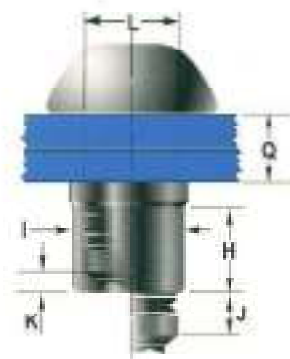
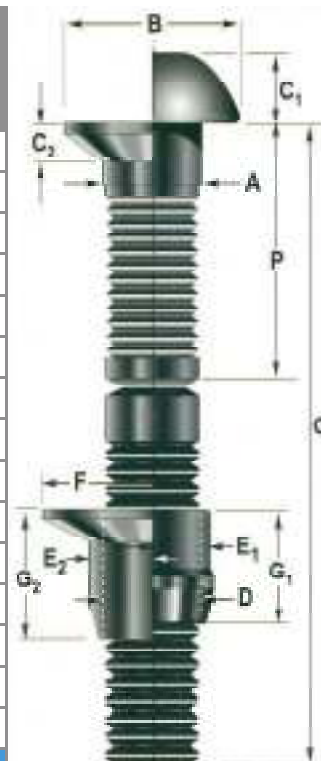


## HYDRALOC "T" Pin & Collar

### 13mm

PIN DIMENSIONS			GRIP NUMBER	GRIP RANGE (Q)	PIN LENGTH (O)	BREAK LENGTH (P)
Shank Diameter	A	12.52 - 12.95	6	6 - 13	79	32
Head Diameter	B	22.8 - 24.5	12	12 - 19	85	38
Head Height	C1	7.7 - 9.2	18	18 - 25	91	44
Head Height	C2	6.15 MAX	24	24 - 31	97	50
COLLAR DIMENSIONS			31	31 - 38	104	57
Bore Diameter	D	13.2 - 13.4	37	37 - 44	110	63
Outside Diameter	E1	19.95 - 20.25	44	44 - 51	117	70
Outside Diameter	E2	20.1 - 20.4	50	50 - 57	123	76
Flange Diameter	F	25.15 - 26.15	57	57 - 64	130	83
Height	G1	15.7 - 15.9	63	63 - 70	136	89
Height	G2	18.7 - 19.2	70	70 - 77	143	96
INSTALLED DATA			77	77 - 84	150	103
Swage Length	H	9.74 MIN	83	83 - 90	156	109
Swage Diameter	I	18.4 MAX	89	89 - 96	162	115
Pin Protrusion	J	9.0 MAX	95	95 - 102	168	121
Pin Intrusion	K	1.5 MAX	<b>No 13 FASTENER</b>			
Hole Size	L	14.2 MAX				
MECHANICAL PROPERTIES						
Shear Strength		65 KN MIN				
Clamp Load		54 KN MIN				
Tensile Strength		76 KN MIN				



## Take Note

All fasteners will deliver the specified mechanical properties when installed within the grip range for material thickness specified.

When using flange collars remember to add the flange thickness to the total material thickness for proper grip selection.

All fasteners are manufactured to metric sizes for your convenience.

'T' denotes Tensile Strength = ASTM Grade 5 = 120,000 PSI (828 mPa) Minimum Ultimate Tensile Strength.

Shear Strength is Approximately 80% of ultimate Tensile. Not all items shown are standard stock items, and are manufactured to order. No. 25 & 28 Fasteners are only made to order.

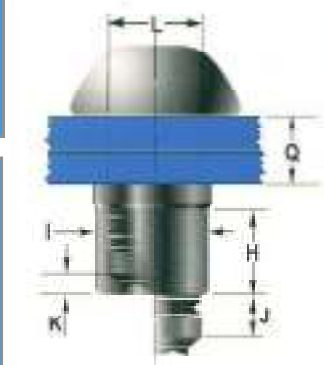
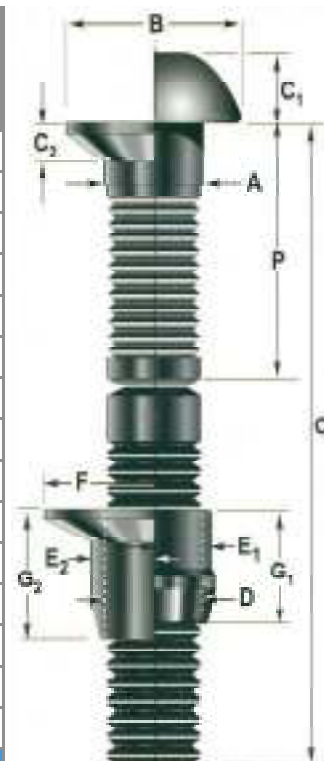
Standard Finishes : Pin - Natural

Collar - Zinc Electro Plated

If Stump Pins are required add suffix 'S'  
'P' dimensions will then apply for average length

## Hydraloc 'T' Pin & Collar 16mm

PIN DIMENSIONS			GRIP NUMBER	GRIP RANGE (Q)	PIN LENGTH (O)	BREAK LENGTH (P)
Shank Diameter	A	15.65 - 16.19	6	6 - 13	94	36
Head Diameter	B	28.5 - 30.0	12	12 - 19	100	42
Head Height	C1	9.5 - 11.3	18	18 - 25	106	48
Head Height	C2	8.1 MAX	24	24 - 31	112	54
COLLAR DIMENSIONS			31	31 - 38	119	61
Bore Diameter	D	16.55 - 16.75	37	37 - 44	125	67
Outside Diameter	E1	24.7 - 24.9	44	44 - 51	132	74
Outside Diameter	E2	24.85 - 25.15	50	50 - 57	138	80
Flange Diameter	F	31.3 - 32.3	57	57 - 64	145	87
Height	G1	21.65 - 21.9	63	63 - 70	151	93
Height	G2	23.75 - 24.25	70	70 - 77	158	100
INSTALLED DATA			77	77 - 84	165	107
Swage Length	H	15.69 MIN	83	83 - 90	171	113
Swage Diameter	I	23.0 MAX	89	89 - 96	177	119
Pin Protrusion	J	9.0 MAX	95	95 - 102	183	125
Pin Intrusion	K	1.5 MAX	<b>No 16 FASTENER</b>			
Hole Size	L	17.5 MAX				
MECHANICAL PROPERTIES						
Shear Strength		101 KN MIN				
Clamp Load		86 KN MIN				
Tensile Strength		121 KN MIN				



### Take Note

All fasteners will deliver the specified mechanical properties when installed within the grip range for material thickness specified.

When using flange collars remember to add the flange thickness to the total material thickness for proper grip selection.

All fasteners are manufactured to metric sizes for your convenience.

'T' denotes Tensile Strength = ASTM Grade 5 = 120,000 PSI (828 mPa) Minimum Ultimate Tensile Strength.

Shear Strength is Approximately 80% of ultimate Tensile. Not all items shown are standard stock items, and are manufactured to order. No. 25 & 28 Fasteners are only made to order.

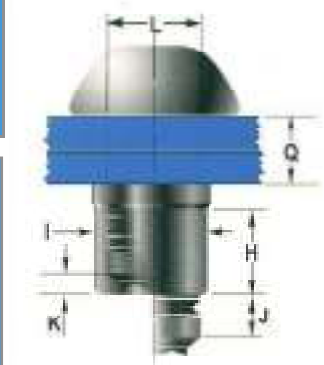
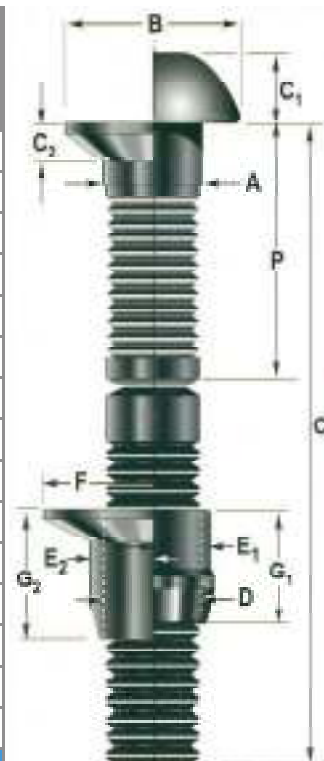
Standard Finishes : Pin - Natural      Collar - Zinc Electro Plated

If Stump Pins are required add suffix 'S'  
'P' dimensions will then apply for average length

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## Hydraloc 'T' Pin & Collar 19mm

PIN DIMENSIONS			GRIP NUMBER	GRIP RANGE (Q)	PIN LENGTH (O)	BREAK LENGTH (P)
Shank Diameter	A	18.8 - 19.43	6	6 - 13	107	39
Head Diameter	B	33.5 - 35.0	12	12 - 19	113	45
Head Height	C1	11.5 - 13.5	18	18 - 25	119	51
Head Height	C2	9.8 MAX	24	24 - 31	125	57
COLLAR DIMENSIONS			31	31 - 38	132	64
Bore Diameter	D	19.80 - 20.0	37	37 - 44	138	70
Outside Diameter	E1	29.5 - 29.8	44	44 - 51	145	77
Outside Diameter	E2	29.85 - 30.15	50	50 - 57	151	83
Flange Diameter	F	37.7 - 38.7	57	57 - 64	158	90
Height	G1	23.95 - 24.25	63	63 - 70	164	96
Height	G2	28.45 - 28.95	70	70 - 77	171	103
INSTALLED DATA			77	77 - 84	178	110
Swage Length	H	16.95 MIN	83	83 - 90	184	116
Swage Diameter	I	27.8 MAX	89	89 - 96	190	122
Pin Protrusion	J	9.0 MAX	95	95 - 102	196	128
Pin Intrusion	K	1.5 MAX	<b>No 19 FASTENER</b>			
Hole Size	L	20.5 MAX				
MECHANICAL PROPERTIES						
Shear Strength		145 KN MIN				
Clamp Load		127 KN MIN				
Tensile Strength		179 KN MIN				



### Take Note

All fasteners will deliver the specified mechanical properties when installed within the grip range for material thickness specified.

When using flange collars remember to add the flange thickness to the total material thickness for proper grip selection.

All fasteners are manufactured to metric sizes for your convenience.

'T' denotes Tensile Strength = ASTM Grade 5 = 120,000 PSI (828 mPa) Minimum Ultimate Tensile Strength.

Shear Strength is Approximately 80% of ultimate Tensile. Not all items shown are standard stock items, and are manufactured to order. No. 25 & 28 Fasteners are only made to order.

Standard Finishes : Pin - Natural

Collar - Zinc Electro Plated

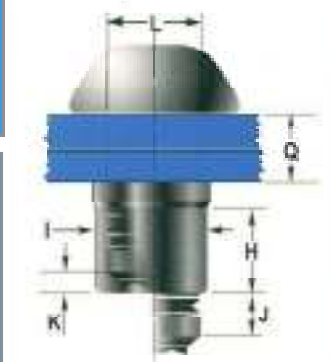
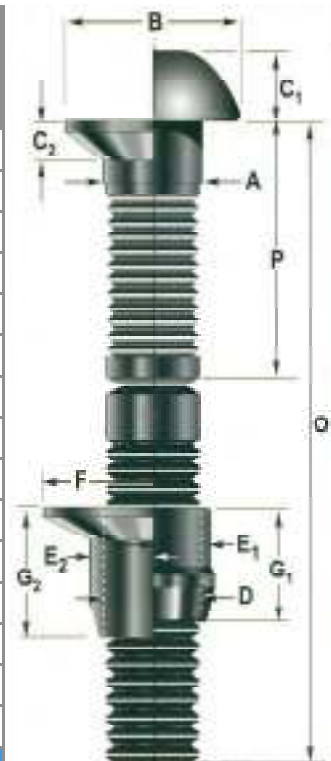
If Stump Pins are required add suffix 'S'  
'P' dimensions will then apply for average length

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## Hydraloc 'T' Pin & Collar

### 22mm

PIN DIMENSIONS			GRIP NUMBER	GRIP RANGE (Q)	PIN LENGTH (O)	BREAK LENGTH (P)
Shank Diameter	A	22.0 - 22.6	6	6 - 13	114	42
Head Diameter	B	39 - 41	12	12 - 19	120	48
Head Height	C1	13.5 - 15.3	18	18 - 25	126	54
Head Height	C2	10.0 MAX	24	24 - 31	132	60
COLLAR DIMENSIONS			31	31 - 38	139	67
Bore Diameter	D	23.4 - 23.6	37	37 - 44	145	73
Outside Diameter	E1	34.55 - 34.85	44	44 - 51	152	80
Outside Diameter	E2	34.6 - 34.8	50	50 - 57	158	86
Flange Diameter	F	40.0 - 41.0	57	57 - 64	165	93
Height	G1	27.85 - 28.15	63	63 - 70	171	99
Height	G2	33.35 - 33.65	70	70 - 77	178	106
INSTALLED DATA			77	77 - 84	185	113
Swage Length	H	19.35 min	83	83 - 90	191	119
Swage Diameter	I	32.3 MAX	89	89 - 96	197	125
Pin Protrusion	J	9.0 MAX	95	95 - 102	203	131
Pin Intrusion	K	1.5 MAX	<b>No 22 FASTENER</b>			
Hole Size	L	23.5 MAX				
MECHANICAL PROPERTIES						
Shear Strength		194 KN MIN				
Clamp Load		175 KN MIN				
Tensile Strength		247 KN MIN				



## Take Note

All fasteners will deliver the specified mechanical properties when installed within the grip range for material thickness specified.

When using flange collars remember to add the flange thickness to the total material thickness for proper grip selection.

All fasteners are manufactured to metric sizes for your convenience.

'T' denotes Tensile Strength = ASTM Grade 5 = 120,000 PSI (828 mPa) Minimum Ultimate Tensile Strength.

Shear Strength is Approximately 80% of ultimate Tensile. Not all items shown are standard stock items, and are manufactured to order. No. 25 & 28 Fasteners are only made to order.

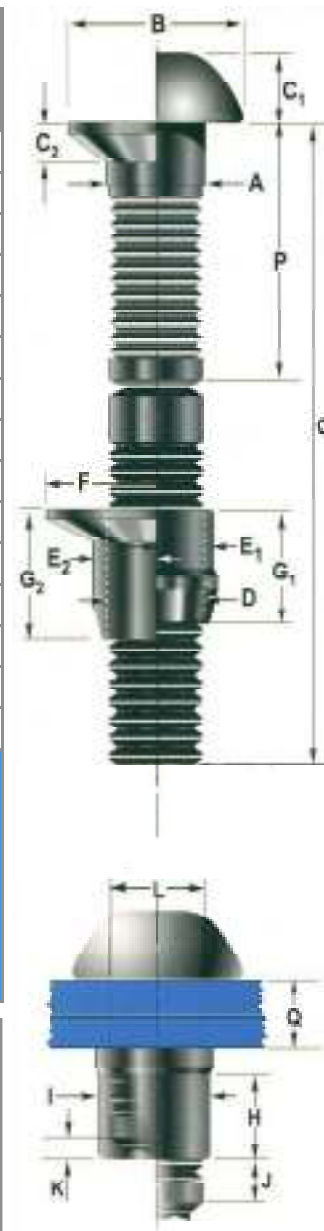
Standard Finishes : Pin - Natural      Collar - Zinc Electro Plated

If Stump Pins are required add suffix 'S'  
'P' dimensions will then apply for average length

## Hydraloc 'T' Pin & Collar

### 25mm

PIN DIMENSIONS			GRIP NUMBER	GRIP RANGE (Q)	PIN LENGTH (O)	BREAK LENGTH (P)
Shank Diameter	A	25.1 - 25.9	6	6 - 13	129	46
Head Diameter	B	45 - 47	12	12 - 19	135	52
Head Height	C1	15.0 - 17.7	18	18 - 25	141	58
Head Height	C2	13.8 MAX	24	24 - 31	147	64
COLLAR DIMENSIONS			31	31 - 38	154	71
Bore Diameter	D	26.2 - 26.4	37	37 - 44	160	77
Outside Diameter	E1	39.55 - 39.85	44	44 - 51	167	84
Outside Diameter	E2	39.45 - 39.75	50	50 - 57	173	90
Flange Diameter	F	47.5 - 48.5	57	57 - 64	180	97
Height	G1	31.55 - 31.95	63	63 - 70	186	103
Height	G2	37.95 - 36.25	70	70 - 77	193	110
INSTALLED DATA			77	77 - 84	200	117
Swage Length	H	21.95 min	83	83 - 90	206	123
Swage Diameter	I	36.8 MAX	89	89 - 96	212	129
Pin Protrusion	J	9.0 MAX	95	95 - 102	218	135
Pin Intrusion	K	1.5 MAX	<b>No 25 FASTENER</b>			
Hole Size	L	27 MAX				
MECHANICAL PROPERTIES						
Shear Strength		251 KN MIN				
Clamp Load		229 KN MIN				
Tensile Strength		323 KN MIN				



## Take Note

All fasteners will deliver the specified mechanical properties when installed within the grip range for material thickness specified.

When using flange collars remember to add the flange thickness to the total material thickness for proper grip selection.

All fasteners are manufactured to metric sizes for your convenience.

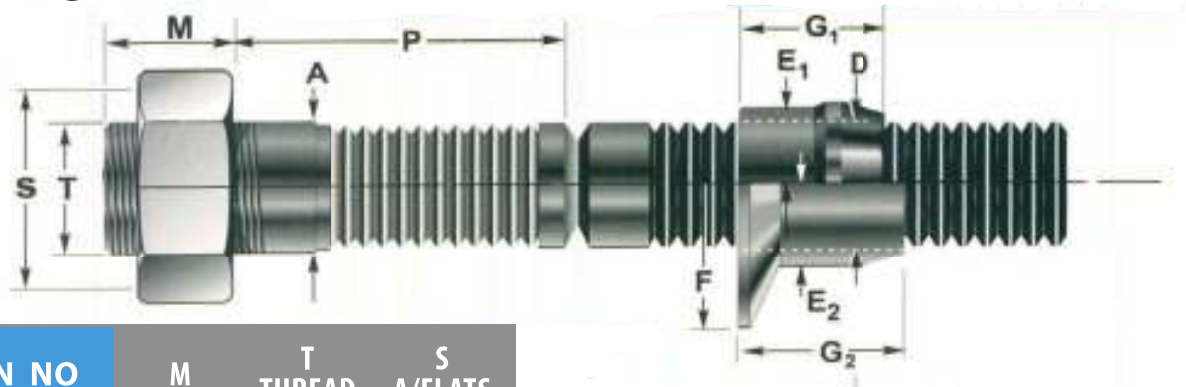
## How to order your Hydraloc 'T' Pin & Collar

PIN			COLLAR			
<b>13</b>	<b>06</b>	<b>R</b>	<b>T</b>	<b>S</b>	<b>13</b>	<b>S</b>
Diameter (A)	Joint Thickness (Q)	Head R - Raised F - Flush N - Nut	Grade T - Tensile	SUFFIX for Stumps Pins Only	Diameter (A)	Collar S - Standard F - Flanged

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## Hydraloc 'T' Nut Head

13-28mm



PIN NO	M	T THREAD	S A/FLATS
13	14	1/2" UN	19
16	16	M16	24
19	19	M20	30
22	21	M22	32
25	26	1" UN	38

All other data for dimensions given as well as installed Data and Mechanical properties can be found in our Standard Fastener Catalogue

### Take Note

Nut head shown is for MONOGRIP applications only, with grip ranges as shown in our Standard Fastener Section.

Nut heads are also available in MULTIGRIP with the thread length "M" extended to suit the customer's requirements.

Standard finishes:

### How to order your MONOGRIP Hydraloc 'T' Nut Head

PIN **13 06 N T** COLLAR **13 S**

Diameter (A)    Minimum Grip    Nut Head    Tensile Head    Diameter (A)    S - Standard    F - Flange

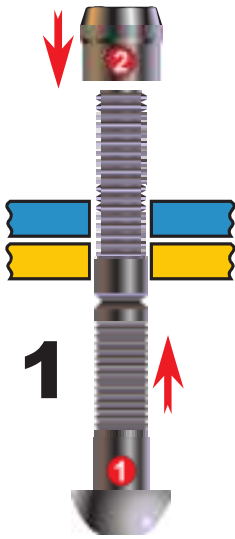
### How to order your MULTIGRIP Hydraloc 'T' Nut Head

PIN **13 06 - 24 N T** SAME AS ABOVE

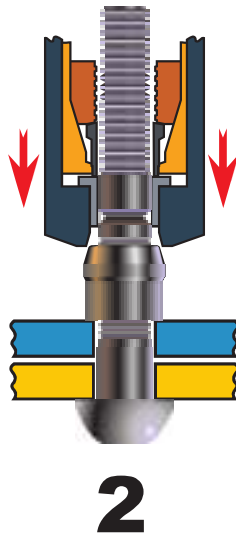
Diameter (A)    Minimum Grip    Maximum Grip    Nut Head    Tensile Head

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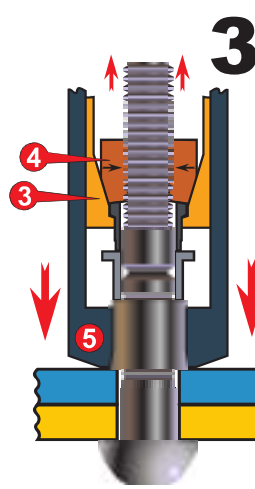
## Hydraloc Installation Guide



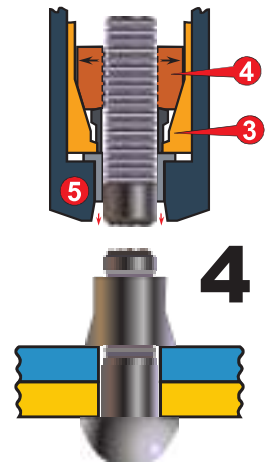
The Hydraloc Pin(1) is pushed through the prepared hole as far as possible. The Collar(2) is then placed over the Pin and located as close to the Joint as possible.



The Installation Tool is Placed over the assembly holding the Pin Head close to the Joint Face and also pushing the Collar as close as possible.



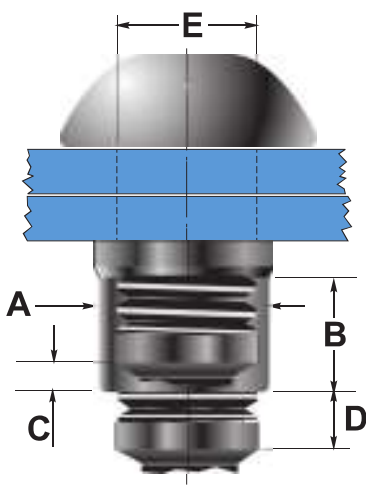
On Installation, the Collet(3) moves backwards allowing the Jaws(4) to grip the Pintail. As the Collet(3) continues to move backwards, the Anvil(5) is forced forward firmly closing any gap condition and then Swaging the Collar into the grooves, developing the Specified Clamp and Tensile Properties



On completion of the Swaging Cycle, the Collet(3) continues to move backwards causing the Pintail to break off. In the return mode of the tool, the assembled joint is first ejected from the Anvil(5) and then the Jaws(4) are opened freeing the spent Pintail which is then removed from the tool.

## Installed Inspection Data

### 13-28mm

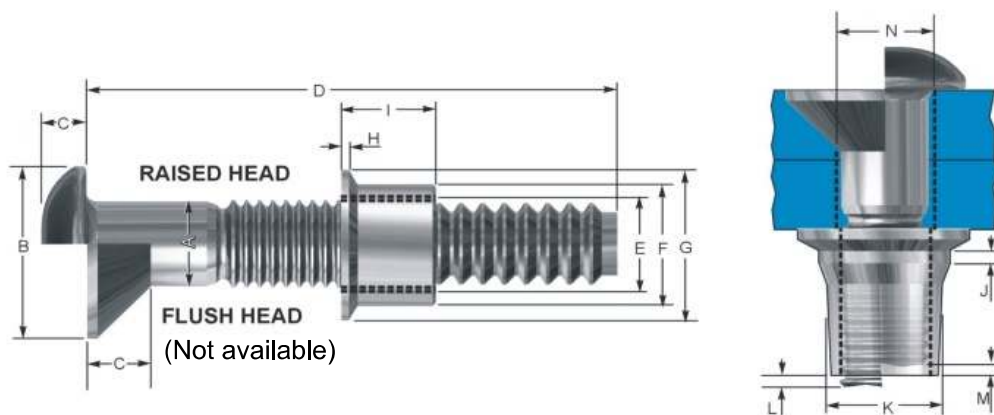


	PIN NUMBER					
	13	16	19	22	25	28
<b>A</b> SWAGED DIAMETER MAXIMUM	18.4	23.0	27.8	32.6	36.8	41.35
<b>B</b> SWAGED LENGTH MINIMUM	9.74	15.69	16.95	19.35	21.95	23.60
<b>C</b> PIN INTRUSION MAXIMUM	1.5	1.5	1.5	1.5	1.5	1.5
<b>D</b> PIN PROTRUSION MAXIMUM	9.0	9.0	9.0	9.0	9.0	9.0
<b>E</b> HOLE DIAMETER MAXIMUM	14.2	17.5	20.5	23.7	27.0	30.2

## Multi-grip Pin & Collar

### 5-10mm

Available from 5 to 10mm diameter. Various lengths. Grade 8.8 Versatile fastener with extensive grip range. Ideal for applications where material thicknesses vary. Reduces stock holding, operator error and provides cost effective benefits over traditional fastening methods.



PIN DIMENSIONS							
NOMINAL DIAMETER		5		6		10	
PART NO		05 02 R MG	05 08 R MG	06 02 R MG	06 08 R MG	10 03 R MG	10 20 R MG
GRIP RANGE		2 - 18	8 - 32	2 - 18	8 - 32	3 - 25	20 - 40
Shank dia. max	A	4.96		5.95		9.73	
Head dia. max	B	9.8		11.5		19.7	
Head Height max	C	3.15		3.8		6.2	
Length max	D	46.0	61.0	50.5	66.0	73.7	89.6
COLLAR DIMENSIONS							
PART NO		05 F M		06 F M		10 F M	
Bore Dia. nom	E	4.9		6.0		10.0	
Body Dia. nom	F	8.0		9.8		16.2	
Flange Dia. max	G	9.7		12.3		20.2	
Flange height	H	1.3		1.7		2.6	
Length	I	6.6		9.0		13.4	
INSTALLATION DATA							
Swage Length max	J	1.3		2.6		2.6	
Swage dia. max	K	7.05		8.75		13.8	
Pin Intrusion max	L	1.6		3.2		6.3	
Pin Protrusion max	M	0.8		0.8		1.6	
Prepared Hole dia. max	N	5.2		6.2		10.2	
MECHANICAL PROPERTIES							
Tensile Strength min	kN	6.0		9.2		26.8	
Clamp Load min	kN	3.2		5.0		17.0	
Shear Strength min	kN	5.5		7.9		21.0	

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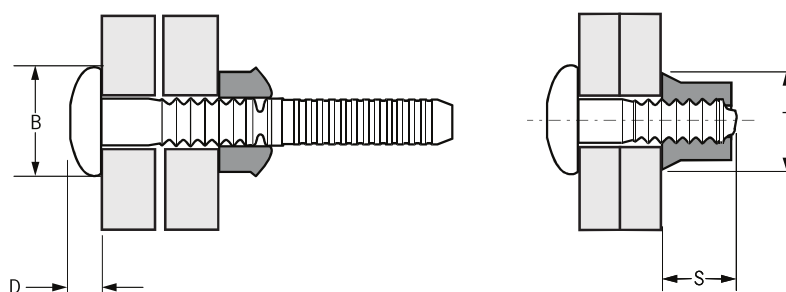
## C106L Pin & Collar 6 & 10mm

This two piece fastener is a heavy duty, high strength, tamper resistant metric fastener available in 6 - 10 mm diameter. High tensile and shear strength, fast installation, vibration resistant, limited grip capability. Avoids operator error and provides cost effective benefits over traditional fastening methods. Ideal for areas with restricted access. Available in various lengths.


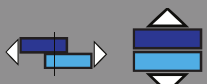




**MATERIAL**  
HEAD: BUTTON  
PIN: STEEL  
COLLAR: STEEL

**FINISH**  
PIN: ZINC PLATED  
COLLAR: ZINC PLATED



Dimensions in millimeter

PART NUMBER	SIZE	HOLE SIZE 	GRIP RANGE	B	D	S	T		
								kN SHEAR	kN TENSILE
N435316-1.5G	6	6.2	1.5 - 7.5	13.33	3.86	8.13	10.39	15.25	10.20
N435316-16.5G	6	6.2	16.5 - 22.5	13.33	3.86	8.13	10.39	15.25	10.20
106LC-2R16G									

PART NUMBER	SIZE	HOLE SIZE 	GRIP RANGE	B	D	S	T		
								kN SHEAR	kN TENSILE
N4353110-4.5G	10	10.2	4.5 - 10.5	19.94	6.27	11.68	16.24	33.00	27.20
N4353110-7.5G	10	10.2	7.5 - 13.5	19.94	6.27	11.68	16.24	33.00	27.20
N4353110-10.5G	10	10.2	10.5 - 16.5	19.94	6.27	11.68	16.24	33.00	27.20
N4353110-13.5G	10	10.2	13.5 - 19.5	19.94	6.27	11.68	16.24	33.00	27.20
N4353110-16.5G	10	10.2	16.5 - 22.5	19.94	6.27	11.68	16.24	33.00	27.20
N451312R10G									

## Avtainer® 2311

The Avdel Avtainer® fastener is a high strength steel fastener for joining composite materials to metal. With a high shear strength due to the internally locked stem the Avtainer rivet creates a vibration resistant joint whilst the under-head Neoprene™ seal creates a watertight joint.

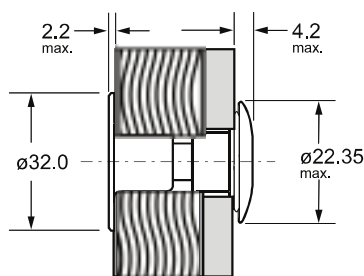
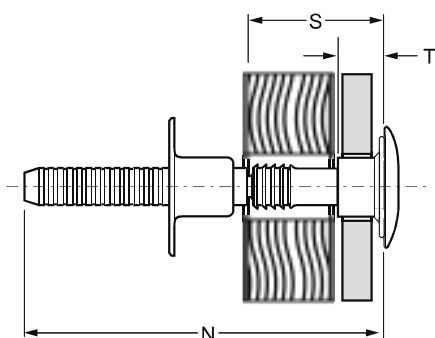


### MATERIAL

HEAD: BRAZIER  
PIN: LOW CARBON STEEL  
COLLAR: LOW CARBON STEEL  
LOCKING SLUG: NYLON



### FINISH

PIN: ZINC PLATED  
COLLAR: ZINC PLATED  
SEAL: NEOPRENE®



S - Break Length  
N - Pin Length  
T - Head Thickness

### Dimensions in millimeter

PART NUMBER	SIZE	HOLE SIZE 	GRIP RANGE	S MAX	N MAX	T MAX		
							kN SHEAR	kN max TENSILE
2311-1210	10.0 x 15.9	10.3 - 10.7	14.27 - 17.45	15.9	56.9		2.22	4.44
2311-1211	10.0 x 17.5	10.3 - 10.7	15.87 - 19.05	17.5	58.4	4.6	2.22	4.44
2311-1214	10.0 x 22.2	10.3 - 10.7	20.62 - 23.80	22.2	63.2	9.4	2.22	4.44
2311-1216	10.0 x 25.4	10.3 - 10.7	23.80 - 26.97	25.4	66.5	12.5	2.22	4.44
2311-1217	10.0 x 27.0	10.3 - 10.7	25.40 - 28.57	27.0	75.9	14.2	2.22	4.44
2311-1218	10.0 x 28.6	10.3 - 10.7	26.97 - 30.15	28.6	75.9	14.2	2.22	4.44
2311-1219	10.0 x 30.2	10.3 - 10.7	28.57 - 31.75	30.2	75.9	14.2	2.22	4.44
2311-1220	10.0 x 31.8	10.3 - 10.7	30.15 - 33.32	31.8	75.9	14.2	2.22	4.44
2311-1222	10.0 x 34.9	10.3 - 10.7	33.32 - 36.50	34.9	75.9	14.2	2.22	4.44
2321-1200			M10 Collar					

Avtainer® is a trademark of Avdel UK.

## Large Diameter Blind Fastener IBOMR

High-strength industrial blind bolt used in situations where a two-piece fastener would commonly be used. These fasteners install from just one side by a single worker, saving time and reducing cost.

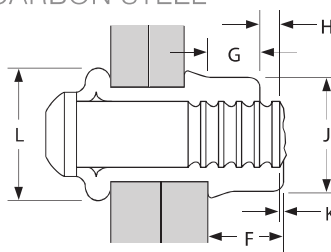
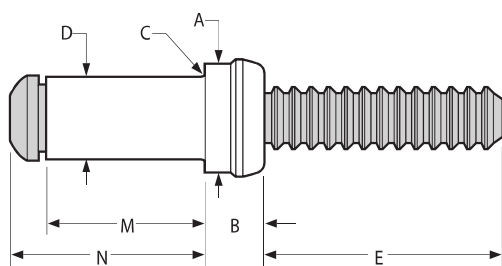


### MATERIAL

**STEM:** CHROMIUM,  
MOLYBDEMIUM STEEL  
**SLEEVE:** CARBON STEEL  
**COLLAR:** CARBON STEEL

### FINISH

**STEM:** BLACK OXIDE  
**SLEEVE:** ZINC PLATED  
**COLLAR:** ZINC PLATED



### Dimensions in millimeter

PART NUMBER	SIZE	HOLE SIZE	GRIP RANGE	M ref	N max
IBOMR204	16	17.45 - 18.49	6.37 - 12.70	30.73	38.88
IBOMR208	16	17.45 - 18.49	12.72 - 19.05	37.08	45.23
IBOMR2012	16	17.45 - 18.49	19.07 - 25.40	43.43	51.59
IBOMR2012G	16	17.45 - 18.49	19.07 - 25.40	43.43	51.59
IBOMR2016	16	17.45 - 18.49	25.42 - 31.75	49.78	57.93
IBOMR2020GA	16	17.45 - 18.49	31.77 - 38.10	56.13	64.28
IBOMR24-8	19	21.03 - 22.17	12.72 - 19.05	41.40	50.8
IBOMR2412	19	21.03 - 22.17	19.07 - 25.40	47.75	57.15
IBOMR2412HDG	19	21.03 - 22.17	19.07 - 25.40	47.75	57.15
IBOMR2416GAG	19	21.03 - 22.17	25.42 - 31.75	54.10	63.5
IBOMR2416GG	19	21.03 - 22.17	25.42 - 31.75	54.10	63.5

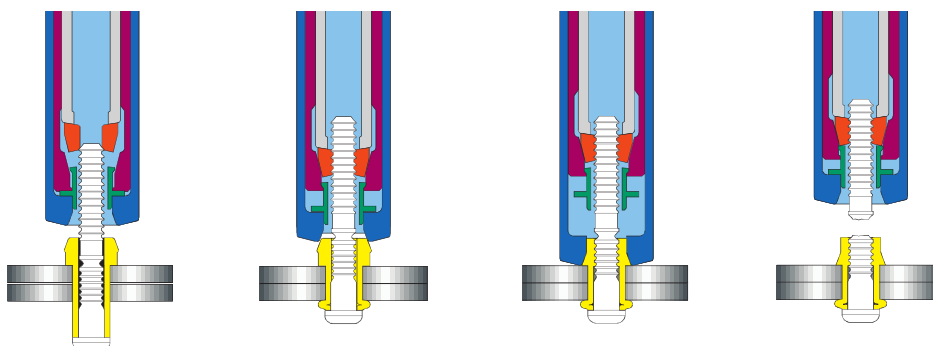
### Dimensional Data

	16	19
A	23.90 - 23.64	28.70 - 28.44
B	12.87 - 13.84	16.17 - 16.61
C max	1.02	1.27
D	17.39 - 15.81	20.72 - 20.19
E	43.43	54.61

### Installed Dimensions

	16	19
F nom	15.11	18.33
G min	10.4	11.0
H max	8.0	8.0
J max	22.19	26.08
K max	3.8	3.8
L nom	26.36	32.18
SHEAR	127kN	200kN
TENSILE	91kN	129kN

### Installation Sequence



Data shown is subject to change without prior notice as a result of continuous product development and improvement. Rev 2014

## Avbolt® 21001

The Avbolt® heavy duty fastener is a structural blind fastener with high strength, and tamper resistance. Designed for use in heavy-duty fastening applications such as construction, container, railway, mining and bridge building.

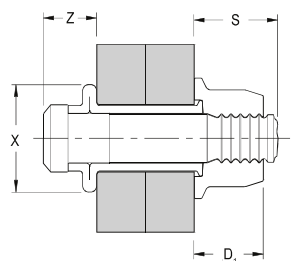
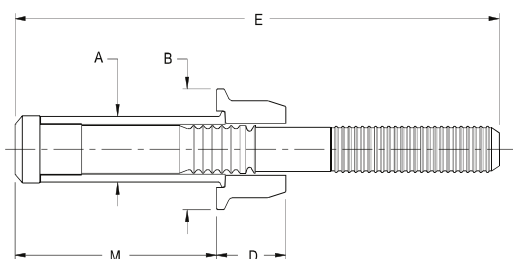


### MATERIAL

STEM: CHROMIUM,  
MOLYBDEMIUM STEEL  
SLEEVE: CARBON STEEL  
COLLAR: CARBON STEEL

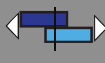


### FINISH

STEM: BLACK OXIDE  
SLEEVE: ZINC PLATED  
COLLAR: ZINC PLATED



Z - 10mm - 9.58  
X - 10mm - 15.5  
S - 10mm - 18.34  
D<sub>1</sub> - 10mm - 14.51  
  
Z - 16mm - 16.01  
X - 16mm - 25.4  
S - 16mm - 30.48  
D<sub>1</sub> - 16mm - 20.07

### Dimensions in millimeter

PART NUMBER	SIZE	HOLE SIZE	GRIP RANGE	A MAX	B MAX	D MAX	M MAX	E MAX		
									kN min SHEAR	kN min TENSILE
21001-01212	10.0	10.49 - 11.05	17.48 - 20.65	10.47	18.77	12.65	37.80	86.58	45.0	32.25
21001-02004	16.0	17.45 - 18.49	6.35 - 12.7	17.30	29.47	17.45	39.35	102.71	129.0	91.19
21001-02012	16.0	17.45 - 18.49	19.05 - 25.4	17.30	29.47	17.45	52.05	115.41	129.0	91.19
21001-02016	16.0	17.45 - 18.49	25.4 - 31.75	17.30	29.47	17.45	58.40	121.76	129.0	91.19
21001-02020	16.0	17.45 - 18.49	31.75 - 38.1	17.30	29.47	17.45	64.75	128.11	129.0	91.19

Avbolt® is a trademark of Avdel UK.

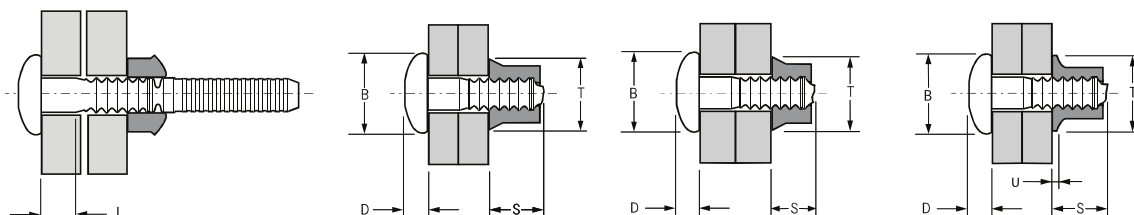
## Avdelok® 2611

The Avdelok® lockbolt is a high strength, vibration resistant lockbolt with high, controlled clamp. Quick to install and easy to inspect for tampering, making this the ideal rivet for heavy engineering applications.



**MATERIAL**  
**HEAD:** BRAZIER  
**PIN:** CARBON STEEL  
**COLLAR:** LOW CARBON STEEL

**FINISH**  
**PIN:** ZINC PLATED  
**COLLAR:** ZINC PLATED



### Dimensions in millimeter

PART NUMBER	SIZE	HOLE SIZE	GRIP RANGE	L MAX	B MAX	D MAX	Full Collar S	Full Collar T	Half Collar S	Half Collar T	Flange Collar S	Flange Collar T	Flange Collar U <sup>3</sup>
2611-0601	4.8	5.0	0.79 - 2.39	1.96	10.1	3.4	8.7	8.0	7.2	8.0	9.4	9.9	0.76
2611-0602	4.8	5.0	2.39 - 3.96	3.52	10.1	3.4	8.7	8.0	7.2	8.0	9.4	9.9	0.76
2611-0603	4.8	5.0	3.96 - 5.56	5.13	10.1	3.4	8.7	8.0	7.2	8.0	9.4	9.9	0.76
2611-0605	4.8	5.0	5.56 - 7.14	8.31	10.1	3.4	8.7	8.0	7.2	8.0	9.4	9.9	0.76
2611-0802	6.4	6.6	2.39 - 3.96	3.66	13.4	4.1	10.7	10.6	9.2	10.6	11.7	13.1	0.94
2611-0804	6.4	6.6	5.56 - 7.14	6.84	13.4	4.1	10.7	10.6	9.2	10.6	11.7	13.1	0.94
2611-0805	6.4	6.6	7.14 - 8.74	8.41	13.4	4.1	10.7	10.6	9.2	10.6	11.7	13.1	0.94
2611-0808	6.4	6.6	8.74 - 10.31		13.4	4.1	10.7	10.6	9.2	10.6	11.7	13.1	0.94
2611-0809	6.4	6.6	11.91 - 13.49		13.4	4.1	10.7	10.6	9.2	10.6	11.7	13.1	0.94
2611-0830	6.4	6.6	46.84 - 48.41		13.4	4.1	10.7	10.6	9.2	10.6	11.7	13.1	0.94

Avdelok® is a trademark of Avdel UK.

STOCK CODE	DESCRIPTION
2662-0600	4.8 Avdelok Full Collar (Aluminium)
2682-0600	4.8 Avdelok Half Collar (Aluminium)
2615-0600	4.8 Avdelok Flange Collar (Aluminium)
2662-0800	6.4 Avdelok Full Collar (Aluminium)
2682-0800	6.4 Avdelok Half Collar (Aluminium)
2615-0800	6.4 Avdelok Flange Collar (Aluminium)

nom	kN SHEAR	kN TENSILE
4.8	8.63	7.34
6.4	14.73	13.35

## Avdelok®

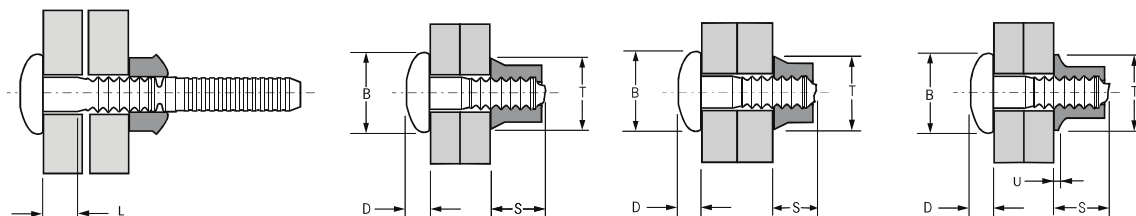
### 2621

The Avdelok® lockbolt is a high strength, vibration resistant lockbolt with high, controlled clamp. Quick to install and easy to inspect for tampering, making this the ideal rivet for heavy engineering applications.



**MATERIAL**  
**HEAD:** BRAZIER  
**PIN:** CARBON STEEL  
**COLLAR:** LOW CARBON STEEL

**FINISH**  
**PIN:** ZINC PLATED  
**COLLAR:** ZINC PLATED



Dimensions in millimeter

PART NUMBER	SIZE	HOLE SIZE	GRIP RANGE	L MAX	B MAX	D MAX	Full Collar S	Full Collar T	Half Collar S	Half Collar T	Flange Collar S	Flange Collar T	Flange Collar U <sup>3</sup>
2621-0802	6.4	6.6	1.57 - 4.75	1.57	13.4	4.1	12.2	10.6	10.7	10.6	13.2	13.1	0.94
2621-0805	6.4	6.6	6.35 - 9.53	6.35	13.4	4.1	12.2	10.6	10.7	10.6	13.2	13.1	0.94
2621-0809	6.4	6.6	12.70 - 15.88	12.70	13.4	4.1	12.2	10.6	10.7	10.6	13.2	13.1	0.94
2621-1004	8.0	8.2	3.18 - 9.53	3.18	16.7	5.5	15.5	13.3	12.5	13.3	16.8	16.3	1.22
2621-1206	9.6	9.8	6.35 - 12.70	0.25	20.1	6.7	18.6	15.5	15.5	15.5	20.0	20.0	1.42
2621-1208	9.6	9.8	9.53 - 15.88	0.375	20.1	6.7	18.6	15.5	15.5	15.5	20.0	20.0	1.42
2621-1210	9.6	9.8	12.70 - 19.05	0.50	20.1	6.7	18.6	15.5	15.5	15.5	20.0	20.0	1.42

Avdelok® is a trademark of Avdel UK.

STOCK CODE	DESCRIPTION
2662-0800	6.4 Avdelok Full Collar (Aluminium)
2682-0800	6.4 Avdelok Half Collar (Aluminium)
2615-0800	6.4 Avdelok Flange Collar (Aluminium)
2662-1000	8.0 Avdelok Full Collar (Aluminium)
2682-1000	8.0 Avdelok Half Collar (Aluminium)
2615-1000	8.0 Avdelok Flange Collar (Aluminium)
2662-1200	9.6 Avdelok Full Collar (Aluminium)
2682-1200	9.6 Avdelok Half Collar (Aluminium)
2615-1200	9.6 Avdelok Flange Collar (Aluminium)

nom	kN SHEAR	kN TENSILE
6.4	14.73	13.35
8.0	22.38	21.81
9.6	32.08	28.93

Data shown is subject to change without prior notice as a result of continuous product development and improvement . Rev 2014

## HYDRAPAC<sup>®</sup> HYDRAULIC POWER UNITS

HydraPac<sup>®</sup> hydraulic power units are compact, portable and available in 220v, 380v and 525v models. The pump solenoid and combination valves are all housed and submerged within the oil reservoir. The electrics are in a separate dry compartment and mounted externally on the motor.

A unique feature is that the motors only run on demand, when you close the tool trigger, it remains running whilst a series of fasteners are driven. At the end of the series if there is no further demand for a preselected (variable) time, the unit switches off, a touch of the tool trigger starts the unit instantly. Conserving power and enhancing system life.

If for any reason the hydraulic system is loaded to maximum pressure, the main relief valve will open and remain open, dropping the system pressure to a few bars until the unit is switched off or goes into sleep mode. This safety feature also ensures that the unit is never subjected to excessive overload. These units are also available in dual that allow operation of two hydraulic tools.



HYDRAPAC MODEL NO.	HP21	HP41	HP51
MOTOR	2,2kw, 4 Pole coupling driven mount		
VOLTS	220, 1Ph	380, 3Ph	525, 3Ph
AMPS / Hz	15A / 50hz	5.3A / 50hz	3.8A / 50 hz
LENGTH mm	815		
WIDTH mm	360		
HEIGHT mm	530		
WEIGHT kg	98 (with full tanks)		



HYDRAPAC MODEL NO.	HPD1
MOTOR	HOFFMAN HP78 Diesel engine
PUMP	Hawe Elements
CONTROL	12v DC Trigger Operated
WORKING PRESSURES	Pull - 55.2mPa (8000Psi) Return - 21mPa (3000 Psi)
PUMP CAPACITY	5.4 min at 3000 RPM
LENGTH mm	900
WIDTH mm	400
HEIGHT mm	700
WEIGHT kg	145 (with full tanks)

A RANGE OF CE COMPLIANT  
LOCALLY DESIGNED,  
DEVELOPED & MANUFACTURED  
LOCKBOLT INSTALLATION TOOLING



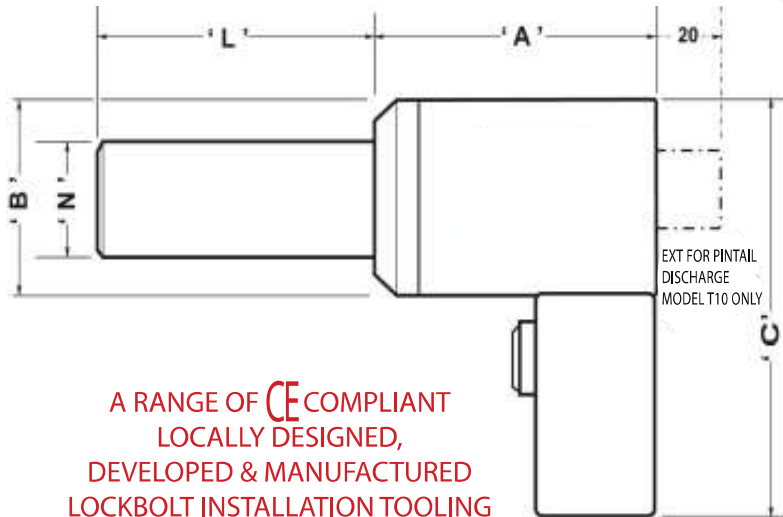
HOSE & CORD KIT	HS13	HS16	HS14
LENGTH mm	6	10	15
WEIGHT kg	5.0	7.0	12.5

other lengths available on request

## HYDRADRIV<sup>®</sup> 10-28mm

### BASIC DIMENSIONS

HYDRADRIV MODEL NO.	T10	T30	T51
LOCKBOLT RANGE	5 - 10	13 - 19	22 - 28
A	118	143	205
B	60	89	122
C	176	203	217
WEIGHT kg	3.5	8.0	18.0



A RANGE OF CE COMPLIANT  
LOCALLY DESIGNED,  
DEVELOPED & MANUFACTURED  
LOCKBOLT INSTALLATION TOOLING



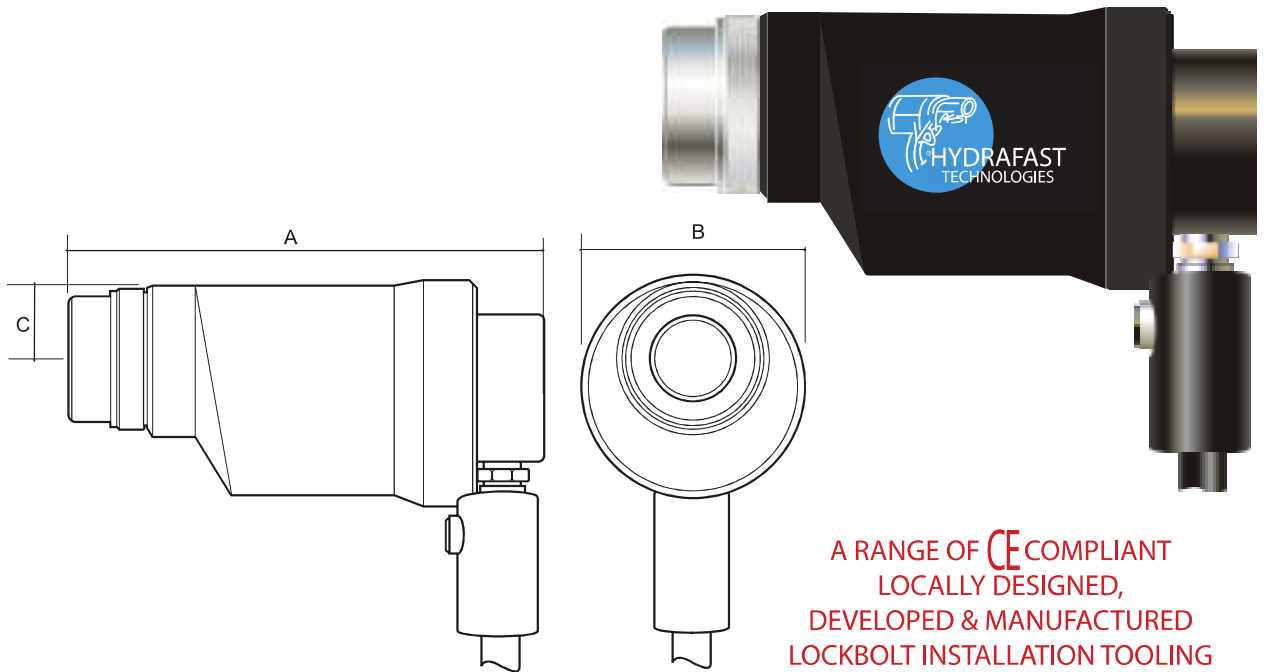
### NOSE SELECTION

T10		T30				T51					
NOSE NO	LOCKBOLT TYPE	L	N	NOSE NO	LOCKBOLT TYPE	L	N	NOSE NO	LOCKBOLT TYPE	L	N
N10	10 STD	89	28	N30	19 STD	131	56	N50	25 STD	153	83
N11	3/8" BLIND	86	28.5	N31	16 STD	113	48	N52	28 STD	158	83
G06	6 MG	69	20	N32	13 STD	110	43	N53	22 STD	148	70
G10	10 MG	90	33	N35	19 BLIND	130	56				



## HYDRADRIV<sup>®</sup> CLOSE QUARTER

### 13-28mm

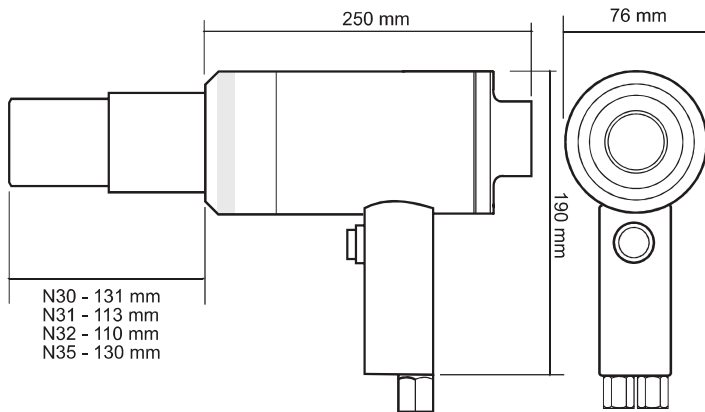


### TOOL SELECTION

HYDRADRIV MODEL NO	T32	T33	T34	T35	T36
LENGTH (A)	182 mm 7.16 in	194 mm 7.64 in	217 mm 8.54 in	217 mm 8.54 in	217 mm 8.54 in
BODY DIAMETER (B)	86 mm 3.38 in	96 mm 3.78 in	130 mm 5.12 in	130 mm 5.12 in	130 mm 5.12 in
BACK MARK (C)	31 mm 1.22 in	34.5 mm 1.36 in	48.5 mm 1.9 in	48.5 mm 1.9 in	48.5 mm 1.9 in
WEIGHT	6.3 kg 13.9 lbs	7.7 kg 17 lbs	15 kg 33 lbs	15 kg 33 lbs	15 kg 33 lbs
STROKE	33 mm 1.3 in	33 mm 1.3 in	41 mm 1.6 in	41 mm 1.6 in	41 mm 1.6 in
PULL PRESSURE	55.2 mPa 8000PSI	55.2 mPa 8000PSI	55.2 mPa 8000PSI	55.2 mPa 8000PSI	55.2 mPa 8000PSI
RETURN PRESSURE	20.7 mPa 3000PSI	20.7 mPa 3000PSI	20.7 mPa 3000PSI	20.7 mPa 3000PSI	20.7 mPa 3000PSI
HYDRAULIC FLUID	ISO VG 46 or Equivalent				
FASTENER RANGE	16 mm	19 mm	22 mm	25 mm	28 mm
NOISE LEVEL	126 dB (A)				
SOUND POWER	100.9 dB (A)				
VIBRATION	8.6 m/sec <sup>3</sup>				

## HYDRADRIV<sup>®</sup> SLIMLINE

13-19mm



A RANGE OF **CE** COMPLIANT  
LOCALLY DESIGNED,  
DEVELOPED & MANUFACTURED  
LOCKBOLT INSTALLATION TOOLING

### BASIC DIMENSIONS

HYDRADRIV MODEL NO	T40			
LENGTH (A)	250 mm		9.8 in	
BODY DIAMETER (B)	76 mm		2.9 in	
HEIGHT	190 mm		7.5 in	
WEIGHT	7 kg		15.4 lbs	
STROKE	41 mm		1.6 in	
PULL PRESSURE	55.2 mPa		8000 PSI	
RETURN PRESSURE	20.7 mPa		3000 PSI	
HYDRAULIC FLUID	ISO VG 46 or Equivalent			
FASTENER RANGE	19 mm STD	13 mm BOM	16 mm BOM	19 mm BOM
NOISE LEVEL	126 dB (A)			
SOUND POWER	100.9 dB (A)			
VIBRATION	8.6 m/sec <sup>3</sup>			

## HYDRADRIV<sup>®</sup> COLLAR SPLITTER

### 13-28mm



### TECHNICAL DATA

HYDRADRIV MODEL NO	S30	S50
CAPACITY	Lockbolts 13 - 19 mm	Lockbolts 22 - 28 mm
	Grade 8 Nuts 12 - 20 mm	Grade 8 Nuts 22 - 27 mm
STROKE	20 mm	20 mm
WORKING PRESSURE	57 Mpa	
	8000 PSI	
LENGTH	210	248
HEIGHT	90	110
WIDTH	60	65
WEIGHT	4.6 kg	7.8 kg
MOVING BLADE		
S30	LS3010	
S50		LS5010
FIXED BLADES		
13 MM	LS3013	
16 MM	LS3016	
19 MM	LS3019	
22 MM		LS5022
25 MM		LS5025
28 MM		LS5028

All new collar splitters are supplied with a full set of blades

# HYDRADRIV<sup>®</sup> DOUGHNUT

19mm STD + 19mm BOM



A RANGE OF CE COMPLIANT  
 LOCALLY DESIGNED,  
 DEVELOPED & MANUFACTURED  
 LOCKBOLT INSTALLATION TOOLING

## TECHNICAL DATA

HYDRADRIV MODEL NO		T42	T42H
CAPACITY		Lockbolts 19 mm	Blind fastener 19 mm
STROKE		35 mm (1.38 in)	
WORKING PRESSURE	PULL	55.2 Mpa (8000 psi)	
	RETURN	20.7 Mpa (3000 psi)	
BODY LENGTH CLOSED		114 mm (4.5 in)	
BODY LENGTH EXTENDED		149 mm (5.88 in)	
BODY DIAMETER		112 mm (4.4 in)	
WEIGHT		6.5 kg	

# PNEUMATIC & MANUAL TOOLS

Avlock International offers consistent and reliable installation tooling for breakstem fasteners, structural fasteners, lockbolts, rivnuts & speed fasteners. Constructed from high quality lightweight materials to provide maximum operator comfort.

Innovative, energy saving, low noise level, efficient, lightweight and robust tools are provided for industrial applications.

## Pneumatic Riveters



## Hand Riveters

