Hercus

Gear Your Future

2015 ENGINEERING CATALOGUE

Dynamic Solutions from concept to manufacture

www.hercus.com.au

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2015 ENGINEERING CATALOGUE

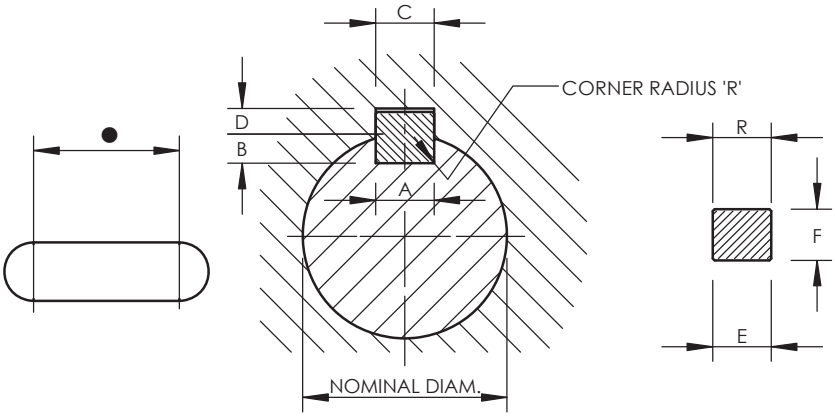
Contents

This catalogue contains a comprehensive range of standardised stock components, designed for use as building blocks in the construction of all types of industrial machinery. The use of stock components in lieu of custom-made items can bring many advantages to both builder and user of the equipment in which they are incorporated. Costs may be lowered by bringing the economies of high volume production to areas where these could not otherwise have been attained. The use of standard, "off the shelf" items can significantly reduce both inventories and lead times. Repair and maintenance can be greatly simplified through the ready availability of interchangeable replacement parts.

TQCSI ISO 9001:2008 Quality Certified AU1194-QC

KEYWAY STANDARDS

IMPERIAL
(BS 46 : PART 1 : 1958)



Safe working loads on keys.

Torque inch/pounds = 9000 x length x F x shaft dia (inches)

$$HP = \frac{\text{Torque(inch/pounds) x RPM}}{63025}$$

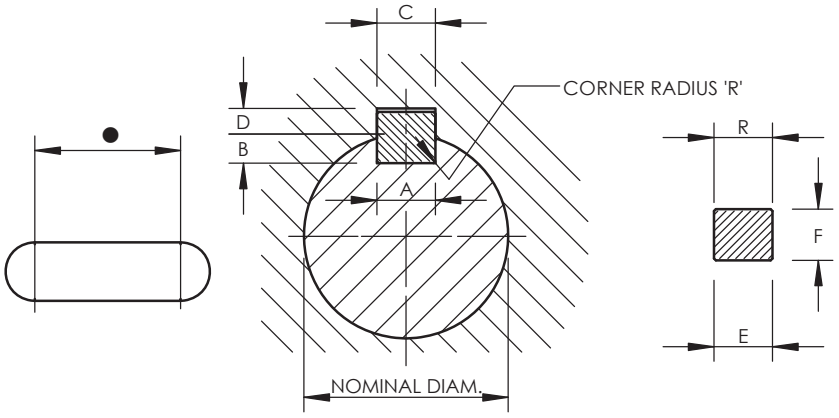
Square Keys:

	NOMINAL SHAFT DIAM.		KEY SIZE	DIMENSIONS (INCHES)						
	OVER	TO (Incl.)		A	B	C	D	E	F	R
	1/4”	1/2”	1/8” x 1/8”	0.124 0.125	0.072 0.078	0.125 0.126	0.060 0.066	0.127 0.125		0.010
	1/2”	3/4”	3/16” x 3/16”	0.187 0.188	0.107 0.113	0.188 0.189	0.088 0.094	0.190 0.188		0.010
	3/4”	1”	1/4” x 1/4”	0.249 0.250	0.142 0.148	0.250 0.251	0.115 0.121	0.252 0.250		0.010
	1”	1.1/4”	5/16” x 5/16”	0.311 0.312	0.177 0.183	0.312 0.313	0.142 0.148	0.314 0.312		0.010
	1.1/4”	1.1/2”	3/8” x 3/8”	0.374 0.375	0.213 0.219	0.375 0.376	0.169 0.175	0.377 0.375		0.010
	1.1/2”	1.3/4”	7/16” x 7/16”	0.437 0.438	0.248 0.254	0.438 0.439	0.197 0.203	0.440 0.438		0.020
	1.3/4”	2”	1/2” x 1/2”	0.499 0.500	0.283 0.289	0.500 0.501	0.224 0.230	0.502 0.500		0.020
*	2”	2.1/4”	9/16” x 9/16”	0.562 0.563	0.321 0.327	0.563 0.564	0.245 0.251	0.565 0.563		0.020
	2”	2.1/2”	5/8” x 5/8”	0.624 0.625	0.354 0.360	0.625 0.626	0.278 0.284	0.627 0.625		0.020
	2.1/2”	3”	3/4” x 3/4”	0.749 0.750	0.424 0.430	0.750 0.751	0.333 0.339	0.752 0.750		0.020
	3”	3.1/2”	7/8” x 7/8”	0.874 0.875	0.495 0.501	0.875 0.876	0.387 0.393	0.877 0.875		0.062
	3.1/2”	4”	1” x 1”	0.999 1.000	0.566 0.572	1.000 1.001	0.442 0.448	1.003 1.000		0.062
*	4”	4.1/2”	1.1/8” x 1.1/8”	1.123 1.125	0.640 0.646	1.125 1.127	0.489 0.495	1.128 1.125		0.062
	4”	5”	1.1/4” x 1.1/4”	1.248 1.250	0.707 0.713	1.250 1.252	0.551 0.557	1.253 1.250		0.062
*	5”	5.1/2”	1.3/8” x 1.3/8”	1.373 1.375	0.782 0.788	1.375 1.377	0.598 0.604	1.378 1.375		0.062
	5”	6”	1.1/2” x 1.1/2”	1.498 1.500	0.848 0.854	1.500 1.502	0.661 0.667	1.504 1.500		0.062
*	6.1/2”	7”	1.3/4” x 1.3/4”	1.748 1.750	0.993 0.999	1.750 1.752	0.762 0.768	1.754 1.750		0.062
*	7.1/2”	8”	2” x 2”	1.998 2.000	1.134 1.140	2.000 2.002	0.872 0.878	2.004 2.000		0.062

* :- Indicates Non Standard Key.

KEYWAY STANDARDS

IMPERIAL
(BS.46 : PART 1 : 1958)



Safe working loads on keys.

Torque inch/pounds = 9000 x length x F x shaft dia (inches)

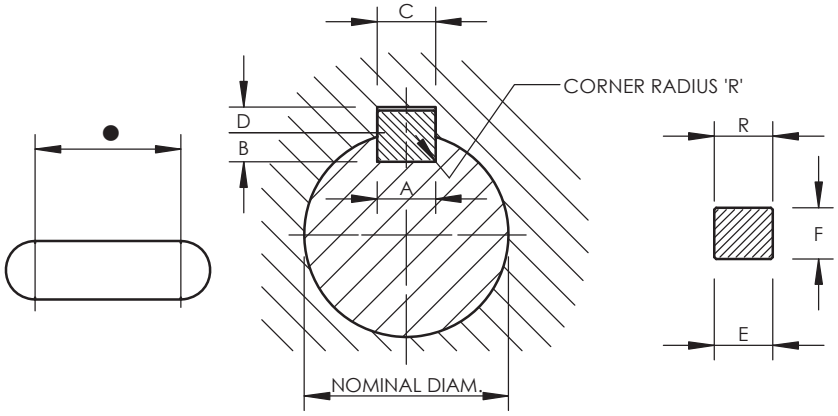
$$HP = \frac{\text{Torque(inch/pounds)} \times \text{RPM}}{63025}$$

Rectangular Keys:

	NOMINAL SHAFT DIAM.		KEY SIZE	DIMENSIONS (INCHES)						
	OVER	TO (Incl.)		A	B	C	D	E	F	R
	1”	1.1/4”	5/16” x 1/4”	0.311 0.312	0.146 0.152	0.312 0.313	0.112 0.118	0.314 0.312	0.253 0.250	0.010
	1.1/4”	1.1/2”	3/8” x 1/4”	0.374 0.375	0.150 0.156	0.375 0.376	0.108 0.114	0.377 0.375	0.253 0.250	0.010
*			3/8” x 5/16”	0.374 0.375	0.182 0.188	0.375 0.376	0.139 0.145	0.377 0.375	0.315 0.312	0.010
*			7/16” x 1/4”	0.437 0.438	0.154 0.160	0.438 0.439	0.104 0.110	0.440 0.438	0.253 0.250	0.020
	1.1/2”	1.3/4”	7/16” x 5/16”	0.437 0.438	0.186 0.192	0.438 0.439	0.135 0.141	0.440 0.438	0.315 0.312	0.020
	1.3/4”	2”	1/2” x 5/16”	0.499 0.500	0.190 0.196	0.500 0.501	0.131 0.137	0.502 0.500	0.315 0.312	0.020
*			1/2” x 7/16”	0.499 0.500	0.256 0.262	0.500 0.501	0.189 0.195	0.502 0.500	0.440 0.438	0.020
	2”	2.1/2”	5/8” x 7/16”	0.624 0.625	0.260 0.266	0.625 0.626	0.185 0.191	0.627 0.625	0.441 0.438	0.020
*			5/8” x 1/2”	0.624 0.625	0.295 0.301	0.625 0.626	0.213 0.219	0.627 0.625	0.502 0.500	0.020
	2.1/2”	3”	3/4” x 1/2”	0.749 0.750	0.299 0.305	0.750 0.751	0.209 0.215	0.752 0.750	0.503 0.500	0.020
*			3/4” x 5/8”	0.749 0.750	0.366 0.372	0.750 0.751	0.274 0.280	0.752 0.750	0.629 0.625	0.020
	3”	3.1/2”	7/8” x 5/8”	0.874 0.875	0.370 0.376	0.875 0.876	0.264 0.270	0.877 0.875	0.629 0.625	0.062
*			1” x 5/8”	0.999 1.000	0.374 0.380	1.000 1.001	0.260 0.266	1.003 1.000	0.629 0.625	0.062
	3.1/2”	4”	1” x 3/4”	0.999 1.000	0.441 0.447	1.000 1.001	0.318 0.324	1.003 1.000	0.754 0.750	0.062
	4”	5”	1.1/4” x 7/8”	1.248 1.250	0.518 0.524	1.250 1.251	0.366 0.372	1.253 1.250	0.879 0.875	0.062
	5”	6”	1.1/2” x 1”	1.498 1.500	0.599 0.605	1.500 1.501	0.412 0.418	1.504 1.500	1.006 1.000	0.062

* :- Indicates Non Standard Key.

METRIC (Normal)
(BS.4235 : PART 1 : 1972)



Safe working loads on keys.

Torque Nm = 0.065 x length x F x shaft dia (mm)

$$kW = \frac{\text{Torque(Nm)} \times \text{RPM}}{9550}$$

	NOMINAL SHAFT DIAM.		KEY SIZE	DIMENSIONS (mm)						
	OVER	TO (Incl.)		A	B	C	D	E	F	R
	8	10	3 x 3	2.970 3.000	1.8 1.9	2.985 3.015	1.4 1.5	3.030 2.970		0.16
	10	12	4 x 4	3.970 4.000	2.5 2.6	3.985 4.015	1.8 1.9	4.030 3.970		0.16
	12	17	5 x 5	4.970 5.000	3.0 3.1	4.985 5.015	2.3 2.4	5.030 4.970		0.25
	17	22	6 x 6	5.970 6.000	3.5 3.6	5.985 6.015	2.8 2.9	6.030 5.970		0.25
*			8 x 8	7.964 8.000	5.0 5.2	7.982 8.018	3.3 3.5	8.000 7.970		0.25
*			10 x 10	9.964 10.000	6.0 6.2	9.982 10.018	4.3 4.5	10.000 9.964		0.40
*			12 x 12	11.957 12.000	7.5 7.7	11.979 12.021	4.9 5.1	12.000 11.957		0.40
*			16 x 16	15.957 16.000	10.0 10.2	15.979 16.021	6.4 6.6	16.000 15.957		0.40
*			20 x 20	19.948 20.000	12.0 12.3	19.974 20.026	8.4 8.7	20.000 19.957		0.60
*			22 x 22	21.948 22.000	13.0 13.3	21.974 22.026	9.4 9.7	22.000 21.948		0.60
	22	30	8 x 7	7.964 8.000	4.0 4.2	7.982 8.018	3.3 3.5	8.000 7.964	7.000 6.910	0.25
	30	38	10 x 8	9.964 10.000	5.0 5.2	9.982 10.018	3.3 3.5	10.000 9.964	8.000 7.910	0.40
	38	44	12 x 8	11.957 12.000	5.0 5.2	11.979 12.021	3.3 3.5	12.000 11.957	8.000 7.910	0.40
*			12 x 10	11.957 12.000	6.0 6.2	11.979 12.021	4.3 4.5	12.000 11.957	10.000 9.964	0.40
	44	50	14 x 9	13.957 14.000	5.5 5.7	13.979 14.021	3.8 4.0	14.000 13.957	9.000 8.910	0.40
	50	58	16 x 10	15.957 16.000	6.0 6.2	15.979 16.021	4.3 4.5	16.000 15.957	10.000 9.910	0.40
	58	65	18 x 11	17.957 18.000	7.0 7.2	17.979 18.021	4.4 4.6	18.000 17.957	11.000 10.890	0.40
	65	75	20 x 12	19.948 20.000	7.5 7.7	19.974 20.026	4.9 5.1	20.000 19.948	12.000 11.890	0.60
	75	85	22 x 14	21.948 22.000	9.0 9.2	21.974 22.026	5.4 5.6	22.000 21.948	14.000 13.890	0.60

* :- Indicates Non Standard Key.

Continued

METRIC (Normal)
(BS.4235 : PART 1 : 1972)

Continued

NOMINAL SHAFT DIAM.		KEY SIZE	DIMENSIONS (mm)						
OVER	TO (Incl.)		A	B	C	D	E	F	R
85	95	25 x 14	24.948 25.000	9.0 9.2	24.974 25.026	5.4 5.6	25.000 24.948	14.000 13.890	0.60
95	110	28 x 16	27.948 28.000	10.0 10.2	27.974 28.026	6.4 6.6	28.000 27.948	16.000 15.890	0.60
110	130	32 x 18	31.938 32.000	11.0 11.2	31.969 32.031	7.4 7.6	32.000 31.938	18.000 17.890	0.60
130	150	36 x 20	35.938 36.000	12.0 12.3	35.969 36.031	8.4 8.7	36.000 35.938	20.000 19.870	1.00
150	170	40 x 22	39.938 40.000	13.0 13.3	39.969 40.031	9.4 9.7	40.000 39.938	22.000 21.870	1.00
170	200	45 x 25	44.938 45.000	15.0 15.3	44.969 45.031	10.4 10.7	45.000 44.938	25.000 24.870	1.00
200	230	50 x 28	49.938 50.000	17.0 17.3	49.969 50.031	11.4 11.7	50.000 49.938	28.000 27.870	1.00

* :- Indicates Non Standard Key.

Hercus "HERKEY"

IS A BRIGHT DRAWN CARBON KEY STOCK SUITABLE FOR THE MANUFACTURE OF KEYS TO THE FOLLOWING STANDARDS:-

IMPERIAL - BS 46 : PART 1 : 1958 METRIC -BS 4235 : PART 1 : 1972
STRENGTH U.T.S. – 35 to 45 TONS/SQ.INCH (540 to 700 MPa)
ELONGATION - 12% MIN.
MATERIAL - EN6 (0.40 Max. Carbon – 0.5 to 0.9 Manganese)
STOCKED IN LENGTHS UP TO 3.0 Metres.

IMPERIAL (Inches)				
Cat. No.	Size	Tolerance -0.000"		
		Width	Thickness	
ATK009	1/16" x 1/16"	+ 0.0020	+ 0.0020	*
ATK100	3/32" x 3/32"	+ 0.0020	+ 0.0020	*
ATK101	1/8" x 1/8"	+ 0.0020	+ 0.0020	
ATK219	5/32" x 5/32"	+ 0.0025	+ 0.0020	*
ATK102	3/16" x 3/16"	+ 0.0025	+ 0.0025	
ATK220	7/32" x 7/32"	+ 0.0025	+ 0.0025	*
ATK103	1/4" x 1/4"	+ 0.0025	+ 0.0025	
ATK221	9/32" x 9/32"	+ 0.0025	+ 0.0025	*
ATK104	5/16" x 5/16"	+ 0.0025	+ 0.0025	
ATK222	11/32" x 11/32"	+ 0.0025	+ 0.0025	*
ATK105	3/8" x 3/8"	+ 0.0025	+ 0.0025	
ATK106	7/16" x 7/16"	+ 0.0025	+ 0.0025	
ATK107	1/2" x 1/2"	+ 0.0025	+ 0.0025	
ATK108	9/16" x 9/16"	+ 0.0025	+ 0.0025	
ATK109	5/8" x 5/8"	+ 0.0025	+ 0.0025	
ATK223	11/16" x 11/16"	+ 0.0025	+ 0.0025	*
ATK110	3/4" x 3/4"	+ 0.0025	+ 0.0025	
ATK224	13/16" x 13/16"	+ 0.0025	+ 0.0025	*
ATK111	7/8" x 7/8"	+ 0.0025	+ 0.0025	
ATK225	15/16" x 15/16"	+ 0.0030	+ 0.0030	*
ATK112	1" x 1"	+ 0.0030	+ 0.0030	
ATK116	1.1/8" x 1.1/8"	+ 0.0030	+ 0.0030	
ATK227	1.3/16" x 1.3/16"	+ 0.0030	+ 0.0030	*
ATK113	1.1/4" x 1.1/4"	+ 0.0030	+ 0.0030	
ATK118	1.3/8" x 1.3/8"	+ 0.0030	+ 0.0030	
ATK114	1.1/2" x 1.1/2"	+ 0.0040	+ 0.0040	
ATK119	1.5/8" x 1.5/8"	+ 0.0040	+ 0.0040	*
ATK115	1.3/4" x 1.3/4"	+ 0.0040	+ 0.0040	
ATK228	1.7/8" x 1.7/8"	+ 0.0040	+ 0.0040	*
ATK117	2" x 2"	+ 0.0040	+ 0.0040	
ATK300	3/32" x 1/8"	+ 0.0020	+ 0.0020	*
ATK301	3/16" x 1/8"	+ 0.0025	+ 0.0020	*
ATK302	1/4" x 1/8"	+ 0.0025	+ 0.0020	*
ATK303	1/4" x 3/16"	+ 0.0025	+ 0.0025	*
ATK304	5/16" x 3/16"	+ 0.0025	+ 0.0025	*
ATK201	5/16" x 1/4"	+ 0.0025	+ 0.0025	
ATK305	3/8" x 3/16"	+ 0.0025	+ 0.0025	*
ATK202	3/8" x 1/4"	+ 0.0025	+ 0.0025	
ATK213	3/8" x 5/16"	+ 0.0025	+ 0.0025	
ATK214	7/16" x 1/4"	+ 0.0025	+ 0.0025	*

IMPERIAL (Inches)				
Cat. No.	Size	Tolerance -0.000"		
		Width	Thickness	
ATK203	7/16" x 5/16"	+ 0.0025	+ 0.0025	*
ATK332	7/16" x 3/8"	+ 0.0025	+ 0.0025	
ATK306	1/2" x 3/16"	+ 0.0025	+ 0.0025	*
ATK307	1/2" x 1/4"	+ 0.0025	+ 0.0025	*
ATK204	1/2" x 5/16"	+ 0.0025	+ 0.0025	
ATK310	1/2" x 3/8"	+ 0.0025	+ 0.0025	*
ATK215	1/2" x 7/16"	+ 0.0025	+ 0.0025	
ATK308	9/16" x 5/16"	+ 0.0025	+ 0.0025	*
ATK314	9/16" x 1/2"	+ 0.0025	+ 0.0025	*
ATK309	5/8" x 5/16"	+ 0.0025	+ 0.0025	*
ATK311	5/8" x 3/8"	+ 0.0025	+ 0.0025	*
ATK205	5/8" x 7/16"	+ 0.0025	+ 0.0025	
ATK216	5/8" x 1/2"	+ 0.0025	+ 0.0025	
ATK317	5/8" x 9/16"	+ 0.0025	+ 0.0025	*
ATK312	3/4" x 3/8"	+ 0.0025	+ 0.0025	*
ATK313	3/4" x 7/16"	+ 0.0025	+ 0.0025	*
ATK206	3/4" x 1/2"	+ 0.0025	+ 0.0025	
ATK217	3/4" x 5/8"	+ 0.0025	+ 0.0025	
ATK322	3/4" x 11/16"	+ 0.0025	+ 0.0025	*
ATK315	11/16" x 1/2"	+ 0.0025	+ 0.0025	*
ATK320	11/16" x 5/8"	+ 0.0025	+ 0.0025	*
ATK316	7/8" x 1/2"	+ 0.0025	+ 0.0025	*
ATK207	7/8" x 5/8"	+ 0.0025	+ 0.0025	
ATK323	7/8" x 11/16"	+ 0.0025	+ 0.0025	*
ATK325	7/8" x 3/4"	+ 0.0025	+ 0.0025	*
ATK218	1" x 5/8"	+ 0.0030	+ 0.0025	
ATK318	1" x 9/16"	+ 0.0030	+ 0.0025	*
ATK324	1" x 11/16"	+ 0.0030	+ 0.0025	*
ATK208	1" x 3/4"	+ 0.0030	+ 0.0025	
ATK329	1" x 7/8"	+ 0.0030	+ 0.0025	*
ATK326	1.1/8" x 3/4"	+ 0.0030	+ 0.0025	*
ATK330	1.1/8" x 7/8"	+ 0.0030	+ 0.0025	*
ATK319	1.1/4" x 9/16"	+ 0.0030	+ 0.0025	*
ATK321	1.1/4" x 5/8"	+ 0.0030	+ 0.0025	*
ATK327	1.1/4" x 3/4"	+ 0.0030	+ 0.0025	*
ATK209	1.1/4" x 7/8"	+ 0.0030	+ 0.0025	
ATK331	1.1/4" x 1"	+ 0.0030	+ 0.0030	*
ATK328	1.1/2" x 3/4"	+ 0.0040	+ 0.0025	*
ATK210	1.1/2" x 1"	+ 0.0040	+ 0.0030	
ATK211	2.1/4" x 1.1/2"	+ 0.0040	+ 0.0040	*
ATK212	2.3/4" x 1.7/8"	+ 0.0040	+ 0.0040	*

* :- Indicates Non Standard Key.

Hercus "HERKEY"

IS A BRIGHT DRAWN CARBON KEY STOCK SUITABLE FOR THE MANUFACTURE OF KEYS TO THE FOLLOWING STANDARDS:-

IMPERIAL - BS 46 : PART 1 : 1958 METRIC -BS 4235 : PART 1 : 1972
STRENGTH U.T.S. – 35 to 45 TONS/SQ.INCH (540 to 700 MPa)
ELONGATION - 12% MIN.
MATERIAL - EN6 (0.40 Max. Carbon – 0.5 to 0.9 Manganese)
STOCKED IN LENGTHS UP TO 3.0 Metres.

METRIC (mm)					METRIC (mm)				
Cat. No.	Size	Tolerance +0.000mm			Cat. No.	Size	Tolerance +0.000mm		
		Width	Thickness				Width	Thickness	
ATK500	3mm x 3mm	-0.030	-0.030						
ATK501	4mm x 4mm	-0.030	-0.030		ATK617	12mm x 10mm	-0.043	-0.090	
ATK502	5mm x 5mm	-0.030	-0.030		ATK628	14mm x 6mm	-0.043	-0.090	*
ATK503	6mm x 6mm	-0.030	-0.030		ATK604	14mm x 9mm	-0.043	-0.090	
ATK629	7mm x 7mm	-0.030	-0.030	*	ATK630	16mm x 7mm	-0.043	-0.090	*
ATK504	8mm x 8mm	-0.030	-0.030		ATK605	16mm x 10mm	-0.043	-0.090	
ATK505	10mm x 10mm	-0.036	-0.036		ATK631	18mm x 7mm	-0.043	-0.090	*
ATK506	12mm x 12mm	-0.043	-0.043		ATK606	18mm x 11mm	-0.043	-0.110	
ATK621	14mm x 14mm	-0.043	-0.043	*	ATK632	20mm x 8mm	-0.043	-0.090	*
ATK507	16mm x 16mm	-0.043	-0.043		ATK607	20mm x 12mm	-0.043	-0.110	
ATK625	18mm x 18mm	-0.043	-0.043	*	ATK633	22mm x 9mm	-0.052	-0.090	*
ATK616	20mm x 20mm	-0.043	-0.043		ATK608	22mm x 14mm	-0.052	-0.110	
ATK508	22mm x 22mm	-0.052	-0.052		ATK609	25mm x 14mm	-0.052	-0.110	
ATK509	25mm x 25mm	-0.052	-0.052	*	ATK600	25mm x 22mm	-0.052	-0.110	*
					ATK610	28mm x 16mm	-0.052	-0.110	
ATK626	8mm x 5mm	-0.030	-0.090	*	ATK634	28mm x 25mm	-0.052	-0.110	*
ATK601	8mm x 7mm	-0.030	-0.090		ATK611	32mm x 18mm	-0.062	-0.110	
ATK627	10mm x 6mm	-0.036	-0.090	*	ATK612	36mm x 20mm	-0.062	-0.130	
ATK602	10mm x 8mm	-0.036	-0.090		ATK613	40mm x 22mm	-0.062	-0.130	
ATK618	12mm x 6mm	-0.043	-0.090	*	ATK614	45mm x 25mm	-0.062	-0.130	
ATK603	12mm x 8mm	-0.043	-0.090		ATK615	50mm x 28mm	-0.062	-0.130	

* :- Indicates Non Standard Key.

HERKEY is a quality keysteel manufactured for Hercus and is available in Metric and Imperial sizes, HERKEY is sold in standard lengths of 75mm, 300mm and 3000mm full length bars.

HERKEY is accurately rolled from EN6 steel and the 300mm lengths are Zinc Plated. Some sizes are also available in 316 Stainless Steel.

Utilise Stainless Steel HERKEY for those applications where OHWS dictate or where corrosion may occur.

A HERKEY KIT of selected sizes in Metric or Imperial are available in 75mm lengths and is a great investment to have on the shelf, just right for that unexpected breakdown.

A HERKEY Cube of selected sizes in Metric or Imperial are in 300mm lengths which are zinc coated, the cube is ideal for industrial transmission resellers or maintenance engineers.

HERKEY in 3000mm lengths is available for the Steel Stockists and are also utilised by engineering companies wishing to make their own special keys.

Please contact your nearest stockist for pricing and availability.

Hercus

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