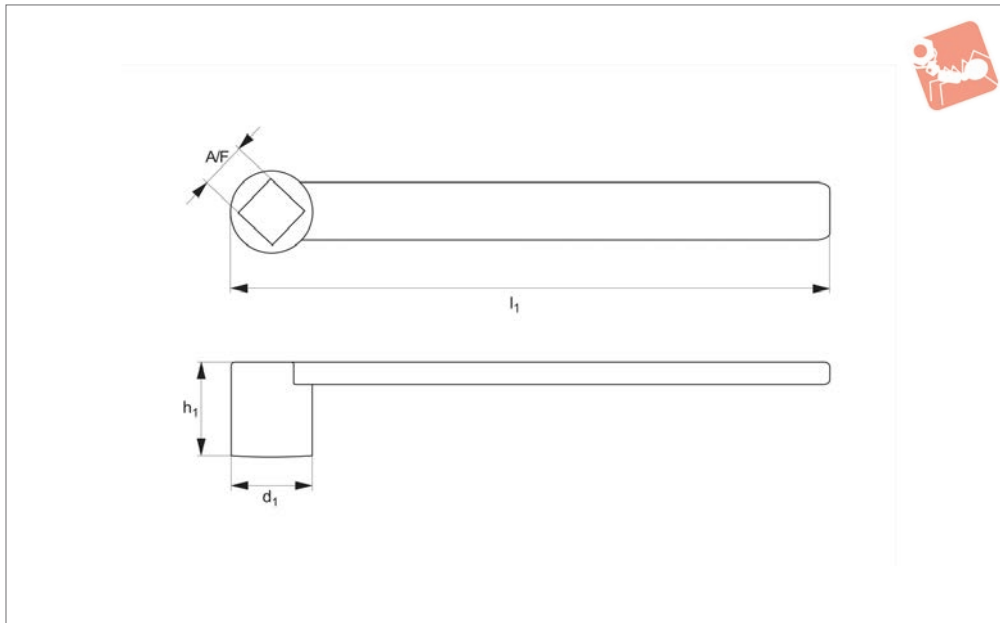
DIN standard.

Order No.	A/F	d ₁	d ₂	d ₃	l ₁	l ₂	l ₃	w ₁	Weight g
92050.W0004	-4	12.0	6.0	6	60	20	9	160	70
92050.W0005	5	12.0	6.0	8	60	20	11	160	70
92050.W0006	6	12.0	6.0	10	80	22	12	160	80
92050.W0007	-7	14.6	6.0	12	80	26	15	160	115
92050.W0008	8	16.0	9.0	14	80	26	15	180	180
92050.W0009	9	16.0	9.0	14	80	26	17	180	180
92050.W0010	10	20.0	11.0	18	100	30	18	200	320
92050.W0011	11	20.0	11.0	18	100	30	20	200	320
92050.W0012	12	24.0	12.0	20	100	38	21	250	450
92050.W0013	13	24.0	12.0	20	100	38	22	250	450
92050.W0014	14	28.0	14.6	22	120	38	24	320	780
92050.W0017	17	34.0	16.0	25	160	50	28	400	1500
92050.W0019	19	36.0	16.0	28	200	50	30	400	1850
92050.W0022	22	42.0	20.0	32	200	65	34	630	3100



Square Socket Wrench female

Hex Keys & Wrenches



92060

HEX KEYS & WRENCHES

Material

Steel (C35/C45) hardened, tempered, with brown finish.

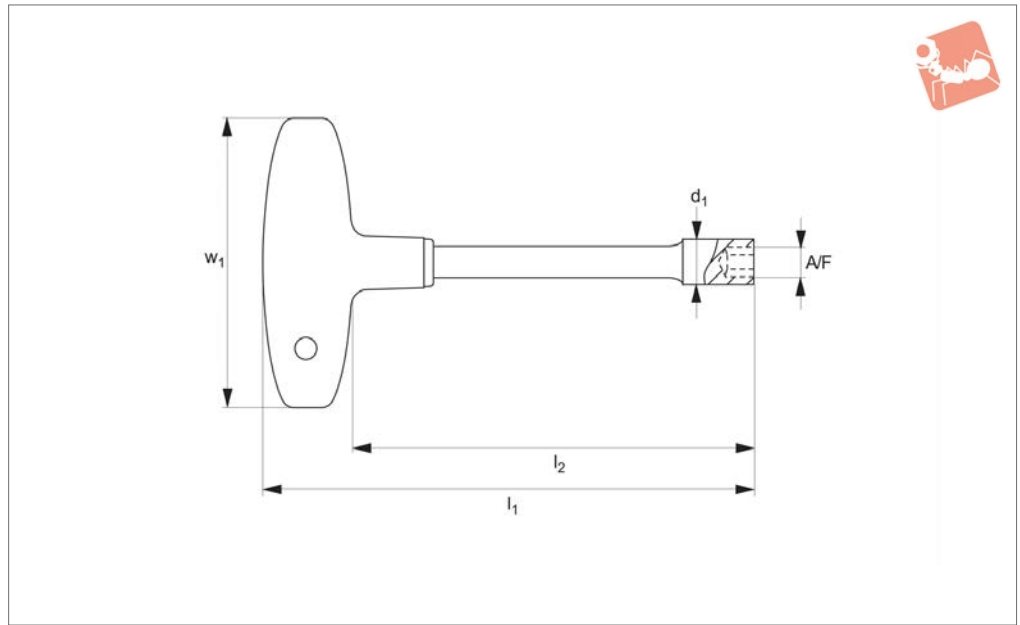
Technical Notes

Produced to DIN 248.

Order No.	A/F	d ₁	h ₁	l ₁	Weight g
92060.W0008	8	17	20.0	160	85
92060.W0010	10	21	22.5	195	165
92060.W0012	12	24	26.5	235	275
92060.W0013	13	26	27.5	250	300
92060.W0014	14	27	30.5	270	420
92060.W0017	17	30	37.0	315	530
92060.W0019	19	35	41.0	345	715
92060.W0022	22	39	46.0	385	900
92060.W0024	24	43	49.0	415	975



92070



Material

Blade: chrome vanadium, hardened, chrome plated.

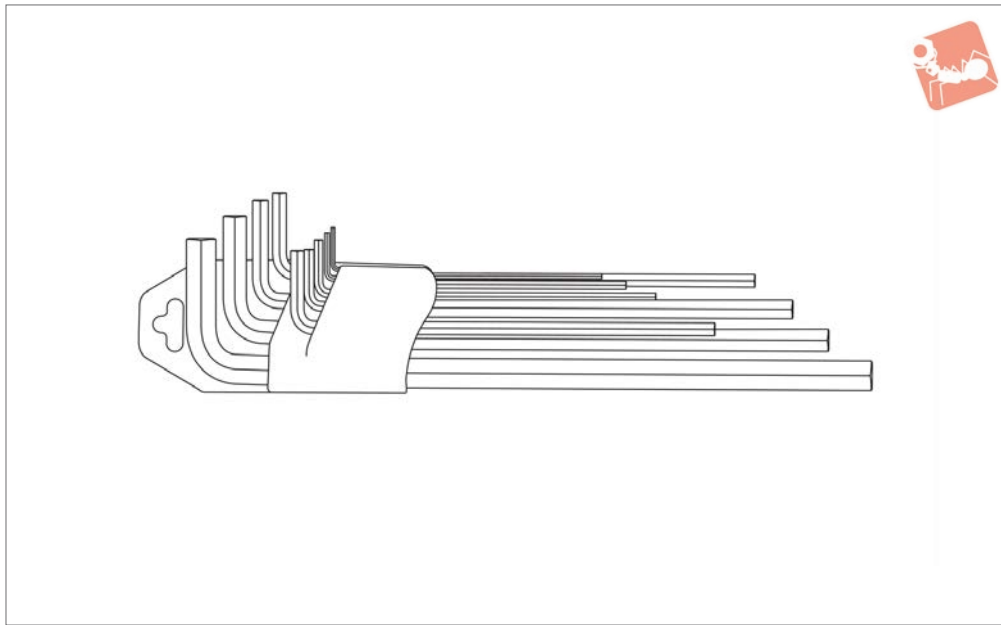
Handle: shock resistant black plastic.

Order No.	A/F	d ₁	l ₁	l ₂	w ₁	Weight g
92070.W0008	8	16	151	125	100	140
92070.W0010	10	17	151	125	100	150



Hexagon Keys - Long

in clip set - blackened or nickel plated



90180

HEX KEYS & WRENCHES

Material

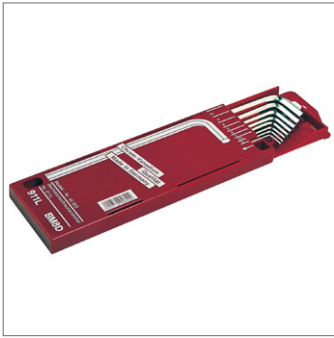
Keys: steel, hardened chrome vanadium.
Blackened or nickel plated.
Clip: part nos. 90180.W0007 and .W0009;

plastic polyamide, red. Part no. 90180.
W0908; plastic polyamide, yellow.

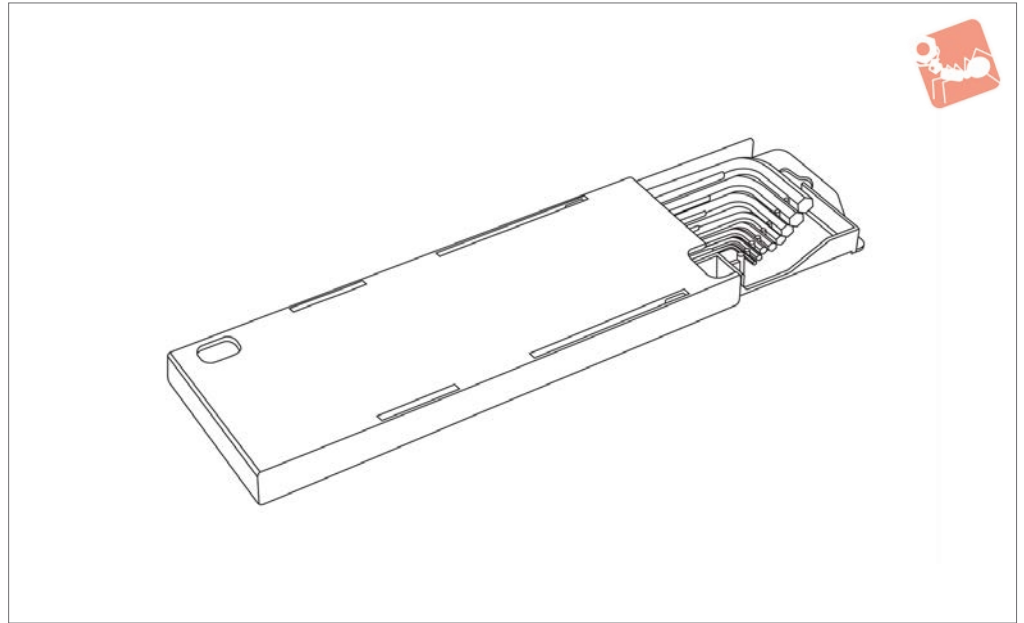
Technical Notes

High quality hex. key sets.
Parts to DIN 911 LC/LD and ISO 2936 LC/LD.

Order No.	Pieces	Finish	Contents A/F mm/inch	Weight g
90180.W0007	9 metric	Nickel Plated	1,5, 2, 2,5, 3, 4, 5, 6, 8, 10	415
90180.W0009	9 metric	Blackened	1,5, 2, 2,5, 3, 4, 5, 6, 8, 10	415
90180.W0908	9 inch	Nickel Plated	5/64", 3/32", 1/8", 5/32", 3/16", 7/32", 1/4", 5/32"	395



90210



Material

Keys: steel, hardened chrome vanadium, nickel plated.

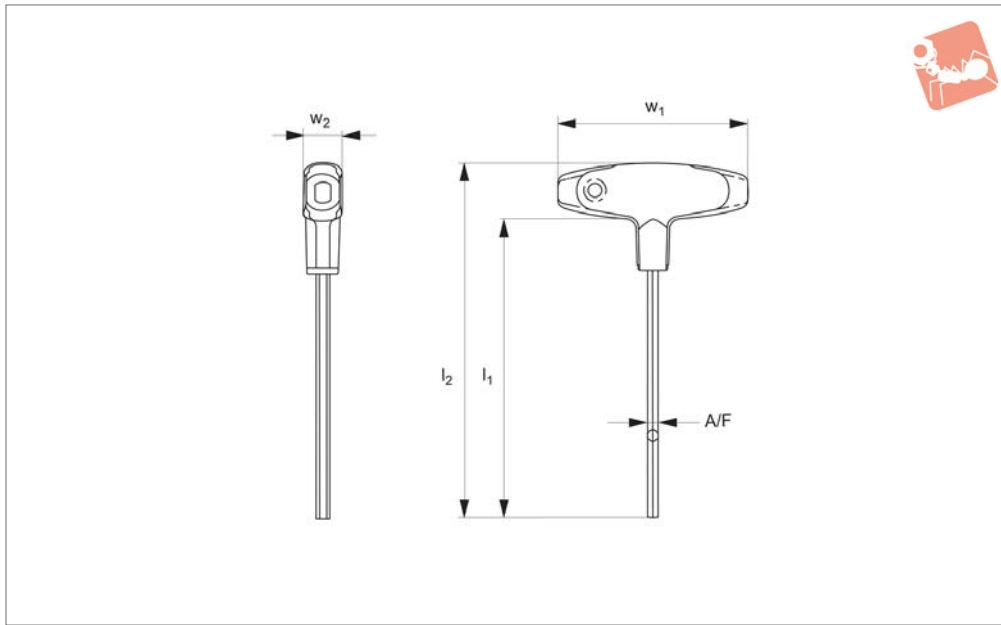
Box: red impact resistant plastic.

Parts to DIN 911 LD and ISO 2936 LD.

Technical Notes

High quality hex. key sets.

Order No.	Box l x w x h	Pieces	Contents A/F	Weight g
90210.W0008	265x88x17	8	2, 2,5, 3, 4, 5, 6, 8, 10	535



90300

HEX KEYS & WRENCHES

Material

Blade: steel, hardened chrome vanadium, nickel plated.

Handle: ergonomic soft red plastic.

Features hang-up hole.

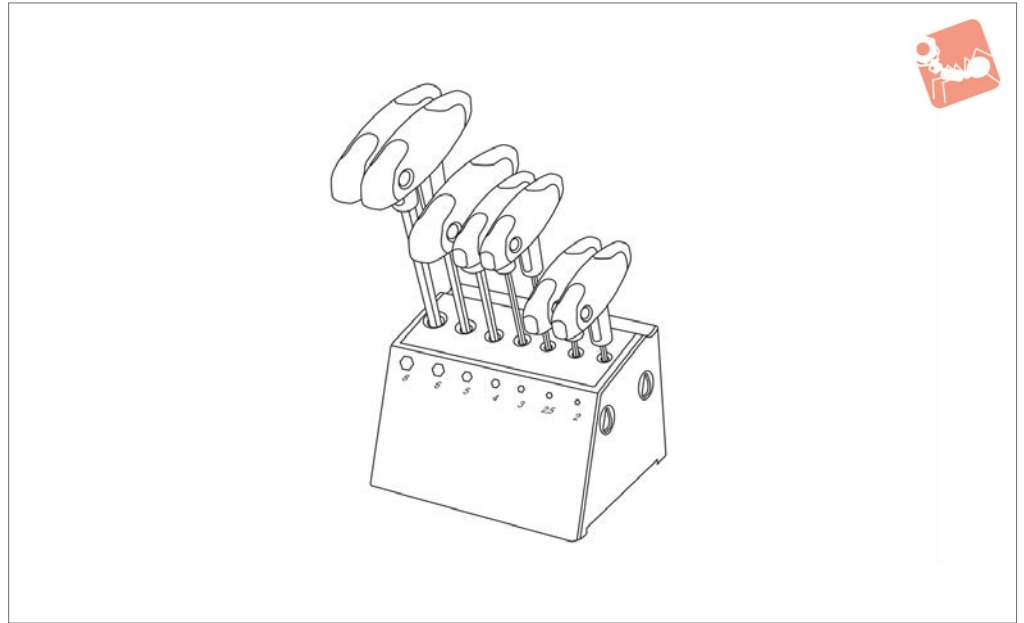
Technical Notes

Grip shape optimised for comfortable use.

Order No.	l ₁	l ₂	w ₁	w ₂	A/F	A/F inch	Weight g
90300.W0020	100	125	80	15.5	2	5/64"	18
90300.W0025	100	125	80	15.5	2.5	-	24
90300.W0026	200	225	80	15.5	2.5	-	30
90300.W0030	100	125	80	15.5	3	-	24
90300.W0031	150	175	80	15.5	3	-	30
90300.W0041	150	175	80	15.5	4	5/32"	36
90300.W0043	300	325	80	15.5	4	5/32"	50
90300.W0051	150	181	100	19.5	5	-	60
90300.W0053	350	381	100	19.5	5	-	100
90300.W0062	200	231	100	19.5	6	-	84
90300.W0063	350	381	100	19.5	6	-	130
90300.W0082	200	231	100	19.5	8	5/16"	125
90300.W0083	350	381	100	19.5	8	5/16"	200
90300.W0100	100	138	100	19.5	10	-	165
90300.W0102	350	338	100	19.5	10	-	350



90310



Material

Blade: steel, hardened chrome vanadium, nickel plated.
Handle: shock resistant red plastic, with

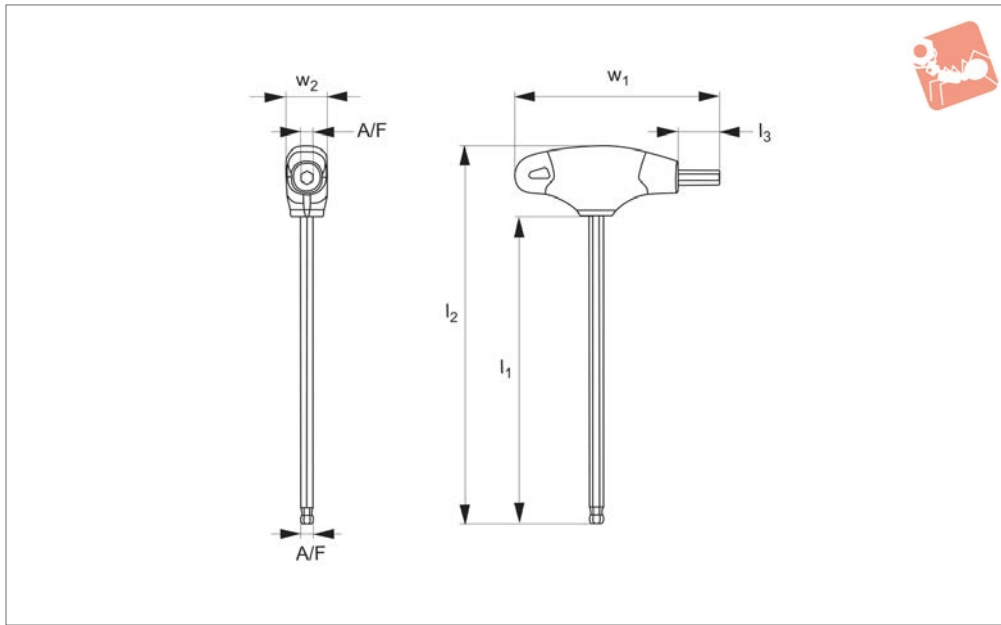
black plastic grip.

Stand: shock resistant plastic.

Tips

Stand features clips for connecting additional workshop stands.

Order No.	Pieces	A/F 2 x l	A/F 2,5 x l	A/F 3 x l	A/F 4 x l	A/F 5 x l	A/F 6 x l	A/F 8 x l	Weight g
90310.W0022	7	100	100	150	150	150	200	200	650



90370

HEX KEYS & WRENCHES

Material

Blade: steel, hardened chrome vanadium, nickel plated, with black tip.
Grip: ergonomic soft red plastic.

Technical Notes

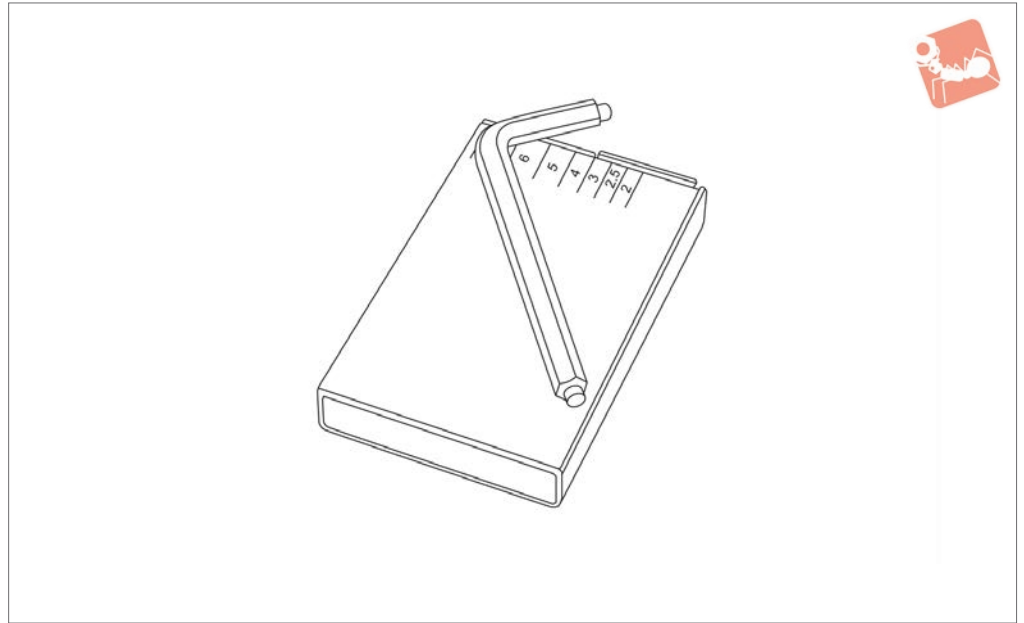
Long arm, with ball end hexagon, for speed.
Short arm, standard hexagon, for final

tightening.

Order No.	l_1	l_2	l_3	w_1	w_2	A/F	Weight g
90370.W0031	125	151	15	75	16	3	25
90370.W0041	125	151	15	75	16	4	33
90370.W0051	150	184	20	100	21	5	60
90370.W0061	150	184	20	100	21	6	83



90490



Material

Key: Steel, hardened chrome vanadium, nickel plated.
Box: red plastic, shock resistant.

Technical Notes

Used with socket head cap screws (DIN

6912), these hexagon keys, with pilot pin provide added security to components in a variety of applications. Sizes 2 and 2,5mm are standard hex. keys.

Tips

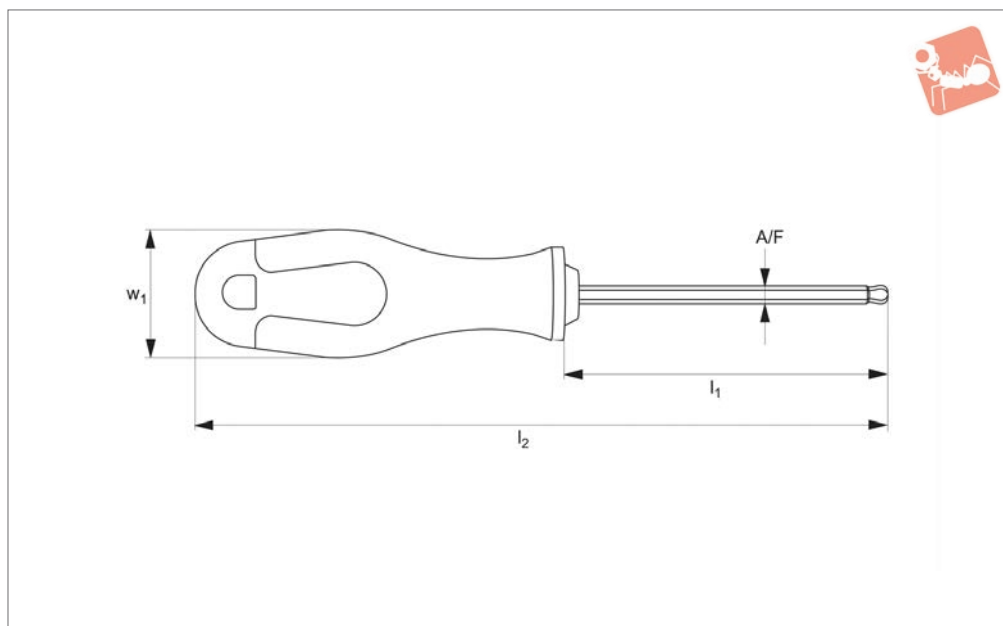
Other sizes available on request.

Order No.	Box l x w x h	Pieces	Contents A/F	Weight g
90490.W0007	133x72x14	7	2, 2,5, 3, 4, 5, 6, 8	175



Ball-Ended Hex. Keys straight handle

Hex Keys & Wrenches



90510

HEX KEYS & WRENCHES

Material

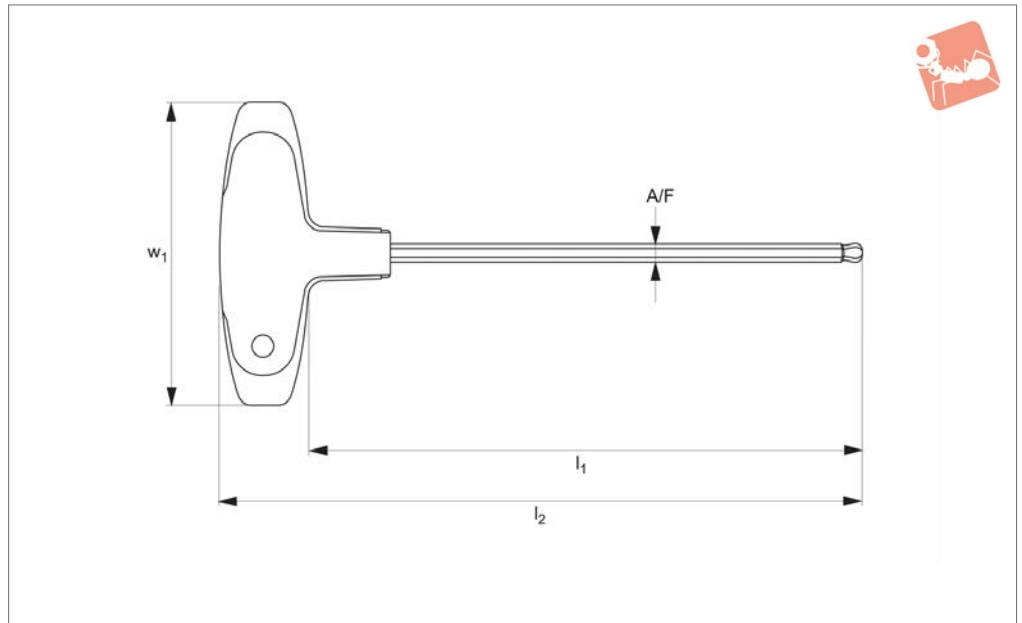
Blade: steel, hardened chrome vanadium, nickel plated

Handle: ergonomic red plastic, with soft black grip.

Order No.	l_1	l_2	w_1	A/F	Weight g
90510.W0002	100	190	19	2.5	35
90510.W0003	100	190	19	3.0	35
90510.W0004	100	200	21	4.0	50
90510.W0005	100	200	21	5.0	75



90520



Material

Handle: ergonomic soft red plastic handle.
Blade: steel, hardened chrome vanadium, nickel plated.

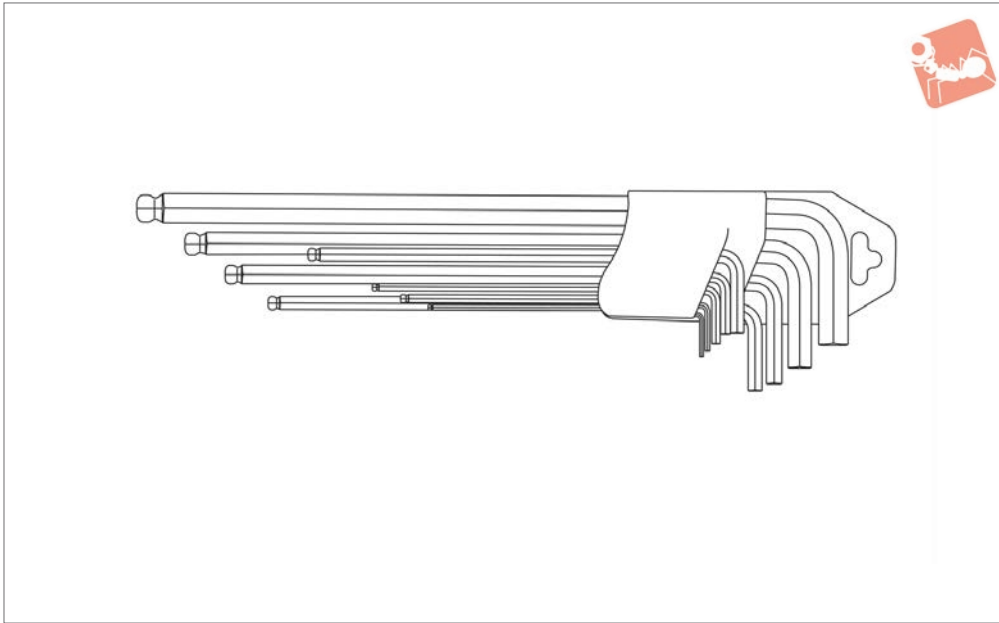
Handle: ergonomic soft red plastic handle.

Order No.	l_1	l_2	w_1	A/F	Weight g
90520.W0004	150	175	80	4	40
90520.W0005	150	181	100	5	65
90520.W0006	150	181	100	6	80
90520.W0008	200	231	100	8	130



Hex Keys Set - Ball Ended clip set - long

Hex Keys & Wrenches



90530

HEX KEYS & WRENCHES

Material

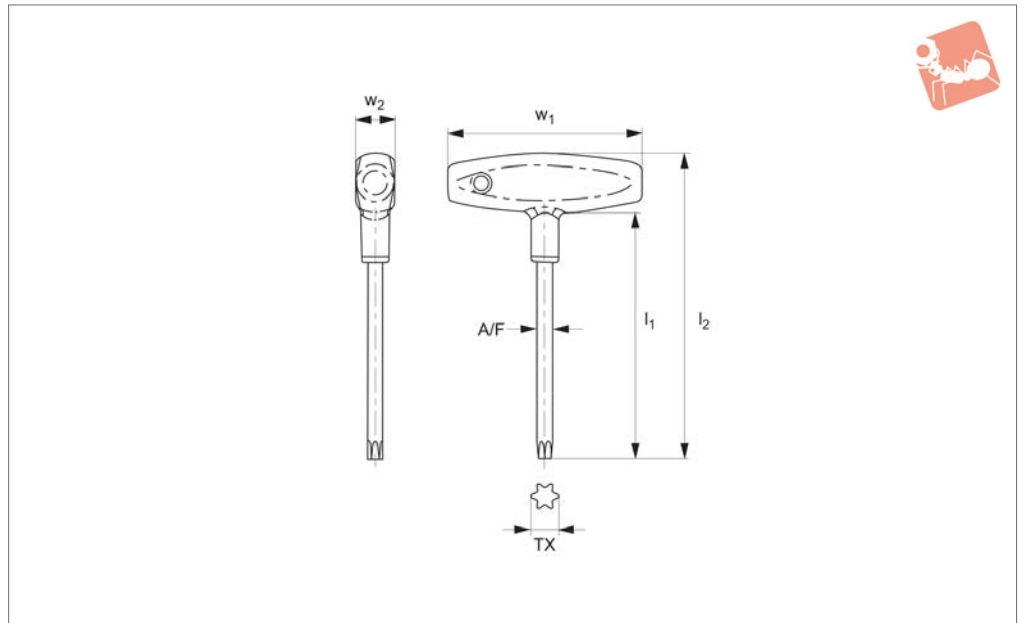
Keys: steel, hardened chrome vanadium,
blackened or nickel plated.

Clip: ergonomic red plastic.

Order No.	Pieces	Finish	Contents A/F	Weight g
90530.W0009	9	Blackened	1,5, 2, 2,5, 3, 4, 5, 6, 8, 10	440
90530.W0109	9	Nickel Plated	1,5, 2, 2,5, 3, 4, 5, 6, 8, 10	440



90620



Material

Blade: steel, hardened chrome vanadium.
 Handle: shock resistant green plastic.

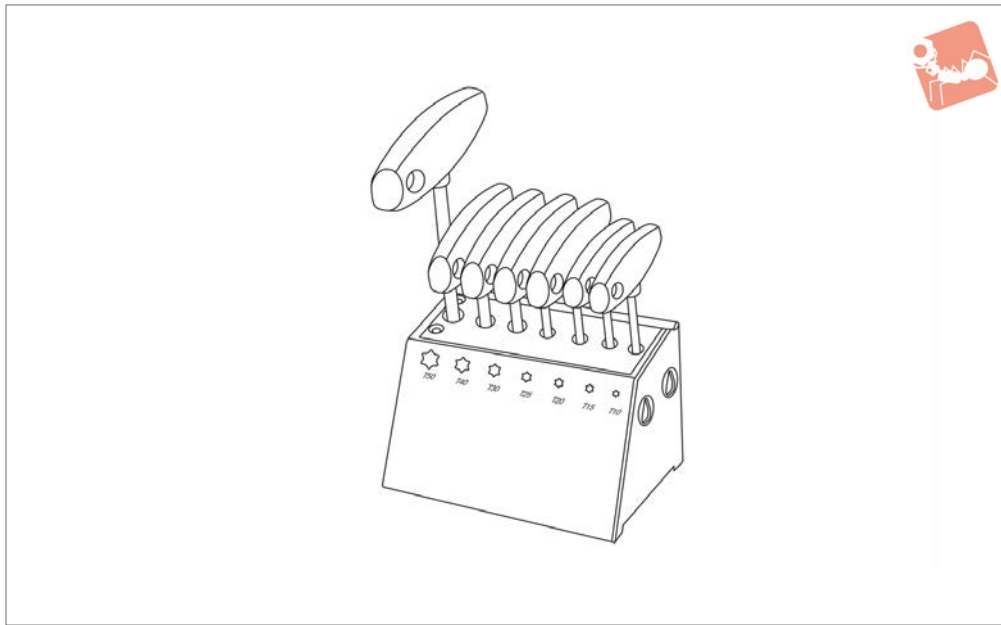
Technical Notes

Torx is a registered trademark of Camcar/ Textron Inc.

Order No.	TX size	l_1	l_2	w_1	w_2	A/F	Weight g
90620.W0009	TX 9	100	125	80	15.5	2.5	35
90620.W0010	TX 10	100	125	80	15.5	2.7	35
90620.W0015	TX 15	100	125	80	15.5	3.3	36
90620.W0020	TX 20	100	125	100	19.5	3.9	60
90620.W0025	TX 25	100	125	100	19.5	4.4	60
90620.W0027	TX 27	100	131	100	19.5	5.0	70
90620.W0030	TX 30	100	131	100	19.5	5.5	75
90620.W0040	TX 40	100	131	100	19.5	6.7	80
90620.W0050	TX 50	150	188	120	23.5	8.8	160



T-Handled TX Keys Set with workstand



90630

HEX KEYS & WRENCHES

Material

Blade: steel, hardened chrome vanadium.
Chrome plated, with black tip.

Handle: shock resistant green plastic.

Workstand: shock resistant green plastic.

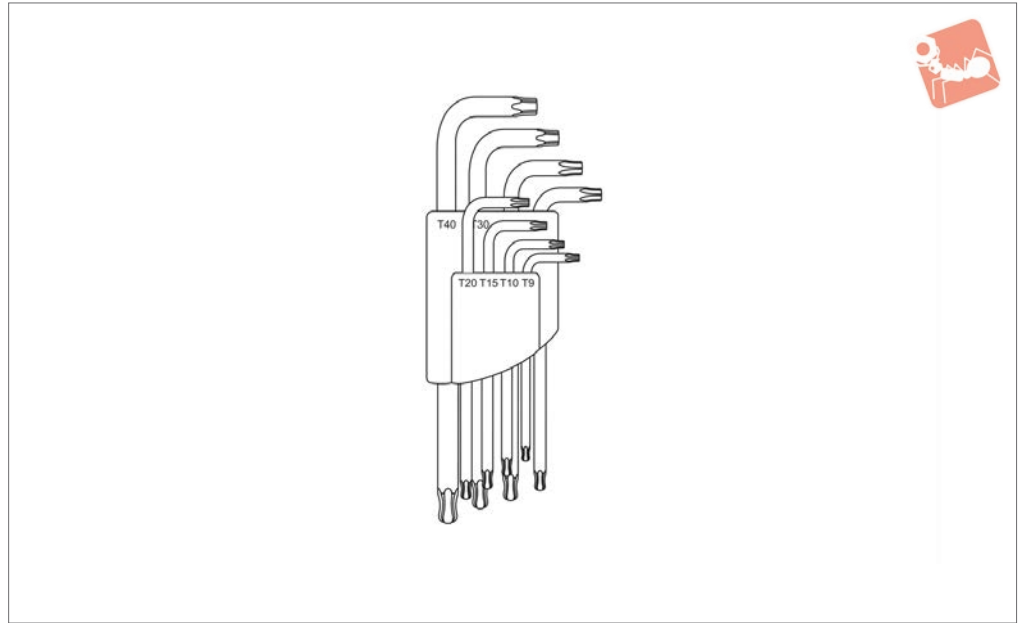
Technical Notes

With T-handled TX keys part no. 90620.

Order No.	Pieces	TX10 x l	TX15 x l	TX20 x l	TX25 x l	TX30 x l	TX40 x l	TX50 x l	Weight g
90630.W0001	7	100	100	100	100	100	100	150	660



90640

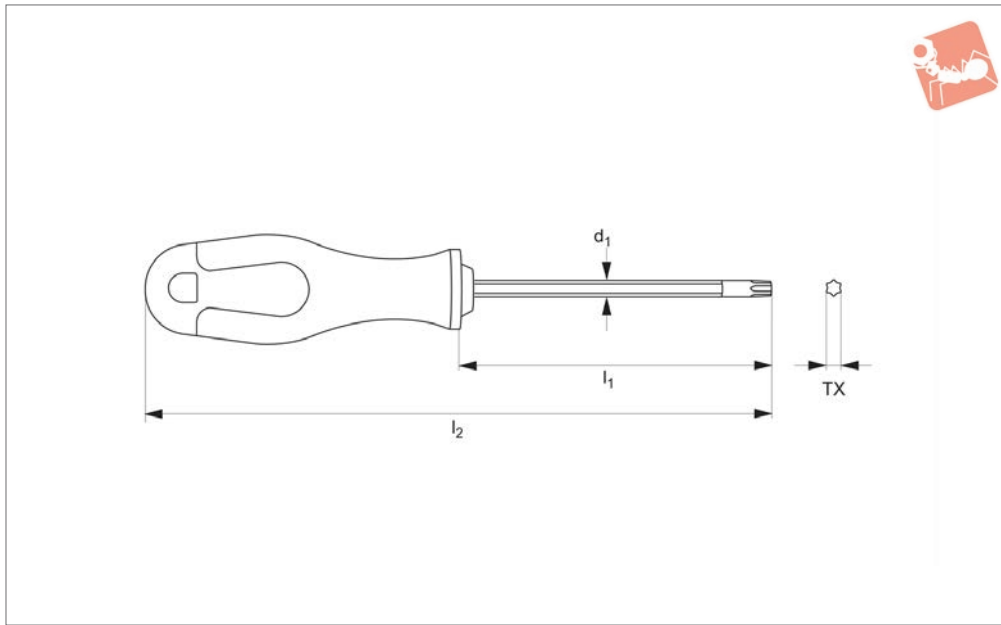


Material

Blade: steel, hardened chrome vanadium, blackened.

Clip: green and black impact resistant plastic.

Order No.	Pieces	Contents TX	Weight g
90640.W0008	8	TX9, TX10, TX15, TX20, TX25, TX27, TX30, TX40	165



90650

HEX KEYS & WRENCHES

Material

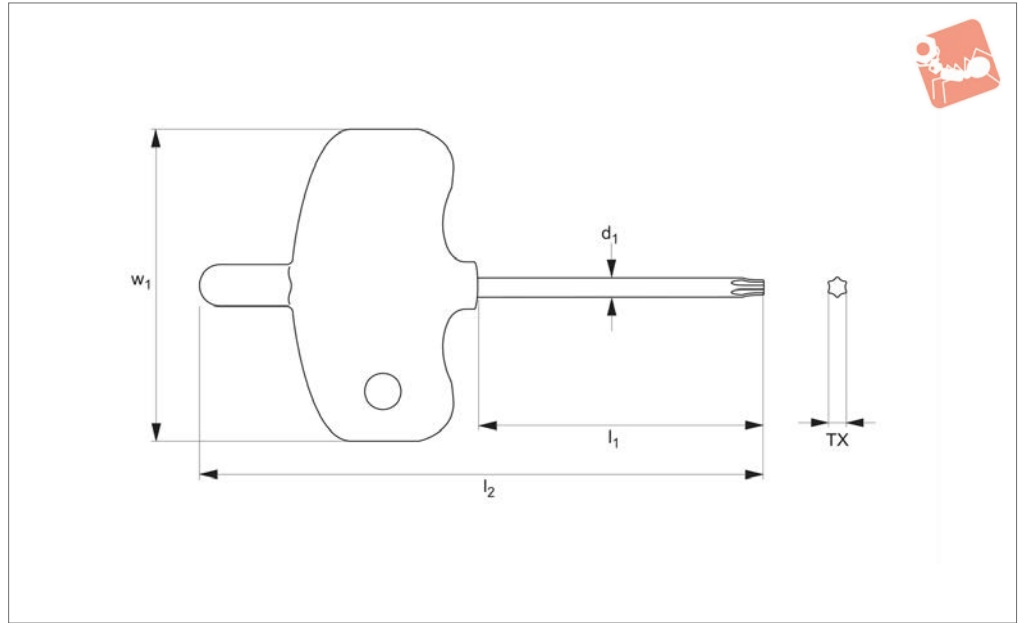
Blade: steel, hardened chrome vanadium, blackened.

Handle: green and black impact resistant plastic.

Order No.	TX	d ₁	l ₁	l ₂	Weight g
90650.W0008	TX 8	2.3	60	140	37
90650.W0009	TX 9	2.5	60	140	37
90650.W0010	TX10	2.7	80	160	39
90650.W0015	TX15	3.3	80	170	41
90650.W0020	TX20	3.9	100	190	56
90650.W0025	TX25	4.4	100	200	60



90670

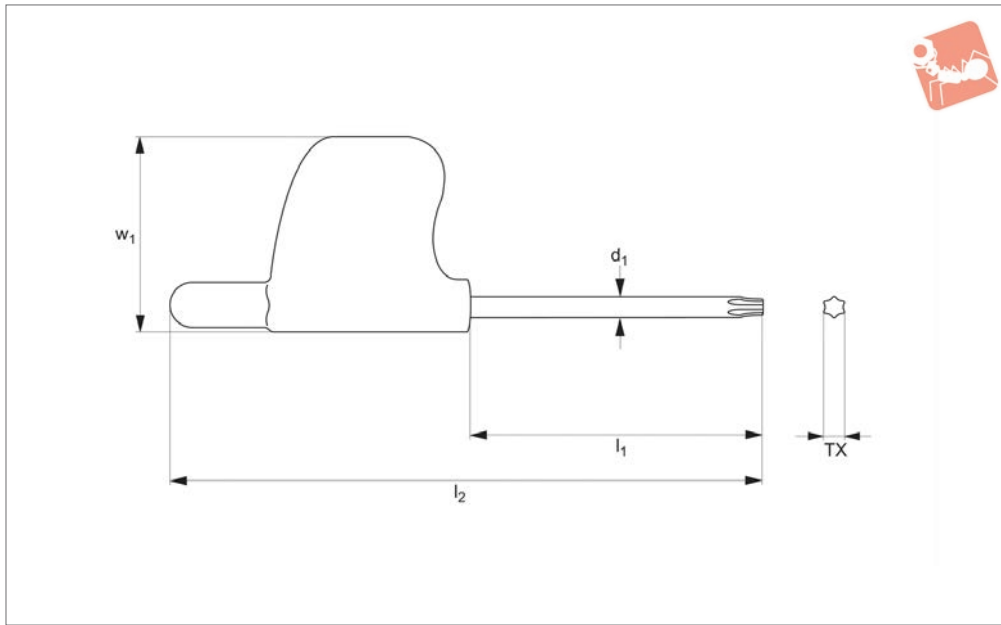


Material

Blade: steel, hardened chrome vanadium, blackened.

Handle: shock resistant green plastic.

Order No.	TX	d_1	l_1	l_2	w_1	Weight g
90670.W0006	TX 6	1.7	35	70	38	14
90670.W0007	TX 7	2.0	35	70	38	14
90670.W0008	TX 8	2.3	40	75	38	14
90670.W0009	TX 9	2.5	40	75	38	15
90670.W0010	TX10	2.7	40	75	38	15



90680

HEX KEYS & WRENCHES

Material

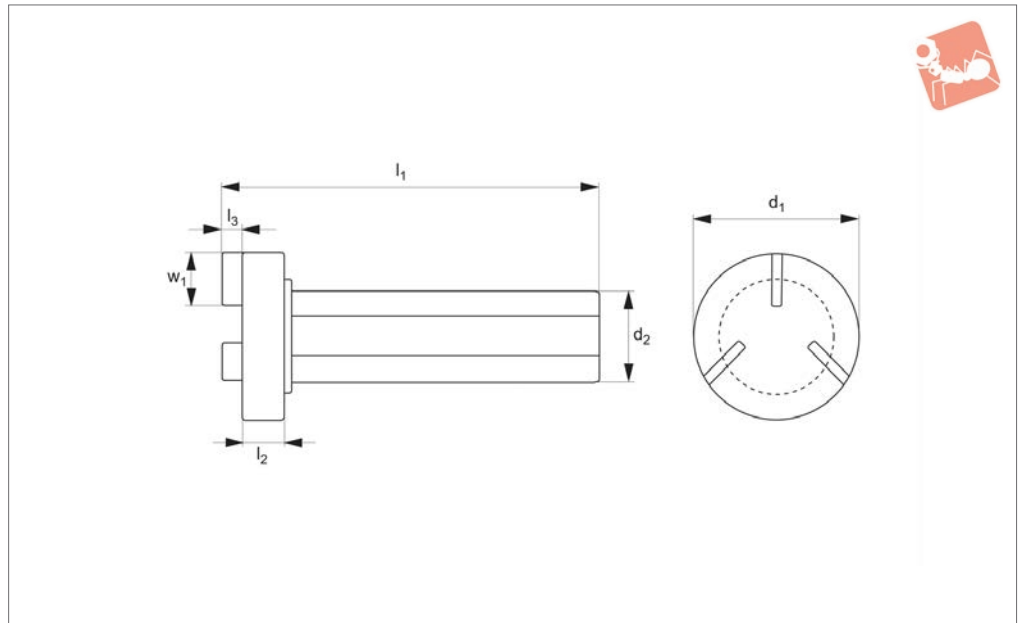
Blade: steel, hardened chrome vanadium.

Handle: shock resistant green plastic.

Order No.	TX	d_1	l_1	l_2	w_1	Weight g
90680.W0005	TX 5	1.4	35	69	22	4
90680.W0006	TX 6	1.7	35	69	22	4
90680.W0007	TX 7	2.0	35	69	22	4
90680.W0008	TX 8	2.3	40	74	22	6
90680.W0009	TX 9	2.5	40	74	22	6
90680.W0010	TX10	2.7	40	74	22	7
90680.W0015	TX15	3.3	45	79	22	8
90680.W0020	TX20	3.9	45	79	22	8



91080



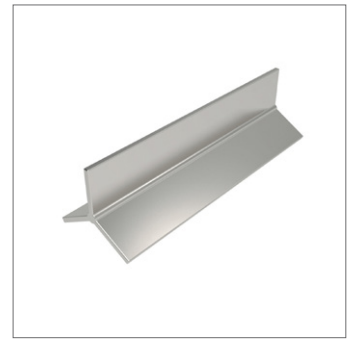
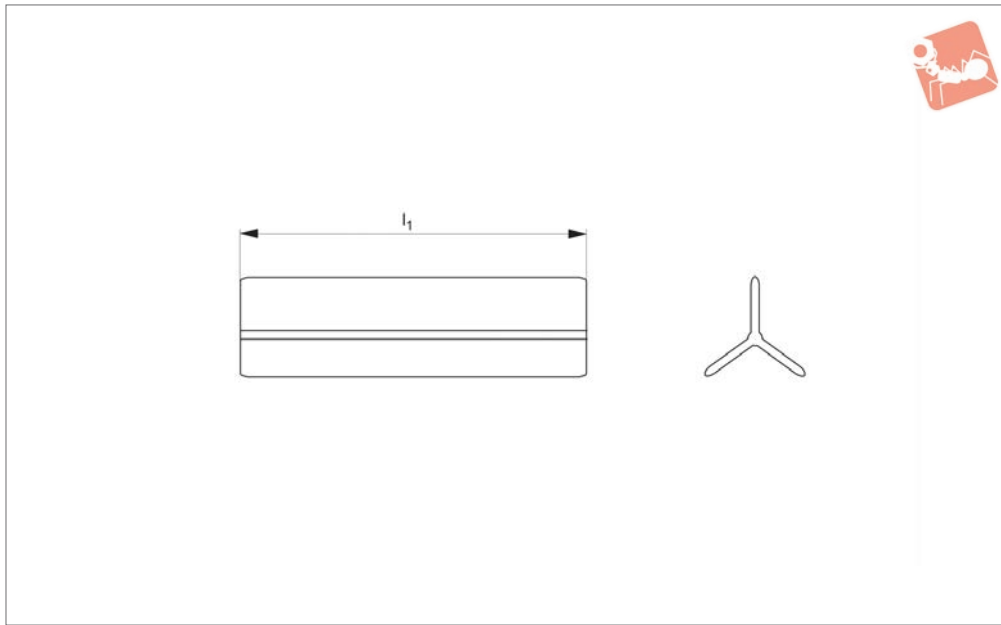
Material

Steel head and fins.
Red plastic handle.

Technical Notes

Simplifies insertion and removal of collets in the spindle nose on CNC lathes.

Order No.	Collet size	Fins	d_1	d_2	l_1	l_2	l_3	w_1	Weight g
91080.W0005	5C	3	31.8	27.9	109.2	12.7	7.6	7.6	159
91080.W0010	16C	3	44.5	27.9	109.2	12.7	7.6	7.6	277
91080.W0015	3J	4	44.5	27.9	109.2	12.7	7.6	7.6	281



91082

HEX KEYS & WRENCHES

Material

Aluminium

Technical Notes

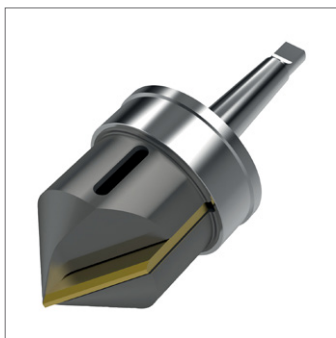
Front loading collet stop:
1. Cut stop to desired length.

2. Insert stop into collet slots, tighten, face off and deburr.
3. Remove and insert machined end into collet. Face off to desired length and deburr.

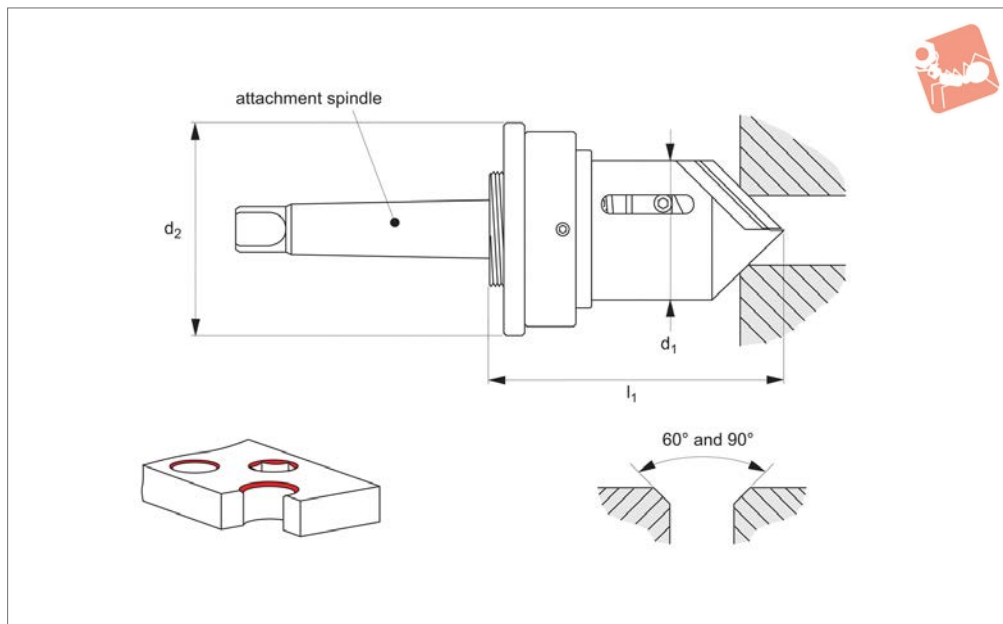
4. Seat into collet and clamp workpiece. Once seated the collet need not be removed for adjustment.

Self-centering and re-usable.

Order No.	Collet size	l_1	Weight g
91082.W0020	5C	610	168



91000



Material

Standard pilot cone type:

Supplied with standard HSS blade of 14. cutting angle.

CRN pilot cone type:

Supplied with HSS TIN coated blade of 20. cutting angle.

Technical Notes

Consists of four main elements;

1. Body and drill attachment spindle.
2. Pilot cone - unique to the desired chamfer, provides full support during cutting and ensures concentric chamfer.

3. Blades - 1 x HSS blade at 14. cutting angle supplied.

4. Blade adjustment lock nut.

The CRN pilot cone type gives better results for harder materials and/or larger batches as these have a higher hardness rating and lower friction characteristics.

Tips

Used to achieve high quality concentric chamfering quickly and easily, without risk of damage/cutting into workpiece.

Recommended cutting speed= 10 - 20 m/

min. For hand drill chamfering tool we recommend a cutting speed of 3 - 40 rpm. Available with attachment spindles to suit most pillar drills, CNCs or hand drills. Chamfer angle quoted is inclusive angle.

Important Notes

To extend the life of the blade and pilot cone we recommend lubrication with cutting fluid or soluble oil.

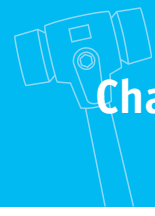
On initial set-up, make minor height adjustment of pilot cone via the blade adjustment lock nut to ensure best possible positioning.

Order No.	Pilot cone type	Chamfer dia. min. max.	Inc. chamfer angle °	Attachment spindle	d ₁	d ₂	l ₁
91000.W1860-1	Standard	4-17	60°	Ø10	18	26	64
91000.W1890-1	Standard	4-17	90°	Ø10	18	26	55
91000.W4260-1	Standard	5-41	60°	Ø10/Ø16	42	65	108
91000.W4290-1	Standard	5-41	90°	Ø10/Ø16	42	65	85
91000.W4260-2	Standard	5-41	60°	CM2	42	65	108
91000.W4290-2	Standard	5-41	90°	CM2	42	65	85
91000.W6060-2	Standard	21-59	60°	CM2	60	70	106
91000.W6090-2	Standard	21-59	90°	CM2	60	70	94
91000.W8060-2	Standard	42-77	60°	CM2	80	90	114
91000.W8090-2	Standard	42-77	90°	CM2	80	90	100
91000.W8190-3	Standard	62-97	90°	CM3	100	110	104
91000.W8290-3	Standard	82-117	90°	CM3	120	130	104
91000.W1860-19	CRN	4-17	60°	Ø10	18	26	64
91000.W1890-19	CRN	4-17	90°	Ø10	18	26	55
91000.W4260-19	CRN	5-41	60°	Ø10/Ø16	42	65	108
91000.W4290-19	CRN	5-41	90°	Ø10/Ø16	42	65	85
91000.W4260-29	CRN	5-41	60°	CM2	42	65	108
91000.W4290-29	CRN	5-41	90°	CM2	42	65	85



Inner Chamfering Tools

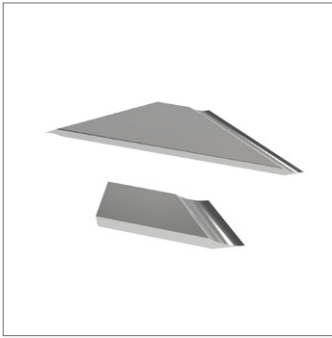
for drill attachment



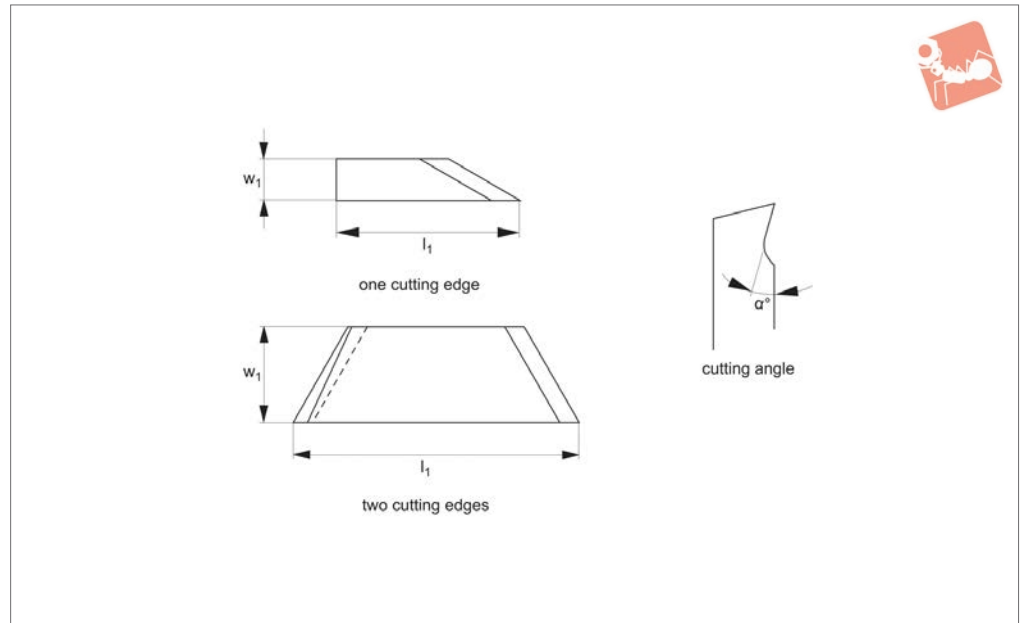
Chamfering Tools



CHAMFERING TOOLS



91002



Material

HSS: high speed steel, for most standard materials.

HSS TIN: high speed steel with TIN coating for difficult to machine materials such as stainless steel, titanium and Inconel.

Carbide: for hard materials.

Technical Notes

A blade with a 14° cutting angle is the most commonly used as it covers the widest range of standard materials, please see material suitability table for further advice.

Important Notes

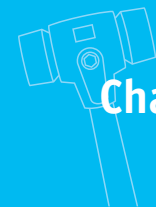
Recommended cutting speed= 10 - 20 m/min. To extend the life of the blade and the pilot cone we recommend lubrication with cutting fluid or soluble oil.

Order No.	Blade material	For chamfer dia. min. max.	Inc. chamfer angle	Cutting angle α	No. of cutting edges	w_1	l_1
91002.W1860-00	HSS	4-17	60°	0°	1	8.7	38.5
91002.W1860-14	HSS	4-17	60°	14°	1	8.7	38.5
91002.W1860-20	HSS	4-17	60°	20°	1	8.7	38.5
91002.W1860-25	HSS	4-17	60°	25°	1	8.7	38.5
91002.W1890-00	HSS	4-17	90°	0°	1	8.7	30.0
91002.W1890-14	HSS	4-17	90°	14°	1	8.7	30.0
91002.W1890-20	HSS	4-17	90°	20°	1	8.7	30.0
91002.W1890-25	HSS	4-17	90°	25°	1	8.7	30.0
91002.W1899-00	HSS	4-17	120°	0°	1	20.0	26.0
91002.W1899-14	HSS	4-17	120°	14°	1	20.0	26.0
91002.W1899-20	HSS	4-17	120°	20°	1	20.0	26.0
91002.W1899-25	HSS	4-17	120°	25°	1	20.0	26.0
91002.W4260-00	HSS	5-41	60°	0°	2	20.0	90.0
91002.W4260-14	HSS	5-41	60°	14°	2	20.0	90.0
91002.W4260-20	HSS	5-41	60°	20°	2	20.0	90.0
91002.W4260-25	HSS	5-41	60°	25°	2	20.0	90.0
91002.W4282-00	HSS	5-41	82°	0°	2	20.0	73.0
91002.W4282-14	HSS	5-41	82°	14°	2	20.0	73.0
91002.W4282-20	HSS	5-41	82°	20°	2	20.0	73.0
91002.W4282-25	HSS	5-41	82°	25°	2	20.0	73.0
91002.W4290-00	HSS	5-41	90°	0°	2	20.0	73.0
91002.W4290-14	HSS	5-41	90°	14°	2	20.0	73.0
91002.W4290-20	HSS	5-41	90°	20°	2	20.0	73.0
91002.W4290-25	HSS	5-41	90°	25°	2	20.0	73.0
91002.W4299-00	HSS	5-41	120°	0°	2	20.0	60.0
91002.W4299-14	HSS	5-41	120°	14°	2	20.0	60.0
91002.W4299-20	HSS	5-41	120°	20°	2	20.0	60.0
91002.W4299-25	HSS	5-41	120°	25°	2	20.0	60.0
91002.W6060-00	HSS	21-59 to 77/117	60°	0°	2	20.0	90.0
91002.W6060-14	HSS	21-59 to 77/117	60°	14°	2	20.0	90.0
91002.W6060-20	HSS	21-59 to 77/117	60°	20°	2	20.0	90.0



Blades For Inner Chamfering Tools

for use with 91000

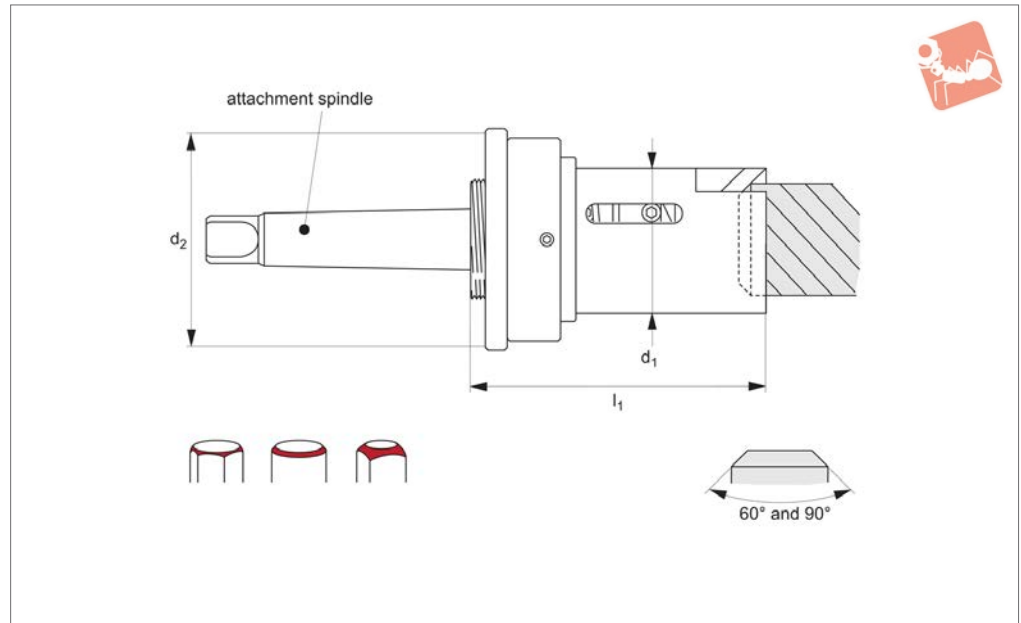


Chamfering Tools

Order No.	Blade material	For chamfer dia. min. max.	Inc. chamfer angle	Cutting angle α	No. of cutting edges	w_1	l_1
91002.W6060-25	HSS	21-59 to 77/117	60°	25°	2	20.0	90.0
91002.W6090-00	HSS	21-59 to 77/117	90°	0°	2	20.0	73.0
91002.W6090-14	HSS	21-59 to 77/117	90°	14°	2	20.0	73.0
91002.W6090-20	HSS	21-59 to 77/117	90°	20°	2	20.0	73.0
91002.W6090-25	HSS	21-59 to 77/117	90°	25°	2	20.0	73.0
91002.W1760-20	HSS TIN	4-17	60°	20°	1	8.7	38.5
91002.W4160-20	HSS TIN	5-41 to 77/117	60°	20°	2	20.0	90.0
91002.W1790-20	HSS TIN	4-17	90°	20°	1	8.7	30.0
91002.W4190-20	HSS TIN	5-41 to 77/117	90°	20°	2	20.0	73.0
91002.W4360-00	Carbide	5-41 to 77/117	60°	0°	2	20.0	90.0
91002.W4390-00	Carbide	5-41 to 77/117	90°	0°	2	20.0	73.0



91020



Material

Standard pilot cone type:

Supplied with standard HSS blade of 14. cutting angle.

CRN pilot cone type:

Supplied with HSS TIN coated blade of 20. cutting angle.

Technical Notes

Consists of four main elements:

1. Body and drill attachment spindle.
2. Pilot cone - unique to the desired chamfer, provides full support during cutting and ensures concentric chamfer.
3. Blades - 1 x HSS blade at 14. cutting angle supplied.
4. Blades adjusted lock nut.

The CRN pilot cone type version gives better results for harder material and larger batches as these have a higher hardness rating and lower friction characteristics.

Used to achieve high quality concentric chamfering quickly and easily, without risk of damage/cutting into the workpiece. The specially designed pilot cone provides full support to the blade throughout cutting and ensures a concentric chamfer.

Available with attachment spindles to suit most pillar drills, CNCs or hand drills. Chamfer angle quoted is inclusive angle.

Tips

Recommended cutting speed= 10 - 20 m/min.

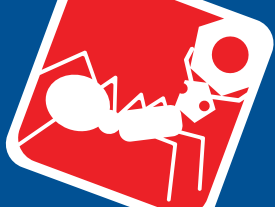
To extend the life of the blade and the pilot cone we recommend lubrication with cutting fluid or soluble oil.

On initial set-up, make minor height adjustment of pilot cone via the blade adjustment lock nut, to ensure the best possible positioning.

Important Notes

For replacement blades see part no. 91022.

Order No.	Pilot cone type	Chamfer dia. min. max.	Inc. chamfer angle	Attachment spindle	d ₁	d ₂	l ₁
91020.W1860-1	Standard	4-17	60°	Ø10	18	26	54
91020.W1890-1	Standard	4-17	90°	Ø10	18	26	54
91020.W3660-1	Standard	4-37	60°	Ø10/Ø16	42	65	105
91020.W3690-1	Standard	4-37	90°	Ø10/Ø16	42	65	85
91020.W3660-2	Standard	4-37	60°	CM2	42	65	105
91020.W3690-2	Standard	4-37	90°	CM2	42	65	85
91020.W4660-2	Standard	10-45	60°	CM2	48	65	109
91020.W4690-2	Standard	10-45	90°	CM2	48	65	85
91020.W6060-2	Standard	21-57	60°	CM2	60	70	109
91020.W6090-2	Standard	21-57	90°	CM2	60	70	85
91020.W8060-2	Standard	41-77	60°	CM2	80	90	118
91020.W8090-2	Standard	41-77	90°	CM2	80	90	95
91020.W8190-3	Standard	60-97	90°	CM3	100	110	107
91020.W8290-3	Standard	80-117	90°	CM3	120	130	110
91020.W1860-19	CRN	4-17	60°	Ø10	18	26	54
91020.W1890-19	CRN	4-17	90°	Ø10	18	26	54
91020.W3660-19	CRN	4-37	60°	Ø10/Ø16	42	65	105
91020.W3690-19	CRN	4-37	90°	Ø10/Ø16	42	65	85
91020.W3660-29	CRN	4-37	60°	CM2	42	65	105



Outer Chamfering Tools

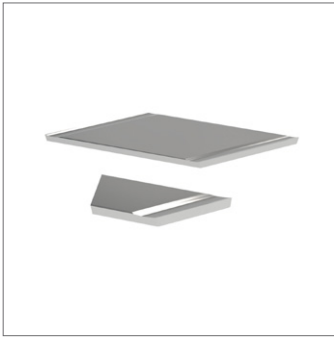
for drill attachment



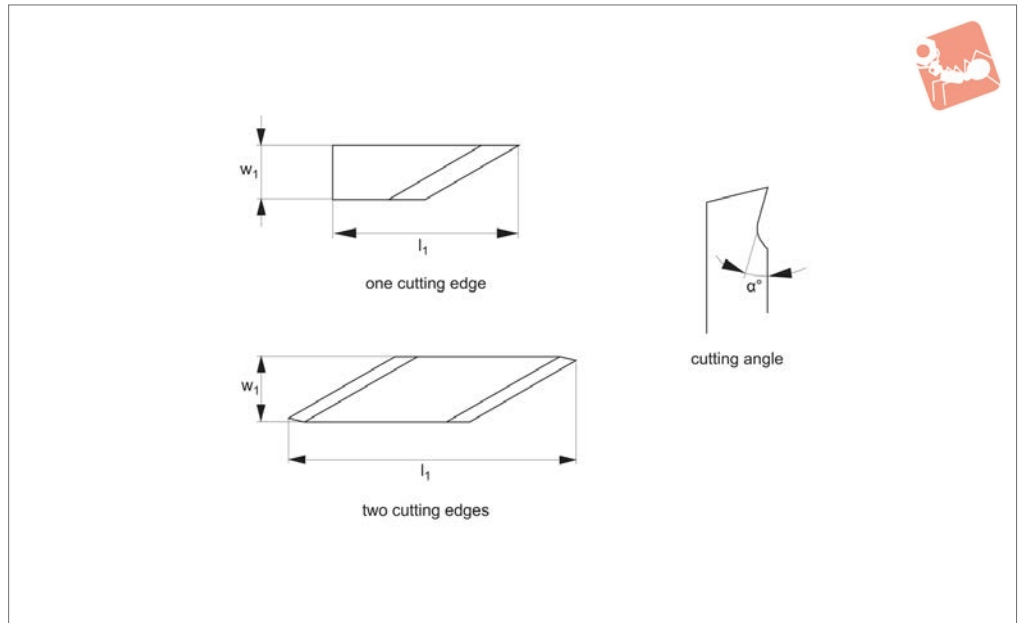
Order No.	Pilot cone type	Chamfer dia. min. max.	Inc. chamfer angle	Attachment spindle	d ₁	d ₂	l ₁
91020.W3690-29	CRN	4-37	90°	CM2	42	65	85



CHAMFERING TOOLS



91022



Material

HSS: high speed steel, for most standard materials.

HSS TIN: high speed steel with TIN coating for difficult to machine materials such as stainless steel, titanium and Inconel.

Technical Notes

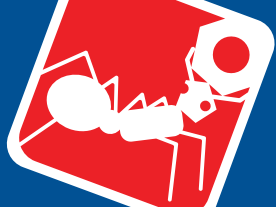
A blade with a 14° cutting angle is most

commonly used as it covers the widest range of standard materials, please see material suitability table for further advice.

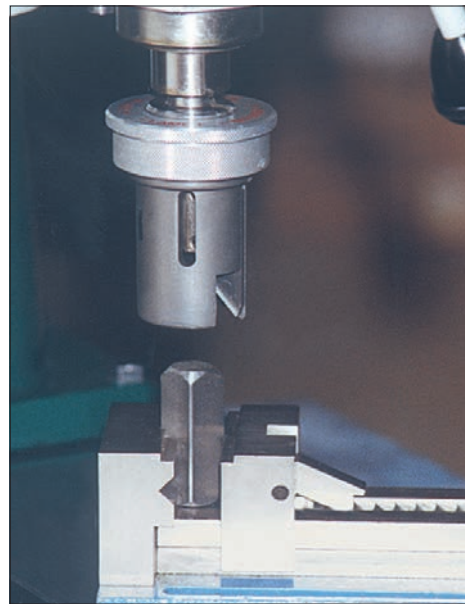
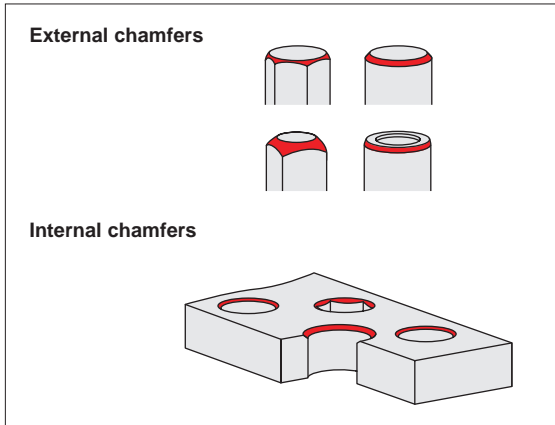
Tips

Recommended cutting speed= 10 - 20 m/min. To extend the life of the blade and pilot cone we recommend lubrication with cutting fluid or soluble oil.

Order No.	Blade material	For chamfer dia. min. max.	Inc. chamfer angle	Cutting angle α	No. of cutting edges	w_1	l_1
91022.W1860-00	HSS	4-17	60°	0°	1	8.7	30
91022.W1860-14	HSS	4-17	60°	14°	1	8.7	30
91022.W1860-20	HSS	4-17	60°	20°	1	8.7	30
91022.W1860-25	HSS	4-17	60°	25°	1	8.7	30
91022.W1890-00	HSS	4-17	90°	0°	1	8.7	30
91022.W1890-14	HSS	4-17	90°	14°	1	8.7	30
91022.W1890-20	HSS	4-17	90°	20°	1	8.7	30
91022.W1890-25	HSS	4-17	90°	25°	1	8.7	30
91022.W3660-00	HSS	5-41 to 77/117	60°	0°	2	20.0	88
91022.W3660-14	HSS	5-41 to 77/117	60°	14°	2	20.0	88
91022.W3660-20	HSS	5-41 to 77/117	60°	20°	2	20.0	88
91022.W3660-25	HSS	5-41 to 77/117	60°	25°	2	20.0	88
91022.W3690-00	HSS	5-41 to 77/117	90°	0°	2	20.0	69
91022.W3690-14	HSS	5-41 to 77/117	90°	14°	2	20.0	69
91022.W3690-20	HSS	5-41 to 77/117	90°	20°	2	20.0	69
91022.W3690-25	HSS	5-41 to 77/117	90°	25°	2	20.0	69
91022.W1760-20	HSS TIN	4-17	60°	20°	1	8.7	30
91022.W1790-20	HSS TIN	4-17	90°	20°	1	8.7	30
91022.W4160-20	HSS TIN	5-41 to 77/117	60°	20°	2	20.0	88
91022.W4190-20	HSS TIN	5-41 to 77/117	90°	20°	2	20.0	69

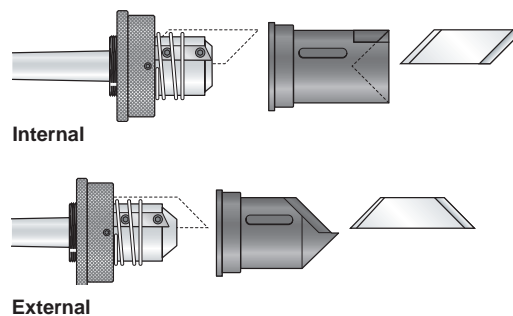


Wixroyd chamfering tools are mainly used as drill extensions to add high quality, consistent inner and outer chamfers. The chamfer angles achievable on a wide range of metals are between 60° to 120° inclusive.



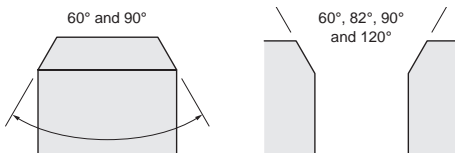
Construction

- Concentric chamfers.
- Excellent surface finish.
- Reduces risk of cutting into the workpiece.
- Controlled machining torque.



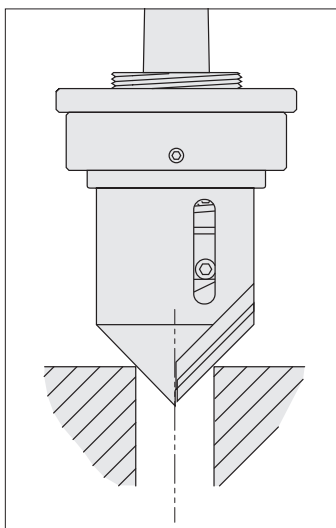
Chamfering tools consist of three main elements: an attachment spindle, pilot cone and cutting blade.

A variety of spindle attachments are available from CM1 to CM3 inclusive.

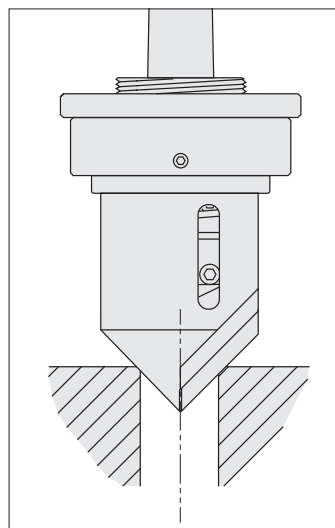


Our chamfer tools act by gradually shaving material away from a right angled corner to create a transitional, angled edge between two planes.

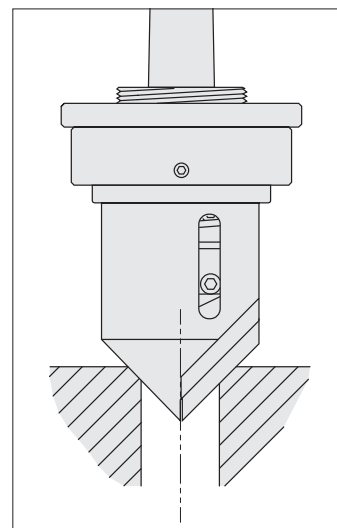
Example: with a blade protrusion of 0,1mm the device will make 10 revolutions to cut 1mm.



1 When the chamfer tools spindle is lowered, it's pilot cone firstly centres the workpiece before retracting to allow the blade to come into contact with the material and start cutting of the chamfer.



2 Adjusting the output of the blade controls the thickness of the chip count NOT the value or angle of the chamfer e.g. with a blade protrusion of 0,1mm the chamfering tool requires 10 revolutions to cut 1mm of the chamfer.



3 Concentric chamfer achieved.



Recommended Cutting Speed

Typical rpm for varying chamfer diameters, when using cutting speed of between 10 and 20 m/min.

We recommend a cutting speed of between 10 and 20m/min.

Therefore typical value for chamfers of varying diameter are as follows.

Diameter	RPM range
10 mm	320 to 640 rpm
15 mm	210 to 420 rpm
20 mm	160 to 320 rpm
30 mm	110 to 220 rpm
40 mm	80 to 160 rpm
50 mm	55 to 110 rpm

We do however recommend you use the following formula to check the most suitable rpm used.

$$Rpm = (cutting\ speed \times 1000) / (diameter \times 3.14)$$

Blade cutting angle	0°	14°	20°	25°
Suitable for material	Brass, bronze, cast iron, stainless steel	Steel, special bronze, perspex	Soft steel, copper, AU 4G, plastic, stainless steel	Aluminium, soft iron, sheet metal

Important Note:

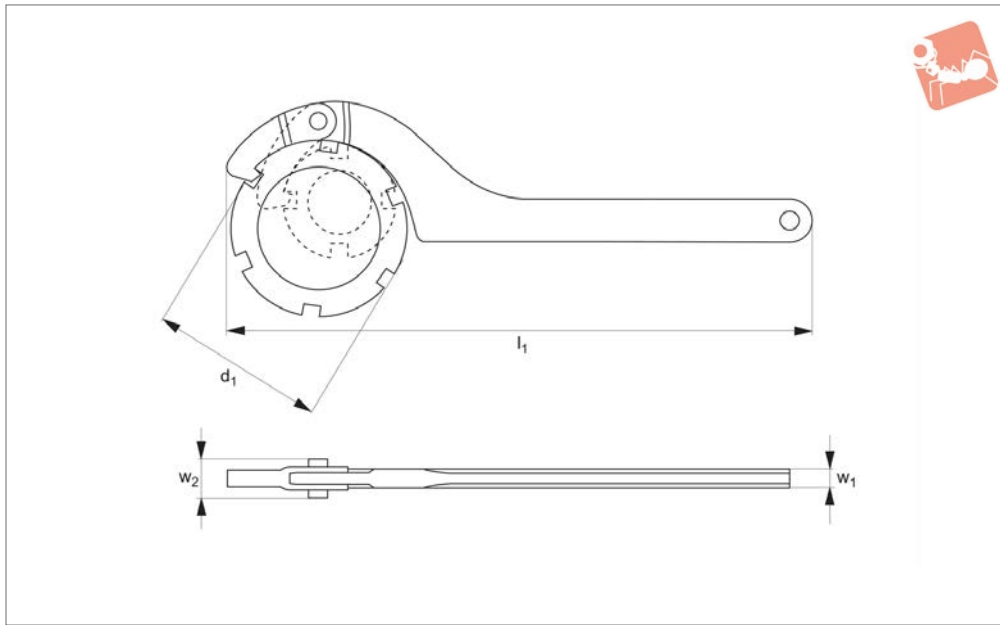
We recommend the chamfering tool is lubricated with cutting fluid or soluble oil to ensure the long life of the cutting blade edge, and to reduce wear of the pilot cone.

We offer blades with a variety of cutting angles to best suit the material in which a chamfer is required.

Typically a blade cutting angle of 14° suits most applications; please refer to table above.



Hook Spanners - with Hook Nose hinge type - traditional



95100

Material

Steel (C35/C45), hardened, blackened, or stainless steel.

Technical Notes

Spanners for adjustment of nuts to DIN 1804, DIN 981 and DIN 11851.

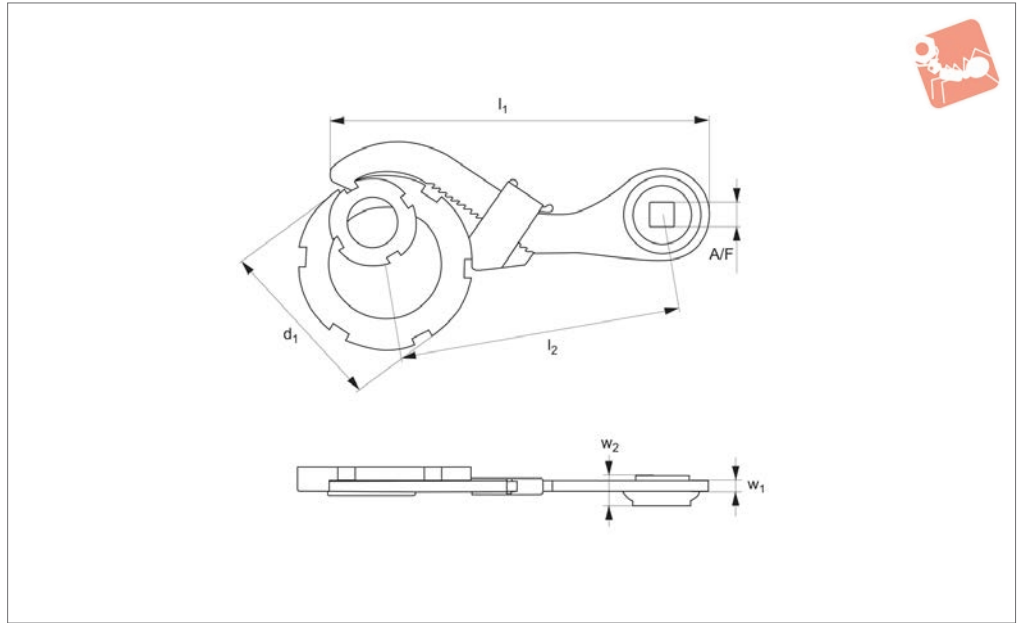
Rounded edges.

Order No.	Finish	d ₁ for nut Ø	Thread size of nut DIN 1804 M	Weight g
95100.W0035	Blackened steel	20-35	8-18	40
95100.W0060	Blackened steel	35-60	20-38	85
95100.W0070	Blackened steel	60-90	20-38	250
95100.W0075	Blackened steel	90-155	20-38	425
95100.W0080	Blackened steel	155-230	20-38	1015
95100.W0901	Stainless steel	20-35	8-18	35
95100.W0902	Stainless steel	35-60	20-38	75
95100.W0903	Stainless steel	60-90	40-60	185
95100.W0904	Stainless steel	90-155	58-110	320
95100.W0905	Stainless steel	155-230	105-170	860

Order No.	Thread size of nut DIN 981 M	DIN 11851-F DN	l ₁	w ₁	w ₂
95100.W0035	1-4	-	135	3	8
95100.W0060	5-8	-	175	4	11
95100.W0070	5-8	-	240	6	13
95100.W0075	5-8	-	300	7	15
95100.W0080	5-8	-	420	8	18
95100.W0901	1-4	-	135	3	8
95100.W0902	5-8	Oct-20	175	4	11
95100.W0903	9-13	25-40	240	5	13
95100.W0904	14-24	50-100	300	6	15
95100.W0905	24-36	125-150	420	8	18



95105



SPANNERS & HOOK SPANNERS

Material

Special steel, hardened and blued.

Technical Notes

Spanner for adjustment of nuts to DIN

1804 and DIN 981. For use with torque wrenches for more accurate installation and adjustment.

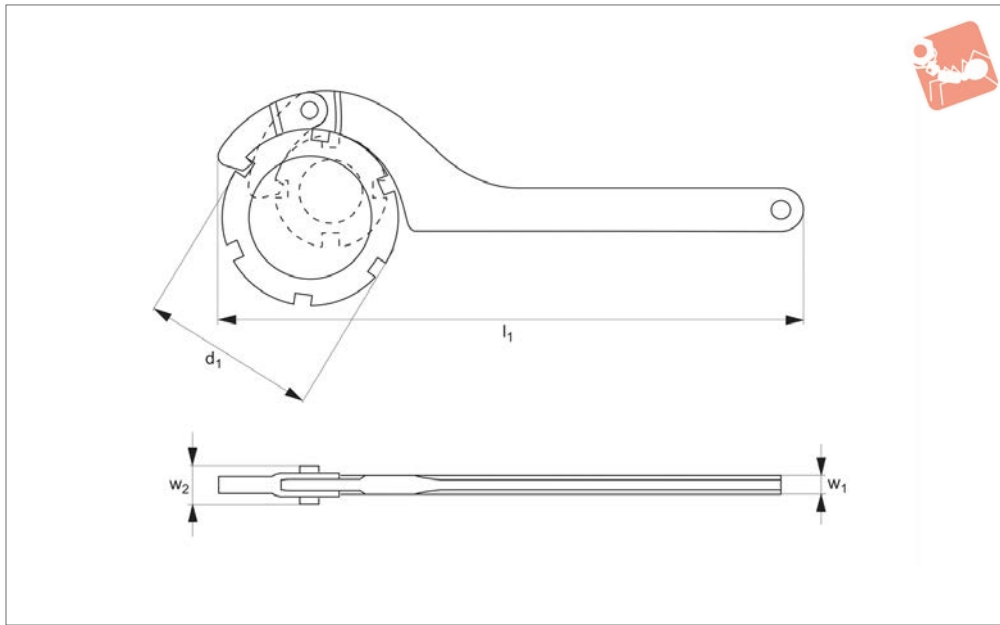
The required torque wrench value is dependent upon dimension l_2 . Please refer to the operating manual of your torque wrench.

dent upon dimension l_2 . Please refer to the operating manual of your torque wrench.

Order No.	d_1 for nut \varnothing	l_1	l_2	w_1	w_2	Drive A/F	Weight g
95105.W0042	20-42	135	100	4	16.0	1/2"	165
95105.W0090	45-90	192	150	6	16.0	1/2"	310
95105.W0165	95-165	272	200	10	16.0	1/2"	680
95105.W0166	95-165	298	220	10	20.5	3/4"	910



Hook Spanners - with Hook Nose hinge type - long version



95110

Material

Steel (C35/C45), edgewise ground, hardened.

Available in steel (blackened or nickel plated), or stainless steel.

Technical Notes

Spanners for adjustment of nuts to DIN

1804, DIN 981 and DIN 11851. Extended hook and shank, strengthened rivet, spring washer.

Rounded edges for better handling.

Tips

The long version spanner allows greater torque to be applied.

Order No.	Finish	d_1 for nut \varnothing	Thread size of nut DIN 1804 M	Weight g
95110.W0035	Blackened steel	20-35	8-18	85
95110.W0060	Blackened steel	35-60	20-38	170
95110.W0090	Blackened steel	60-90	40-60	360
95110.W0155	Blackened steel	90-155	58-110	610
95110.W0230	Blackened steel	155-230	105-170	1200
95110.W0535	Nickel plated steel	20-35	8-18	85
95110.W0560	Nickel plated steel	35-60	20-38	170
95110.W0590	Nickel plated steel	60-90	40-60	360
95110.W0655	Nickel plated steel	90-155	58-110	610
95110.W0730	Nickel plated steel	155-230	105-170	1200
95110.W0901	Stainless steel	20-35	8-18	85
95110.W0902	Stainless steel	35-60	20-38	170
95110.W0903	Stainless steel	60-90	40-60	360
95110.W0904	Stainless steel	90-155	58-110	580
95110.W0905	Stainless steel	155-230	105-170	1200

Order No.	Thread size of nut DIN 981 M	DIN 11851-F DN	l_1	w_1	w_2
95110.W0035	1-4	-	165	4	10.5
95110.W0060	5-8	-	210	5	12.5
95110.W0090	9-13	-	280	6	14.5
95110.W0155	14-24	-	335	7	17.5
95110.W0230	24-36	-	460	8	17.5
95110.W0535	1-4	-	165	4	10.5
95110.W0560	5-8	-	210	5	12.5
95110.W0590	9-13	-	280	6	14.5
95110.W0655	14-24	-	335	7	17.5
95110.W0730	24-36	-	460	8	17.5
95110.W0901	1-4	-	165	4	10.5
95110.W0902	5-8	Oct-20	210	5	12.5
95110.W0903	9-13	25-40	280	6	14.5

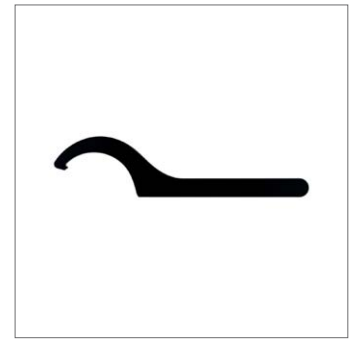
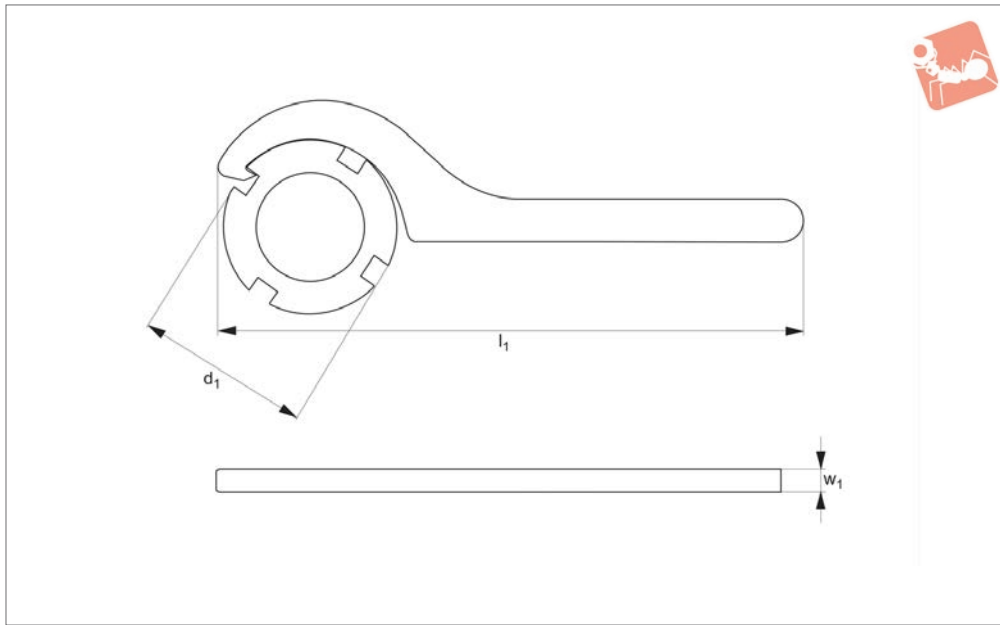


Order No.	Thread size of nut DIN 981 M	DIN 11851-F DN	l_1	w_1	w_2
95110.W0904	14-24	50-100	335	6	17.5
95110.W0905	24-36	125-150	460	8	17.5



Hook Spanners - with Hook Nose fixed

Spanners & Hook Spanners



95400

SPANNERS & HOOK SPANNERS

Material

Steel (C35/C45), hardened and blackened.
Edgewise ground.

request, subject to minimum order quantities.

DIN 981.

Tips

Items marked (), width varies from DIN standard. For slotted nuts to DIN 1804 and

Technical Notes

To DIN 1810A. Specials available on

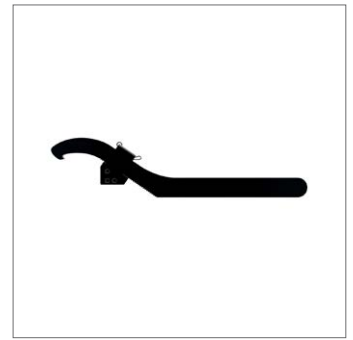
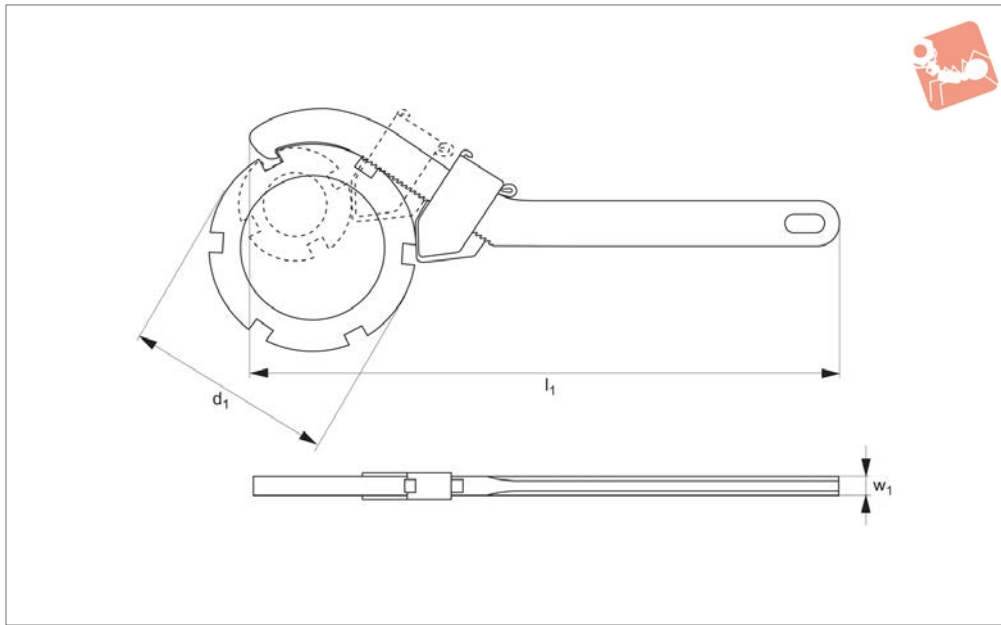
Order No.	d ₁ for nut Ø	l ₁	w ₁	Weight g
95400.W0014	12-24	110	3	25
95400.W0020	16-20	110	3	25
95400.W0028	25-28	136	4	45
95400.W0032	30-32	136	4	50
95400.W0036	34-36	170	5	90
95400.W0038	(38-45)	170	5	95
95400.W0042	40-42	170	5	90
95400.W0050	45-50	206	6	155
95400.W0055	52-55	206	6	160
95400.W0062	58-62	240	7	260
95400.W0064	(65-70)	240	7	255
95400.W0075	68-75	240	7	255
95400.W0090	80-90	280	8	410
95400.W0092	(85-92)	280	8	410
95400.W0100	95-100	280	8	405
95400.W0102	(98-105)	290	8	405
95400.W0115	110-115	335	10	745
95400.W0130	120-130	335	10	720
95400.W0146	135-145	385	10*	1000
95400.W0166	155-165	385	10*	965
95400.W0196	180-195	470	10*	1500
95400.W0221	205-220	470	10*	1580
95400.W0246	230-245	568	10*	2250
95400.W0271	260-270	568	10*	2250
95400.W0300	280-300	680	15	5150
95400.W0320	300-320	695	15	5100
95400.W0345	320-345	695	15	5200
95400.W0375	350-375	735	15	5200
95400.W0400	380-400	770	15	6700
95400.W0500	480-500	988	20	13000





Hook Spanners - with Hook Nose

adjustable - spring loaded



95420

Material

Steel (C35/C45), hardened and blackened.

Tips

For slotted nuts DIN 1804 and DIN 981.

Order No.	d ₁ for nut Ø	l ₁	w ₁	Weight g
95420.W0002	20-42	180	4	100
95420.W0005	45-90	240	6	250
95420.W0009	95-165	335	10	710





Applications and Size Ranges Hook Wrenches DIN 1810A

95400

SPANNERS & HOOK SPANNERS

Size	DIN 1804	DIN 981	DIN 981	DIN 981	DIN 70852	DIN 11851-F	
	M	M	KM	KML		KMT	M
12 - 14	-	-	-	-	-	-	-
16 - 20	6 8	-	-	-	-	10	-
25 - 28	10 12	15 17	2 3	-	- 0	- 16	-
30 - 32	14 16	- 20	- 4	-	- 1	- 18	-
34 - 36	18 20	-	-	-	-	- 22	-
38 - 45	26	25 30	5 6	-	-	24 -	10 15
40 - 42	22 24	-	-	-	4 -	26 28	-
45 - 50	26 28 - 30	30 -	6 -	-	-	- 35	-
52 - 55	32 35	35 -	7 -	-	-	-	20
58 - 62	38 40 - 42	40 -	8 -	-	-	- 45	- 25
65 - 70	-	45 50	9 10	-	- 9	48 52	- 32
68 - 75	45 48 - 50	- 55	- 11	-	- 10	50 55	-
80 - 90	52 - 55 58 - 60	60 -	12 -	-	- 12	60 70	-
85 - 92	-	65 70	13 14	-	-	65 -	- 50
95 - 100	62 - 65 68 - 70	-	-	-	13 14	75 80	-
98 - 105	-	75 80	15 16	-	- 15	-	-
110 - 115	72 - 75 80	85 -	17 -	-	16 -	-	65
120 - 130	85 90	90 100	18 20	-	17 19	- 105	-
135 - 145	95 100	110 120	22 -	- 24	20 22	- 115	-
155 - 165	105 - 110 115 - 120	120 - 130 130 - 140	24 26	26 28	24 26	125 135	-
180 - 195	125 - 130 140	140 - 150 150	28 30	30 -	- 32	150 -	-
205 - 220	150 160	- 170 - 190	- 34	- 38	34 -	175 180	-
230 - 245	170 180	180 -	36 -	-	-	190 -	-
Size	DIN 1804	DIN 981	DIN 981				
	M	Tr	HM				
260 - 270	190 200	220x4 210x4	3044 42 T	-	-	-	-
280 - 300	-	220x4 140x4	44 T 48 T	-	-	-	-
300 - 320	-	240x4 250x4	48 T 50 T	-	-	-	-
320 - 345	-	250x4 -	50 T -	-	-	-	-
350 - 375	-	-	-	-	-	-	-
380 - 400	-	-	-	-	-	-	-
480 - 500	-	-	-	-	-	-	-

We specialise in the non-standard, supplying a range of DIN hand tools from socket wrenches to hook spanners, pin spanners to drill drifts, and beyond. These parts have various applications for DIN and other standard nuts and tooling. **The following pages cross reference the suitability of our hand tools to specific DIN sizings.**

Adjustable Hook Wrenches with Nose

Size	DIN 1804 M	DIN 981 M	DIN 981 KM	DIN 981 KML	DIN 11851-F DN	95420 and 95105
20 - 42	8 - 24	12 - 25	1 - 5	-	10	
45 - 90	26 - 60	30 - 65	6 - 13	-	15 - 50	
95 - 165	62 - 120	75 - 140	15 - 26	24 - 28	65 - 100	

Hook Wrenches

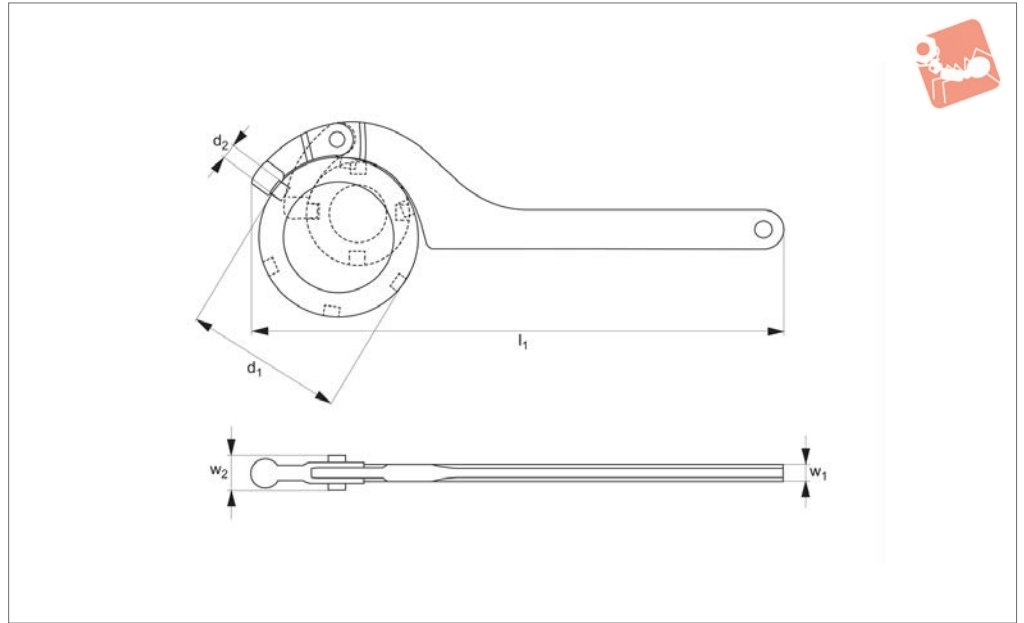
Size	DIN 1804 M	DIN 981 M	DIN 981 KM	DIN 981 KML	DIN 11851-F KMT	DIN 11851-F DN	DIN 70852 M	95100 and 95110
20 - 35	8 - 18	12 - 20	1 - 4	-	0 - 2	-	10 - 20	
35 - 60	20 - 38	25 - 40	5 - 8	-	3 - 7	10 - 20	22 - 42	
60 - 90	40 - 60	45 - 65	9 - 13	-	8 - 12	25 - 40	42 - 70	
90 - 155	58 - 110	70 - 130	14 - 24	24, 26	13 - 24	50 - 100	70 - 125	
155 - 230	105 - 170	120 - 190	24 - 36	26 - 38	24 - 38	125 - 150	125 - 190	

Hook Wrenches DIN 1810B

1810B Size	DIN 1816 M	776 Size	1810B Size	DIN 1816 M	776 Size	95151, 95152, 95450, 95154
16 - 18	6	16 - 22		72	95 - 155	
20 - 22	8	22 - 35	110 - 115	75	95 - 155	
25 - 28	10	22 - 35		80	95 - 155	
30 - 32	12	22 - 35	120 - 130	85	95 - 155	
	14	22 - 35		90	95 - 155	
	16	22 - 35	135 - 145	95	95 - 155	
34 - 36	18	22 - 35		100	95 - 155	
	20	35 - 60		105	95 - 155	
40 - 42	22	35 - 60	155 - 165	110	95 - 155	
	24	35 - 60		115	165 - 230	
	26	35 - 60		120	165 - 230	
45 - 50	28	35 - 60		125	165 - 230	
	30	35 - 60	180 - 195	130	165 - 230	
	32	35 - 60		140	165 - 230	
52 - 55	35	35 - 60	205 - 220	150	165 - 230	
	38	35 - 60		160	165 - 230	
58 - 62	40	60 - 90	230 - 245	170	165 - 230	
	42	60 - 90		180	-	
	45	60 - 90	260 - 270	190	-	
68 - 75	48	60 - 90		200	-	
	50	60 - 90				
	52	60 - 90				
80 - 90	55	60 - 90				
	58	60 - 90				
	60	60 - 90				
95 - 100	62	95 - 155				
	65	95 - 155				
	68	95 - 155				
	70	95 - 155				



95151



Material

Steel (C35/C45), tempered, hardened, with brown finish.

Edgewise ground.

circumferences to DIN 1816.

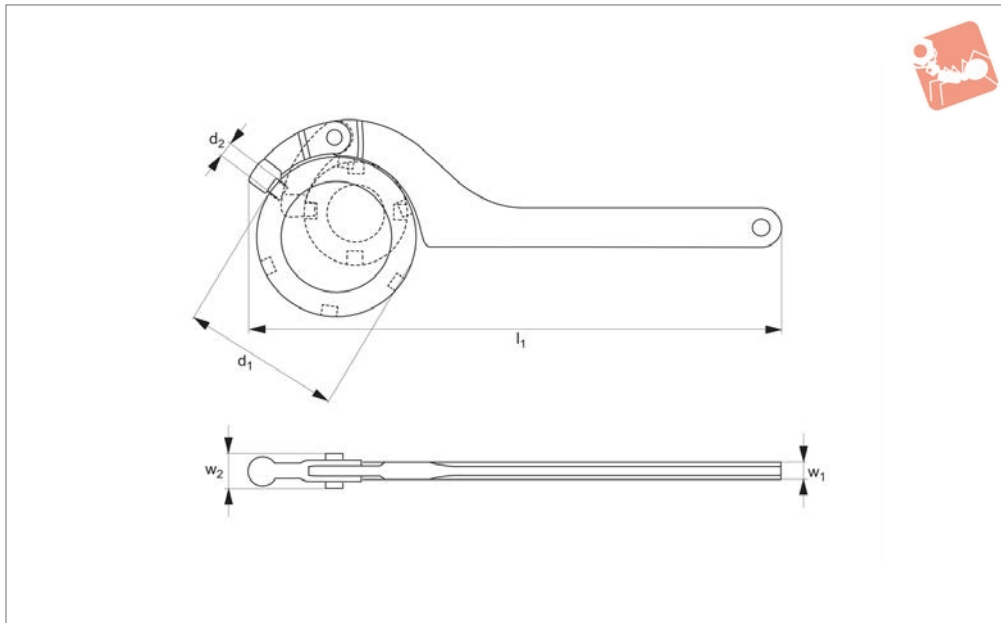
Technical Notes

For round nuts with set pin holes on outer

Order No.	d ₁ for nut Ø	d ₂	l ₁	w ₁	w ₂	Weight g
95151.W0035	20-35	2.5	135	3	8	40
95151.W0036	20-35	3.0	135	3	8	40
95151.W0060	35-60	4.0	175	4	11	85
95151.W0061	35-60	5.0	175	4	11	85
95151.W0090	60-90	5.0	245	6	13	250
95151.W0091	60-90	6.0	245	6	13	250
95151.W0155	90-155	6.0	300	7	15	425
95151.W0156	90-155	8.0	300	7	15	425
95151.W0230	155-230	8.0	420	8	18	1015



Hook Spanners - with Pin Nose hinge type - long version



95152

Material

Steel (C35/C45), tempered, hardened, blue finish or nickel plated. Edgewise ground.

circumferences to DIN 1816.

Rounded edges for better handling. Sizes 16-22 without retaining ring.

Technical Notes

For round nuts with set pin holes on outer

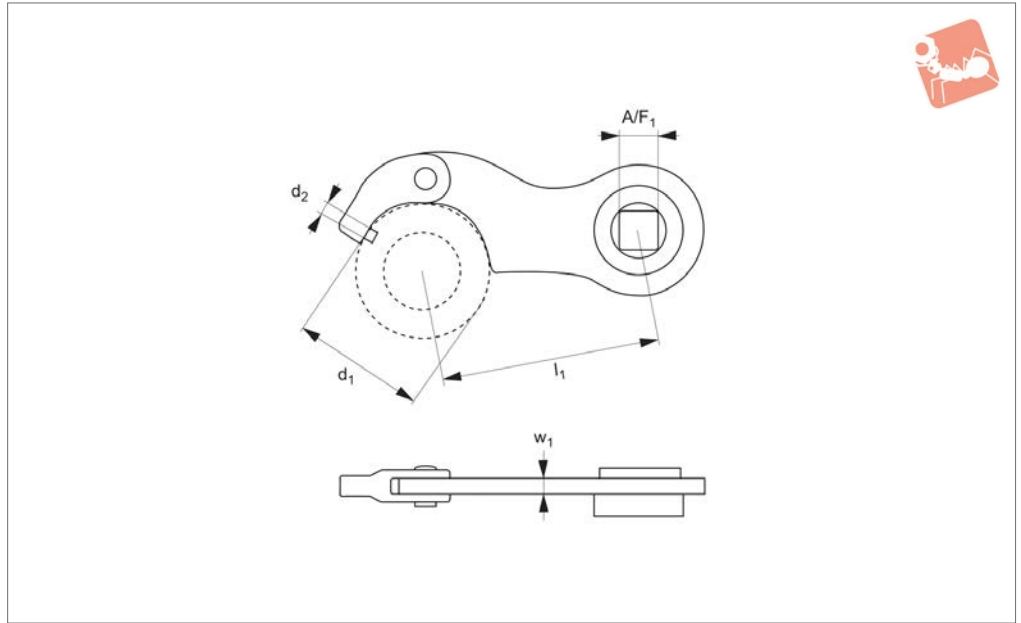
Tips

Longer handle shaft (l_1) enables higher torque to be applied.

Order No.	Finish	d_1 for nut \varnothing	d_2	l_1	w_1	w_2	Weight g
95152.W0122	Blackened	16-22	2.5	135	3	7.5	50
95152.W0135	Blackened	22-35	3.0	165	4	10.5	85
95152.W0160	Blackened	35-60	4.0	205	5	12.5	170
95152.W0190	Blackened	60-90	5.0	280	6	14.5	380
95152.W0191	Blackened	60-90	6.0	280	6	14.5	380
95152.W0255	Blackened	95-155	6.0	335	7	17.5	610
95152.W0256	Blackened	95-155	8.0	335	7	17.5	610
95152.W0330	Blackened	165-230	8.0	460	8	17.5	1200
95152.W0331	Blackened	165-230	10.0	460	8	17.5	1200
95152.W0622	Nickel plated	16-22	2.5	135	3	7.5	50
95152.W0635	Nickel plated	22-35	3.0	165	4	10.5	85
95152.W0660	Nickel plated	35-60	4.0	205	5	12.5	170
95152.W0690	Nickel plated	60-90	6.0	280	6	14.5	380
95152.W0755	Nickel plated	95-155	6.0	335	7	17.5	610
95152.W0830	Nickel plated	165-230	10.0	460	8	17.5	1200



95154



SPANNERS & HOOK SPANNERS

Material

Special steel, hardened and blued.
Drive: square socket.

Technical Notes

For nuts with radial holes to DIN 1816.

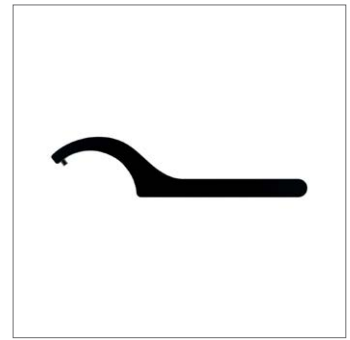
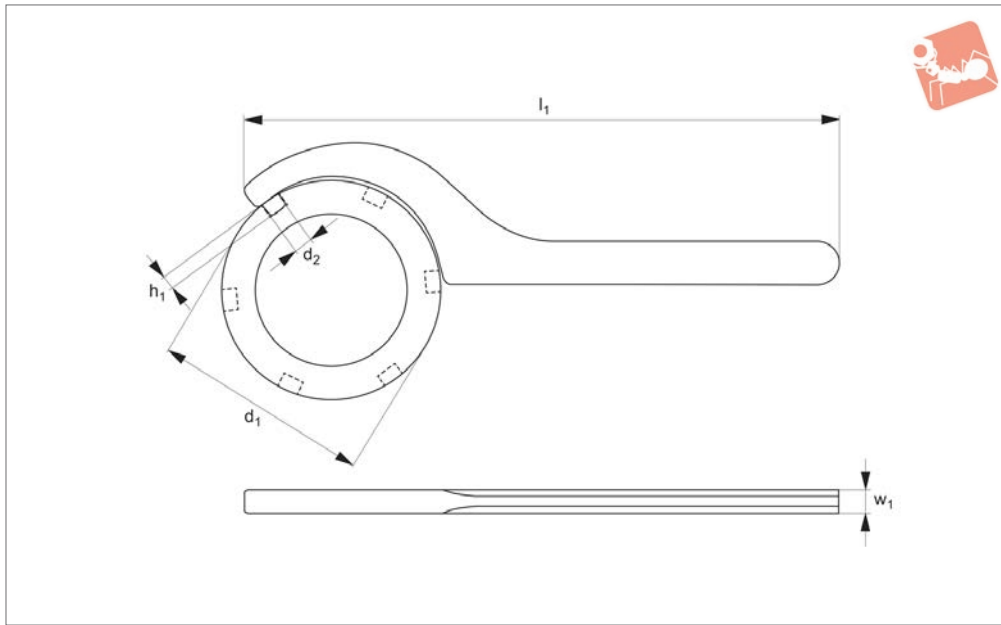
Order No.	d ₁ min. max.	A/F	d ₂	l ₁	w ₁	Weight g
95154.W0160	35-60	1/2"	4	75	5	185
95154.W0191	60-90	1/2"	6	100	6	320



Hook Spanners - with Pin Nose

fixed

Spanners & Hook Spanners



95450

SPANNERS & HOOK SPANNERS

Material

Body: steel (C35/C45), hardened and blackened. Edgewise ground.

including stainless steel models - subject to minimum order quantities.

holes to DIN 1816.

Technical Notes

To DIN 1816. Specials available on request,

Tips

Items marked (), width varies from DIN standard. For round nuts with set pin

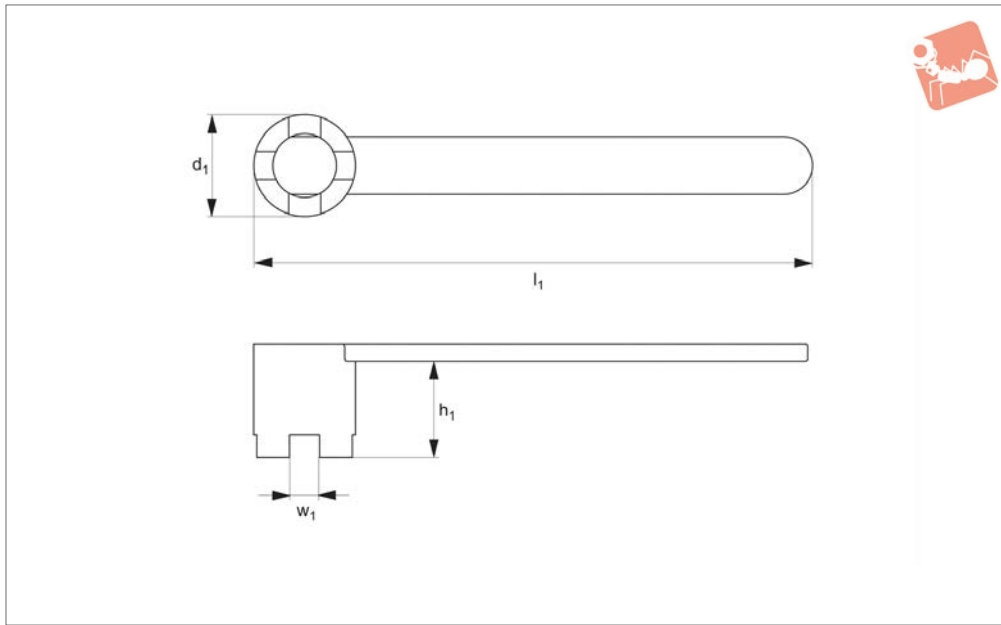
Order No.	d ₁ for nut Ø	d ₂	l ₁	w ₁	h ₁	Weight g
95450.W0014	12-14	2.0	110	3	2.0	25
95450.W0018	16-18	2.5	110	3	2.5	25
95450.W0022	20-22	2.5	110	3	2.5	25
95450.W0028	25-28	3.0	136	4	3.0	55
95450.W0032	30-32	4.0	136	4	3.0	55
95450.W0036	34-36	4.0	170	5	3.5	100
95450.W0042	40-42	4.0	170	5	3.5	100
95450.W0050	45-50	5.0	206	6	4.0	165
95450.W0055	52-55	5.0	206	6	4.0	165
95450.W0062	58-62	5.0	240	7	5.0	270
95450.W0075	68-75	6.0	240	7	5.0	270
95450.W0090	80-90	6.0	280	8	6.0	410
95450.W0100	95-100	8.0	280	8	6.0	410
95450.W0115	110-115	8.0	335	(8)	8.0	610
95450.W0130	120-130	8.0	335	(8)	8.0	610
95450.W0146	135-145	8.0	380	(8)	8.0	790
95450.W0166	155-165	8.0	380	(8)	8.0	790
95450.W0196	180-195	10.0	470	(10)	8.0	1500
95450.W0221	205-220	10.0	470	(10)	8.0	1580
95450.W0246	230-245	10.0	568	(10)	10.0	2250
95450.W0271	260-270	10.0	568	(10)	10.0	2250





Spanner for Shell and Mill Arbors

for screws to DIN 6367



92100

SPANNERS & HOOK SPANNERS

Material

Steel (C35/C45) hardened, tempered, with brown finish.

Technical Notes

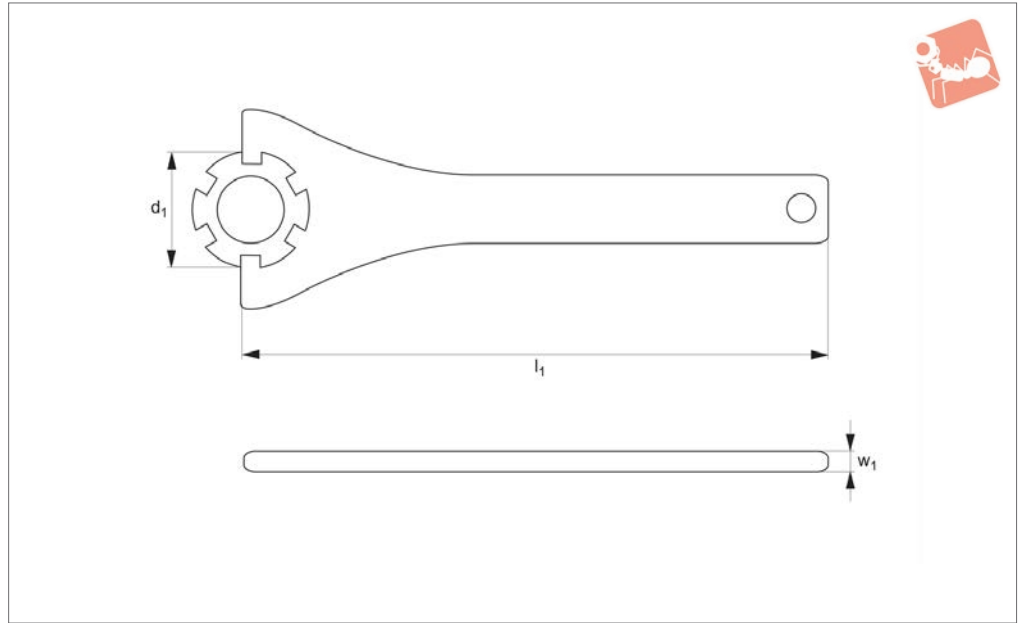
Nominal size refers to diameter of mandrel on milling arbor.

Order No.	Size	For nut to DIN 6367	d_1	h_1	l_1	w_1	Weight g
92100.W0013	13	M 6	18	16	160	6.1	75
92100.W0016	16	M 8	22	20	180	8.1	110
92100.W0022	22	M10	28	25	200	10.1	200
92100.W0027	27	M12	35	32	225	12.1	400
92100.W0032	32	M16	42	36	250	16.1	570
92100.W0040	40	M20	52	40	280	20.2	800
92100.W0050	50	M24	63	45	315	24.2	1100
92100.W0060	60	M30	76	50	355	28.2	1750





92120



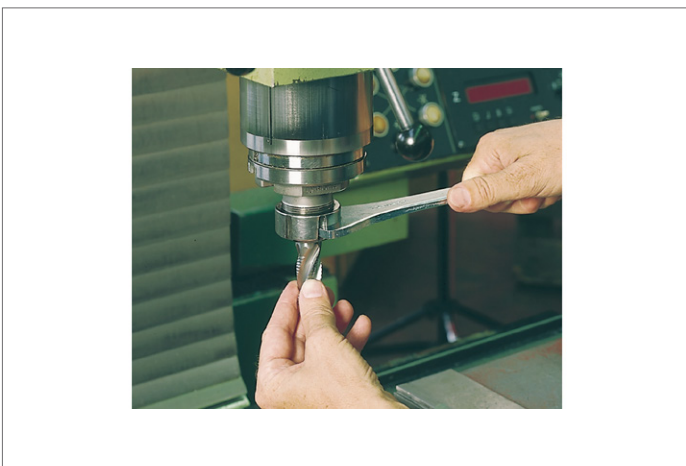
Material

Steel (C35/C45), hardened, zinc plated.

Technical Notes

For use on clamping nuts to DIN 6499D.

Order No.	Size	For nut to DIN 6499D	d_1	l_1	w_1	Weight g
92120.W0016	16	16	32	163	4	125
92120.W0020	20	20	35	183	5	190
92120.W0025	25	25	42	203	6	255
92120.W0032	32	32	50	253	6	359
92120.W0040	40	40	63	285	6	480
92120.W0050	50	-	78	350	7	810

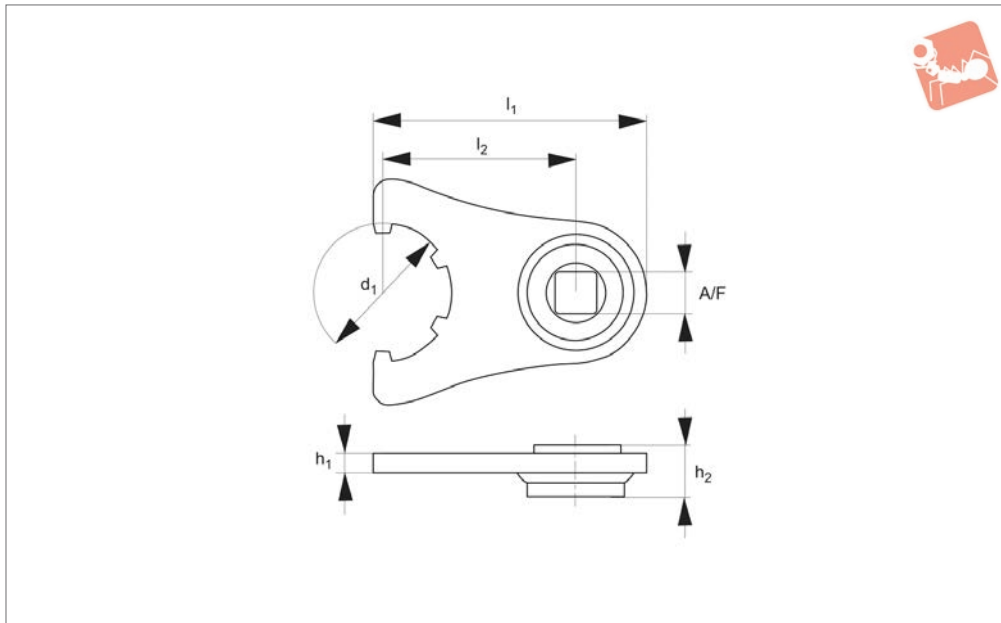




Collet Spanner

for use with torque wrench

Spanners & Hook Spanners



92121

SPANNERS & HOOK SPANNERS

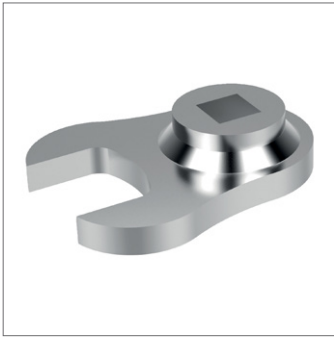
Material

Special steel, hardened and zinc-plated.

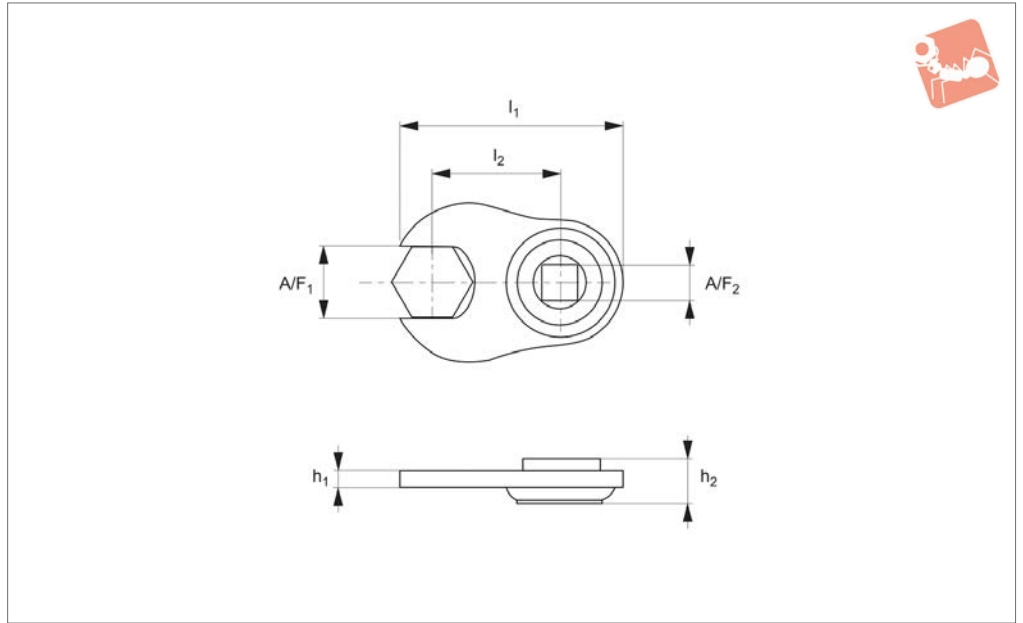
Technical Notes

Controlled tightening prevents damage to spindle changing tools on machines.

Order No.	Size	A/F	d ₁	h ₁	h ₂	l ₁	l ₂	Weight g
92121.W0016	16	1/2"	32	5	16	69	45	140
92121.W0025	25	1/2"	42	6	16	85	60	200
92121.W0032	32	1/2"	50	6	16	85	60	215
92121.W0040	40	1/2"	63	6	16	85	60	220



92122



SPANNERS & HOOK SPANNERS

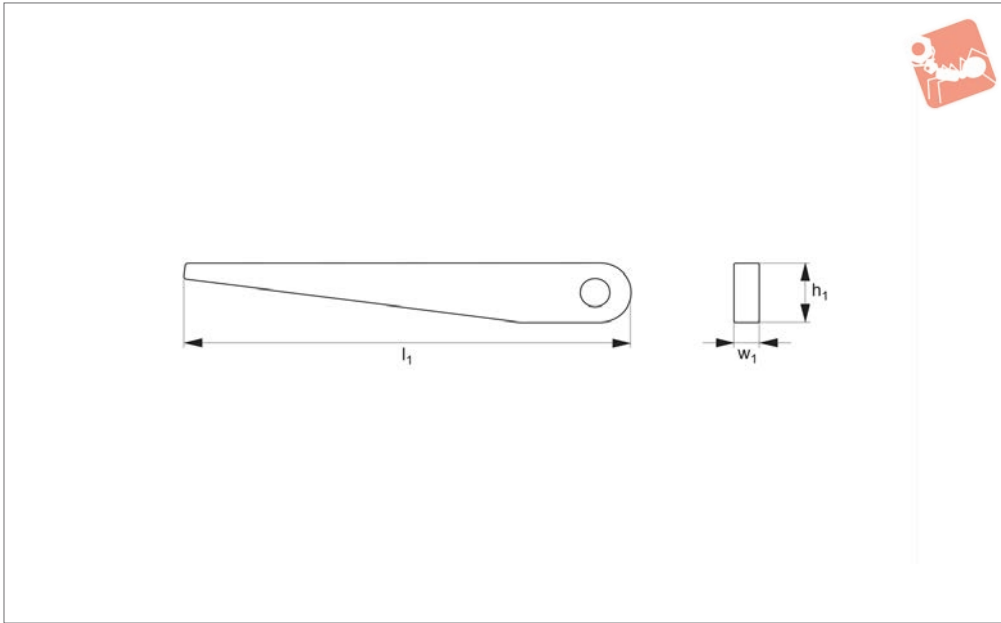
Material

Special steel, hardened and zinc-plated.

Technical Notes

Controlled tightening prevents damage to spindle changing tools on machines.

Order No.	A/F_1	A/F_2	h_1	h_2	l_1	l_2	Weight g
92122.W0025	25	1/2"	6	16	78	45	170
92122.W0036	36	1/2"	7	16	101	60	255
92122.W0046	46	1/2"	8	16	108	60	340



92200

SPANNERS & HOOK SPANNERS

Material

Steel (C35/C45), hardened and brown finish.

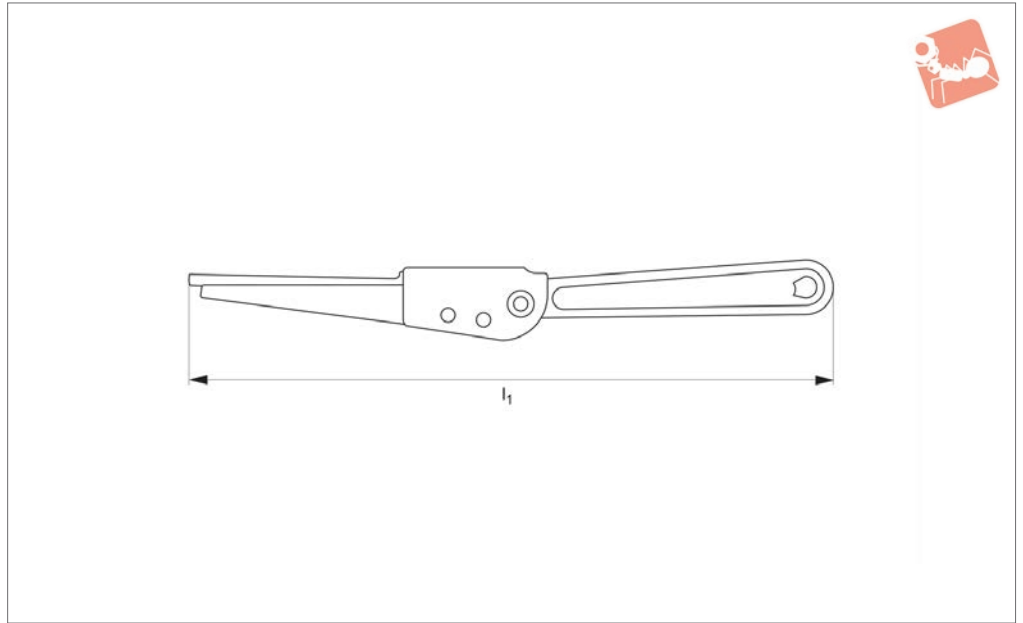
Technical Notes

Produced to DIN 317.
For machine tapers DIN 228.

Order No.	Size	Morse taper	h_1	Taper metric	l_1	w_1	Weight g
92200.W0000	0	0	12	4 & 6	90	3	14
92200.W0001	1	1 & 2	20	-	140	5	70
92200.W0003	3	3	25	-	190	7	150
92200.W0004	4	4	30	-	225	10	310
92200.W0005	5	5 & 6	35	-	265	15	650



92220



Material

Body: steel (C35/C45), hardened and blackened.
Grip: powder coated, red.

With finger protection.

Tips

This semi-automatic drill drift simplifies

the removal of machine tapers (to DIN 228).

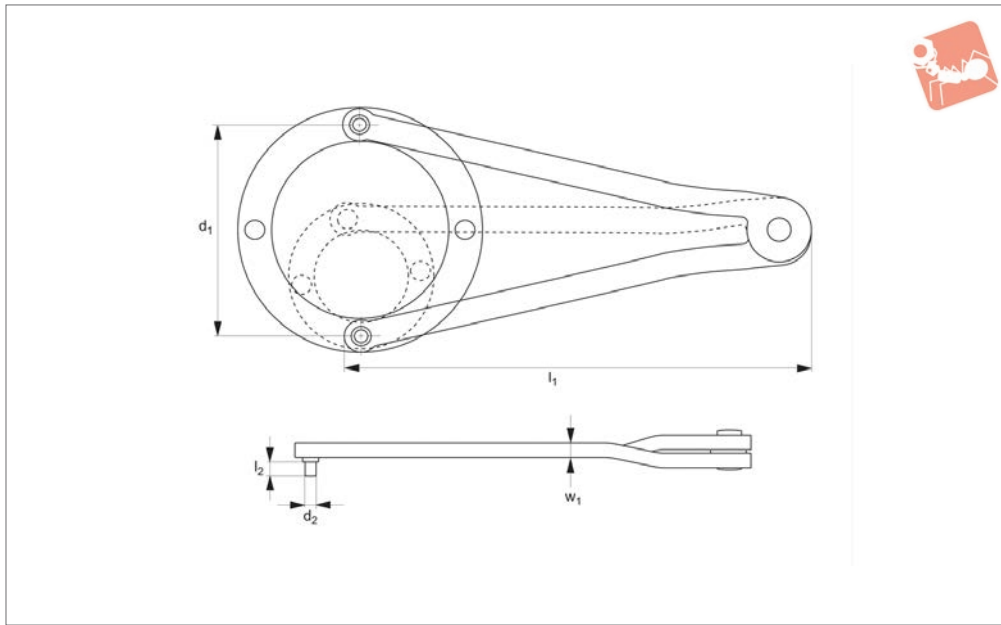
Order No.	For morse taper	l_1	Weight g
92220.W0003	1-3	330	370
92220.W0006	4-6	380	530





Adjustable Pin Face Spanners with welded pins

Spanners & Hook Spanners



94000.1

SPANNERS & HOOK SPANNERS

Material

Carbon steel (C35/C45), tempered.

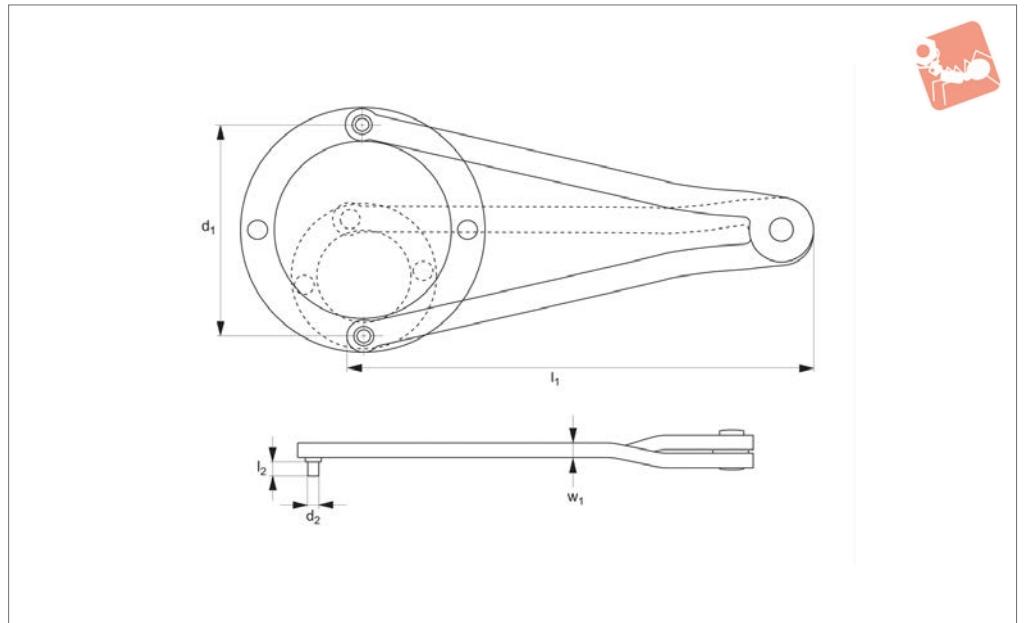
Technical Notes

Size 7-40 with riveted pins, from size 11-60 pins electrically welded.

Order No.	d ₁ for nut min. max.	d ₂ -0.1mm tol. h12	l ₁	l ₂	w ₁	Weight g
94000.W0041	7-40	1.5	115	2.0	3	40
94000.W0042	7-40	2.0	115	2.5	3	40
94000.W0043	7-40	2.5	115	3.0	3	40
94000.W0061	11-60	3.0	160	4.0	4	140
94000.W0062	11-60	4.0	160	5.0	4	140
94000.W0063	11-60	5.0	160	6.0	4	140
94000.W0101	14-100	5.0	215	6.0	6	300
94000.W0102	14-100	6.0	215	7.0	6	300
94000.W0103	14-100	8.0	215	8.0	6	300
94000.W0125	22-125	8.0	260	8.0	6	500
94000.W0126	22-125	10.0	260	10.0	6	500
94000.W0127	22-125	12.0	260	12.0	6	500



94000.2



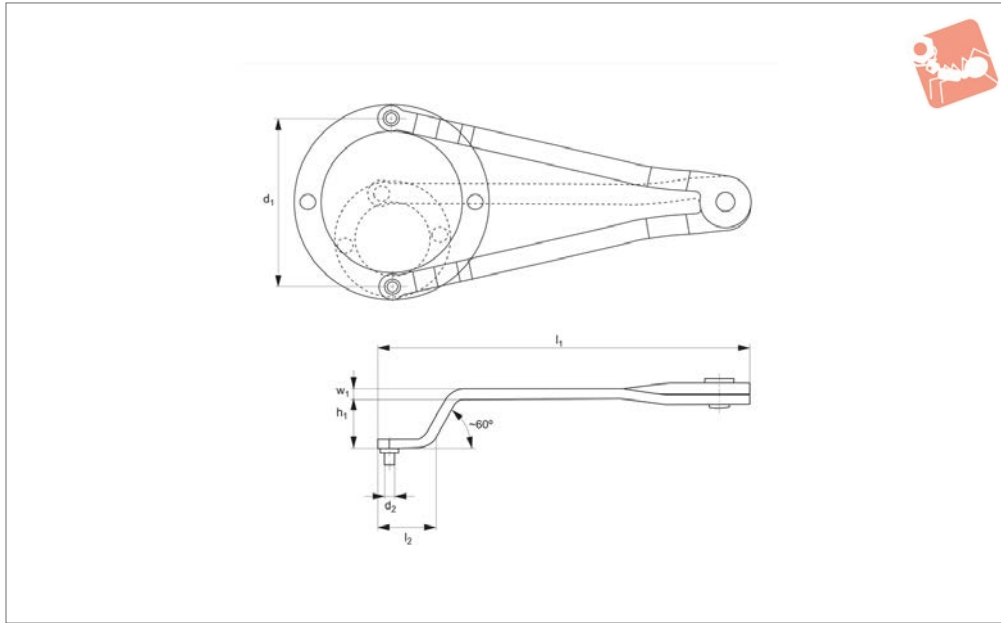
Material

Stainless steel.

Order No.	d ₁ for nut min. max.	d ₂ -0.1mm tol. h12	l ₁	l ₂	w ₁	Weight g
94000.W0561	11-60	3	162	4	4	115
94000.W0562	11-60	4	162	5	4	115



Adjustable Pin Face Spanner - Off set with welded pins

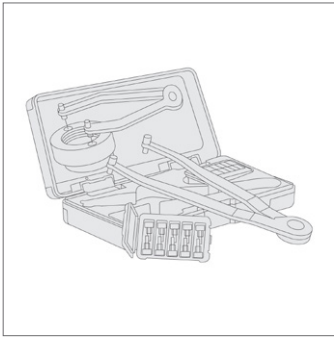


94002

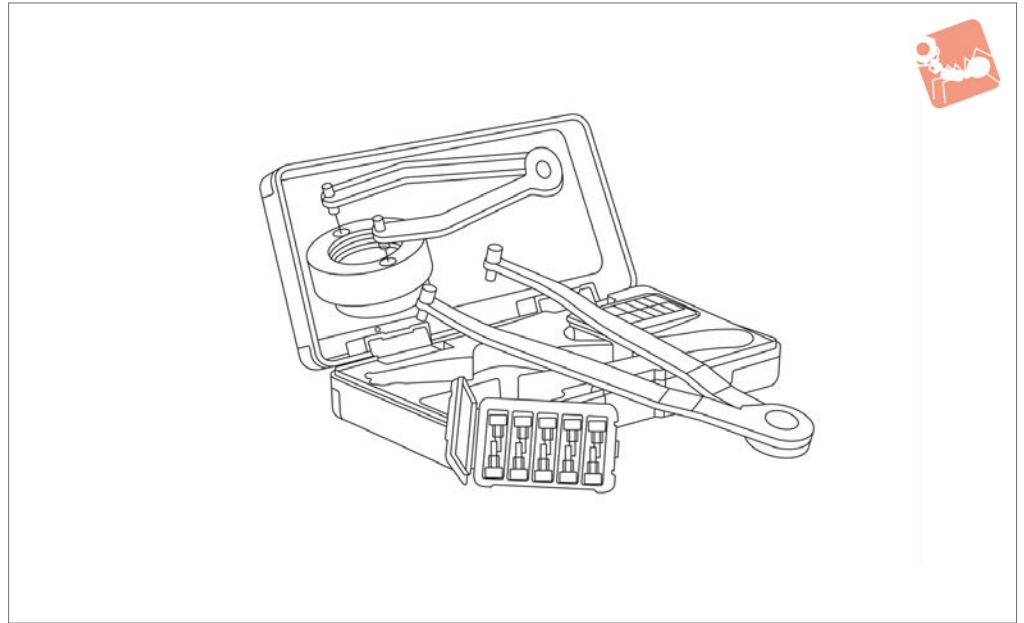
Material

Special steel, hardened and blued.

Order No.	d_1 for nut \emptyset	d_2 -0.1mm tol. h12	h_1	l_1	l_2	w_1	Weight g
94002.W0061	11-60	3	20	153	24	4	120
94002.W0062	11-60	4	20	153	24	4	120
94002.W0101	14-90	5	27	205	31	6	310
94002.W0102	14-90	6	27	205	31	6	310



94020



Material

Spanner: steel (C35/C45), zinc plated.
Pins: hardened steel, blackened.

Technical Notes

Set contains 1 pieces adjustable pin face

spanner to suit interchangeable pins. Pin set contains two pieces each of pin diameter 1.5, 2, 2.5, 3 and 4. Supplied in robust storage box.

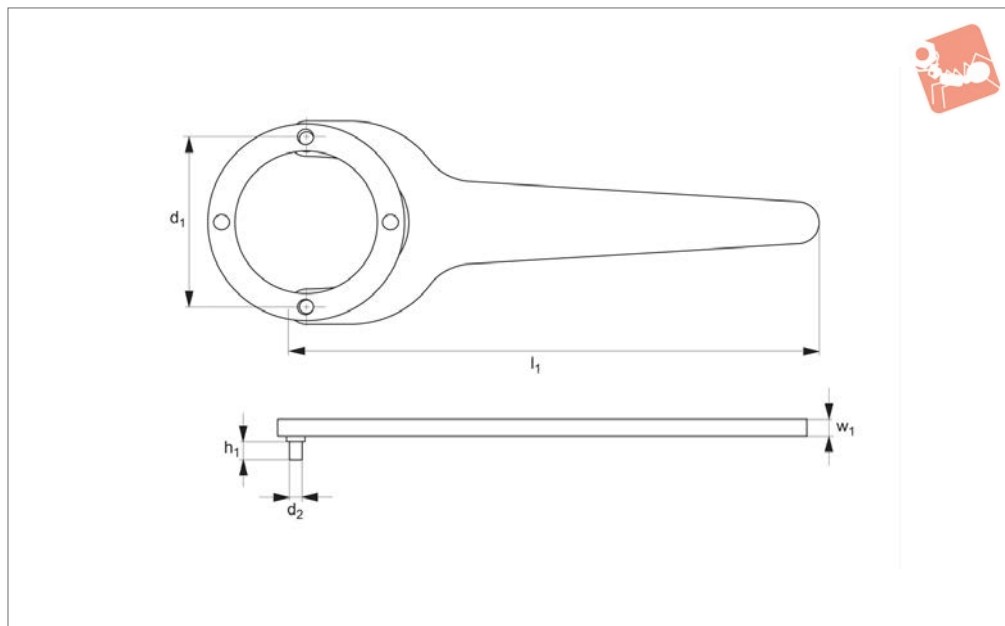
Order No.	Box l x w x h	For nut diameter	Pin diameter	Weight g
94020.W0061	165x87x36	8-100	1.5, 2, 2.5, 3, 4	335



Face Spanner - with Pins

fixed

Spanners & Hook Spanners



95340

SPANNERS & HOOK SPANNERS

Material

Steel (C35/C45), tempered and blackened.

Pins spot welded.

Technical Notes

Produced to DIN 3116A.

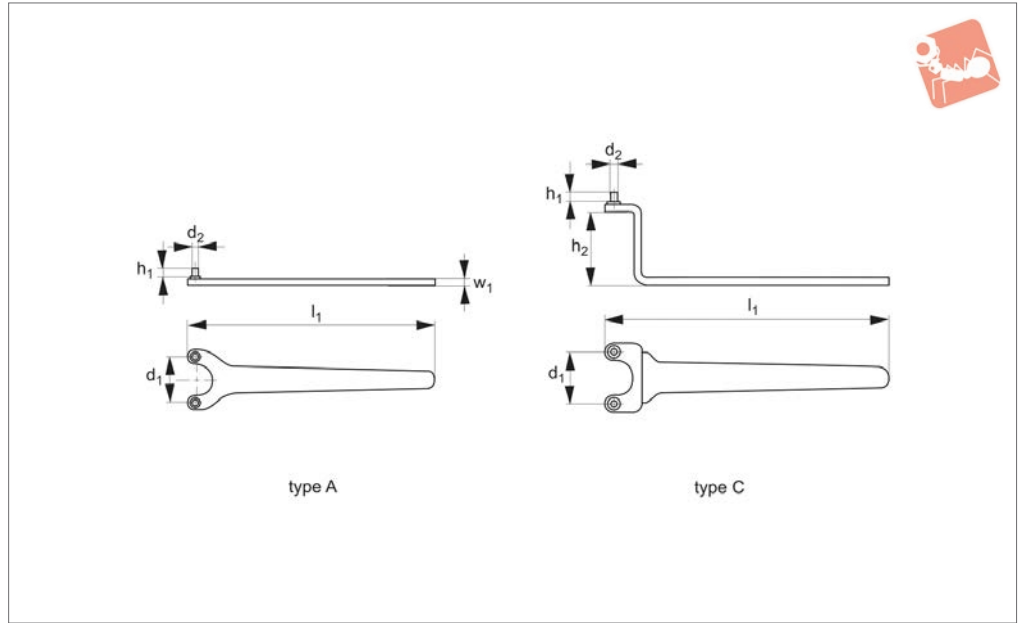
Tips

()= not to DIN standard.

Order No.	d ₁ for nut Ø	d ₂ -0.1 tol. h12	h ₁	l ₁	w ₁	Weight g
95340.W0013	13	2.5	3.0	90	3	27
95340.W0015	15	3.0	3.5	90	3	27
95340.W0020	(20)	3.0	4.0	122	4	50
95340.W0021	(20)	4.0	5.0	122	4	50
95340.W0025	25	3.0	4.0	137	4	65
95340.W0026	(25)	4.0	5.0	137	4	65
95340.W0030	30	4.0	5.0	164	4	85
95340.W0035	35	5.0	6.0	180	5	120
95340.W0036	(35)	4.0	5.0	180	5	120
95340.W0040	40	4.0	5.0	167	5	120
95340.W0045	45	4.0	5.0	187	5	145
95340.W0050	50	5.0	6.0	198	5	175
95340.W0060	60	5.0	6.0	213	6	220
95340.W0075	75	6.0	7.0	243	6	330
95340.W0090	90	7.0	7.5	270	6	410



95342.1



Material

Special steel, zinc plated, with electrically welded pins.

Technical Notes

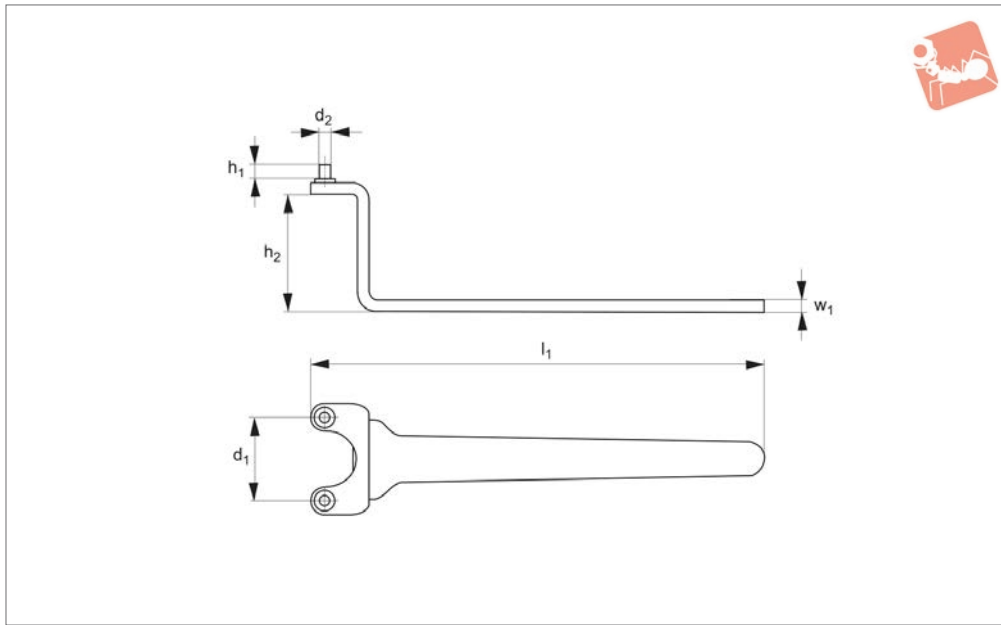
Size 35 for flange nut DIN 44716-D of angle grinder DIN 44706 for clamping,

grinding and cutting-off wheels.

Order No.	Type	d ₁	d ₂	h ₁	h ₂	l ₁	w ₁	Weight g
95342.W0030	A	30	4	5	-	164	4	85
95342.W0035	A	35	5	6	-	180	5	120
95342.W0135	C	35	-5	6	50	200	5	200



Face Spanner - Off set with fixed pins



95342.2

SPANNERS & HOOK SPANNERS

Material

Special steel, blued, with electrically welded pins.

belt tensioners (AUDI, VW).

Important Notes

Pin diameter = nominal diameter -0.1mm (tolerance class h12).

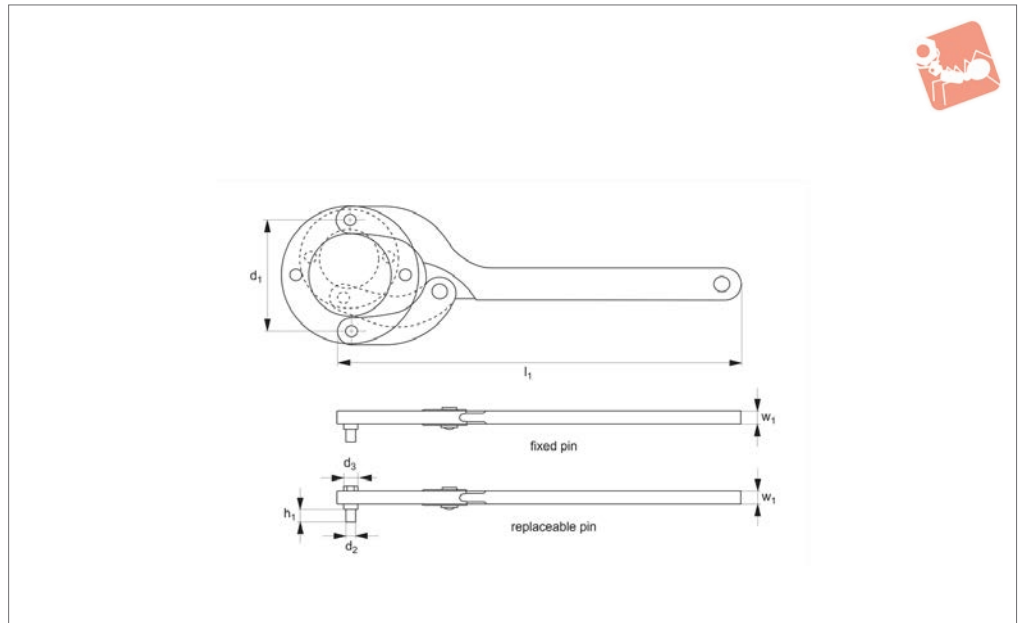
Technical Notes

This wrench is used for adjusting timing

Order No.	Type	d ₁	d ₂	h ₁	h ₂	l ₁	w ₁	Weight g
95342.W0118	C	18	3	4	15	140	4	95



95350



Material

Steel (C35/C45), tempered and blackened.

welded.

For replacement pins see part no. 95360.

Technical Notes

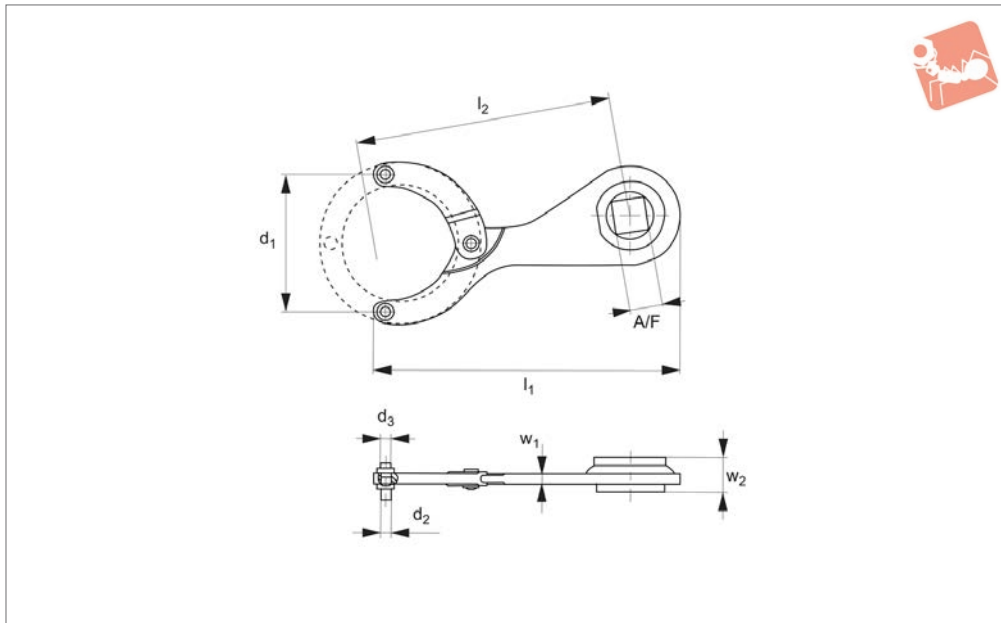
Fixed or replaceable pins, fixed pin spot

Order No.	Type	d ₁ for nut Ø	d ₂ -0.1 tol. h12	d ₃	h ₁	l ₁	w ₁	Weight g
95350.W0041	Fixed Pin	18-40	3	-	4.0	150	5	100
95350.W0042	Fixed Pin	18-40	4	-	5.0	150	5	100
95350.W0081	Fixed Pin	40-80	4	-	5.0	220	6	265
95350.W0082	Fixed Pin	40-80	5	-	6.0	220	6	265
95350.W0083	Fixed Pin	40-80	6	-	7.0	220	6	265
95350.W0125	Fixed Pin	80-125	6	-	7.0	295	8	650
95350.W0126	Fixed Pin	80-125	7	-	7.5	295	8	650
95350.W0127	Fixed Pin	80-125	8	-	8.0	295	8	650
95350.W0201	Fixed Pin	125-200	8	-	8.0	405	10	1590
95350.W0202	Fixed Pin	125-200	10	-	10.0	405	10	1590
95350.W0541	Replaceable Pin	18-40	3	M 4	4.0	150	5	100
95350.W0542	Replaceable Pin	18-40	4	M 4	5.0	150	5	100
95350.W0581	Replaceable Pin	40-80	4	M 6	5.0	220	6	265
95350.W0582	Replaceable Pin	40-80	5	M 6	6.0	220	6	265
95350.W0583	Replaceable Pin	40-80	6	M 6	7.0	220	6	265
95350.W0625	Replaceable Pin	80-125	6	M 6	7.0	295	8	650
95350.W0626	Replaceable Pin	80-125	7	M 6	7.5	295	8	650
95350.W0627	Replaceable Pin	80-125	8	M 6	8.0	295	8	650
95350.W0701	Replaceable Pin	125-200	8	M 8	8.0	405	10	1590
95350.W0702	Replaceable Pin	125-200	10	M 8	10.0	405	10	1590



Adjustable Face Spanner

with replaceable pins - for torque socket wrench



95352

SPANNERS & HOOK SPANNERS

Material

Special steel, hardened and blackened.

Technical Notes

Replaceable, hardened pins.

Pin diameter = nominal diameter -0,1mm (tolerance class h12). See part 95360 for replacement pins.

For use with torque wrench, for more accu-

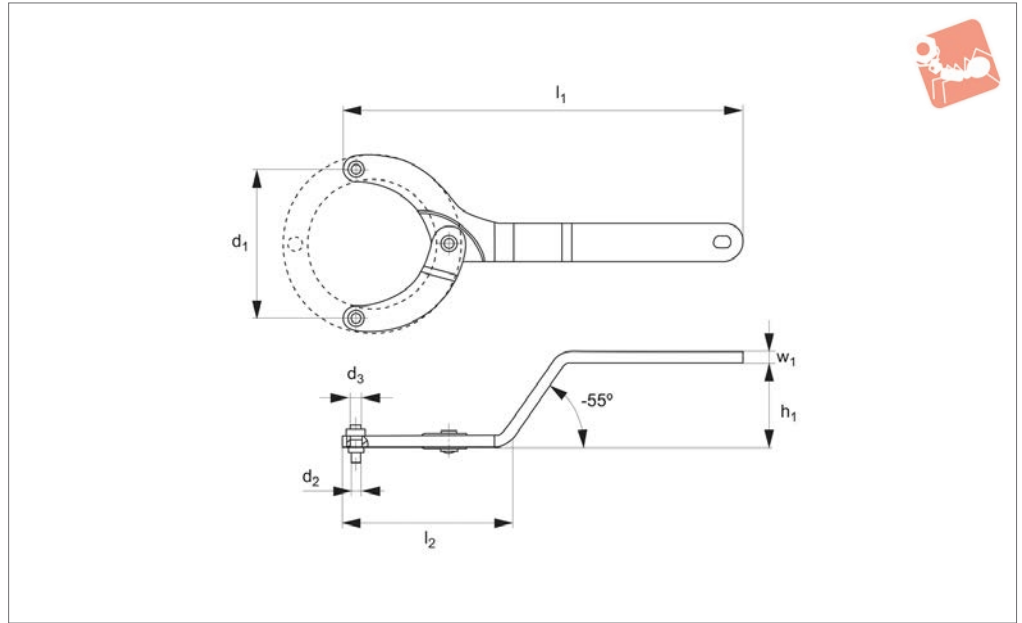
rate installation and adjustment.

The required torque wrench value is dependent upon dimension l_2 . Please refer to the operating manual of your torque wrench.

Order No.	d_1 for nut \emptyset	d_2 -0.1	d_3	l_1	l_2	w_1	w_2	Drive A/F	Weight g
95352.W0042	18-40	4	M 4	120	100	5	16.0	1/2"	155
95352.W0082	40-80	5	M 6	180	150	6	20.5	3/4"	450
95352.W0083	40-80	6	M 6	180	150	6	20.5	3/4"	455
95352.W0125	80-125	6	M 6	250	220	8	20.5	3/4"	795
95352.W0127	80-125	8	M 6	250	220	8	20.5	3/4"	800



95353



Material

Spanner: steel C35/C45, hardened, with blue finish.

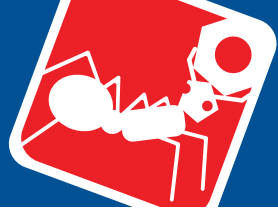
Pins: hardened steel, blackened.

(tolerance class h12). See part 95360 for replacement pins.

Technical Notes

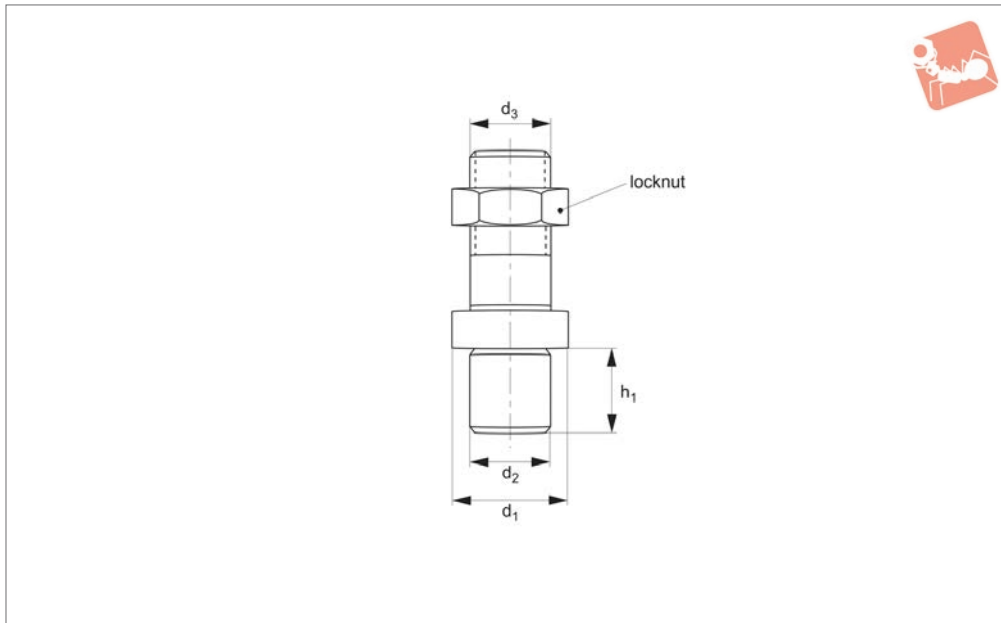
Pin diameter = nominal diameter -0,1mm

Order No.	d ₁ for nut Ø	d ₂ -0.1	d ₃	h ₁	l ₁	l ₂	w ₁	Weight g
95353.W0041	18-40	3	M 4	33	158	57	5	114
95353.W0042	18-40	4	M 4	33	158	57	5	114
95353.W0081	40-80	4	M 6	45	215	92	6	290
95353.W0082	40-80	5	M 6	45	215	92	6	290
95353.W0083	40-80	6	M 6	45	215	92	6	295
95353.W0125	80-125	6	M 6	63	290	130	8	695
95353.W0126	80-125	8	M 6	63	290	130	8	700



Replacement Pins for face spanners

Spanners & Hook Spanners



95360

SPANNERS & HOOK SPANNERS

Material

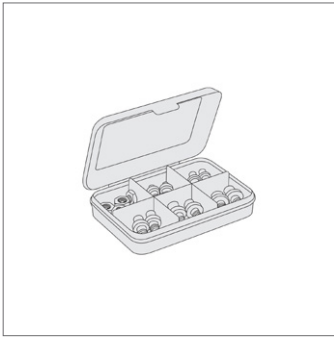
Steel (C35/C45), tempered, hardened, with blue finish.

Technical Notes

Sold as individual pins. Suitable for a variety of spanners, for example 95350,

95352, 95353. See individual product table for pin thread required.

Order No.	d ₁	d ₂ pin tol. h ₁₂ -0,1	d ₃	h ₁	Weight g
95360.W0002	5.5	3	M 4	4.0	2
95360.W0003	7.0	4	M 4	5.0	2
95360.W0010	8.5	4	M 6	4.5	3
95360.W0011	8.5	5	M 6	5.5	5
95360.W0012	10.0	6	M 6	6.5	7
95360.W0013	11.0	7	M 6	7.0	8
95360.W0014	12.0	8	M 6	7.5	9
95360.W0017	12.0	8	M 8	7.5	14
95360.W0019	15.0	10	M 8	9.5	19



95362



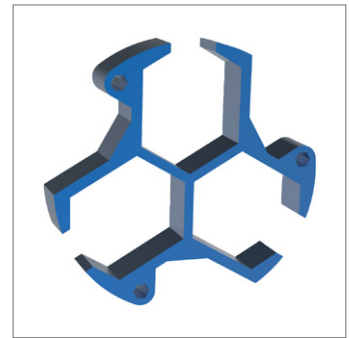
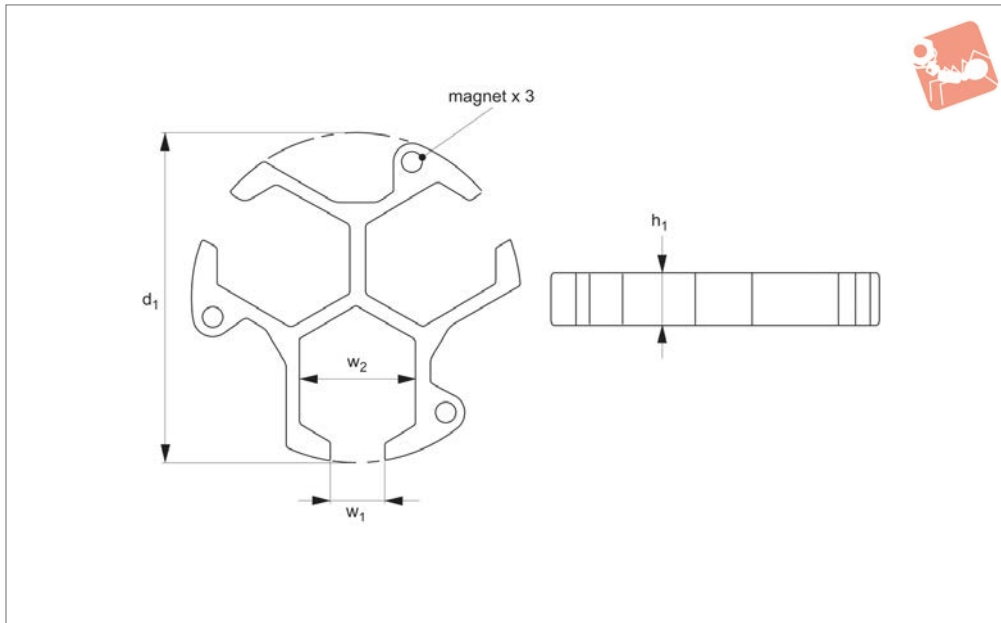
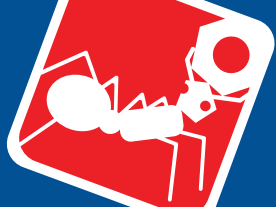
Material

Special steel, hardened and blued.

Technical Notes

Two pins each per size, including nuts in a clearly arranged assortment box.

Order No.	Box l x w x h	For use with 95350, 95352, 95353	Pin diameter -0.1mm tol. h12	Nut (DIN 439)	Weight g
95362.W0006	90 x 65 x 20	40-80 / 80-125	4, 5, 6, 7, 8	10xM 6	95



97100

SPANNERS & HOOK SPANNERS

Material

Body: anodised aluminium (high wear resistance).

Technical Notes

The Posi-stop replaces all forms of distance

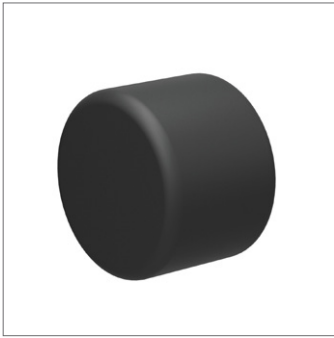
sleeves and soft jaws normally used when turning short workpieces. They mount securely against the chuck face using three strong magnets and provide a fixed reference surface.

Tips

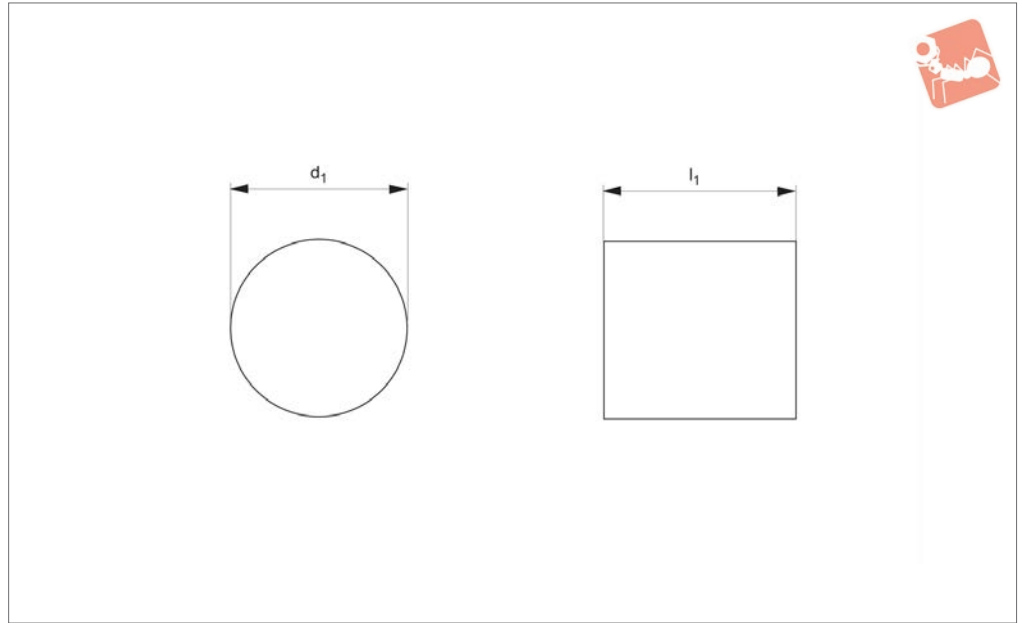
* w_1 - standard width jaw is 25mm, this can easily be milled or sawn larger for chucks with wider jaws up to 54mm.

Order No.	d_1	h_1 ± 0.01	w_1	w_2	Type
97100.W0015	150	15	25	55	Single
97100.W0020	150	20	25	55	Single
97100.W0025	150	25	25	55	Single
97100.W0030	150	30	25	55	Single
97100.W0035	150	35	25	55	Single
97100.W0040	150	40	25	55	Single
97100.W0503	-	1 of each - 15, 20, 25	-	-	Set of 3
97100.W0504	-	1 of each - 15, 20, 25, 30	-	-	Set of 4
97100.W0505	-	1 of each - 15, 20, 25, 30, 35	-	-	Set of 5
97100.W0506	-	1 of each - 15, 20, 25, 30, 35, 40	-	-	Set of 6





97103



Material

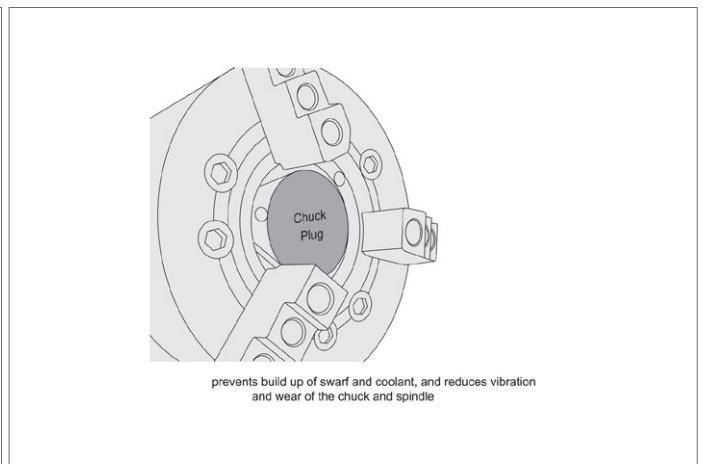
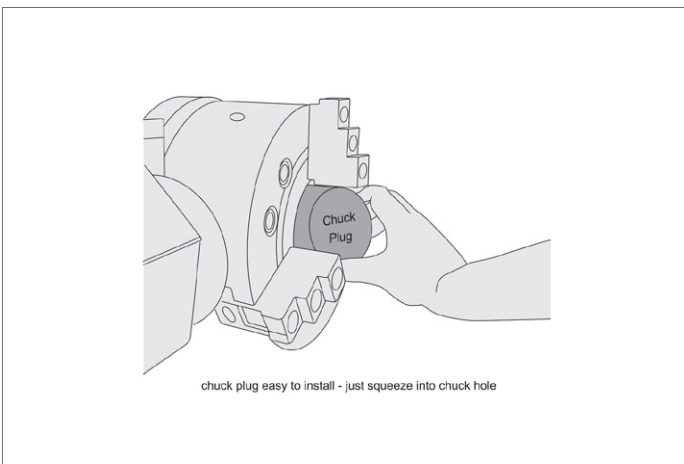
Flame resistant neoprene foam.

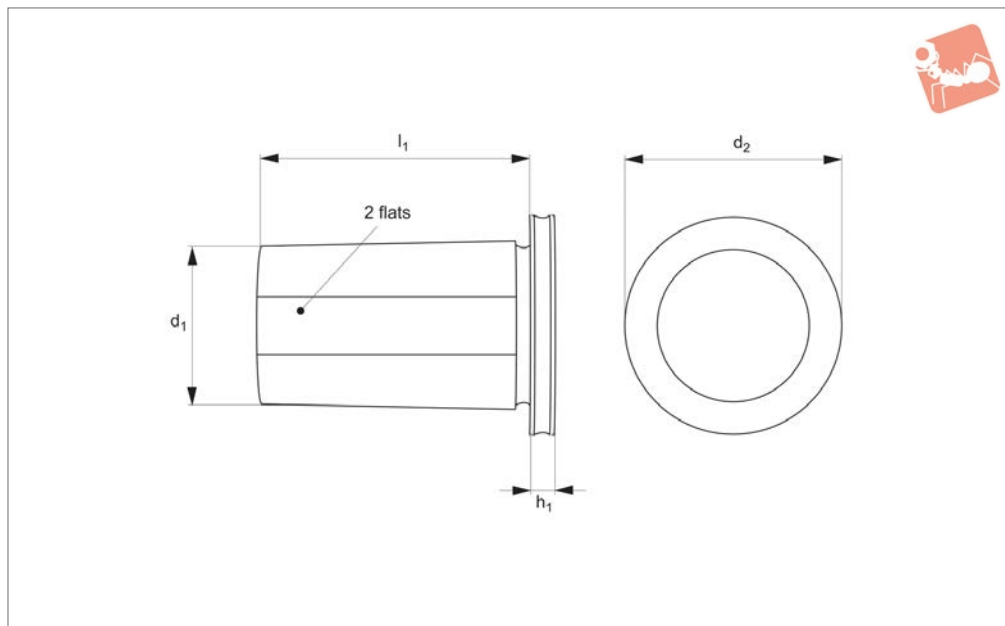
through holes to keep swarf and coolant from the spindle bore.
Just squeeze the plug into the chuck hole.

Technical Notes

The chuck plug is used to plug lathe chuck

Order No.	d ₁	Optimal bore length l ₁	Bore length l ₁ min. max.	Qty/pack
97103.W0035	35	33	30-34	2
97103.W0048	48	45	42-47	2
97103.W0055	55	52	49-54	2
97103.W0070	70	66	62-68	2
97103.W0080	80	75	72-78	2
97103.W0086	86	81	76-83	2
97103.W0097	97	91	87-94	2
97103.W0107	107	100	97-104	2
97103.W0113	113	106	100-109	2





97104

SPANNERS & HOOK SPANNERS

Material

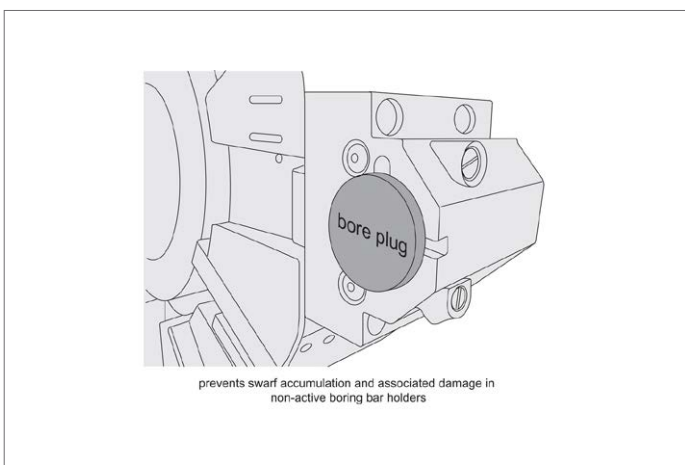
Body: aluminium (hard coat anodized).

coolant build up in boring bar holders, and as a result also prolongs tool holder life.

Technical Notes

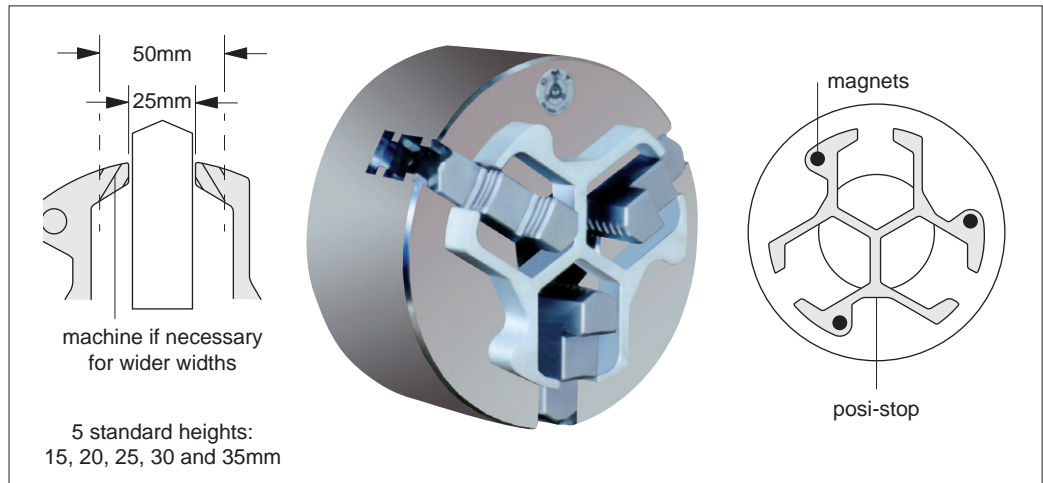
The bore plug is used to prevent swarf and

Order No.	d ₁	h ₁	l ₁	d ₂	Type
97104.W0025	25	6.4	68.5	36.5	Metric
97104.W0032	32	6.4	68.5	42.9	Metric
97104.W0040	40	6.4	68.5	49.2	Metric
97104.W0050	50	6.4	68.5	61.9	Metric
97104.W0100I	1"	0,25"	2,75"	1,44"	Inch
97104.W0125I	1-1/4"	0,25"	2,75"	1,69"	Inch
97104.W0150I	1-1/2"	0,25"	2,75"	1,94"	Inch
97104.W0200I	2"	0,25"	2,75"	2,44"	Inch





97100 Posi-Stops

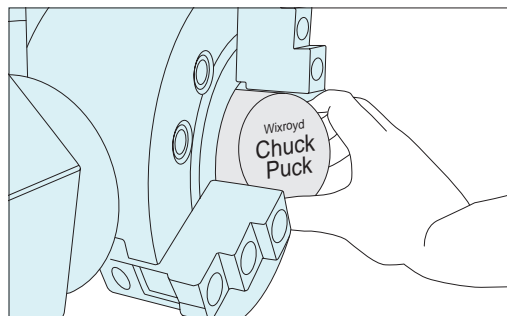


Chuck “Posi-stops” provide a quick and accurate method of moving workpieces away from the face of the chuck. Often used to enable the workpiece to be machined more closely to its extremity or for shorter workpieces.

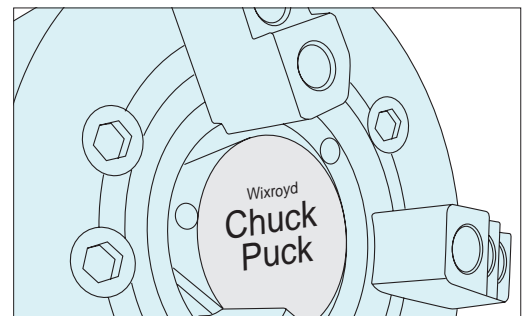
Each posi-stop has strong magnets on the bottom face so that the stop snaps firmly over the chuck jaws and onto the chuck face. There are five standard thicknesses; 15, 20, 25, 30 and 35mm (accuracy $\pm 0.01\text{mm}$) or they can be purchased as a set.

The posi-stops are made for a standard jaw width of 25mm but they can easily be opened up (mill or saw) to accommodate wider jaw widths.

97103 Chuck Puck

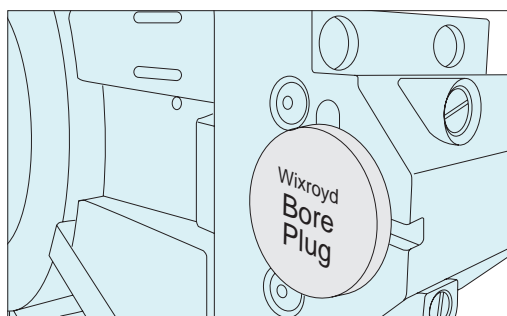


Chuck plug easy to install - just squeeze into the chuck hole.

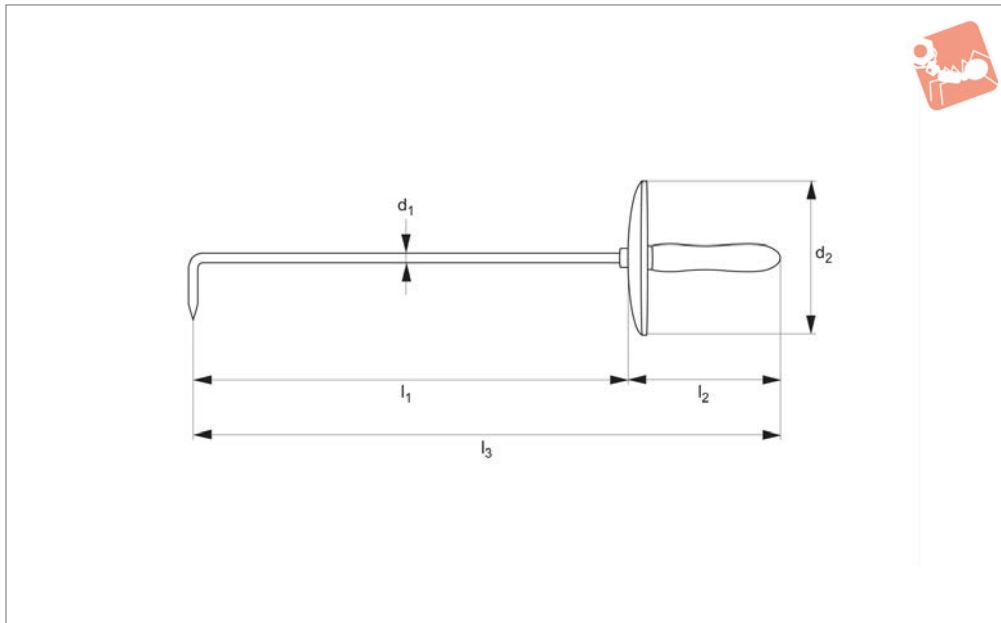


Prevents build up of swarf and coolant, reduces vibration as well as wear of the chuck and spindle.

97104 Bore Plug



Prevents swarf accumulation and associated damage in non-active boring bar holders.



97050

SPANNERS & HOOK SPANNERS

Material

Hook and guard: steel.
Handle: wood.

Technical Notes

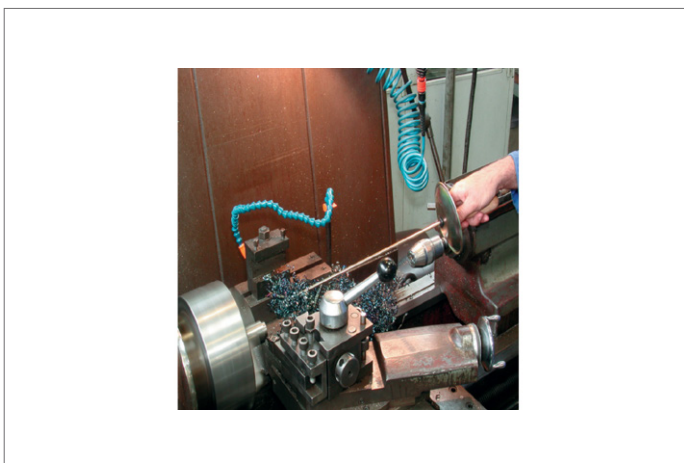
Excellent for removing swarf or chips from in and around workpieces for mills and

lathes. Extended hook minimises risk to operator.
Part number 97050.W2050 has rigid fixing (brazed-soldered).
All other parts have flexible fixing (rubber).

Important Notes

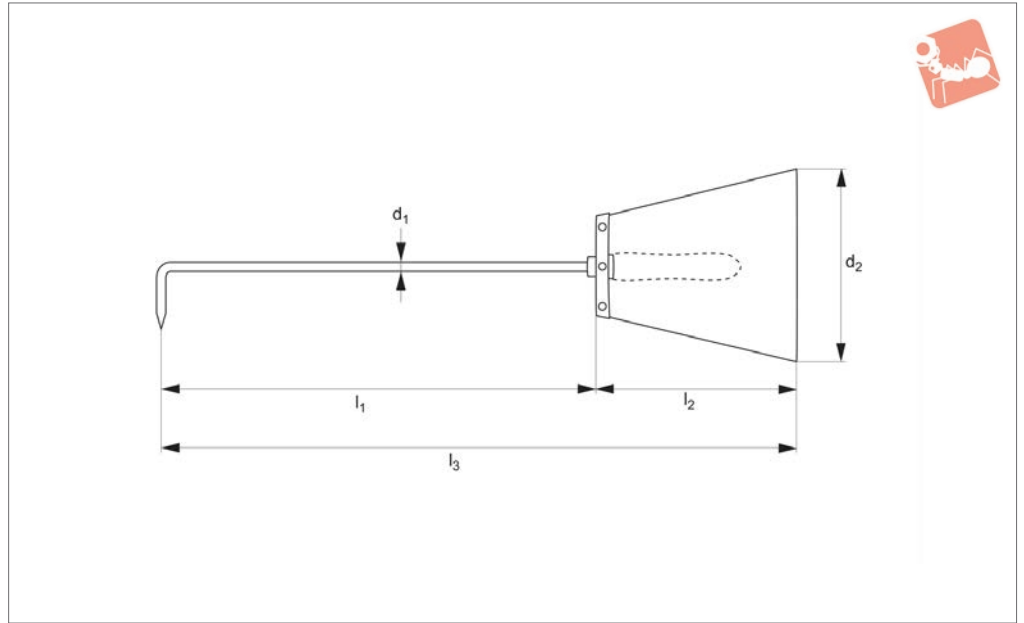
Take all necessary safety precautions when using this product in or around working machinery. If in doubt shut down machine.

Order No.	Guard fixing	d ₁	l ₁	l ₂	l ₃	d ₂
97050.W2020	Flexible-circlip	5	180	125	305	115
97050.W2030	Flexible-circlip	6	280	130	410	130
97050.W2040	Flexible-circlip	6	400	130	530	140
97050.W2050	Rigid-welded	6	400	130	530	140





97052



Material

Hook: steel.
Guard: plastic.
Handle: wood.

Technical Notes

Excellent for removing swarf or chips from

in and around workpieces for mills and lathes. Extended hook minimises risk to operator.

Important Notes

Take all necessary safety precautions when using this product in or around working

machinery. If in doubt shut down machine.

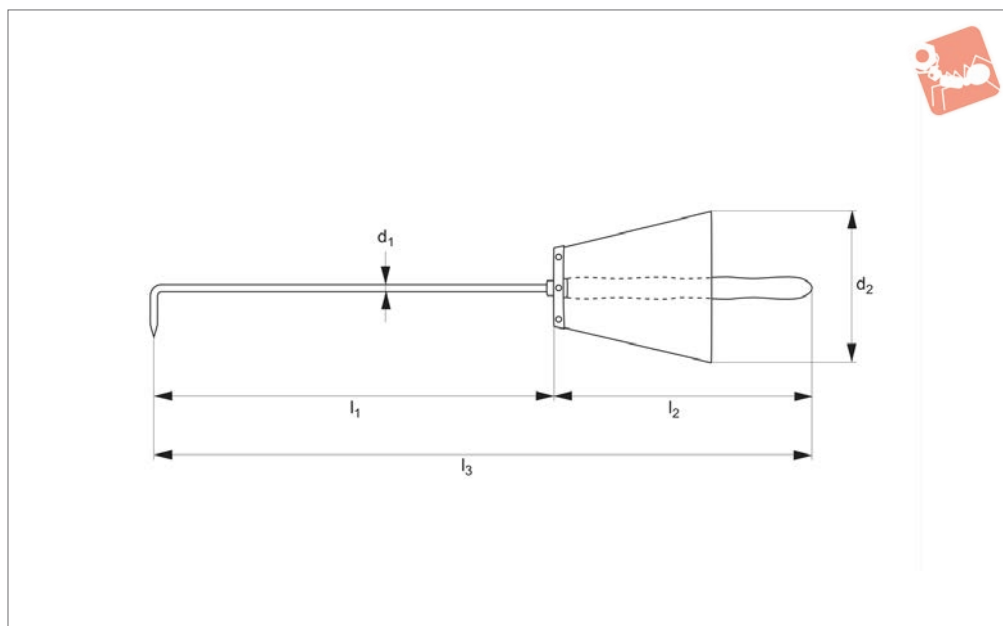
Order No.	d ₁	l ₁	l ₂	l ₃	d ₂
97052.W2060	6	400	180	570	180
97052.W2070	7	500	180	670	180



Chip Hooks

full plastic guard - long handle

Spanners & Hook Spanners



97053

SPANNERS & HOOK SPANNERS

Material

Hook: steel.
Guard: plastic.
Handle: wood.

in and around workpieces for mills and lathes. Extended hook minimises risk to operator.

machinery. If in doubt shut down machine.

Technical Notes

Excellent for removing swarf or chips from

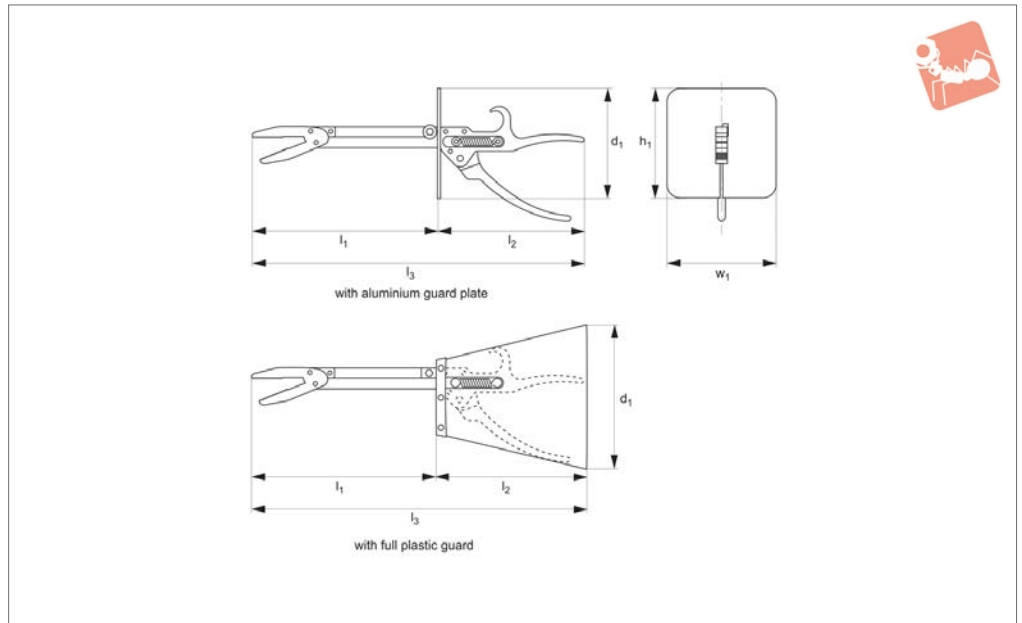
Important Notes

Take all necessary safety precautions when using this product in or around working

Order No.	d ₁	l ₁	l ₂	l ₃	d ₂
97053.W2080	7	500	320	820	180
97053.W2090	8	800	320	1120	180
97053.W2100	8	1000	320	1320	180



97060



Material

Handle and cutter: steel.
Guard: plastic or aluminium.

Important Notes

Take all necessary safety precautions when using this product in or around working

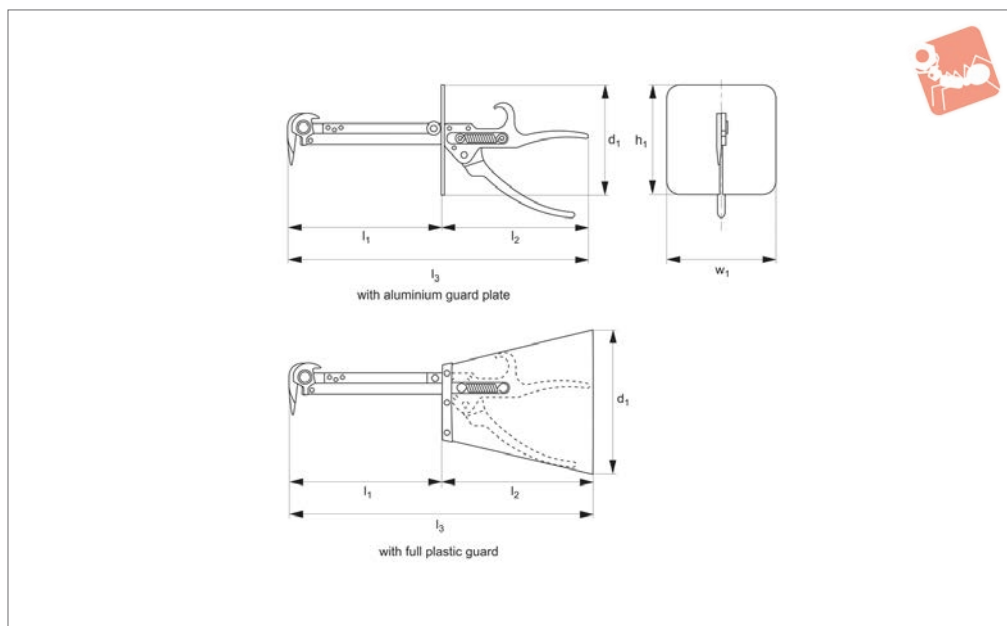
machinery. If in doubt shut down machinery.

Order No.	Guard material	d ₁	h ₁ x w ₁	l ₁	l ₂	l ₃
97060.W1025	Aluminium	-	85x85	175	155	330
97060.W1035	Plastic	180	-	175	180	355



Chip Cutter and Hook with hand guard

Spanners & Hook Spanners



97061

SPANNERS & HOOK SPANNERS

Material

Handle and cutter: steel.
Guard: plastic or aluminium.

Technical Notes

Max. capacity of cutter is clip section of

1,5mm² (e.g. 0,25mm x 6mm).

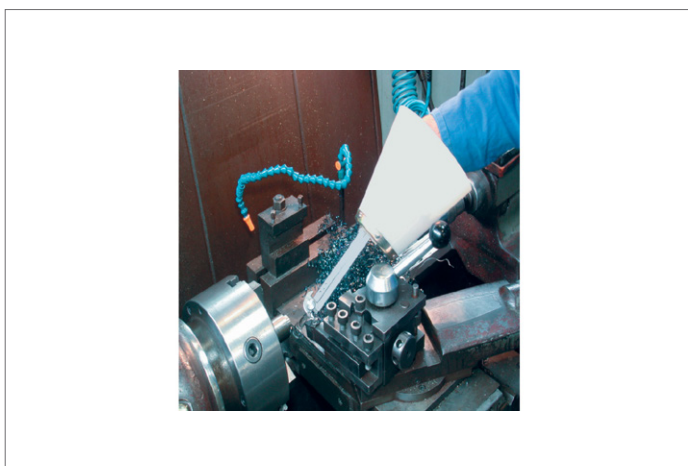
Tips

Part no. 97061 has added benefit of hook as well as cutter for improved removal of difficult to reach swarf/chips.

Important Notes

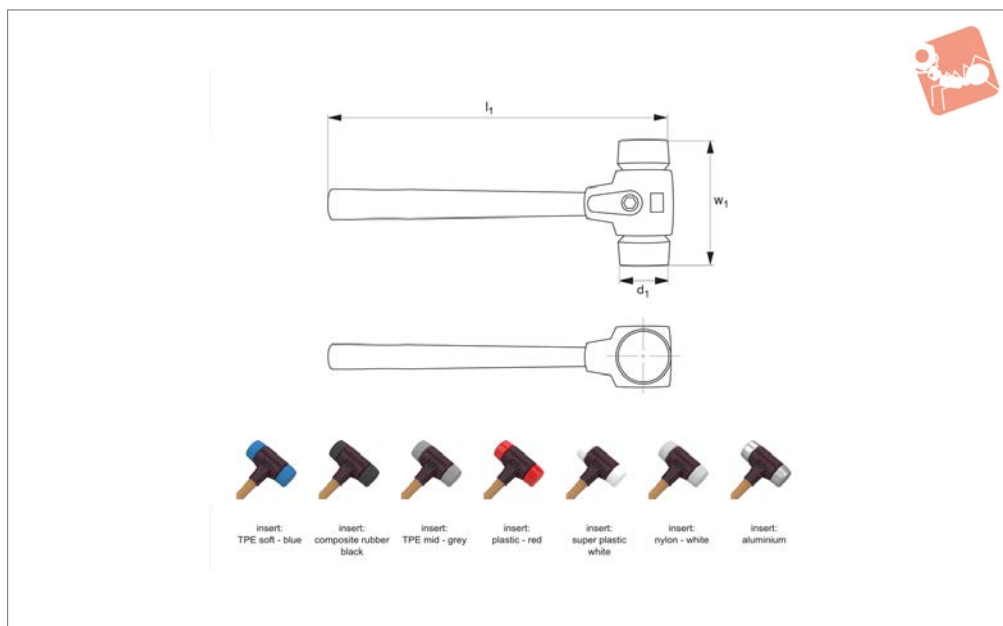
Take all necessary safety precautions when using this product in or around working machinery. If in doubt shut down machinery.

Order No.	Guard material	d ₁	h ₁ x w ₁	l ₁	l ₂	l ₃
97061.W1050	Aluminium	-	85x85	165	155	320
97061.W1060	Plastic	180	-	165	180	345





98001



Material

Handle: wood.
Housing: cast iron.
Inserts: see table.

Technical Notes

For full details of inserts see part no.

98004.

Tips

Simplex mallets are a flexible modular system with replaceable handle, housing and inserts. Suitable replacement items for Simplex Mallet 98001 are;

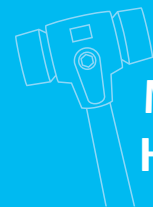
- handle no. 98003
- housing no. 98002
- inserts no. 98004

Order No.	Inserts	$\varnothing d_1$	w_1	l_1	Weight g
98001.W0130	TPE Soft - Blue	30	90	300	345
98001.W0140	TPE Soft - Blue	40	110	330	620
98001.W0150	TPE Soft - Blue	50	135	350	1170
98001.W0160	TPE Soft - Blue	60	145	405	1530
98001.W0230	Composite Rubber - Black	30	90	300	340
98001.W0240	Composite Rubber - Black	40	110	330	650
98001.W0250	Composite Rubber - Black	50	135	350	1170
98001.W0260	Composite Rubber - Black	60	145	405	1600
98001.W0280	Composite Rubber - Black	80	175	490	2950
98001.W0330	TPE - Mid Grey	30	90	300	335
98001.W0340	TPE - Mid Grey	40	110	330	600
98001.W0350	TPE - Mid Grey	50	135	350	1070
98001.W0360	TPE - Mid Grey	60	145	405	1420
98001.W0430	Plastic - Red	30	90	300	345
98001.W0440	Plastic - Red	40	110	330	635
98001.W0450	Plastic - Red	50	135	350	1120
98001.W0460	Plastic - Red	60	145	405	1520
98001.W0530	Superplastic - White	30	90	300	320
98001.W0540	Superplastic - White	40	110	330	610
98001.W0550	Superplastic - White	50	135	350	1040
98001.W0560	Superplastic - White	60	145	405	1440
98001.W0580	Superplastic - White	80	175	490	2660
98001.W0630	Nylon - White	30	90	300	340
98001.W0640	Nylon - White	40	110	330	650
98001.W0650	Nylon - White	50	135	350	1130
98001.W0660	Nylon - White	60	145	405	1500
98001.W0680	Nylon - White	80	175	490	2880
98001.W0730	Aluminium	30	90	300	400
98001.W0740	Aluminium	40	110	330	750
98001.W0750	Aluminium	50	135	350	1380
98001.W0760	Aluminium	60	145	405	1950



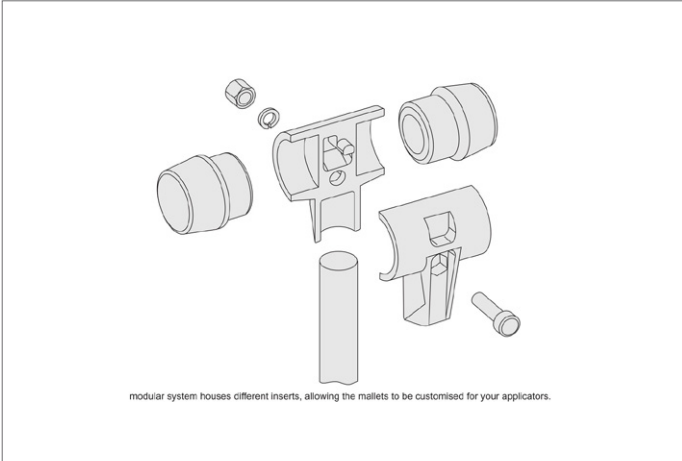
Simplex Mallets - Complete

cast iron housing - wooden handle



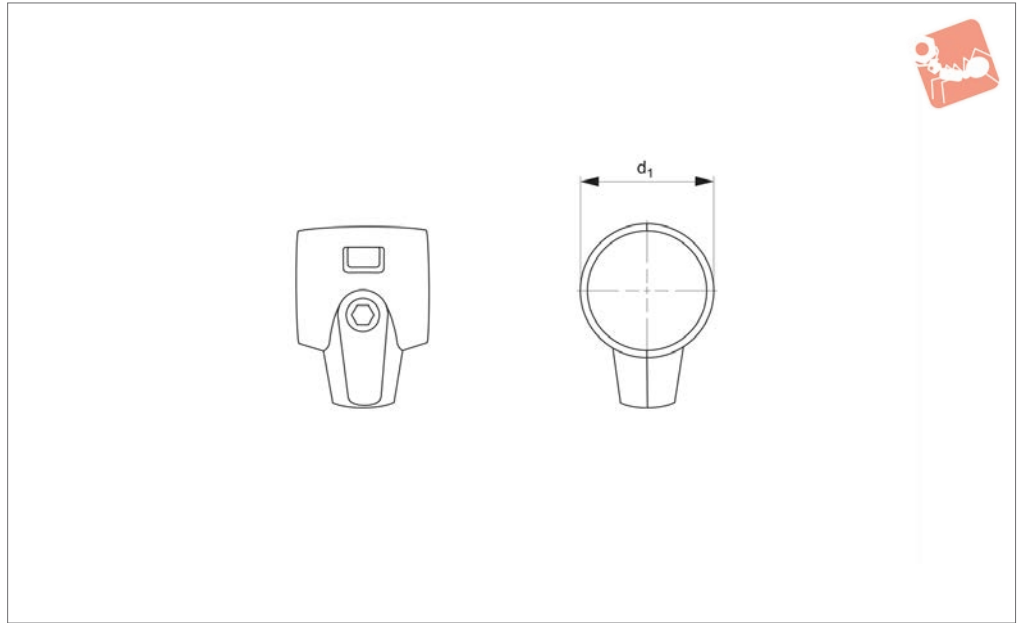
Mallets & Hammers

Order No.	Inserts	$\varnothing d_1$	w_1	l_1	Weight g
98001.W0780	Aluminium	80	175	490	3860





98002



Material

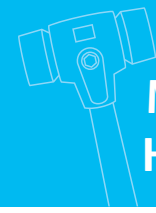
Cast iron housing (two parts to complete the mallet head housing).

Order No.	For mallet head dia. d_1	d_1
98002.W0131	30	30
98002.W0141	40	40
98002.W0151	50	50
98002.W0161	60	60
98002.W0181	80	80
98002.W0191	100	100
98002.W1101	125/140	125/140

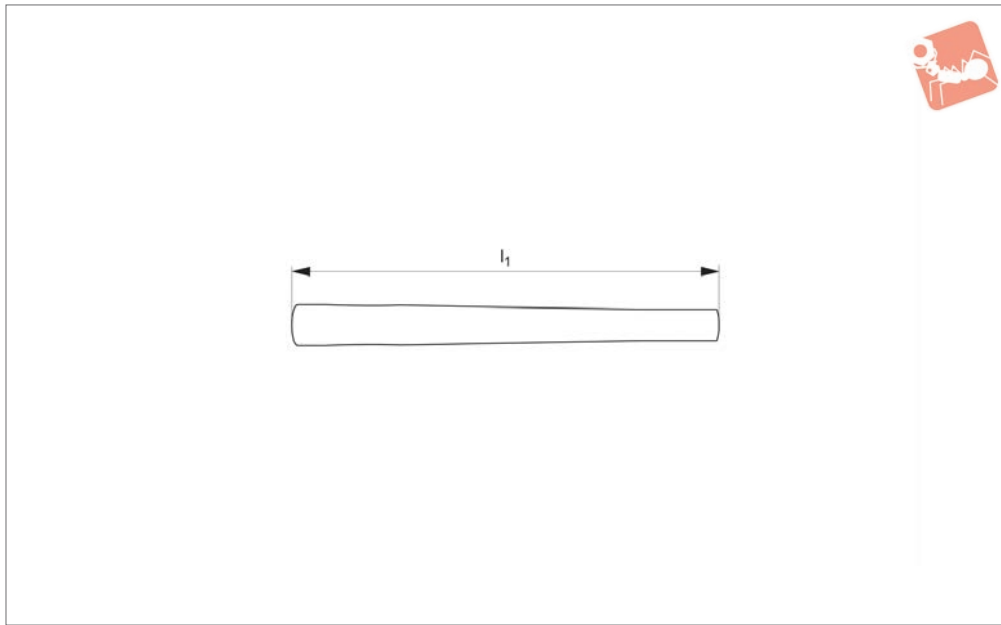


Handle - for Simplex Mallets

wood - for no. 98001 and 98201



Mallets & Hammers



98003

MALLETS & HAMMERS

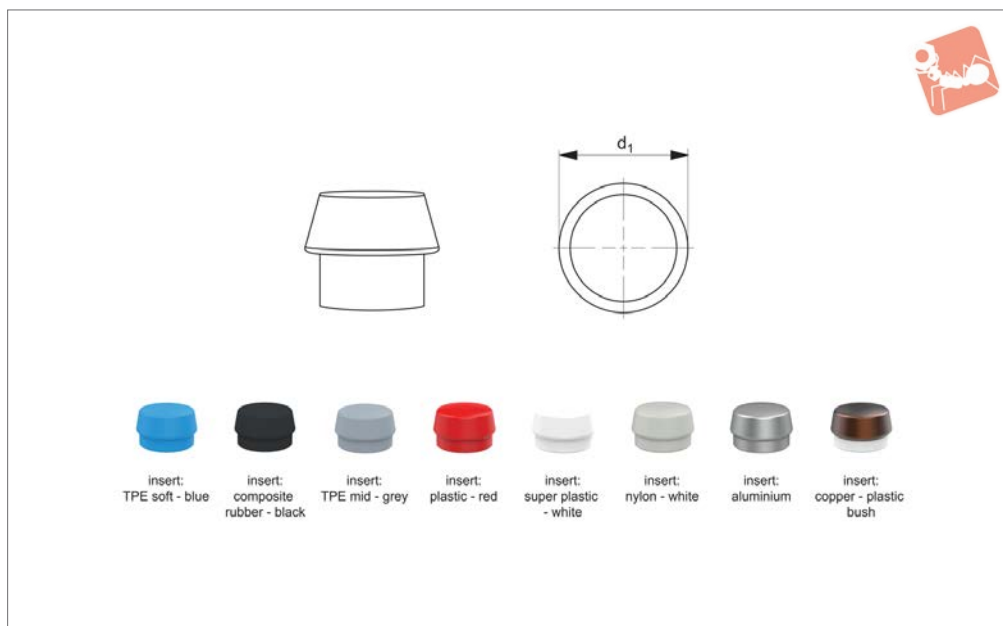
Material

Wood.

Order No.	For mallet head dia. d_1	l_1
98003.W0231	30	260
98003.W0241	40	275
98003.W0251	50	310
98003.W0261	60	335
98003.W0281	80	395



98004



Important Notes

Aluminium inserts, part nos. 98004.W0733-W0788 not for use in light alloy

housings part no. 98022.
 Copper inserts part no. 98004.W0833 and W0844 only for use in reinforced housing

part no. 98002.

Order No.	For mallet head dia. d_1	Insert type
98004.W0133	30	TPE Soft - Blue
98004.W0144	40	TPE Soft - Blue
98004.W0155	50	TPE Soft - Blue
98004.W0166	60	TPE Soft - Blue
98004.W0233	30	Composite Rubber - Black
98004.W0244	40	Composite Rubber - Black
98004.W0255	50	Composite Rubber - Black
98004.W0266	60	Composite Rubber - Black
98004.W0288	80	Composite Rubber - Black
98004.W0333	30	TPE Mid - Grey
98004.W0344	40	TPE Mid - Grey
98004.W0355	50	TPE Mid - Grey
98004.W0366	60	TPE Mid - Grey
98004.W0433	30	Plastic - Red
98004.W0444	40	Plastic - Red
98004.W0455	50	Plastic - Red
98004.W0466	60	Plastic - Red
98004.W0533	30	Superplastic - White
98004.W0544	40	Superplastic - White
98004.W0555	50	Superplastic - White
98004.W0566	60	Superplastic - White
98004.W0588	80	Superplastic - White
98004.W0600	100	Superplastic - White
98004.W0611	125	Superplastic - White
98004.W0622	140	Superplastic - White
98004.W0633	30	Nylon - White
98004.W0644	40	Nylon - White
98004.W0655	50	Nylon - White
98004.W0666	60	Nylon - White
98004.W0688	80	Nylon - White
98004.W0733	30	Aluminium
98004.W0744	40	Aluminium
98004.W0755	50	Aluminium
98004.W0766	60	Aluminium
98004.W0788	80	Aluminium



Inserts - for Simplex Mallets

for no. 98001, 98103 & 98101

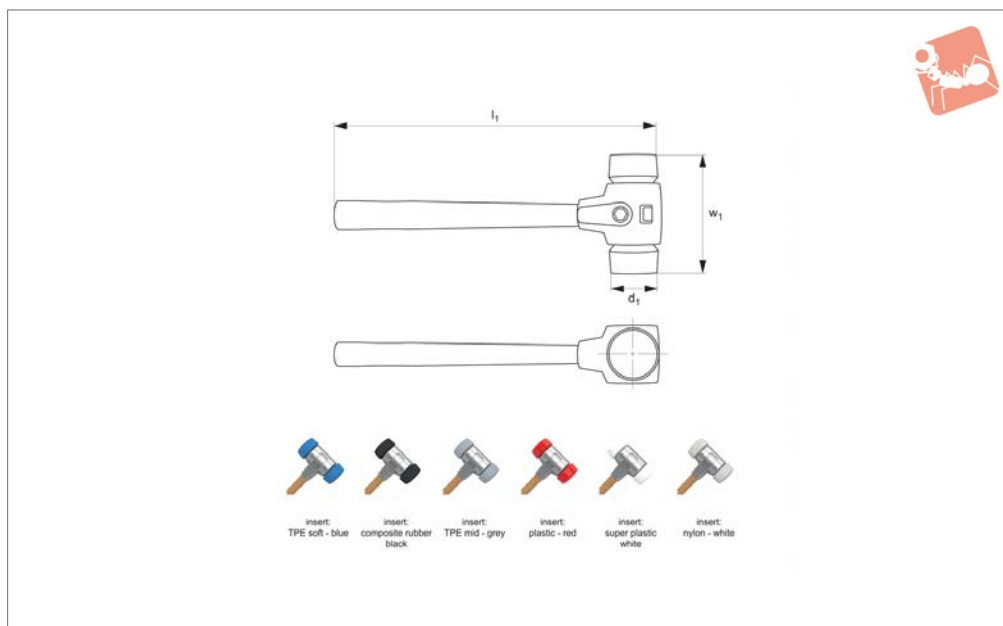


Mallets & Hammers

Order No.	For mallet head dia. d_1	Insert type
98004.W0833	30	Copper - With Plastic Bush
98004.W0844	40	Copper - With Plastic Bush



98021



Material

Handle: wood.
Housing: light alloy.
Inserts: see table.

Technical Notes

For full range of inserts see part no. 98004.

Tips

Simplex mallets are a flexible modular system with replaceable handle, housing and inserts. Suitable replacement items for Simplex Mallet 98021 are:

- handle no. 98003

- housing no. 98022

- inserts no. 98004

Important Notes

Soft metal inserts (nos. 98004.W0733-W0788) must not be used in light alloy housing mallets.

Order No.	Insert type	Ø d ₁	w ₁	l ₁	Weight g
98021.W0130	TPE - Soft Blue	30	90	300	200
98021.W0140	TPE - Soft Blue	40	110	330	360
98021.W0150	TPE - Soft Blue	50	135	350	655
98021.W0160	TPE - Soft Blue	60	145	405	825
98021.W0230	TPE - Rubber	30	90	300	210
98021.W0240	TPE - Rubber	40	110	330	405
98021.W0250	TPE - Rubber	50	135	350	740
98021.W0260	TPE - Rubber	60	145	405	980
98021.W0330	TPE - Mid Grey	30	90	300	205
98021.W0340	TPE - Mid Grey	40	110	330	360
98021.W0350	TPE - Mid Grey	50	135	350	635
98021.W0360	TPE - Mid Grey	60	145	405	825
98021.W0430	Plastic - Red	30	90	300	205
98021.W0440	Plastic - Red	40	110	330	390
98021.W0450	Plastic - Red	50	135	350	635
98021.W0460	Plastic - Red	60	145	405	920
98021.W0530	Superplastic - White	30	90	300	215
98021.W0540	Superplastic - White	40	110	330	360
98021.W0550	Superplastic - White	50	135	350	675
98021.W0560	Superplastic - White	60	145	405	855
98021.W0630	Nylon - White	30	90	300	215
98021.W0640	Nylon - White	40	110	330	395
98021.W0650	Nylon - White	50	135	350	720
98021.W0660	Nylon - White	60	145	405	930

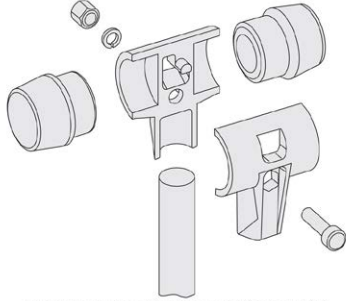


Simplex Mallets - Complete

light alloy housing - wooden handle



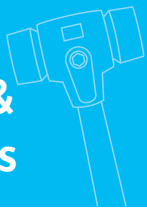
Mallets & Hammers



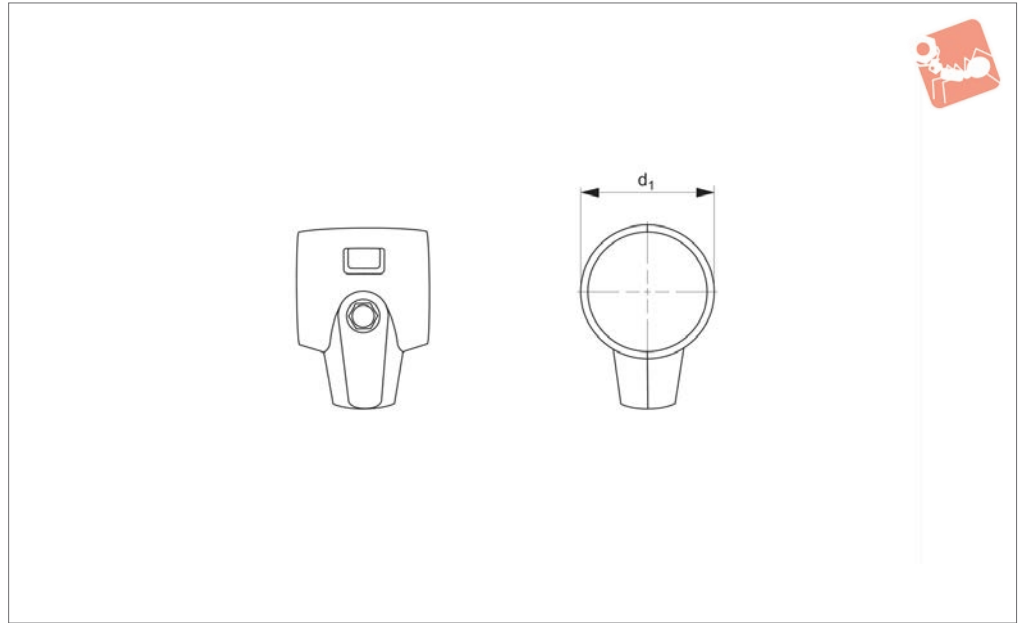
modular system houses different inserts, allowing the mallets to be customised for your applications



MALLETS & HAMMERS



98022



Material

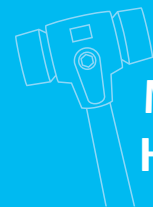
Light alloy housing (two parts).

Order No.	For mallet head dia. d_1	d_1
98022.W0131	30	30
98022.W0141	40	40
98022.W0151	50	50
98022.W0161	60	60

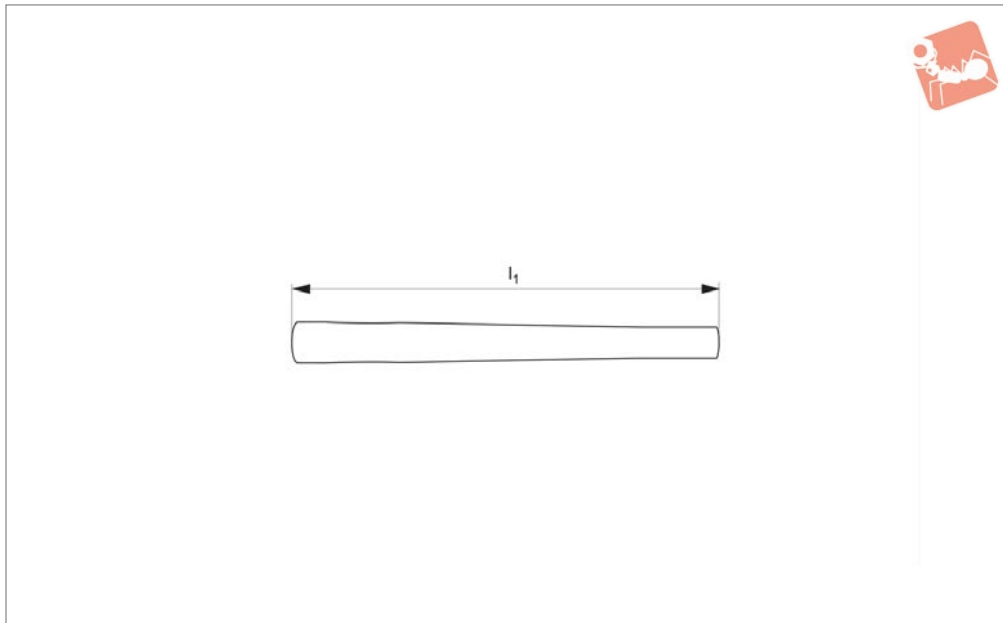


Simplex Mallets

wooden handle for no. 98021



Mallets & Hammers



98023

MALLETS & HAMMERS

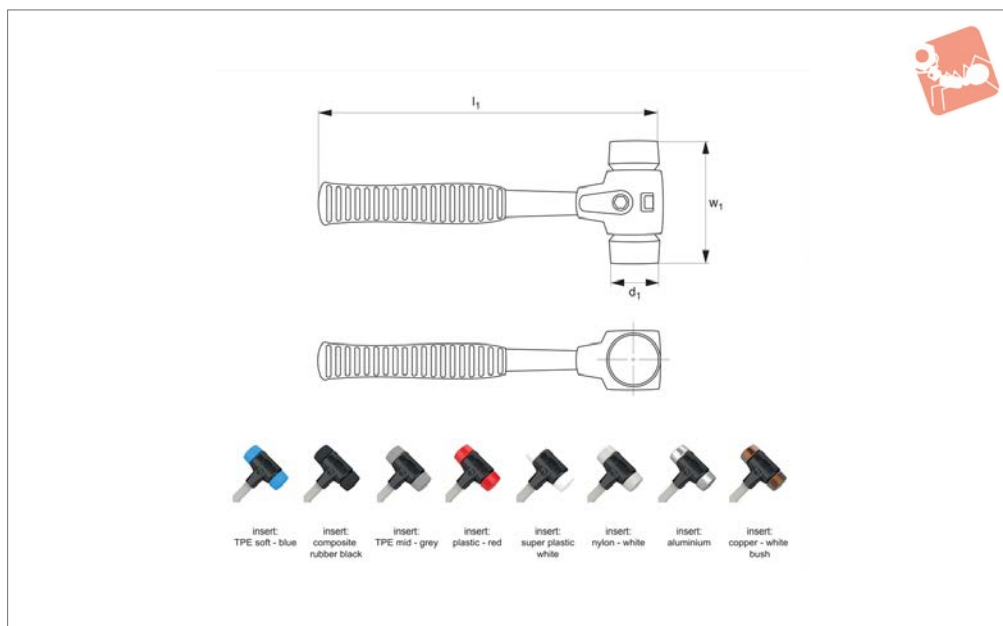
Material

Wooden handle.

Order No.	For mallet head dia. d_1	l_1
98023.W0231	30	260
98023.W0241	40	270
98023.W0251	50	310
98023.W0261	60	335
98023.W0281	80	395



98101



Material

Handle: fibreglass.

Housing: reinforced cast iron.

Inserts: see table.

Technical Notes

For full details of inserts see part no.

98004.

Tips

Simplex mallets are a flexible modular system with replaceable handle, housing and inserts. Suitable replacement items for Simplex Mallet 98101 are;

- handle no. 98103

- housing no. 98102

- inserts no. 98004

Order No.	Inserts	Ø d ₁	w ₁	l ₁	Weight g
98101.W0130	TPE Soft - Blue	30	90	300	450
98101.W0140	TPE Soft - Blue	40	110	330	850
98101.W0150	TPE Soft - Blue	50	135	330	1190
98101.W0160	TPE Soft - Blue	60	145	410	1710
98101.W0230	Composite Rubber - Black	30	90	300	460
98101.W0240	Composite Rubber - Black	40	110	330	890
98101.W0250	Composite Rubber - Black	50	135	330	1250
98101.W0260	Composite Rubber - Black	60	145	410	1830
98101.W0280	Composite Rubber - Black	80	175	490	3420
98101.W0330	TPE Mid - Grey	30	90	300	450
98101.W0340	TPE Mid - Grey	40	110	330	850
98101.W0350	TPE Mid - Grey	50	135	330	1170
98101.W0360	TPE Mid - Grey	60	145	410	1710
98101.W0430	Plastic - Red	30	90	300	450
98101.W0440	Plastic - Red	40	110	330	870
98101.W0450	Plastic - Red	50	135	330	1230
98101.W0460	Plastic - Red	60	145	410	1800
98101.W0530	Superplastic - White	30	90	300	450
98101.W0540	Superplastic - White	40	110	330	860
98101.W0550	Superplastic - White	50	135	330	1200
98101.W0560	Superplastic - White	60	145	410	1750
98101.W0580	Superplastic - White	80	175	490	3240
98101.W0630	Nylon - White	30	90	300	460
98101.W0640	Nylon - White	40	110	330	880
98101.W0650	Nylon - White	50	135	330	1240
98101.W0660	Nylon - White	60	145	410	1820
98101.W0680	Nylon - White	80	175	490	3390
98101.W0730	Aluminium	30	90	300	520
98101.W0740	Aluminium	40	110	330	1000
98101.W0750	Aluminium	50	135	330	1490
98101.W0760	Aluminium	60	145	410	2240



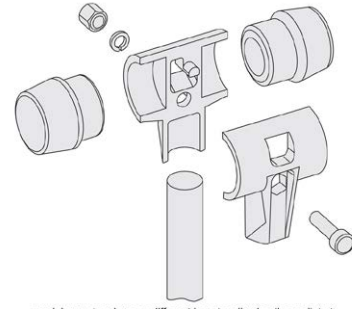
Simplex Mallets - Complete

reinforced cast iron housing - fibreglass handle

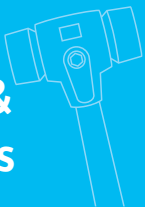


Mallets & Hammers

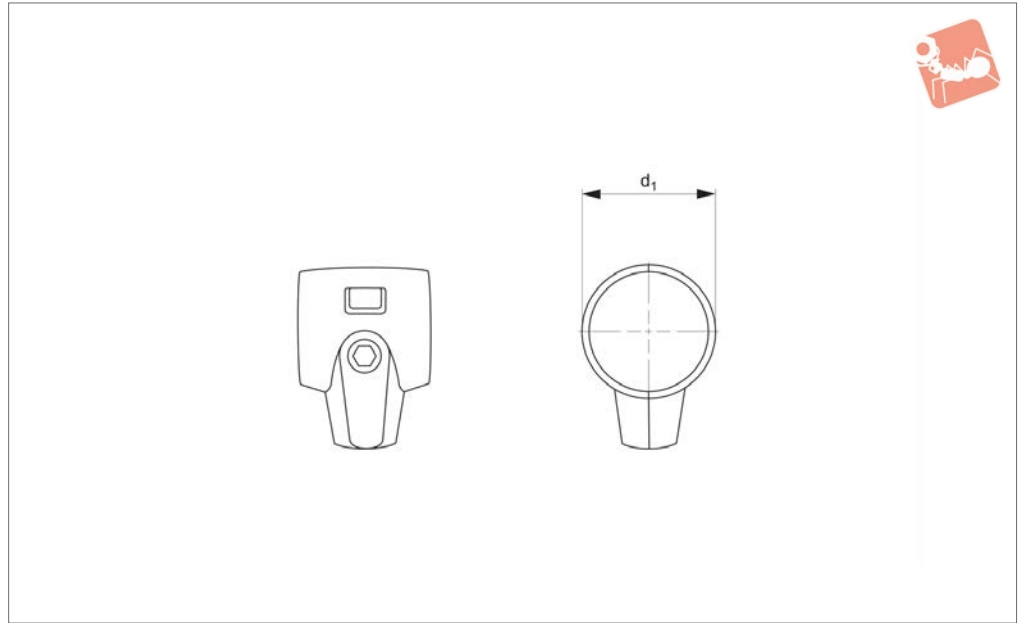
Order No.	Inserts	$\varnothing d_1$	w_1	l_1	Weight g
98101.W0780	Aluminium	80	175	490	4290
98101.W0830	Copper - With Bush	30	90	300	690
98101.W0840	Copper - With Bush	40	110	330	1410



modular system houses different inserts, allowing the mallets to be customised for your applications



98102



Material

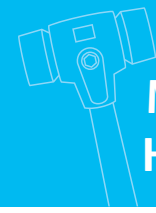
Reinforced housing (two parts, malleable cast iron).

Order No.	For mallet head dia. d_1	d_1
98102.W0131	30	30
98102.W0141	40	40
98102.W0151	50	50
98102.W0161	60	60
98102.W0181	80	80

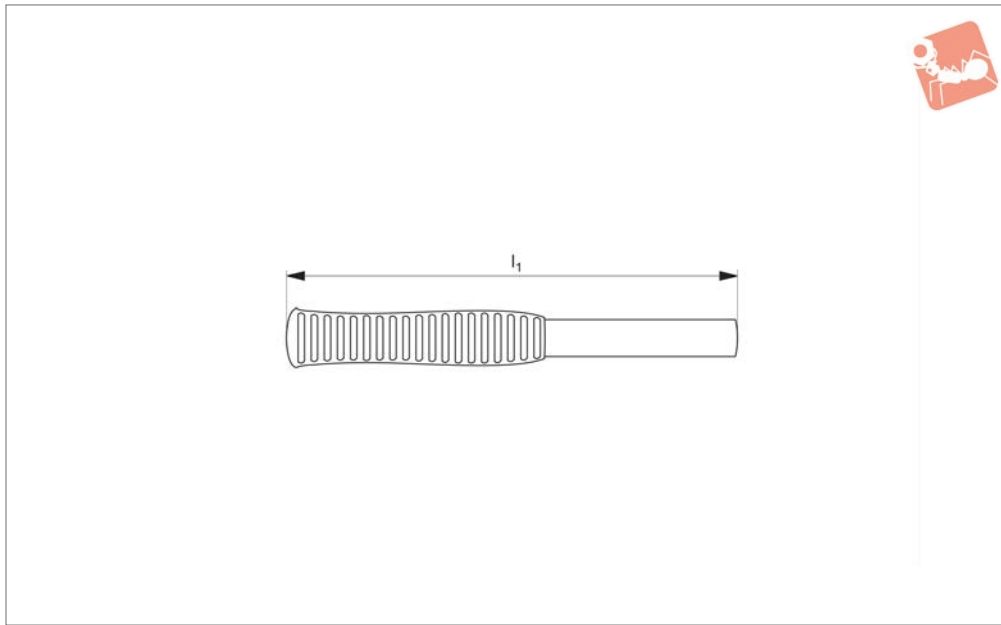


Handle - for Simplex Mallets

fibreglass - for no. 98101



Mallets & Hammers



98103

MALLETS & HAMMERS

Material

Handle: fibreglass.

Grip: rubber.

Order No.	For mallet head d_1	l_1
98103.W0231	30	260
98103.W0241	40/50	267
98103.W0261	60	340
98103.W0281	80	400
98103.W0282	80	700



Application Selection Chart

MALLETS & HAMMERS

Application selection chart

TPE-soft	Composite rubber	TPE-mid	Plastic	Super plastic	Nylon	Alu	Copper	98301 wood	98301 steel	98301 fibre	98310	98321	98401	98330
Soft	Med	Med	Hard	Med	Hard	Hard	Hard							
Range of inserts for Simplex mallets 98001 to 98224								Range of mallet handle types						

Construction applications

Paving		•	•		•										
Floor tiling	•		•												
Curbstone setting / Masonry work		•			•										
Concrete form set-up		•		•											
Scaffold construction		•		•	•	•									
Tent and hall construction					•	•		•							
Gardening and landscaping		•			•										
Home construction		•	•												

Metal-working industry applications

Automotive assembly and repair work				•	•	•	•	•	•	•	•	•	•	•	•
Positioning of workpieces in a vice								•	•	•	•	•			
Straightening work						•		•	•	•	•				
Joining of workpieces						•		•	•	•	•			•	•
Repair and maintenance work				•			•	•	•	•	•			•	•
Car body work				•	•		•	•	•	•	•	•	•	•	•
Sheet metal working				•	•	•		•	•	•	•	•	•		•
Dent removal	•	•		•	•	•					•	•	•	•	•
Housing assembly					•	•		•	•	•		•	•	•	•
Mould construction						•	•								•
Assembly of sharp-edged workpieces					•	•		•	•	•					•

Wood-working applications

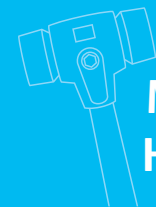
Furniture assembly	•		•										•		•
Window and door construction	•		•										•		•
Prefabricated house construction		•													
Joiner's work	•		•										•		•
Carpenter's work		•													
Floor parqueting / laminating													•		

Agriculture and forestry applications

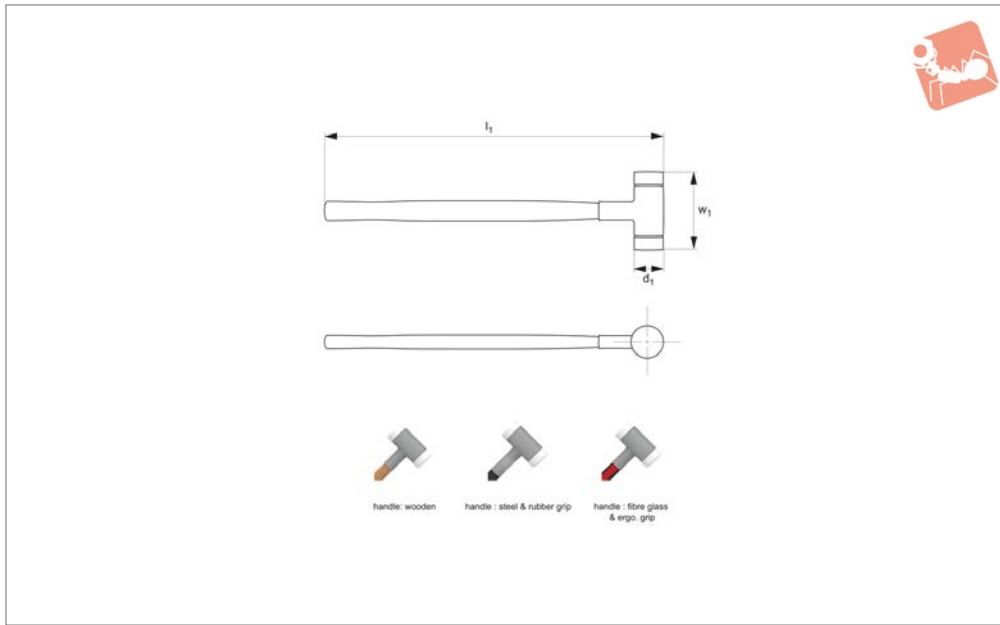
Fence construction		•			•			•							
Wood splitting with wedge					•			•							
Maintenance and repair work on agricultural machinery						•		•							•



Non-Rebound Mallets - Complete with nylon inserts



Mallets & Hammers



98301

MALLETS & HAMMERS

Material

Housing: steel, shot filled.
 Inserts: nylon, made from extruded tube material.
 Handle: wood, fibreglass or steel. Steel and fibreglass handles include rubber grip.

Technical Notes

Shot filled housing results in a non-rebound action and assists in full transmission of impact force.
 Inserts are replaceable.

Tips

Both handle and inserts can be replaced.
 For replacement items see;
 - handle no. 98302
 - inserts no. 98303

Order No.	Handle type	Ø d ₁	w ₁	l ₁	Weight g
98301.W0020	Wood	20	105	300	245
98301.W0025	Wood	25	105	305	325
98301.W0030	Wood	30	110	330	460
98301.W0035	Wood	35	110	335	560
98301.W0040	Wood	40	115	360	715
98301.W0045	Wood	45	120	365	830
98301.W0050	Wood	50	120	370	990
98301.W0060	Wood	60	145	370	1705
98301.W0070	Wood	70	150	370	2215
98301.W0080	Wood	80	168	380	3210
98301.W0125	Steel	25	105	270	385
98301.W0130	Steel	30	110	290	585
98301.W0135	Steel	35	110	295	690
98301.W0140	Steel	40	115	300	805
98301.W0145	Steel	45	120	305	935
98301.W0150	Steel	50	120	310	1150
98301.W0160	Steel	60	145	325	1750
98301.W0170	Steel	70	150	335	2250
98301.W0240	Fibreglass	40	116	370	790
98301.W0250	Fibreglass	50	120	380	1040
98301.W0260	Fibreglass	60	145	390	1625

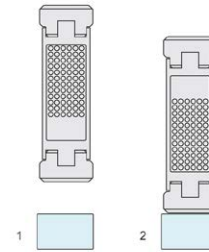
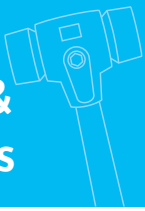
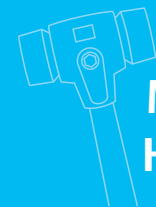


diagram showing the shot-filled housing of the non-rebound mallet

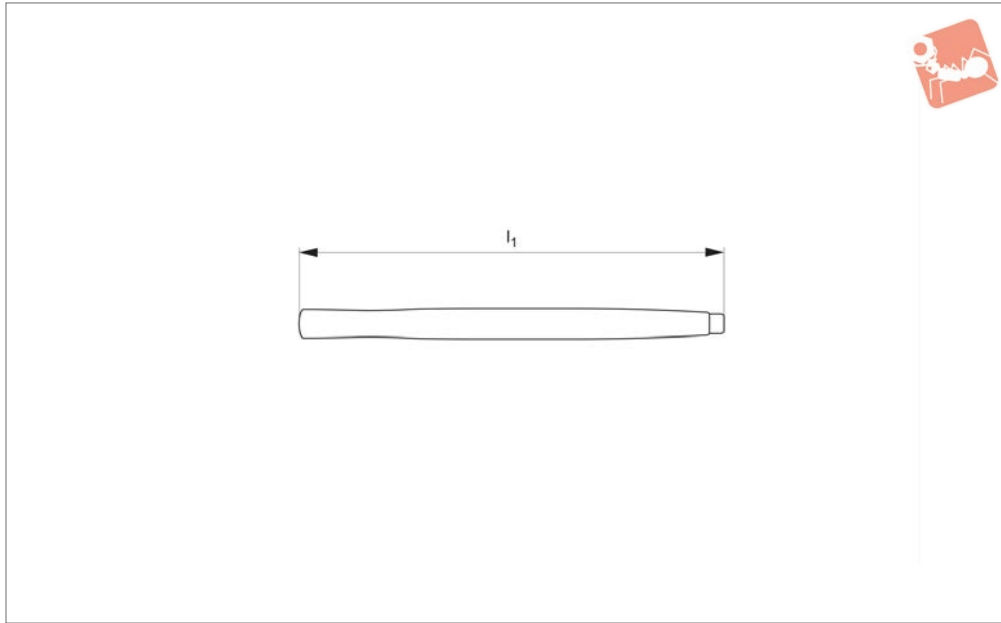


Handle - for Non-Rebound Mallets

wood - for no. 98301



Mallets & Hammers



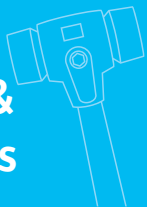
98302

MALLETS & HAMMERS

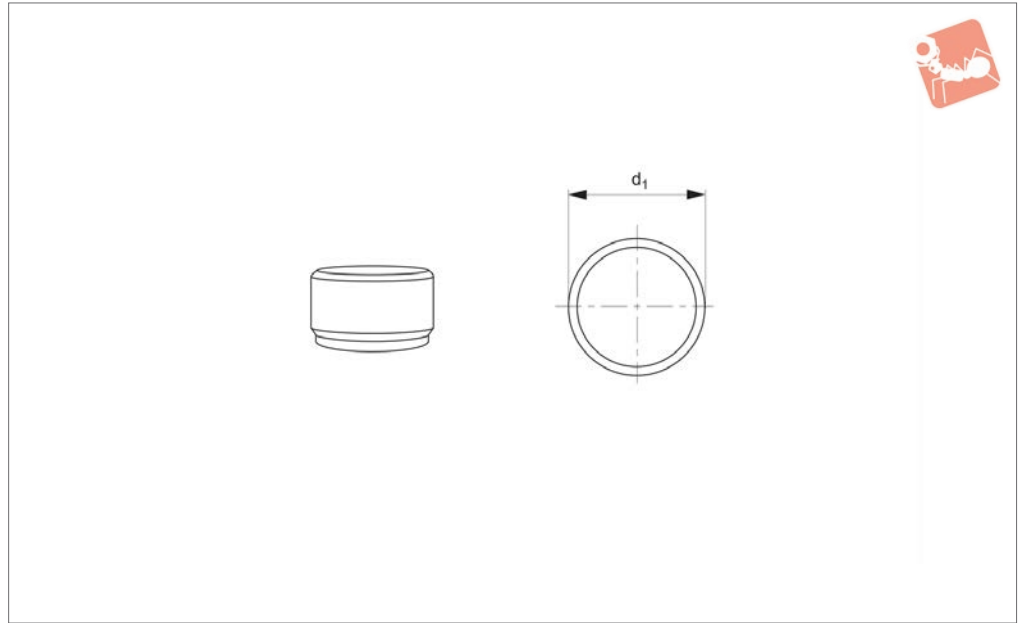
Material

Hickory wood.

Order No.	For mallet head dia. d_1	l_1
98302.W0320	20	280
98302.W0325	25	280
98302.W0330	30/35	300
98302.W0340	40/45/50	315
98302.W0360	60/70/80	300



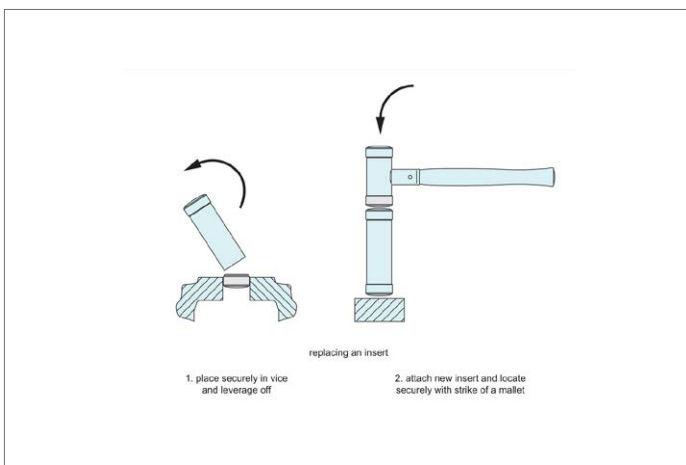
98303



Material

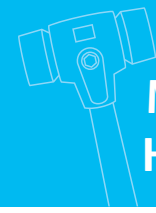
Nylon, white.

Order No.	For mallet head dia. d_1	Insert type
98303.W0420	20	Nylon - White
98303.W0425	25	Nylon - White
98303.W0430	30	Nylon - White
98303.W0435	35	Nylon - White
98303.W0440	40	Nylon - White
98303.W0445	45	Nylon - White
98303.W0450	50	Nylon - White
98303.W0460	60	Nylon - White
98303.W0470	70	Nylon - White
98303.W0480	80	Nylon - White

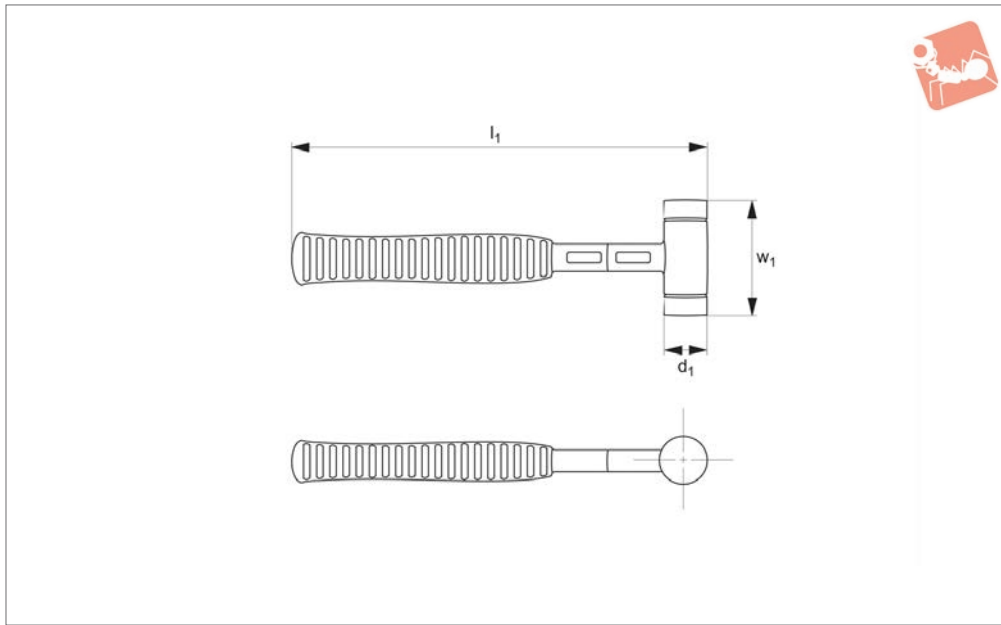




Non-Rebound Mallets - Complete steel housing and handle



Mallets & Hammers



98310

MALLETS & HAMMERS

Material

Housing: steel, polyurethane coating.
Handle: steel, ergonomic rubber grip.

rebound action and assists in full transmission of impact force.

workpieces in vices, sheet-metal working, dent removal.

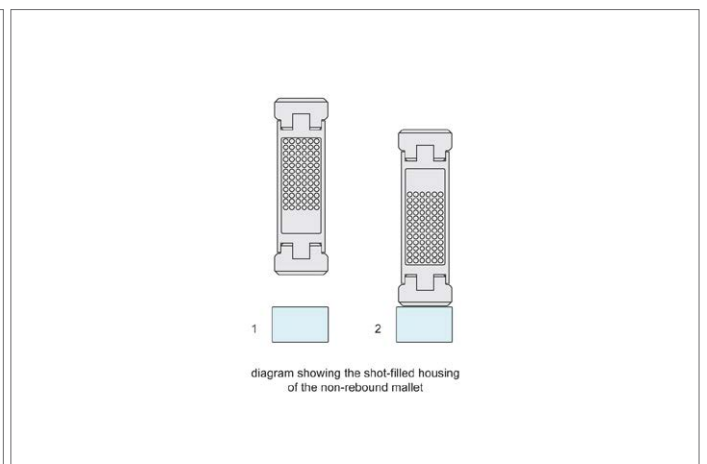
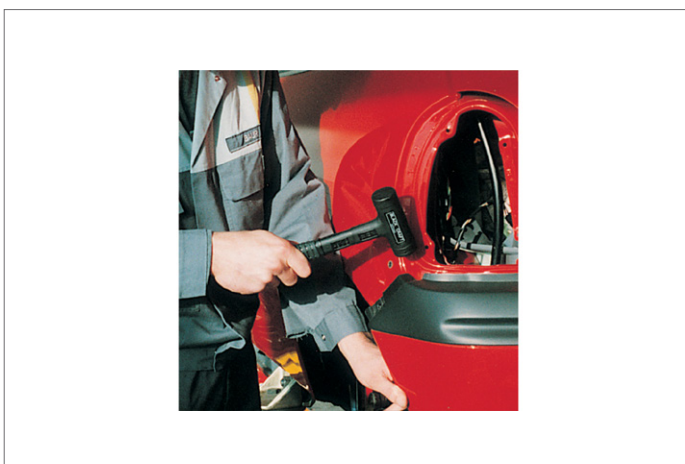
Technical Notes

Shot filled housing results in a non-

Tips

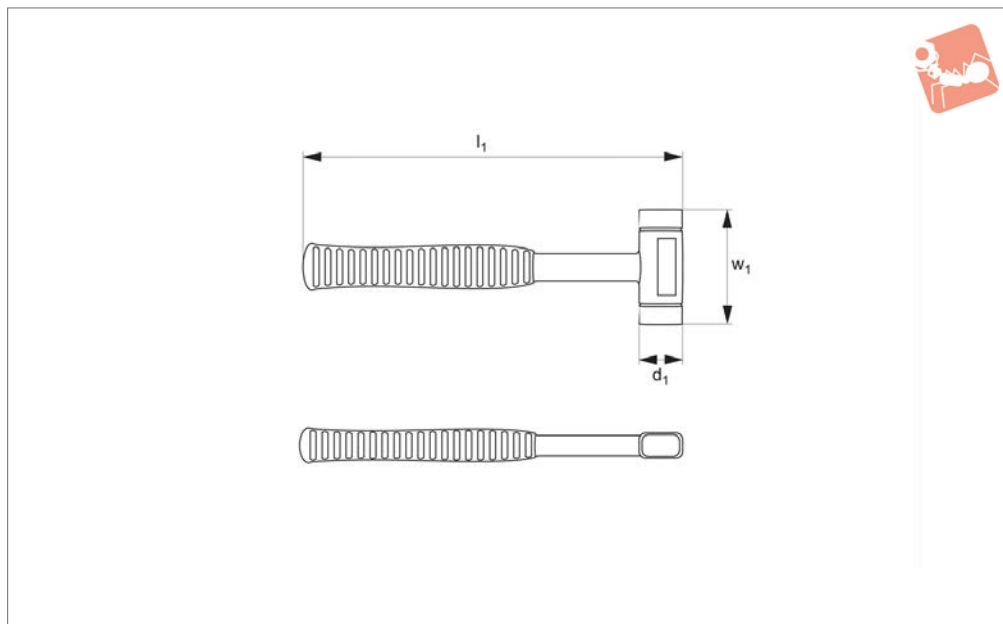
Ideal for uses including: automobile assembly and repair work, positioning of

Order No.	$\varnothing d_1$	w_1	l_1	Weight g
98310.W0040	40	110	300	640
98310.W0050	50	115	310	900
98310.W0060	60	120	315	1300





98321



Material

Housing: from cut steel plate.
 Handle: sheet metal, ergonomic rubber grip.
 Inserts: polyurethane, yellow. Medium hard.

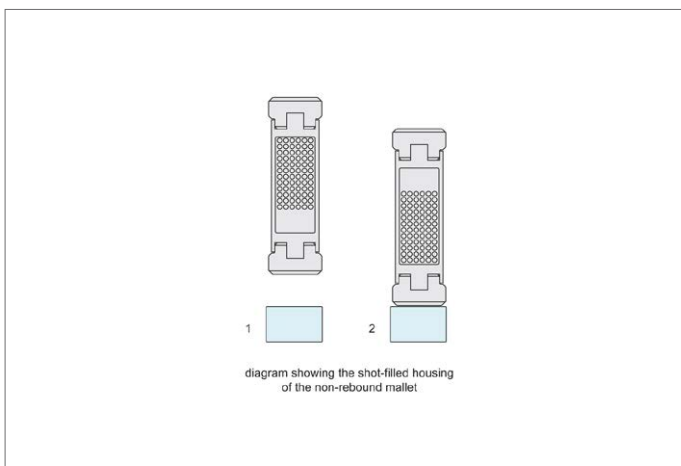
Technical Notes

Shot filled housing results in a non-rebound action and assists in full transmission of impact force.
 Inserts are replaceable.

Tips

For replacement inserts see;
 - inserts no. 98322

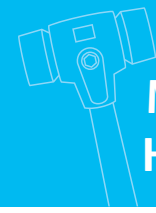
Order No.	d_1	w_1	l_1	Weight g
98321.W0040	30x40	117	300	680



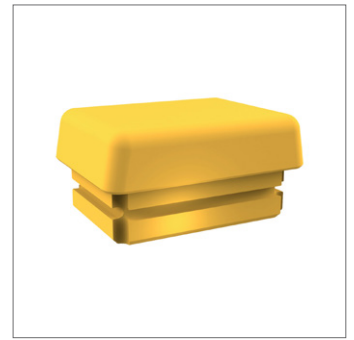
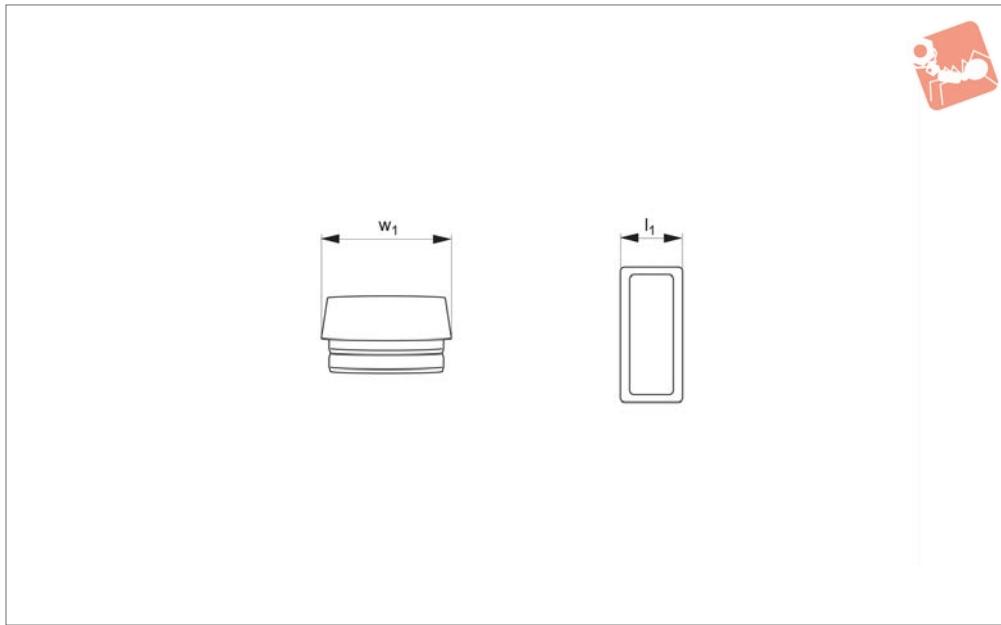


Inserts - for Non-Rebound Mallets

for no. 98321



Mallets & Hammers



98322

MALLETS & HAMMERS

Material

Polyurethane, yellow.

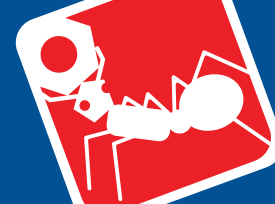
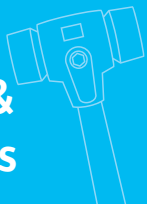
Technical Notes

Replacement inserts for secural mallet, part no. 98321.

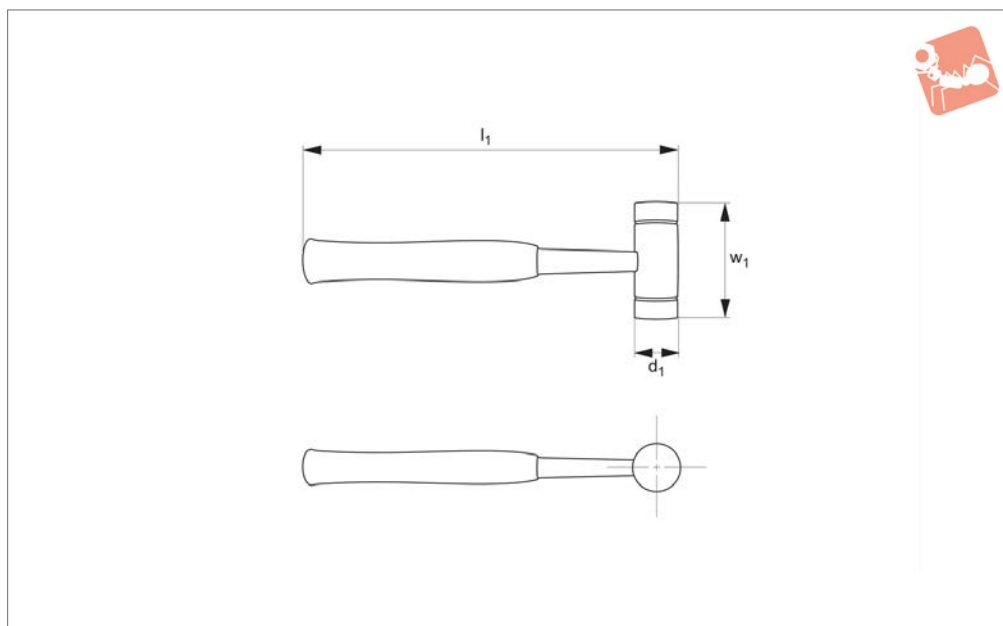
Order No.
98322.W0141

For mallet size $l_1 \times w_1$
30x40

Insert type
Polyurethane



98330



Material

Head: steel.
 Handle: steel tube, with rubber grip.
 Hammer faces: 1 x heat treated steel, induction hardened. 1 x nylon, white.

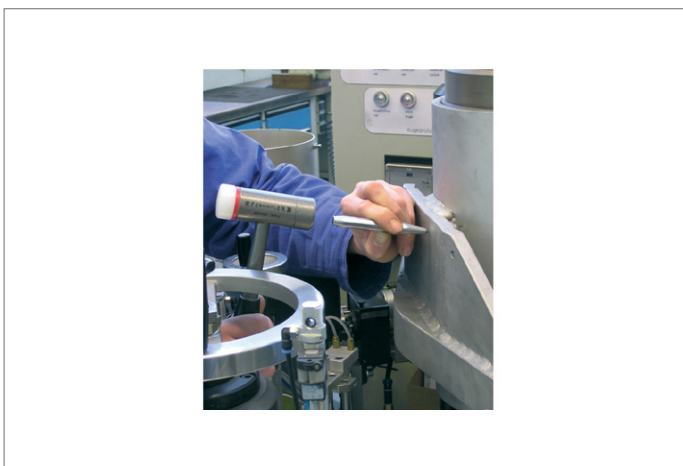
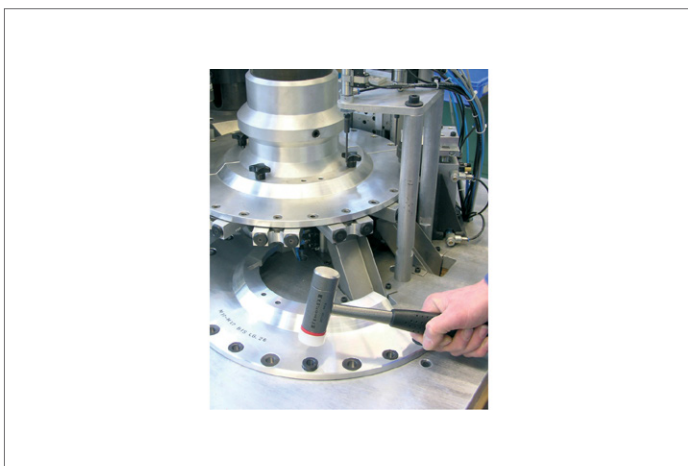
Technical Notes

Nylon insert can be replaced, see replacement part nos. 98363.W0480 and 98363.W0482.

Tips

For replacement nylon insert see; - inserts no. 98363

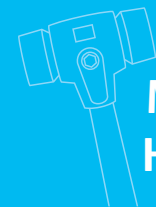
Order No.	$\varnothing d_1$	w_1	l_1	Weight g
98330.W0030	30	104	290	600
98330.W0035	35	104	295	800



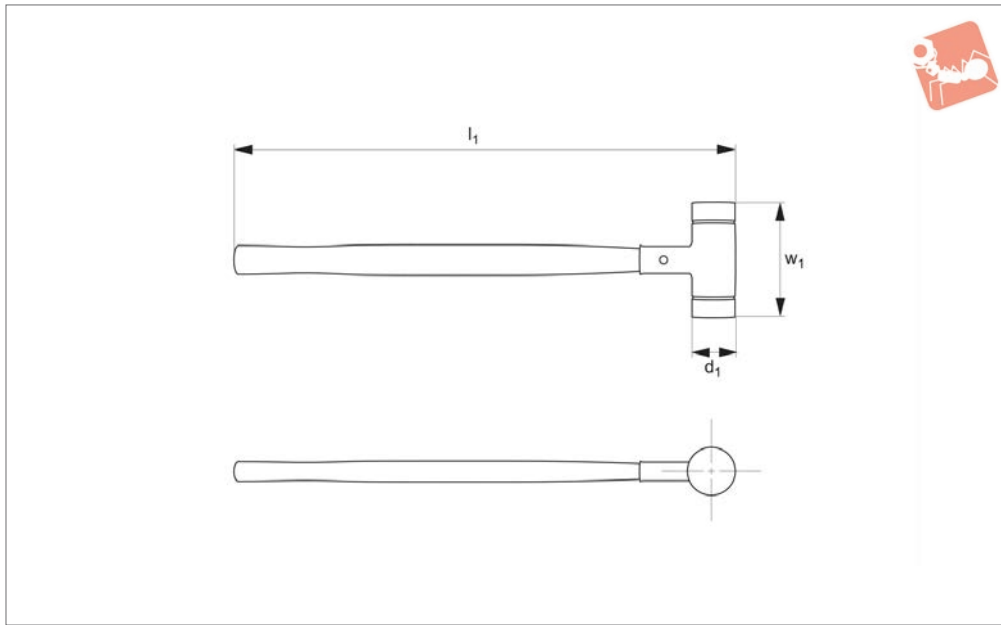


Non-Rebound Sledge Hammer

steel housing - wooden handle - complete



Mallets & Hammers



98361

MALLETS & HAMMERS

Material

Housing: steel, shot filled.
 Inserts: nylon, made from extruded tube material.
 Handle: wood.

Technical Notes

Shot filled housing results in a non-

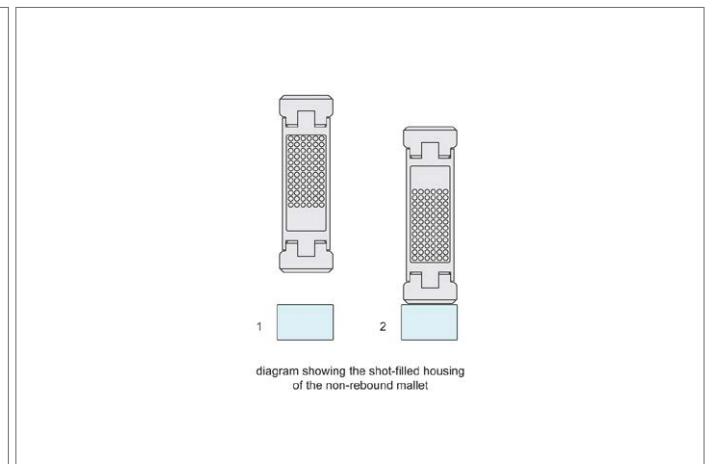
rebound action and assists in full transmission of impact force.
 Inserts are replaceable see part no. 98363.

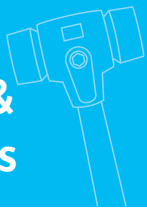
Tips

Both handle and inserts can be replaced.
 For replacement items see;
 - handle no. 98362

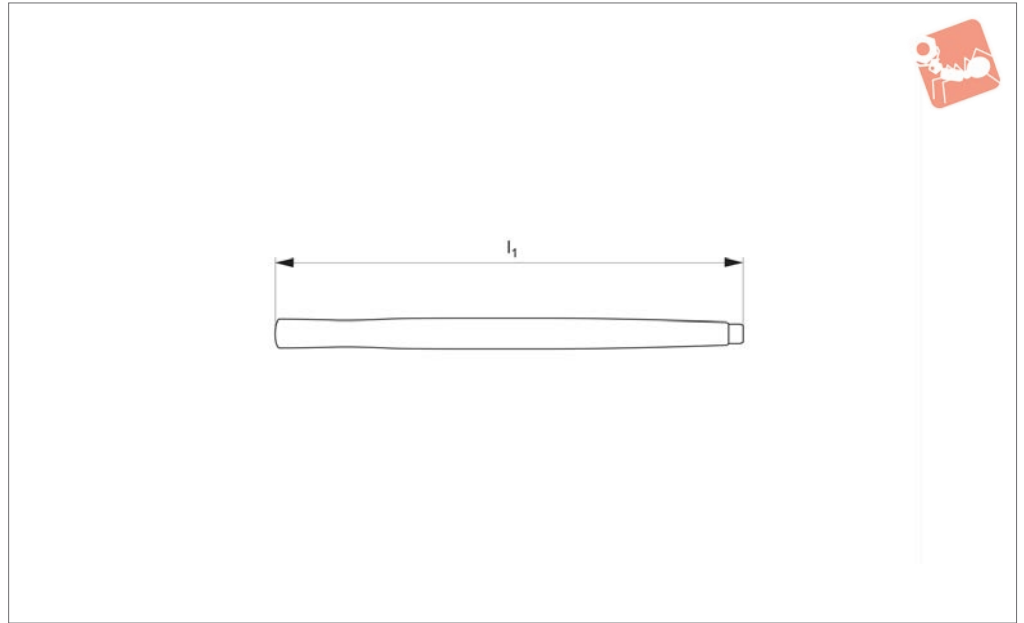
- inserts no. 98363

Order No.	Insert type	$\varnothing d_1$	w_1	l_1	Weight g
98361.W0080	Nylon	80	200	880	4410
98361.W0100	Nylon	100	210	1000	7050
98361.W0120	Nylon	100	265	1000	9300





98362



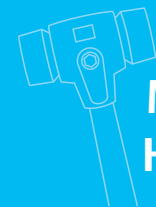
Material
Wood.

Order No.	For mallet head dia. d_1	l_1
98362.W0381	80	800
98362.W0382	100	900

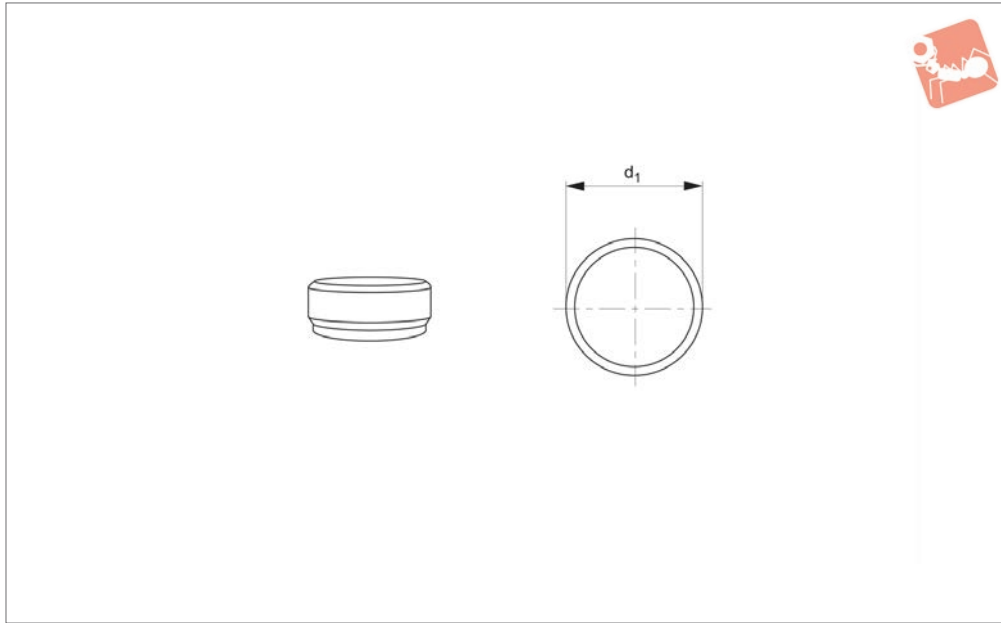


Inserts - Non-Rebound Sledgehammer

for no. 98361



Mallets & Hammers

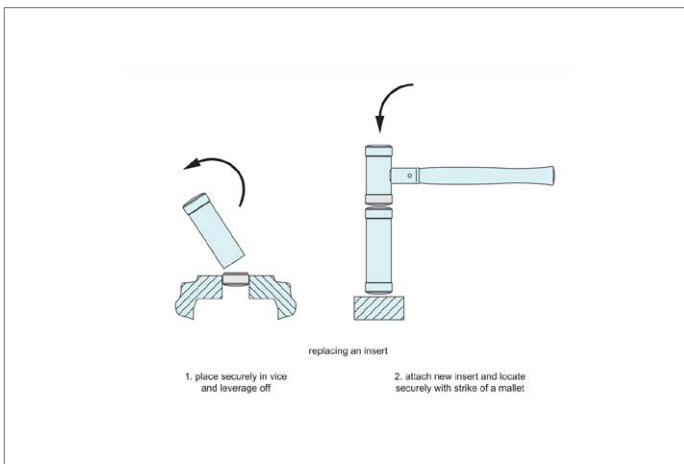


98363

MALLETS & HAMMERS

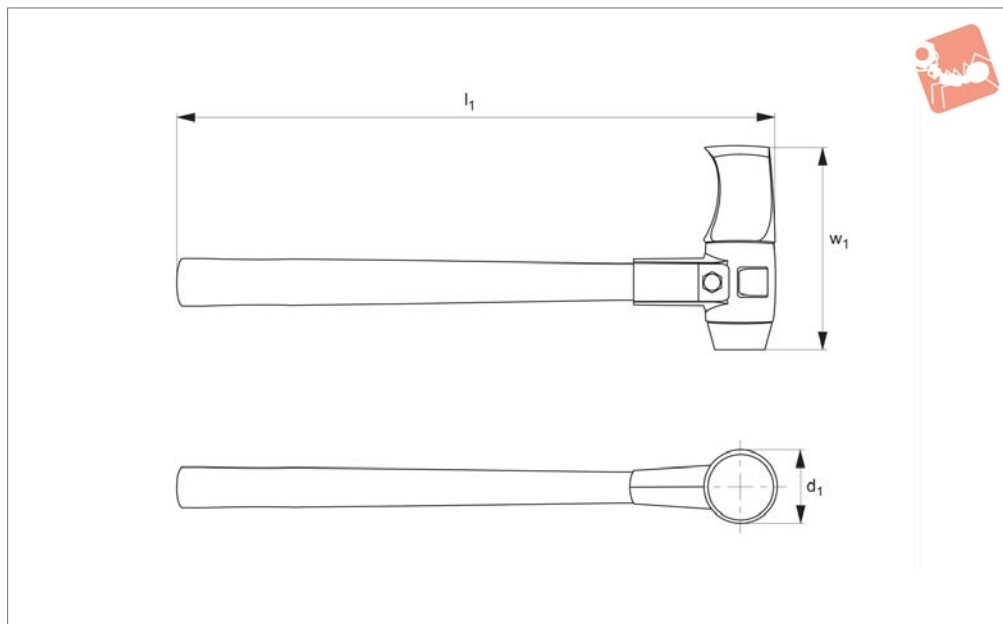
Material
Nylon, white.

Order No.	For mallet head dia. d_1	Insert type
98363.W0480	80	Nylon - White
98363.W0482	100	Nylon - White





98381



Material

Housing: malleable cast iron.
Handle: hickory wood.

Inserts: superplastic, white. Medium hard.
Splitting Maul: carbon steel, drop-forged and hardened, with turned nose.

Technical Notes

Two tools in one; splitting maul for wood

harvesting and soft face mallet for hammering stakes and fencing posts.

Tips

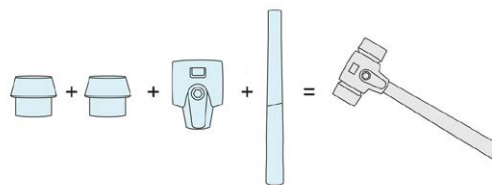
Simplex maul mallets are a flexible modular system with replaceable handle, housing and inserts. Suitable replacement items for Simplex maul mallet 98381 are;
- handle no. 98383

- housing no. 98382
- inserts no. 98384

Important Notes

Do not strike steel with the splitting insert - can result in splintering and injury. Use only original Wixroyd Simplex Mallet parts when replacing handle or inserts.

Order No.	Inserts	Head d_1	w_1	l_1	Weight g
98381.W0065	Splitting Maul/Superplastic	60	65	900	4100



modular splitting maul/mallet system allows this product to be reverted to a traditional mallet if required

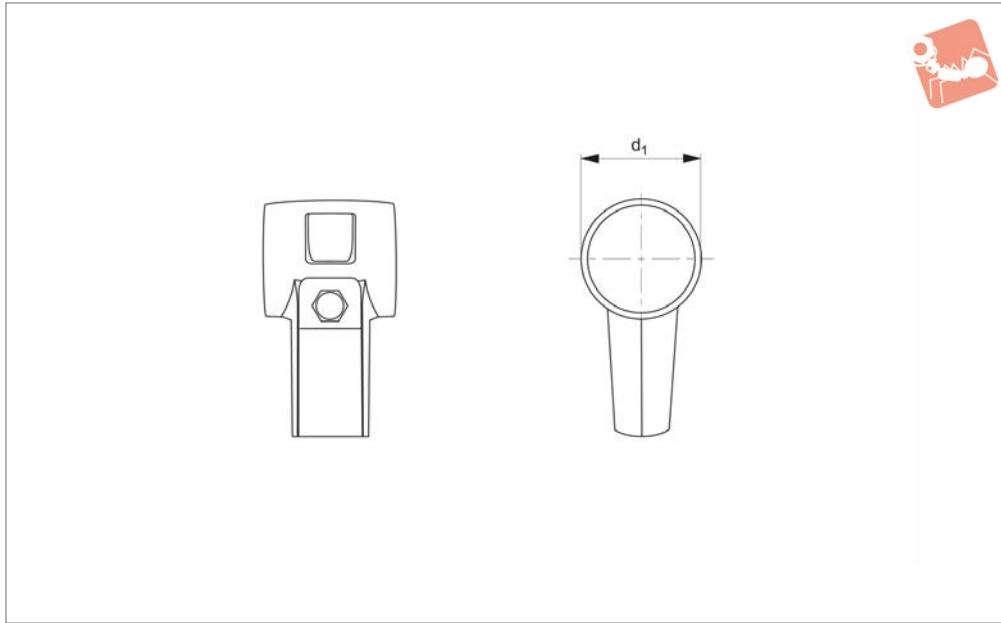


Housing - for Split Maul Mallets

cast iron - for no. 98381



Mallets & Hammers



98382

MALLETS & HAMMERS

Material

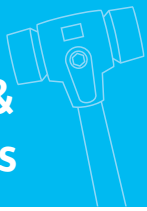
Malleable cast iron housing.

must only be used with spare parts of the Simplex Splitting Maul.

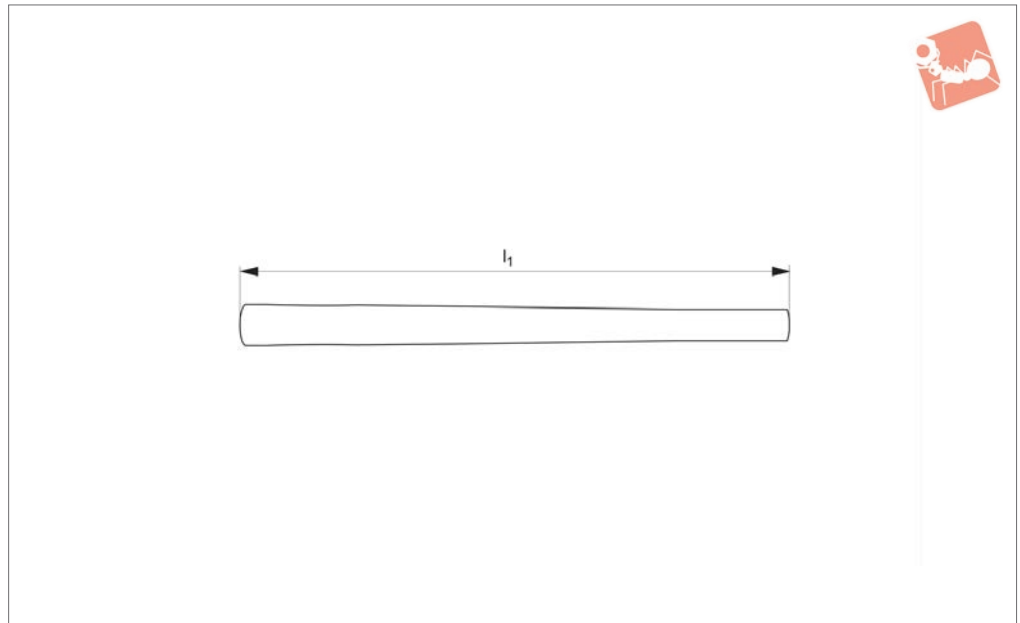
Important Notes

Cast iron housing part no. 98382.W0160

Order No.	For mallet head d_1	d_1	Weight g
98382.W0160	160	160	1900



98383



Material
Hickory wood.

must only be mounted into cast iron housing of part no. 98382.W0160.

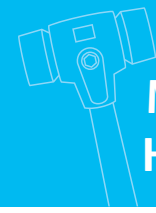
Important Notes
Hickory handles part no. 98383.W0260

Order No.	For mallet head dia. d_1	l_1	Weight g
98383.W0260	160	850	750

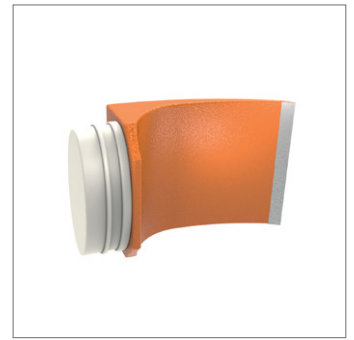
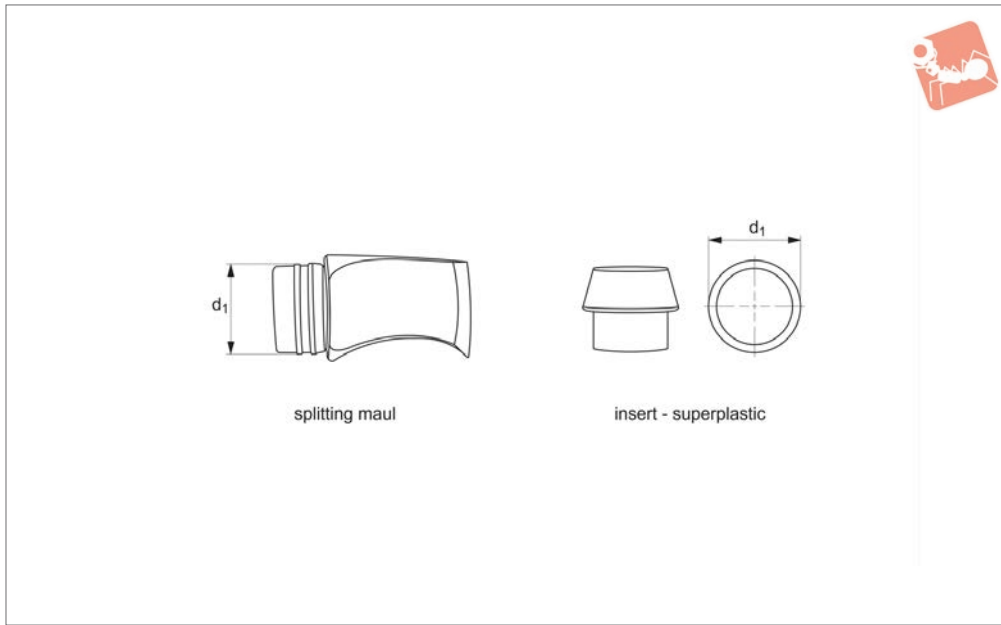


Inserts - for Split Maul Mallets

for no. 98381



Mallets & Hammers



98384

MALLETS & HAMMERS

Material

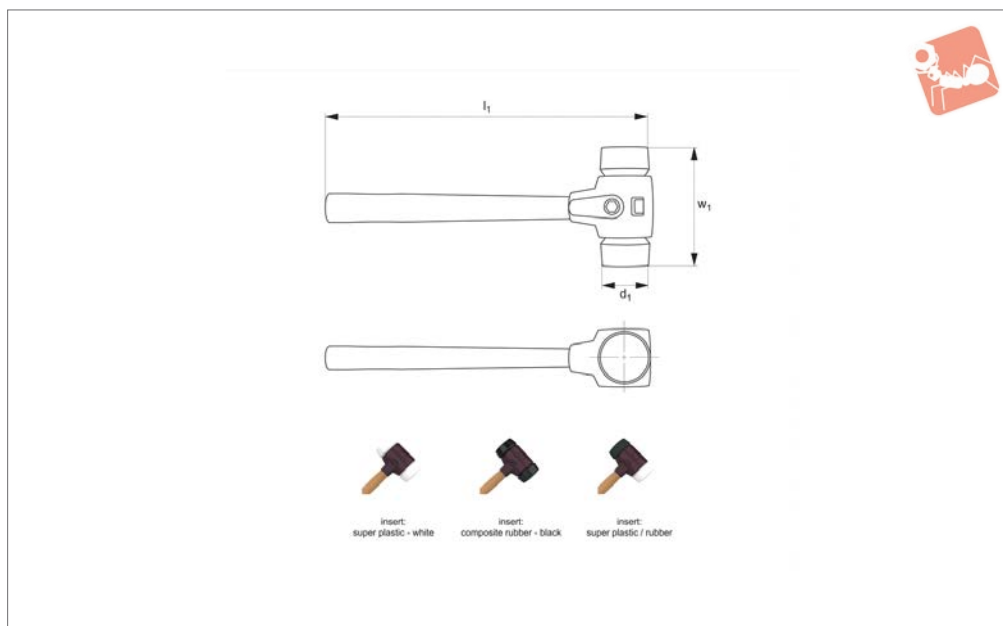
Splitting Maul: carbon steel, drop forged and tempered.

Plastic Insert: superplastic, white.

Order No.	For mallet head d_1	Insert type	d_1	Weight g
98384.W0360	160	Splitting Maul	160	1340
98384.W0460	160	Insert - Superplastic	160	1340



98201



Material

Handle: wood.
Housing: cast iron.
Inserts: see table.

modular system with replaceable handle, housing and inserts. Suitable replacement items for Simplex sledge hammer 98201 are;

- inserts no. 98204

Tips

Simplex sledge hammers are a flexible

- handle no. 98202
- housing no. 98002

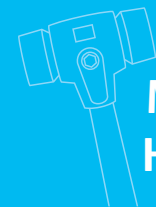
Order No.	Inserts	Ø d ₁	w ₁	l ₁	Weight g
98201.W0081	Superplastic - White	80	175	800	3090
98201.W0100	Superplastic - White	100	200	1000	5200
98201.W0125	Superplastic - White	125	215	1040	7700
98201.W0140	Superplastic - White	140	215	1045	7900
98201.W1081	Composite Rubber - Black	80	175	800	3270
98201.W1100	Composite Rubber - Black	100	200	1000	5500
98201.W2081	Composite Rubber Superplastic	80	175	800	3170
98201.W2100	Composite Rubber Superplastic	100	200	1000	5350



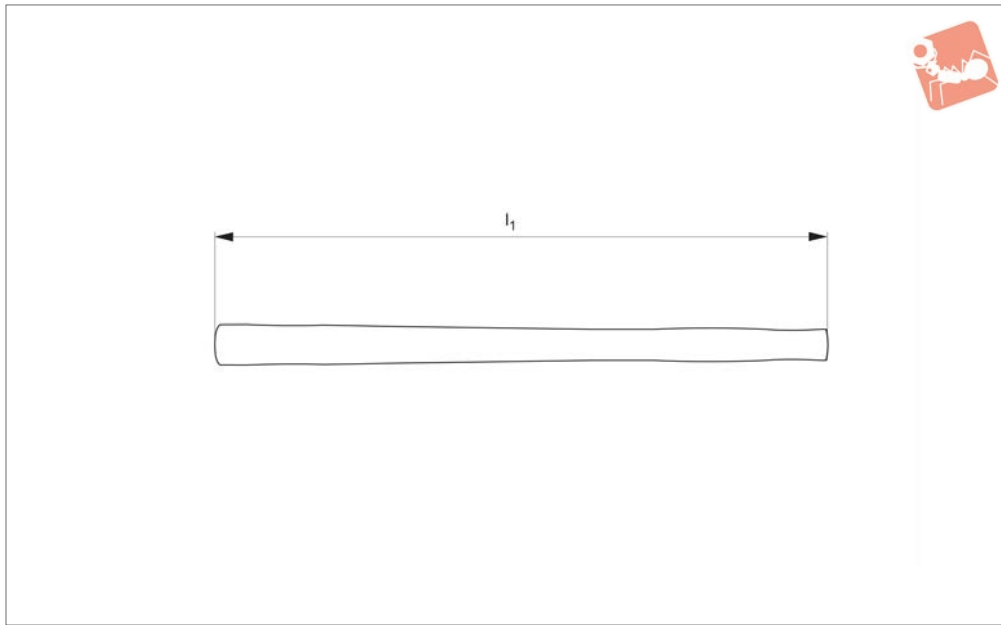


Handle - for Simplex Sledge Hammers

wood - for no. 98201



Mallets & Hammers



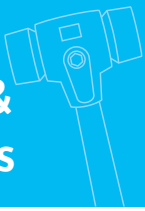
98202

MALLETS & HAMMERS

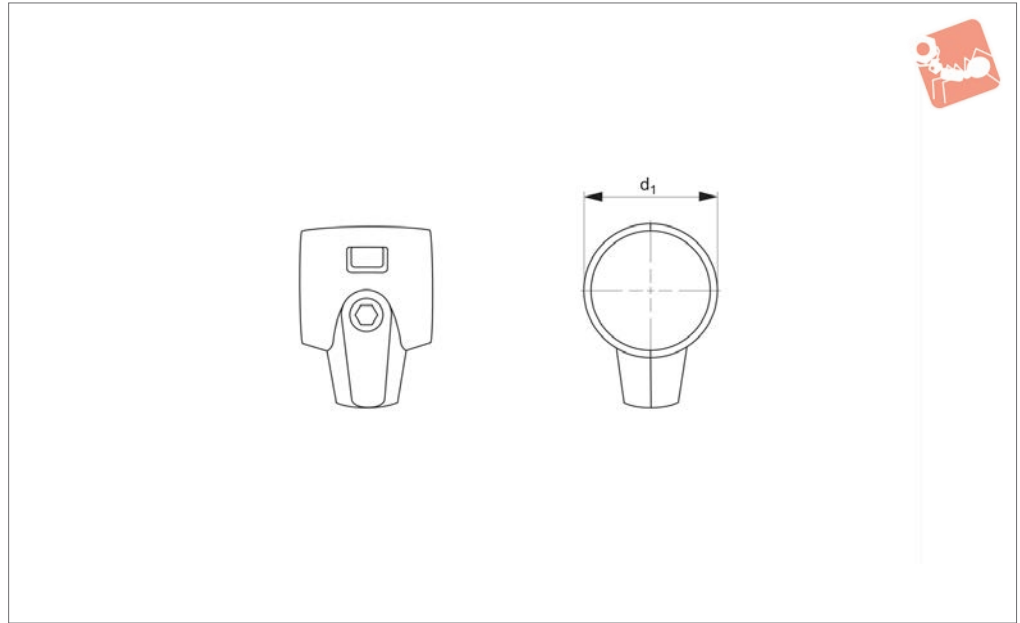
Material

Wood.

Order No.	For mallet head dia. d_1	l_1
98202.W0208	80	700
98202.W0210	100/125/140	900



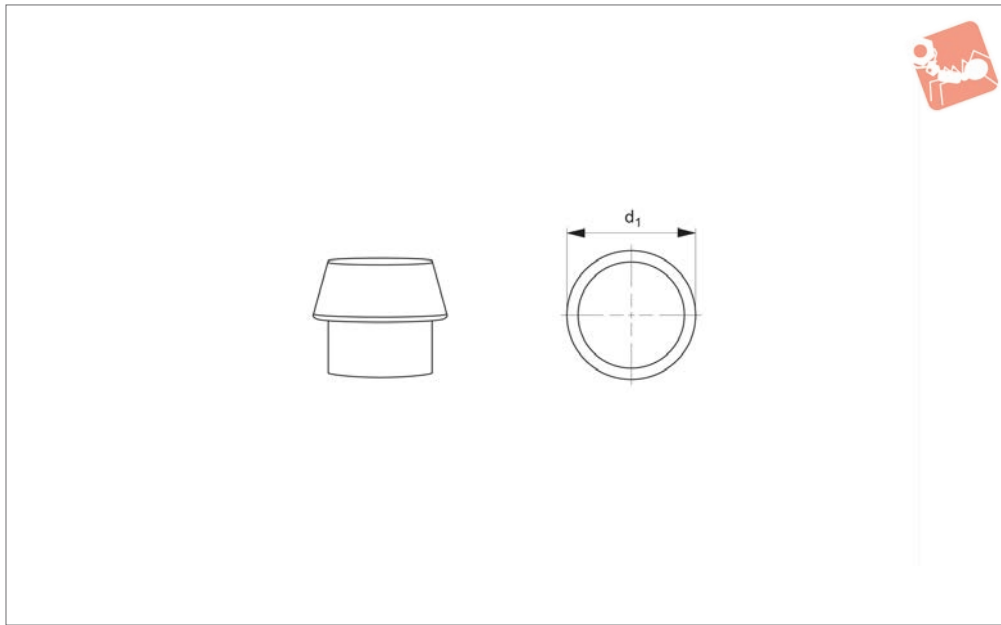
98203



Material

Cast iron housing (2 parts).

Order No.	For mallet head dia. d_1	d_1
98203.W0260	30	30
98203.W0270	40	40
98203.W0280	50	50
98203.W0290	60	60
98203.W0300	80	80
98203.W0310	100	100
98203.W0325	125	125
98203.W0340	140	140



98204

MALLETS & HAMMERS

Material

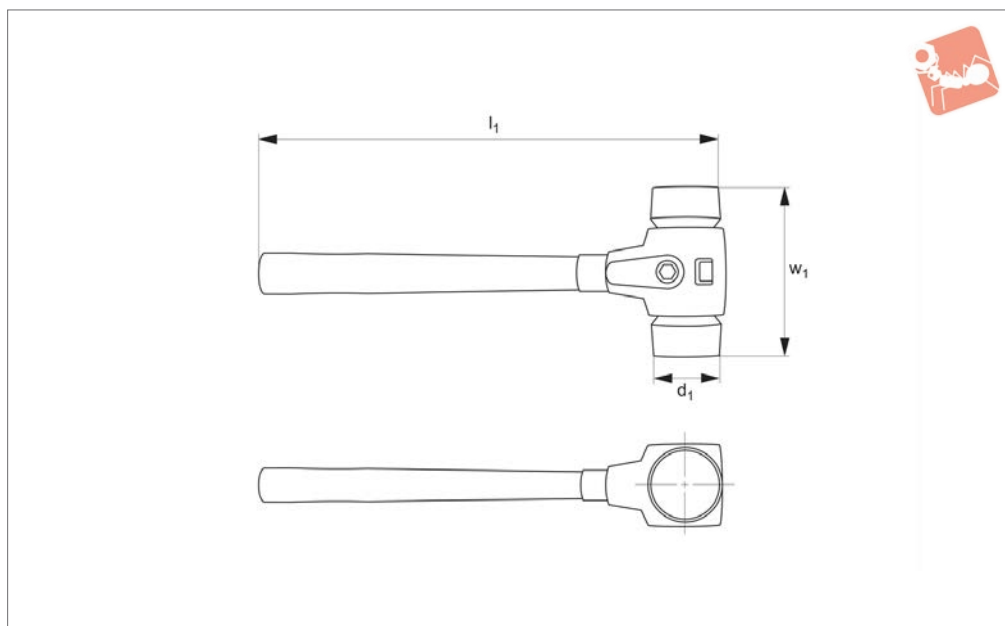
Black: composite rubber.

White: superplastic.

Order No.	For mallet head dia. d_1	Insert type
98204.W0288	80	Composite Rubber - Black
98204.W0588	80	Superplastic - White
98204.W0590	100	Superplastic - White
98204.W0592	125	Superplastic - White
98204.W0594	140	Superplastic - White



98221



Material

Insert: aluminium.
Handle: fibreglass.

Tips

Simplex sledge hammers are a flexible

modular system with replaceable handle, housing and inserts. Suitable replacement items for Simplex sledge hammer 98221 are;

- housing no. 98102
- inserts no. 98224

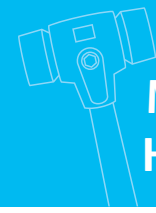
- handle no. 98223

Order No.	$\varnothing d_1$	w_1	l_1	Weight g
98221.W0081	80	175	800	4650

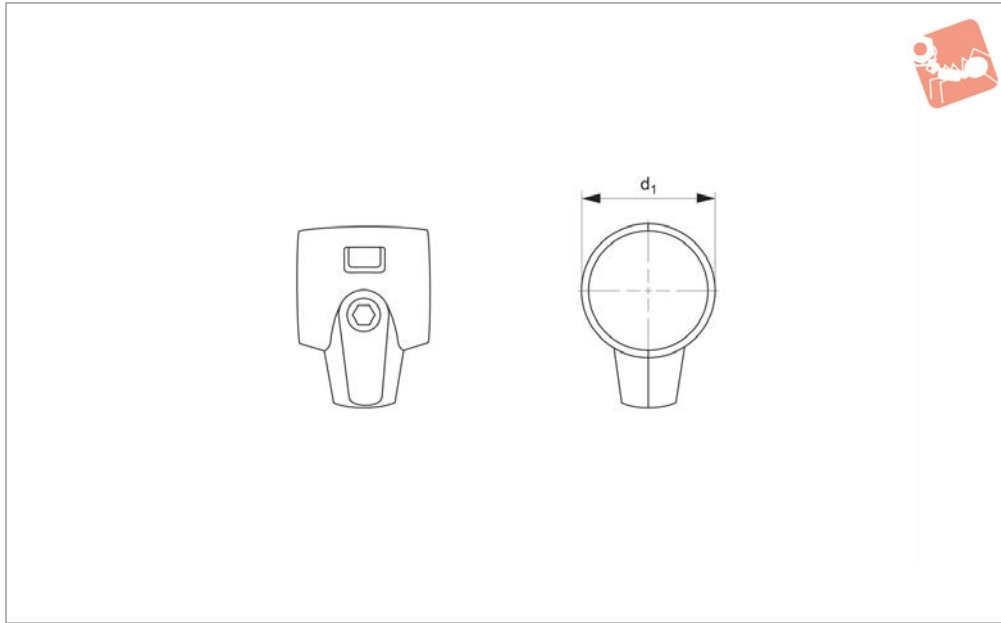


Simplex Sledge Hammers - Type C

reinforced housing, for 98221



Mallets & Hammers



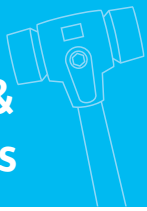
98222

MALLETS & HAMMERS

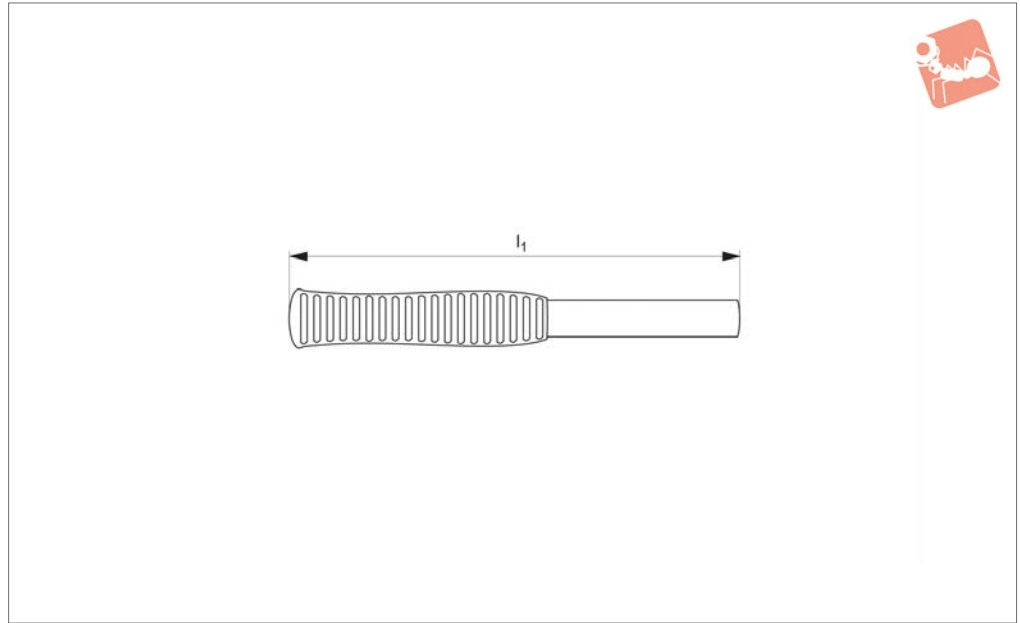
Material

Reinforced housing (2 parts, malleable cast iron).

Order No.	For mallet head dia. d_1
98222.W0141	40
98222.W0151	40
98222.W0161	50
98222.W0171	60
98222.W0181	80



98223



Material

Handle: fibreglass.
Grip: rubber.

Important Notes

Fibreglass handles must only be mounted on reinforced malleable cast iron housing -

black, part no. 98102.W0181.

Order No.
98223.W0208

For mallet head dia. d_1
80

l_1
700

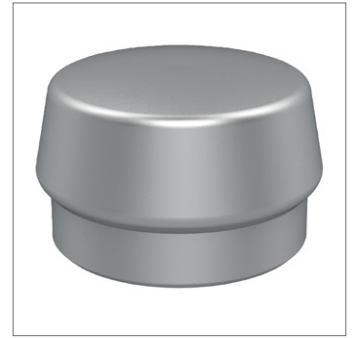
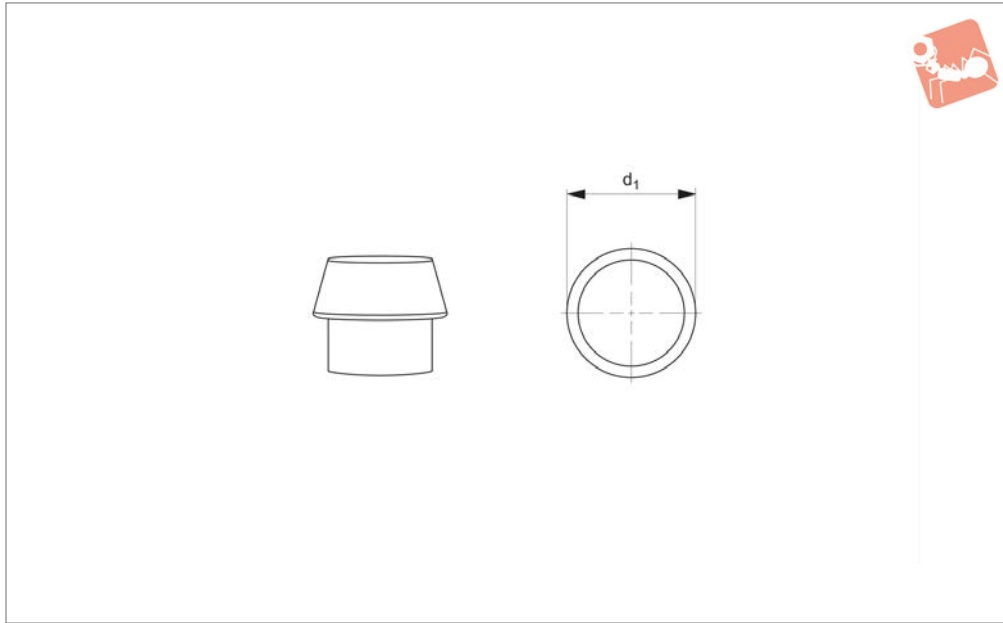


Inserts - for Simplex Sledge Hammers

for no. 98221



Mallets & Hammers



98224

MALLETS & HAMMERS

Material
Aluminium.

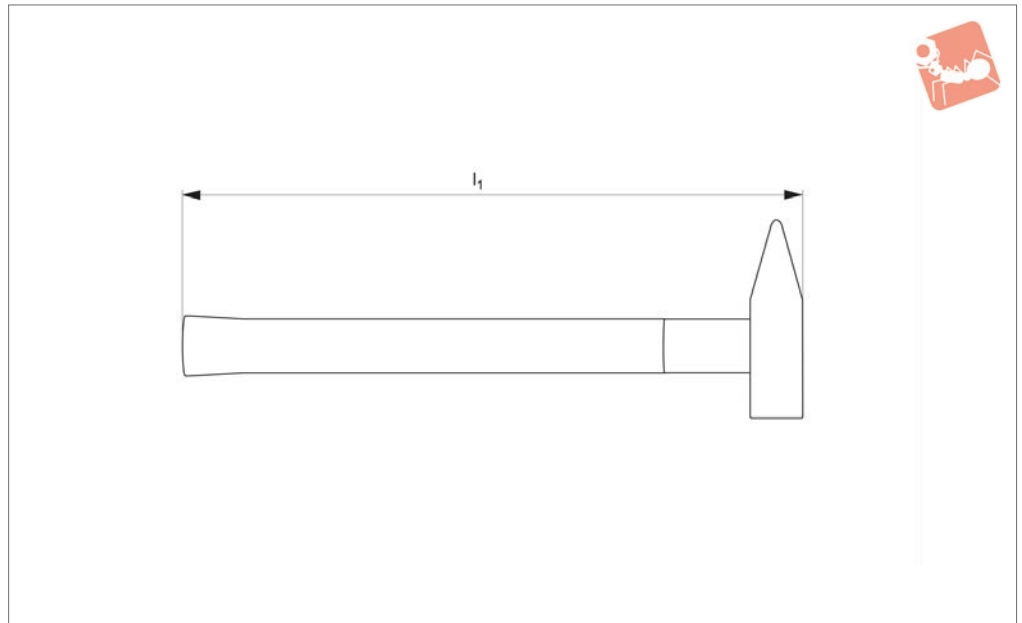
Order No.
98224.W0788

For mallet head dia. d_1
80

Insert type
Aluminium



98501



Material

Head: drop-forged, high quality steel. Face ground, chamfered edge.
Handle: hickory wood, with protective

rubber sleeve to reduce rebound and increase power of impact while reducing shock and vibration in the user's arm.

Tips

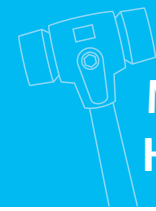
For replacement handle see; - inserts no. 98502

Order No.	h_1	Weight g
98501.W0030	300	300
98501.W0032	320	500
98501.W0035	350	800
98501.W0036	360	1000

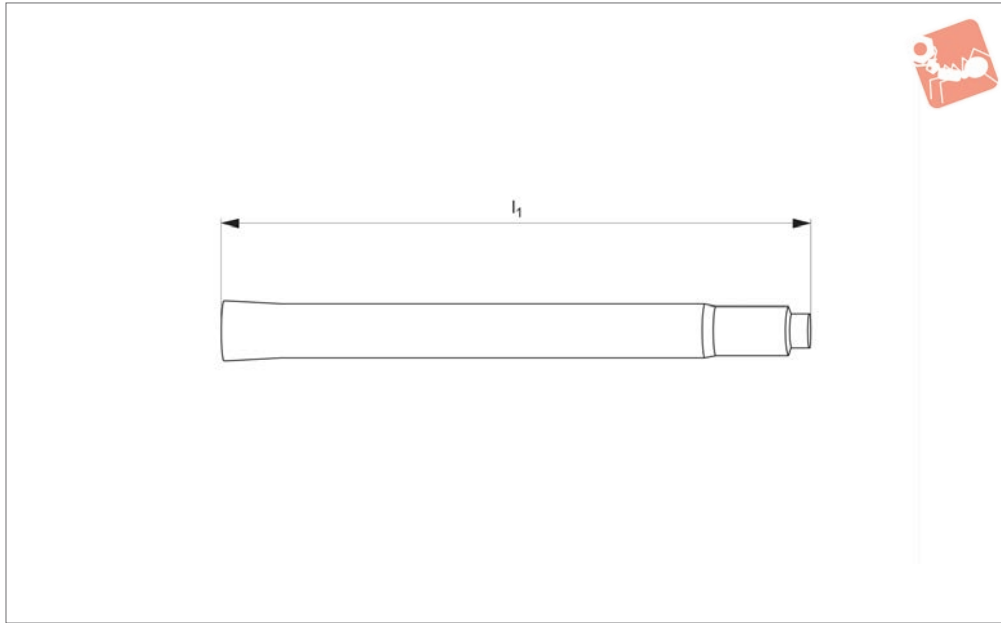


Handle - for Maxx Craft Hammer

wood - for no. 98501



Mallets & Hammers



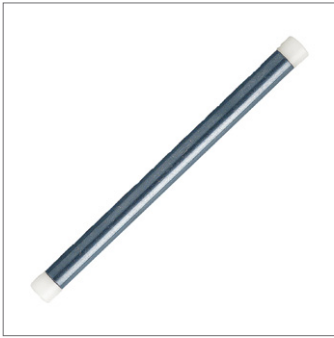
98502

MALLETS & HAMMERS

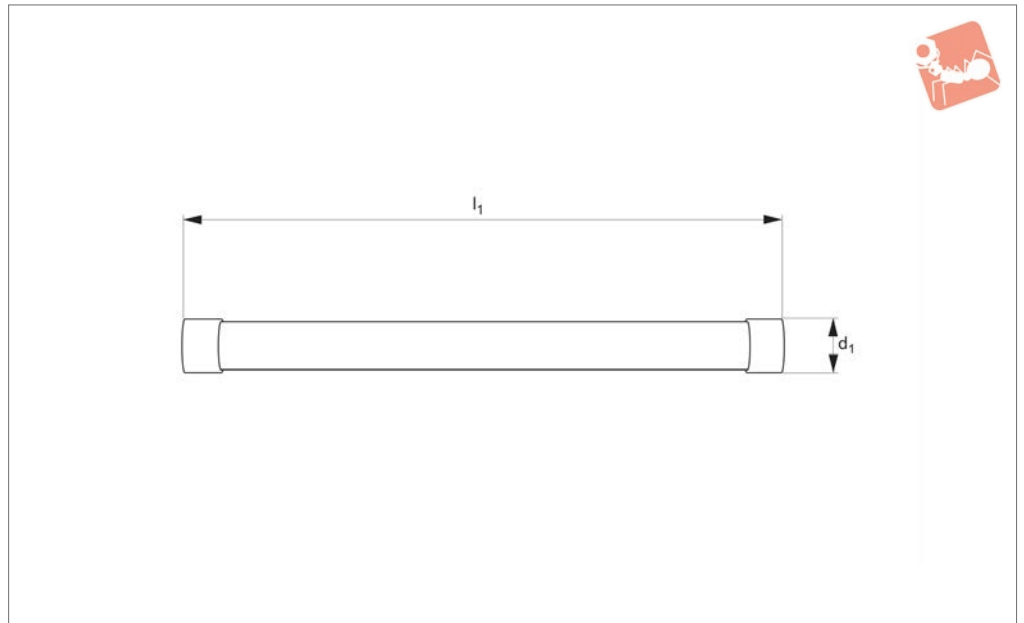
Material

Hickory wood.

Order No.	For	l_1	Weight g
98502.W0203	MaxxCraft 300	265	100
98502.W0205	MaxxCraft 500	280	120
98502.W0208	MaxxCraft 800	305	170
98502.W0210	MaxxCraft 1000	310	180



98401



Material

Steel body with nylon inserts.

Tips

For replacement inserts see;
- inserts no. 98402

Technical Notes

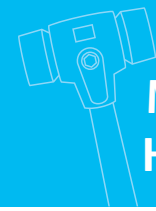
Inserts are replaceable see part no. 98402.

Order No.	Insert type	Ø d ₁	l ₁	Weight g
98401.W0010	Nylon - White	10	168	90
98401.W0012	Nylon - White	12	170	130
98401.W0015	Nylon - White	15	175	200

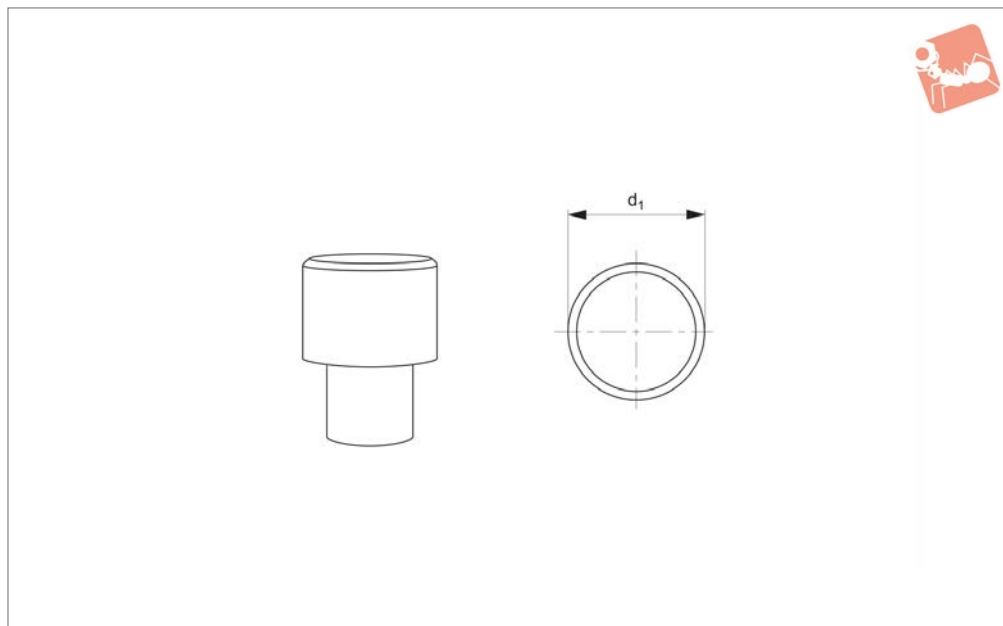


Inserts - for Rebound Punches

for no. 98401



Mallets & Hammers



98402

MALLETS & HAMMERS

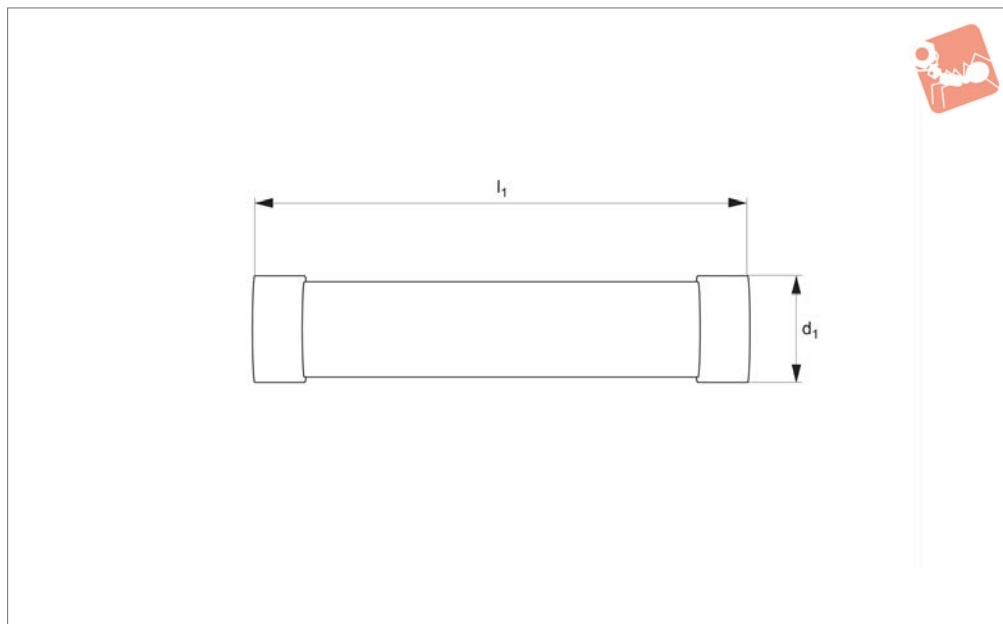
Material

Nylon, white.

Order No.	Type	For mallet head dia. d_1
98402.W0110	Nylon - White	10
98402.W0112	Nylon - White	12
98402.W0115	Nylon - White	15



98421



Material

Housing: steel.
Insert: nylon, white.

rebound action and assists in full transmission of impact force.
Inserts are replaceable. See part no. 98422.

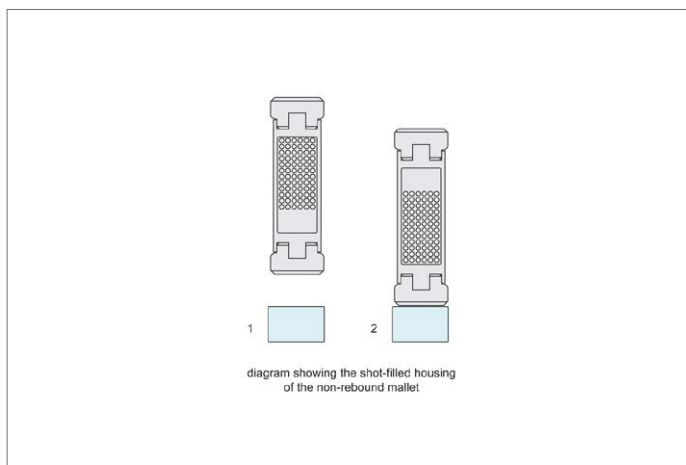
Tips

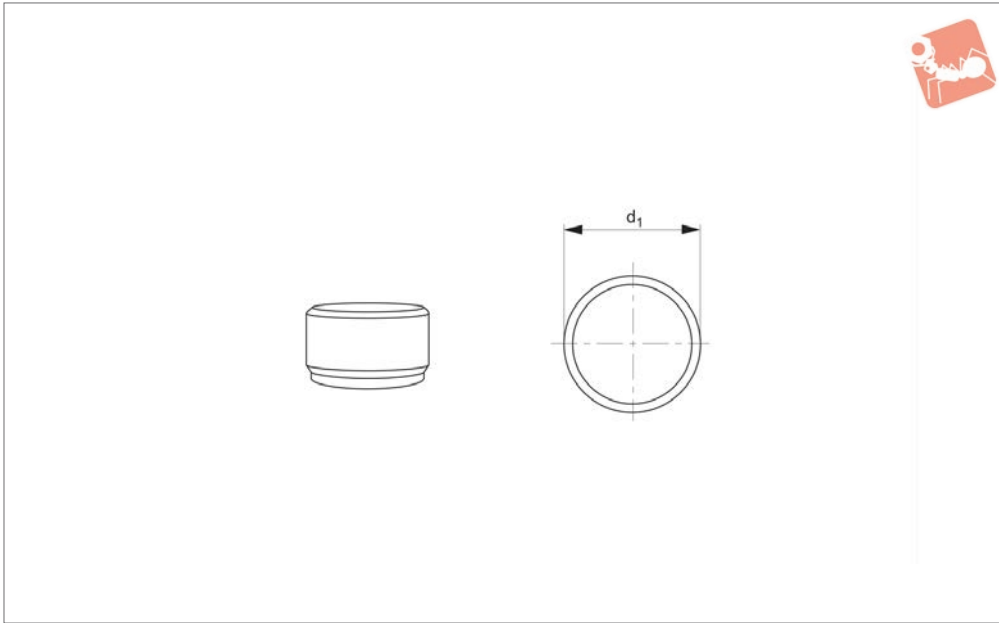
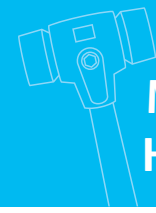
For replacement inserts see;
- inserts no. 98422

Technical Notes

Shot filled housing results in a non-

Order No.	Insert type	$\varnothing d_1$	l_1	Weight g
98421.W0020	Nylon - White	20	150	215
98421.W0025	Nylon - White	25	150	340
98421.W0030	Nylon - White	30	155	470
98421.W0035	Nylon - White	35	155	630
98421.W0040	Nylon - White	40	160	785
98421.W0045	Nylon - White	45	160	965
98421.W0050	Nylon - White	50	165	1250





98422

MALLETS & HAMMERS

Material

Insert: nylon, white.

Order No.	Type	For mallet head d_1
98422.W0120	Nylon - White	20
98422.W0125	Nylon - White	25
98422.W0130	Nylon - White	30
98422.W0135	Nylon - White	35
98422.W0140	Nylon - White	40
98422.W0145	Nylon - White	45
98422.W0150	Nylon - White	50

