



ALLIED MACHINE & ENGINEERING

Holemaking Solutions for Today's Manufacturing



Drilling



Reaming



Burnishing



Threading



Specials



Wohlhaupter®

► *BORING*

Master Shanks with MVS Connection

WOHLHAUPTER®

SECTION

B10-F

Master Shanks with MVS Connection

Wohlhaupter® Master Shanks with MVS Connection



The MVS Connection

Wohlhaupter MVS connection shanks provide a high level of accuracy when building or replacing components. Our master shanks adapt to any machine tool spindle, making it easy to find the shank you need.

Your safety and the safety of others is very important. This catalog contains important safety messages. Always read and follow all safety precautions.



This triangle is a safety hazard symbol. It alerts you to potential safety hazards that can cause tool failure and serious injury.

When you see this symbol in the catalog, look for a related safety message that may be near this triangle or referred to in the nearby text.

There are safety signal words also used in the catalog. Safety messages follow these words.

WARNING

WARNING (shown above) means that failure to follow the precautions in this message could result in tool failure and serious injury.

NOTICE means that failure to follow the precautions in this message could result in damage to the tool or machine but not result in personal injury.

NOTE and **IMPORTANT** are also used. These are important that you read and follow but are not safety-related.

Visit www.alliedmachine.com for the most up-to-date information and procedures.

Applicable Industries



Aerospace



Agriculture



Automotive



Firearms



General
Machining



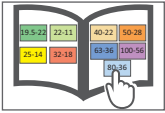
Oil & Gas



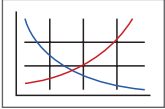
Renewable
Energy

Reference Icons

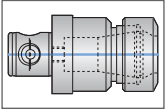
The following icons will appear throughout the catalog to help you navigate between products.



MVS Connection Color Guide
Detailed instructions and information regarding the MVS connection(s)



Recommended Cutting Data
Speed and feed recommendations for optimum and safe boring



Clamping Elements
Collet chucks for carbide shanks



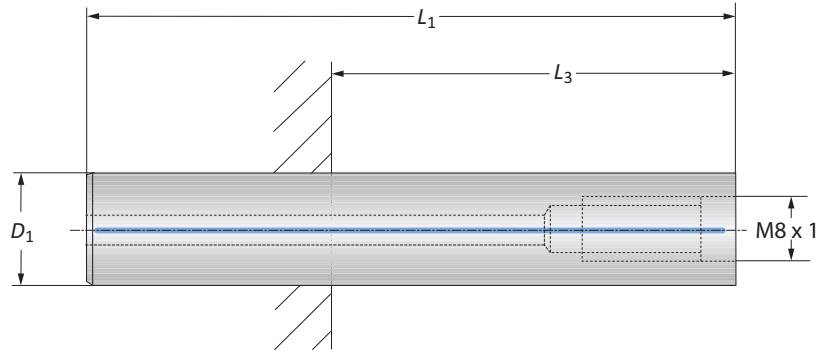
Coolant-Through Option
Indicates that the product is coolant through

Master Shanks with MVS Connection Table of Contents

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249 (248) Shanks

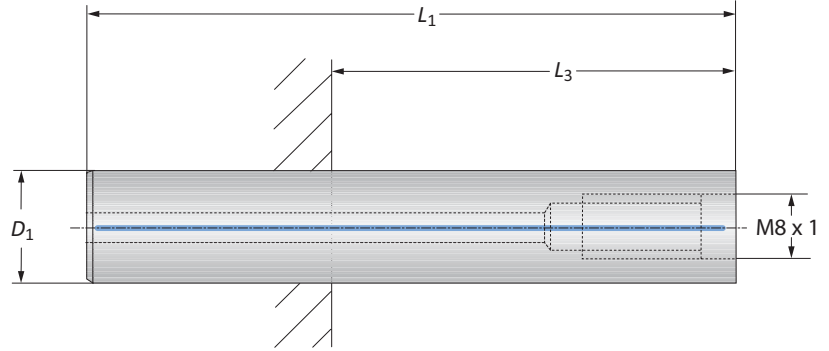
Steel | Carbide



Steel Shanks

Connection	Shank			L_3 min*			Weight	Part No.	
	D_1	L_1	L_3 max*	SK 40+50	HSK-A 63	HSK-A 100			
i	M8 x 1	0.591	3.346	1.456	-	-	-	0.220 (lbs)	248136
	M8 x 1	0.709	3.937	2.047	-	0.196	0.472	0.440 (lbs)	248137
	M8 x 1	0.906	4.606	2.716	-	0.866	1.141	0.881 (lbs)	248138
m	M8 x 1	15.00	85.00	37.00	-	-	-	0.10 (kg)	248136
	M8 x 1	18.00	100.00	52.00	-	5.00	12.00	0.20 (kg)	248137
	M8 x 1	23.00	117.00	69.00	-	22.00	29.00	0.40 (kg)	248138

* L_3 dimensions apply to collet chucks



Carbide Shanks

Connection	Shank			L_3 min*				Weight	Part No.	
	D_1	L_1	L_3 max*	SK 40	SK 50	HSK-A 63	HSK-A 100			
i	M8 x 1	0.591	5.118	3.228	0.787	0.787	1.377	1.653	0.661 (lbs)	248142
	M8 x 1	0.709	6.102	4.212	1.535	0.826	2.362	2.637	1.322 (lbs)	248143
	M8 x 1	0.906	7.086	5.196	2.519	1.811	3.346	3.622	2.425 (lbs)	248144
	M8 x 1	0.906	9.527	7.637	4.960	4.251	5.787	6.062	3.086 (lbs)	248145
m	M8 x 1	15.00	130.00	82.00	20.00	20.00	35.00	42.00	0.30 (kg)	248142
	M8 x 1	18.00	155.00	107.00	39.00	21.00	60.00	67.00	0.60 (kg)	248143
	M8 x 1	23.00	180.00	132.00	64.00	46.00	85.00	92.00	1.10 (kg)	248144
	M8 x 1	23.00	242.00	194.00	126.00	108.00	147.00	154.00	1.40 (kg)	248145

* L_3 dimensions apply to collet chucks

B10-M: 12-15 B10-A: 30 B10: vi-vii

i = Imperial (in)
m = Metric (mm)

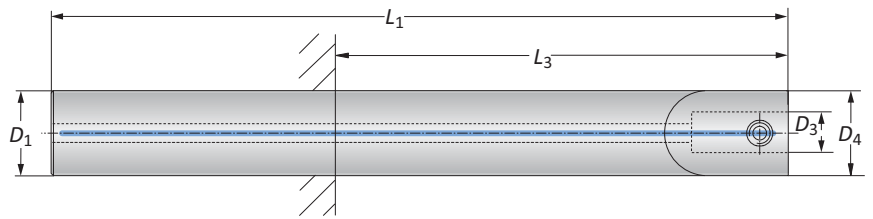
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- Consult machine tool builder for machine's weight limitations.
 - Refer to example on page B10-M: 11 for calculating tool assembly weight
- Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

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Carbide Master Shanks



Connection	Shank			L_3 min				Weight	Part No.	
	D_4 D_3	L_1	D_1	L_3 max	SK 40	SK 50	HSK-A 63			HSK-A 100
i	18 - 11	6.102	0.709	4.213	1.535	1.024	2.362	2.638	1.102 (lbs)	299009*
	22 - 11	5.512	0.866	3.622	1.102	1.102	1.772	2.047	1.543 (lbs)	299001*
	22 - 11	7.480	0.866	5.591	2.913	2.205	3.740	4.016	1.984 (lbs)	299002*
	22 - 11	9.049	0.866	7.205	4.528	3.819	5.354	5.630	2.425 (lbs)	299003*
	25 - 14	6.496	0.984	4.606	1.929	1.417	2.756	3.031	2.205 (lbs)	299004*
	25 - 14	8.465	0.984	6.575	3.898	3.189	4.724	5.000	2.866 (lbs)	299005*
	32 - 18	8.268	1.260	-	5.354	5.354	5.572	5.394	4.630 (lbs)	299006**
	32 - 18	10.236	1.260	-	7.323	7.323	7.441	7.362	5.732 (lbs)	299007**
40 - 22	16.399	1.575	-	-	13.110	-	13.110	11.460 (lbs)	299008**	
m	18 - 11	155.00	18.00	107.00	39.00	26.00	60.00	67.00	0.50 (kg)	299009*
	22 - 11	140.00	22.00	92.00	28.00	28.00	45.00	52.00	0.70 (kg)	299001*
	22 - 11	190.00	22.00	142.00	74.00	56.00	95.00	102.00	0.90 (kg)	299002*
	22 - 11	231.00	22.00	183.00	115.00	97.00	136.00	143.00	1.10 (kg)	299003*
	25 - 14	165.00	25.00	117.00	49.00	36.00	70.00	77.00	1.00 (kg)	299004*
	25 - 14	215.00	25.00	167.00	99.00	81.00	120.00	127.00	1.30 (kg)	299005*
	32 - 18	210.00	32.00	-	136.00	136.00	139.00	137.00	2.10 (kg)	299006**
	32 - 18	260.00	32.00	-	186.00	186.00	189.00	187.00	2.60 (kg)	299007**
40 - 22	415.00	40.00	-	-	333.00	-	333.00	5.20 (kg)	299008**	

NOTE: Adapter shanks are used for extensions up to 10xD

*Recommended clamping element: collet chuck ISO 15488 (DIN 6499-B) (pg. B10-I: 5)

**Recommended clamping element: collet chuck ISO 10897 (DIN 6388) (pg. B10-I: 5)



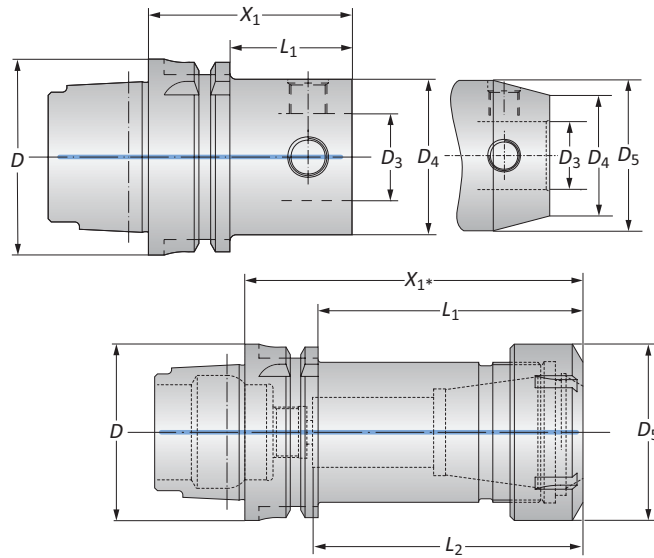
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HSK Master Shanks (DIN 69893)

Imperial | Balanced

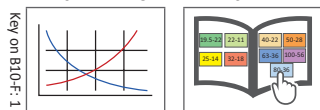


Taper Size	Connection	Shank				Weight	Part No.
D	D ₄ D ₃	X ₁	L ₁	L ₂	D ₅		
40	40 - 22	2.205	-	-	-	0.881 (lbs)	246016
40	50 - 28	2.756	-	-	-	1.543 (lbs)	246004
50	40 - 22	2.205	1.181	-	-	1.322 (lbs)	246015
50	50 - 28	2.559	-	-	-	1.763 (lbs)	245011
63	25 - 14	1.811	0.787	-	-	1.543 (lbs)	246012
63	32 - 18	2.205	1.181	-	-	1.763 (lbs)	246013
63	40 - 22	2.205	1.181	-	-	1.764 (lbs)	246014
63	50 - 28	2.559	1.535	-	-	2.425 (lbs)	245012
63	63 - 36	3.150	-	-	-	3.306 (lbs)	245013
63	80 - 36	3.150	-	-	-	4.629 (lbs)	246009
63	ER 40	4.724	3.700	3.740	2.480	3.747 (lbs)	252090**
100	50 - 28	2.559	1.417	-	-	5.291 (lbs)	245014
100	50 - 28	7.087	5.944	-	2.362	11.020 (lbs)	246020
100	50 - 28*	7.087	5.944	-	-	6.393 (lbs)	246021
100	63 - 36	3.150	2.007	-	-	6.393 (lbs)	245015
100	63 - 36	8.071	6.929	-	3.070	17.190 (lbs)	246019
100	63 - 36	8.071	6.929	-	-	17.190 (lbs)	246022
100	80 - 36	3.150	2.007	-	-	8.157 (lbs)	245016
100	80 - 36	10.03	8.897	-	3.543	27.770 (lbs)	246018
100	80 - 36	10.03	8.897	-	-	22.920 (lbs)	246023
100	100 - 56	3.937	-	-	-	11.020 (lbs)	246010
100	100 - 56	11.810	8.700	-	-	38.580 (lbs)	246017
100	ER 40	4.724	3.582	3.464	2.480	7.716 (lbs)	252091**

NOTE: Balanced refers to a specific residual imbalance of ≤4.00 gmm/kg

*D₄ = 49.50

**Balanced without clamping nut
B10-M: 12-15
B10: vi-vii



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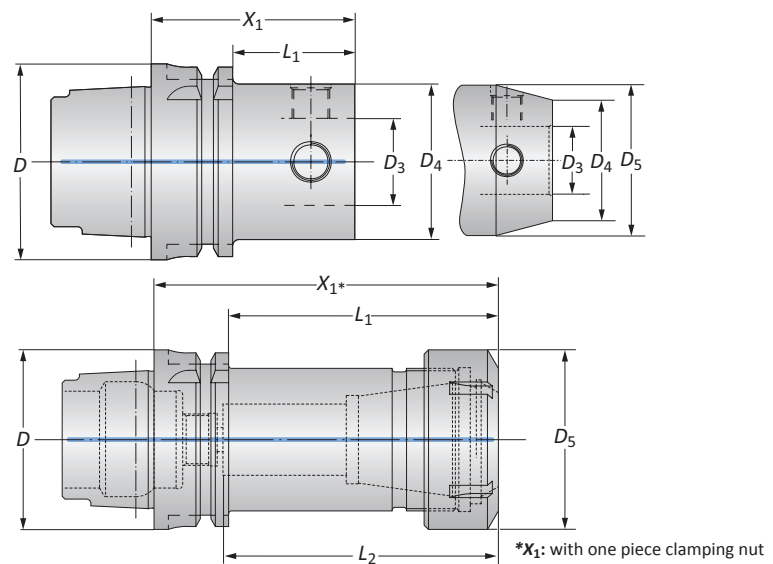
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HSK Master Shanks (DIN 69893)

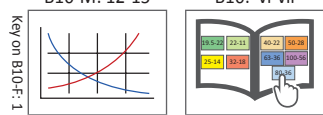
Metric | Balanced



Taper Size	Connection	Shank				Weight	Part No.
D	D4 D3	X1	L1	L2	D5		
40	40 - 22	56.00	-	-	-	0.40 (kg)	246016
40	50 - 28	70.00	-	-	-	0.70 (kg)	246004
50	40 - 22	56.00	30.00	-	-	0.60 (kg)	246015
50	50 - 28	65.00	-	-	-	0.80 (kg)	245011
63	25 - 14	46.00	20.00	-	-	0.70 (kg)	246012
63	32 - 18	56.00	30.00	-	-	0.80 (kg)	246013
63	40 - 22	56.00	30.00	-	-	0.80 (kg)	246014
63	50 - 28	65.00	39.00	-	-	1.10 (kg)	245012
63	63 - 36	80.00	-	-	-	1.50 (kg)	245013
63	80 - 36	80.00	-	-	-	2.10 (kg)	246009
63	ER 40	120.00	94.00	95.00	63.00	1.70 (kg)	252090**
100	50 - 28	65.00	36.00	-	-	2.40 (kg)	245014
100	50 - 28	180.00	151.00	-	60.00	5.00 (kg)	246020
100	50 - 28*	180.00	151.00	-	-	4.00 (kg)	246021
100	63 - 36	80.00	51.00	-	-	2.90 (kg)	245015
100	63 - 36	205.00	176.00	-	78.00	7.80 (kg)	246019
100	63 - 36	205.00	176.00	-	-	7.80 (kg)	246022
100	80 - 36	80.00	51.00	-	-	3.70 (kg)	245016
100	80 - 36	255.00	226.00	-	90.00	12.60 (kg)	246018
100	80 - 36	255.00	226.00	-	-	10.40 (kg)	246023
100	100 - 56	100.00	-	-	-	5.00 (kg)	246010
100	100 - 56	300.00	221.00	-	-	17.50 (kg)	246017
100	ER 40	120.00	91.00	88.00	63.00	3.50 (kg)	252091**

NOTE: Balanced refers to a specific residual imbalance of ≤4.00 gmm/kg
 *D4 = 49.50mm

**Balanced without clamping nut
 B10-M: 12-15
 B10: vi-vii



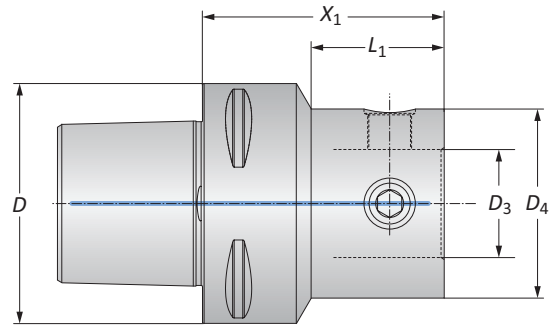
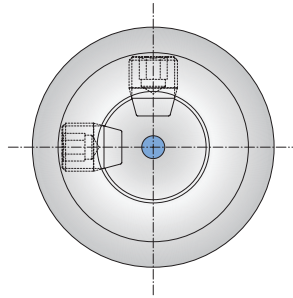
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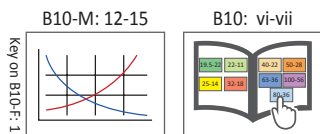
Polygon Shaft Master Shanks (PSC) (ISO 26623-1)

Balanced



PSC	Connection	Shank		Weight	Part No.	
		D	D ₄ D ₃			X ₁
50	40 - 22		2.126	1.224	1.543 (lbs)	227014
50	50 - 28		2.559	-	2.205 (lbs)	227001
50	63 - 36		3.150	-	3.307 (lbs)	227002
50	80 - 36		3.150	-	5.512 (lbs)	227012
63	25 - 14		2.126	0.838	1.984 (lbs)	227010
63	32 - 18		2.126	0.917	2.205 (lbs)	227009
i	63	40 - 22	2.559	1.433	2.425 (lbs)	227008
63	50 - 28		2.559	1.555	2.866 (lbs)	227003
63	63 - 36		3.150	-	3.968 (lbs)	227004
63	80 - 36		3.150	-	5.732 (lbs)	227005
80	50 - 28		2.559	1.047	4.850 (lbs)	227011
80	63 - 36		3.150	1.783	5.732 (lbs)	227006
80	80 - 36		3.150	-	7.275 (lbs)	227007
<hr/>						
50	40 - 22		54.00	31.10	0.70 (kg)	227014
50	50 - 28		65.00	-	1.00 (kg)	227001
50	63 - 36		80.00	-	1.50 (kg)	227002
50	80 - 36		80.00	-	2.50 (kg)	227012
63	25 - 14		54.00	21.10	0.90 (kg)	227010
63	32 - 18		54.00	23.00	1.00 (kg)	227009
m	63	40 - 22	65.00	36.40	1.10 (kg)	227008
63	50 - 28		65.00	39.00	1.30 (kg)	227003
63	63 - 36		80.00	-	1.80 (kg)	227004
63	80 - 36		80.00	-	2.60 (kg)	227005
80	50 - 28		65.00	25.00	2.20 (kg)	227011
80	63 - 36		80.00	45.10	2.60 (kg)	227006
80	80 - 36		80.00	-	3.30 (kg)	227007

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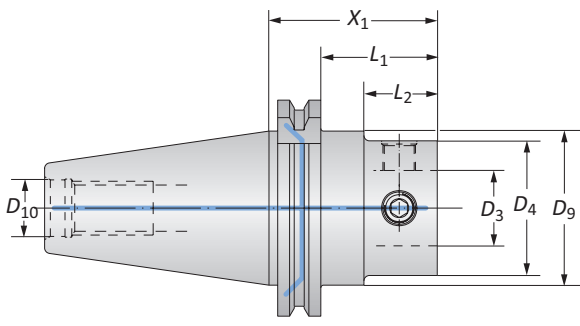
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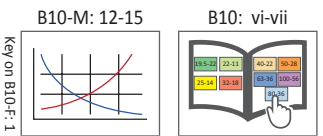
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Dual Contact CAT Master Shanks with Imperial Threads



Taper Size	Connection		Shank				Weight	Part No.	
	D ₄ D ₃	X ₁	L ₁	L ₂	D ₉	D ₁₀			
i	40	50 - 28	2.440	1.688	1.062	1.752	5/8 - 11	2.866 (lbs)	353062
	40	50 - 28	5.394	4.642	4.016	1.752	5/8 - 11	5.292 (lbs)	353076
	40	63 - 36	3.228	2.440	1.850	1.752	5/8 - 11	3.968 (lbs)	353063
	50	50 - 28	2.440	1.689	1.062	2.752	1 - 8	7.275 (lbs)	353061
	50	50 - 28*	7.953	7.201	6.575	2.752	1 - 8	11.687 (lbs)	353077
	50	63 - 36	2.835	2.083	1.457	2.752	1 - 8	7.938 (lbs)	353078
	50	63 - 36	8.740	7.988	7.362	2.752	1 - 8	15.656 (lbs)	353079
	50	80 - 36	2.834	2.082	1.456	2.752	1 - 8	9.039 (lbs)	353060
	50	80 - 36	10.709	9.957	9.331	2.752	1 - 8	26.240 (lbs)	353080
	50	100 - 56	4.134	3.382	2.756	2.752	1 - 8	13.230 (lbs)	353081
50	100 - 56	12.008	11.256	10.630	2.752	1 - 8	39.470 (lbs)	353082	
m	40	50 - 28	62.00	42.90	27.00	44.50	5/8 - 11	1.30 (kg)	353062
	40	50 - 28	137.00	117.90	102.00	44.50	5/8 - 11	2.40 (kg)	353076
	40	63 - 36	82.00	62.90	47.00	44.50	5/8 - 11	1.80 (kg)	353063
	50	50 - 28	62.00	42.90	27.00	69.90	1 - 8	3.30 (kg)	353061
	50	50 - 28*	202.00	182.90	167.00	69.90	1 - 8	5.30 (kg)	353077
	50	63 - 36	72.00	52.90	37.00	69.90	1 - 8	3.60 (kg)	353078
	50	63 - 36	222.00	202.90	187.00	69.90	1 - 8	7.10 (kg)	353079
	50	80 - 36	72.00	52.90	37.00	69.90	1 - 8	4.10 (kg)	353060
	50	80 - 36	272.00	252.90	237.00	69.90	1 - 8	11.90 (kg)	353080
	50	100 - 56	105.00	85.90	70.00	69.90	1 - 8	6.00 (kg)	353081
50	100 - 56	305.00	285.90	270.00	69.90	1 - 8	17.90 (kg)	353082	

*D₄ = 49.50

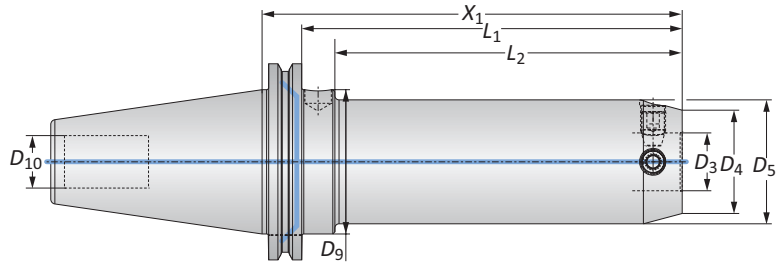


i = Imperial (in)
m = Metric (mm)

⚠ WARNING Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:
 -Consult machine tool builder for machine's weight limitations.
 -Refer to example on page B10-M: 11 for calculating tool assembly weight
 Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

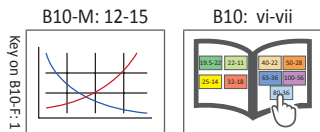
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CAT Master Shanks with Imperial Threads



Taper Size	Connection		Shank					Weight	Part No.
	D_4 D_3	X_1	L_1	L_2	D_5	D_9	D_{10}		
30	40 - 22	2.362	1.612	-	-	-	1/2 - 13	1.322 (lbs)	353001
30	50 - 28	2.756	2.006	-	-	-	1/2 - 13	1.763 (lbs)	353002
40	25 - 14	2.165	1.415	0.787	-	1.750	5/8 - 11	2.204 (lbs)	353011
40	25 - 14	5.551	4.800	4.173	1.102	1.750	5/8 - 11	3.306 (lbs)	353012
40	32 - 18	2.559	1.809	1.181	-	1.750	5/8 - 11	2.425 (lbs)	353013
40	32 - 18	6.732	5.982	5.354	1.378	1.750	5/8 - 11	4.188 (lbs)	353014
40	40 - 22	2.165	1.415	0.787	-	1.750	5/8 - 11	2.491 (lbs)	353003
40	40 - 22	6.378	5.628	-	1.850	1.750	5/8 - 11	5.511 (lbs)	353015
40	50 - 28	2.441	1.691	-	-	1.750	5/8 - 11	2.821 (lbs)	353004
40	50 - 28	5.394	4.644	-	-	1.750	5/8 - 11	5.291 (lbs)	353016
40	63 - 36	3.228	2.478	-	-	1.750	5/8 - 11	4.034 (lbs)	353005
40	63 - 36	6.181	5.431	-	-	1.750	5/8 - 11	7.936 (lbs)	353017
50	40 - 22	2.165	1.415	0.787	-	2.750	1 - 8	7.297 (lbs)	353006
50	40 - 22	6.378	5.628	5.000	1.850	2.750	1 - 8	9.920 (lbs)	353018
50	50 - 28	2.441	1.691	1.063	-	2.750	1 - 8	7.583 (lbs)	353007
50	50 - 28*	7.953	7.203	6.575	-	2.750	1 - 8	11.680 (lbs)	353025
50	50 - 28	7.953	7.203	6.575	2.362	2.750	1 - 8	14.100 (lbs)	353019
50	63 - 36	2.835	2.085	1.457	-	2.750	1 - 8	8.223 (lbs)	353008
50	63 - 36	8.740	7.990	7.362	-	2.750	1 - 8	15.650 (lbs)	353023
50	63 - 36	8.740	7.990	-	3.071	2.750	1 - 8	20.500 (lbs)	353020
50	80 - 36	2.835	2.085	-	-	2.750	1 - 8	9.413 (lbs)	353009
50	80 - 36	10.709	9.959	-	-	2.750	1 - 8	26.230 (lbs)	353024
50	80 - 36	10.709	9.959	-	3.543	2.750	1 - 8	31.300 (lbs)	353021
50	100 - 56	4.134	3.384	-	-	2.750	1 - 8	13.600 (lbs)	353010
50	100 - 56	12.008	11.258	-	-	2.750	1 - 8	39.460 (lbs)	353022

* D_4 = 49.50



i = Imperial (in)
m = Metric (mm)

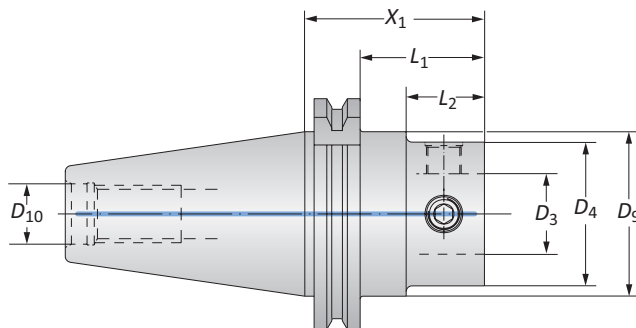
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CAT Master Shanks with Metric Threads

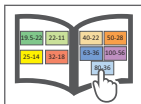
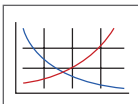


Taper Size	Connection	Shank					Weight	Part No.	
	$D_4 D_3$	X_1	L_1	L_2	D_9	D_{10}			
m	40	50 - 28	62.00	42.90	-	44.45	M16 x 2	1.30 (kg)	132022T016960
	40	63 - 36	82.00	62.90	-	44.45	M16 x 2	1.80 (kg)	132066T016960
	50	50 - 28	62.00	42.90	27.00	69.85	M24 x 3	3.40 (kg)	132022T016962
	50	63 - 36	72.00	52.90	37.00	69.85	M24 x 3	3.70 (kg)	132066T016962
	50	80 - 36	72.00	52.90	-	69.85	M24 x 3	4.20 (kg)	132088T016962
	50	100 - 56	105.00	85.90	-	69.85	M24 x 3	5.20 (kg)	132076T016962

B10-M: 12-15

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Key on B10-F-1



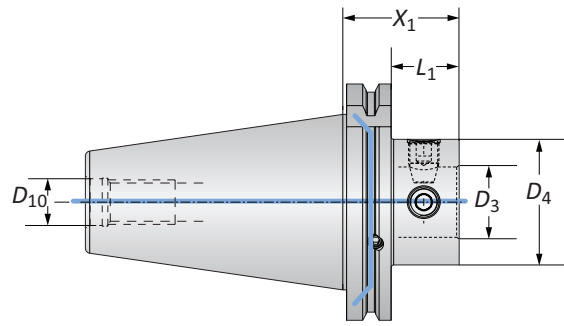
I = Imperial (in)
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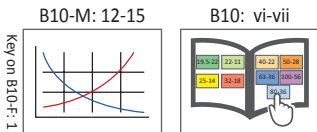
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Dual Contact SK Master Shanks (DIN 69871-AD / B-D)



	Taper Size	Connection		Shank			Weight	Part No.
		D_4 D_3	X_1	L_1	D_{10}			
i	40	50 - 28	1.811	1.059	M16 x 2	2.426 (lbs)	353064	
	40	63 - 36	2.598	1.846	M16 x 2	6.395 (lbs)	353065	
	50	50 - 28	1.811	1.059	M24 x 3	6.395 (lbs)	353066	
	50	63 - 36	2.205	1.453	M24 x 3	7.056 (lbs)	353067	
	50	80 - 36	2.205	1.453	M24 x 3	8.159 (lbs)	353068	
	50	100 - 56	3.543	2.791	M24 x 3	11.687 (lbs)	353069	
m	40	50 - 28	46.00	26.90	M16 x 2	1.10 (kg)	353064	
	40	63 - 36	66.00	46.90	M16 x 2	1.50 (kg)	353065	
	50	50 - 28	46.00	26.90	M24 x 3	2.90 (kg)	353066	
	50	63 - 36	56.00	36.90	M24 x 3	3.20 (kg)	353067	
	50	80 - 36	56.00	36.90	M24 x 3	3.70 (kg)	353068	
	50	100 - 56	90.00	70.90	M24 x 3	5.30 (kg)	353069	



i = Imperial (in)
m = Metric (mm)

WARNING Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

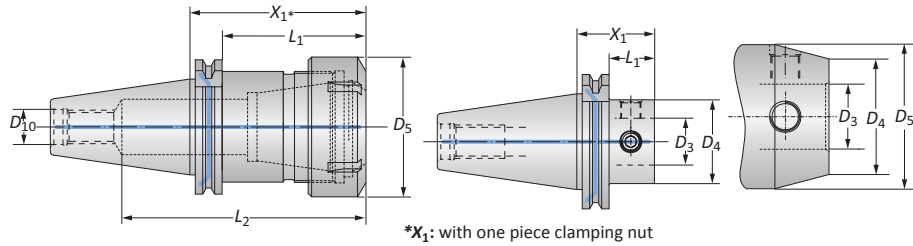
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SK Master Shanks (DIN 69871-AD / B-D)

Balanced



Taper Size	Connection		Shank				Weight	Part No.	
	D_4 D_3	X_1	L_1	L_2	D_5	D_{10}			
i	30	40 - 22	1.811	1.059	-	-	M12 x 1.75	1.103 (lbs)	327001
	30	50 - 28	2.283	1.531	-	-	M12 x 1.75	1.764 (lbs)	327002
	40	32 - 18	2.165	1.413	-	1.575	M16 x 2	2.426 (lbs)	327003
	40	40 - 22	1.811	1.059	-	-	M16 x 2	2.205 (lbs)	327004
	40	50 - 28	1.811	1.059	-	-	M16 x 2	2.426 (lbs)	327005
	40	63 - 36	2.598	1.846	-	-	M16 x 2	3.087 (lbs)	327006
	40	80 - 36	2.598	1.846	-	-	M16 x 2	4.190 (lbs)	327007
	40	ER 40	3.149	2.397	4.566	2.480	M16 x 2	2.860 (lbs)	259079**
	50	50 - 28	1.811	1.059	-	-	M24 x 3	6.395 (lbs)	327017
	50	50 - 28	7.323	6.571	-	2.362	M24 x 3	13.230 (lbs)	327025
	50	50 - 28*	7.323	6.571	-	-	M24 x 3	10.805 (lbs)	327033
	50	63 - 36	2.205	1.453	-	-	M24 x 3	7.056 (lbs)	327018
	50	63 - 36	8.110	7.358	-	3.071	M24 x 3	19.625 (lbs)	327026
	50	63 - 36	8.110	7.358	-	-	M24 x 3	15.215 (lbs)	327034
	50	80 - 36	2.205	1.453	-	-	M24 x 3	8.159 (lbs)	327010
	50	80 - 36	10.079	9.327	-	3.543	M24 x 3	29.988 (lbs)	327027
	50	100 - 56	3.543	2.791	-	-	M24 x 3	11.687 (lbs)	327011
	50	100 - 56	11.417	10.665	-	-	M24 x 3	37.706 (lbs)	327028
	50	ER 40	3.149	2.173	5.275	2.480	M24 x 3	6.834 (lbs)	259080**
	m	30	40 - 22	46.00	26.90	-	-	M12 x 1.75	0.50 (kg)
30		50 - 28	58.00	38.90	-	-	M12 x 1.75	0.80 (kg)	327002
40		32 - 18	55.00	35.90	-	40.00	M16 x 2	1.10 (kg)	327003
40		40 - 22	46.00	26.90	-	-	M16 x 2	1.00 (kg)	327004
40		50 - 28	46.00	26.90	-	-	M16 x 2	1.10 (kg)	327005
40		63 - 36	66.00	46.90	-	-	M16 x 2	1.40 (kg)	327006
40		80 - 36	66.00	46.90	-	-	M16 x 2	1.90 (kg)	327007
40		ER 40	80.00	60.90	116.00	63.00	M16 x 2	1.30 (kg)	259079**
50		50 - 28	46.00	26.90	-	-	M24 x 3	2.90 (kg)	327017
50		50 - 28	186.00	166.90	-	60.00	M24 x 3	6.00 (kg)	327025
50		50 - 28*	186.00	166.90	-	-	M24 x 3	4.90 (kg)	327033
50		63 - 36	56.00	36.90	-	-	M24 x 3	3.20 (kg)	327018
50		63 - 36	206.00	186.90	-	78.00	M24 x 3	8.90 (kg)	327026
50		63 - 36	206.00	186.90	-	-	M24 x 3	6.90 (kg)	327034
50		80 - 36	56.00	36.90	-	-	M24 x 3	3.70 (kg)	327010
50		80 - 36	256.00	236.90	-	90.00	M24 x 3	13.60 (kg)	327027
50		100 - 56	90.00	70.90	-	-	M24 x 3	5.30 (kg)	327011
50		100 - 56	290.00	270.90	-	-	M24 x 3	17.10 (kg)	327028
50		ER 40	80.00	55.20	134.00	63.00	M24 x 3	3.10 (kg)	259080**

NOTE: Balanced refers to a specific residual imbalance of ≤ 4.00 gmm/kg

* $D_4 = (49.50$ mm)

**Balanced without clamping nut

i = Imperial (in)

m = Metric (mm)

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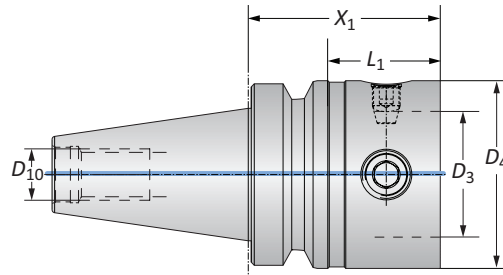
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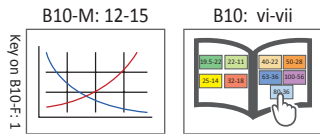
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- When using a carbide shank, do not exceed recommended 9xD length-to-diameter ratio
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Dual Contact BT Master Shanks (JIS B 6339)



	Connection		Shank			Weight	Part No.
	Taper Size	D_4 D_3	X_1	L_1	D_{10}		
i	40	50 - 28	2.126	1.063	M16 x 2	2.646 (lbs)	353070
	40	63 - 36	2.520	1.457	M16 x 2	3.308 (lbs)	353071
	50	50 - 28	2.559	1.055	M24 x 3	8.820 (lbs)	353072
	50	63 - 36	2.953	1.449	M24 x 3	9.261 (lbs)	353073
	50	80 - 36	2.953	1.449	M24 x 3	10.584 (lbs)	353074
	50	100 - 56	3.543	2.039	M24 x 3	12.128 (lbs)	353075
m	40	50 - 28	54.00	27.00	M16 x 2	1.20 (kg)	353070
	40	63 - 36	64.00	37.00	M16 x 2	1.50 (kg)	353071
	50	50 - 28	65.00	26.80	M24 x 3	4.00 (kg)	353072
	50	63 - 36	75.00	36.80	M24 x 3	4.20 (kg)	353073
	50	80 - 36	75.00	36.80	M24 x 3	4.80 (kg)	353074
	50	100 - 56	90.00	51.80	M24 x 3	5.50 (kg)	353075



i = Imperial (in)
m = Metric (mm)

WARNING Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

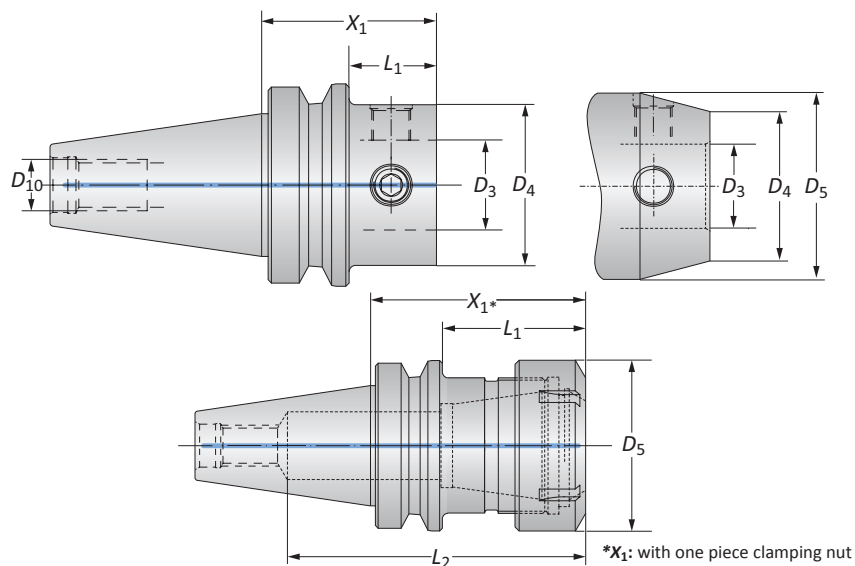
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 - When using a carbide shank, do not exceed recommended 9xD length-to-diameter ratio
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BT Master Shanks (JIS B 6339)

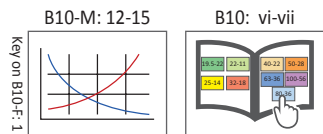
Balanced



Taper Size	Connection	Shank					Weight	Part No.	
		$D_4 D_3$	X_1	L_1	L_2	D_5			D_{10}
i	30	40 - 22	1.575	0.710	-	-	M12 x 1.75	1.102 (lbs)	327012
	30	50 - 28	1.811	0.945	-	-	M12 x 1.75	1.323 (lbs)	327013
	40	40 - 22	1.811	0.750	-	-	M16 x 2	2.425 (lbs)	327016
	40	50 - 28	2.126	1.060	-	-	M16 x 2	2.646 (lbs)	327019
	40	63 - 36	2.520	1.457	-	-	M16 x 2	3.307 (lbs)	327020
	40	ER 40	2.755	1.692	4.094	2.480	M16 x 2	2.645 (lbs)	259081*
	50	50 - 28	2.559	1.060	-	-	M24 x 3	8.599 (lbs)	327021
	50	63 - 36	2.953	1.450	-	-	M24 x 3	9.261 (lbs)	327022
	50	80 - 36	2.953	1.450	-	-	M24 x 3	10.363 (lbs)	327023
	50	100 - 56	3.543	2.039	-	-	M24 x 3	12.127 (lbs)	327024
50	ER 40	3.149	1.645	5.314	2.480	M24 x 3	8.377 (lbs)	259082*	
m	30	40 - 22	40.00	18.00	-	-	M12 x 1.75	0.50 (kg)	327012
	30	50 - 28	46.00	24.00	-	-	M12 x 1.75	0.60 (kg)	327013
	40	40 - 22	46.00	19.00	-	-	M16 x 2	1.10 (kg)	327016
	40	50 - 28	54.00	27.00	-	-	M16 x 2	1.20 (kg)	327019
	40	63 - 36	64.00	37.00	-	-	M16 x 2	1.50 (kg)	327020
	40	ER 40	70.00	43.00	104.00	63.00	M16 x 2	1.20 (kg)	259081*
	50	50 - 28	65.00	26.80	-	-	M24 x 3	3.90 (kg)	327021
	50	63 - 36	75.00	36.80	-	-	M24 x 3	4.20 (kg)	327022
	50	80 - 36	75.00	36.80	-	-	M24 x 3	4.70 (kg)	327023
	50	100 - 56	90.00	51.80	-	-	M24 x 3	5.50 (kg)	327024
50	ER 40	80.00	41.80	135.00	63.00	M24 x 3	3.80 (kg)	259082*	

NOTE: Balanced refers to a specific residual imbalance of ≤ 4.00 gmm/kg

*Balanced without clamping nut

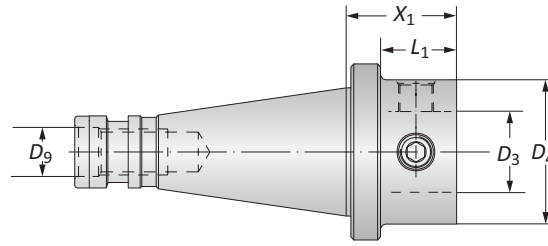


i = Imperial (in)
m = Metric (mm)

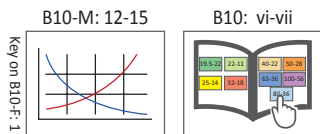
⚠ WARNING Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:
 -Consult machine tool builder for machine's weight limitations.
 -Refer to example on page B10-M: 11 for calculating tool assembly weight
 Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

⚠ WARNING Tool failure can cause serious injury. To prevent:
 -Do not exceed recommended 10xD length-to-diameter ratio or exceed 4 total components (including shank)
 -When using Alu-Line components, do not exceed recommended 5xD length-to-diameter ratio
 -When using tool steel components, do not exceed recommended 6xD length-to-diameter ratio
 -When using a heavy metal reducer, do not exceed recommended 8xD length-to-diameter ratio
 -When using a carbide shank, do not exceed recommended 9xD length-to-diameter ratio
 -When using a NOVI^{TECH} module, do not exceed recommended 10xD length-to-diameter ratio
 -Refer to examples on pages B10-M: 8-10 for calculating length-to-diameter ratio
 Factory technical assistance is available for your specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

NMTB Master Shanks



	Connection		Shank			Weight	Part No.
	Taper Size	D ₄ D ₃	X ₁	L ₁	D ₉		
i	40	50 - 28	1.496	1.039	5/8 - 11	2.900 (lbs)	132022T004498
	40	63 - 36	1.890	1.433	5/8 - 11	3.300 (lbs)	132066T004498
	50	50 - 28	1.654	1.060	1 - 8	6.600 (lbs)	132022T004480
	50	63 - 36	2.047	1.450	1 - 8	7.700 (lbs)	132066T004480
	50	80 - 36	2.047	1.450	1 - 8	8.800 (lbs)	132088T004480
	50	100 - 56	3.543	2.945	1 - 8	10.800 (lbs)	132076T004480
m	40	50 - 28	38.00	26.40	5/8 - 11	1.30 (kg)	132022T004498
	40	63 - 36	48.00	36.40	5/8 - 11	1.50 (kg)	132066T004498
	50	50 - 28	42.00	26.80	1 - 8	3.00 (kg)	132022T004480
	50	63 - 36	52.00	36.80	1 - 8	3.50 (kg)	132066T004480
	50	80 - 36	52.00	36.80	1 - 8	4.00 (kg)	132088T004480
	50	100 - 56	90.00	74.80	1 - 8	4.90 (kg)	132076T004480



i = Imperial (in)
m = Metric (mm)

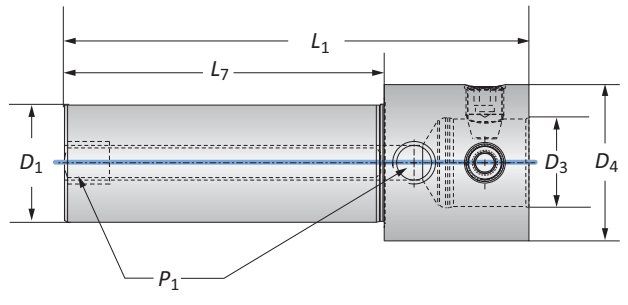
⚠ WARNING Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

- Do not exceed recommended 10xD length-to-diameter ratio or exceed 4 total components (including shank)
 - When using Alu-Line components, do not exceed recommended 5xD length-to-diameter ratio
 - When using tool steel components, do not exceed recommended 6xD length-to-diameter ratio
 - When using a heavy metal reducer, do not exceed recommended 8xD length-to-diameter ratio
 - When using a carbide shank, do not exceed recommended 9xD length-to-diameter ratio
 - When using a NOVI^{TECH} module, do not exceed recommended 10xD length-to-diameter ratio
 - Refer to examples on pages B10-M: 8-10 for calculating length-to-diameter ratio
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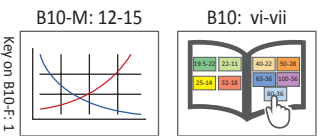
⚠ WARNING Tool failure can cause serious injury. To prevent:

- Do not exceed recommended 10xD length-to-diameter ratio or exceed 4 total components (including shank)
 - When using Alu-Line components, do not exceed recommended 5xD length-to-diameter ratio
 - When using tool steel components, do not exceed recommended 6xD length-to-diameter ratio
 - When using a heavy metal reducer, do not exceed recommended 8xD length-to-diameter ratio
 - When using a carbide shank, do not exceed recommended 9xD length-to-diameter ratio
 - When using a NOVI^{TECH} module, do not exceed recommended 10xD length-to-diameter ratio
 - Refer to examples on pages B10-M: 8-10 for calculating length-to-diameter ratio
- Factory technical assistance is available for your specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

Imperial Straight Master Shanks



	Connection	Shank				Weight	Part No.
	D ₄ D ₃	L ₇	D ₁	P ₁	L ₁		
i	40 - 22	3-½	1-¼	¼-27 NPTF	5.080	1.764 (lbs)	K71547
	50 - 28	4	1-½	¼-18 NPTF	5.810	3.086 (lbs)	K71548
	63 - 36	4-½	2	¼-18 NPTF	6.700	5.952 (lbs)	K71549
	80 - 36	4-½	2	¼-18 NPTF	6.700	7.716 (lbs)	K71550



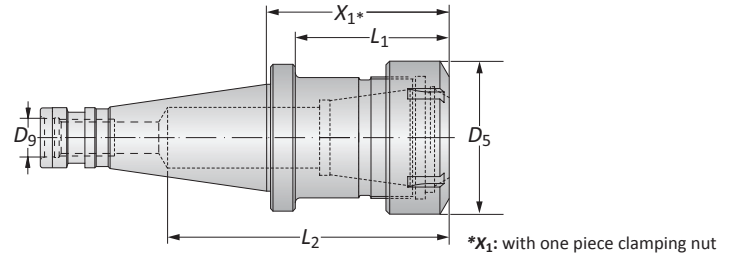
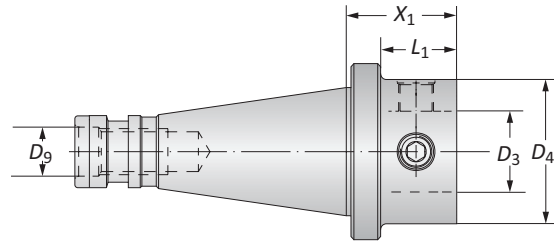
i = Imperial (in)
m = Metric (mm)

⚠ WARNING Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:
 -Consult machine tool builder for machine's weight limitations.
 -Refer to example on page B10-M: 11 for calculating tool assembly weight
 Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

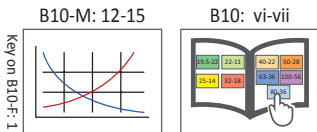
⚠ WARNING Tool failure can cause serious injury. To prevent:
 -Do not exceed recommended 10xD length-to-diameter ratio or exceed 4 total components (including shank)
 -When using Alu-Line components, do not exceed recommended 5xD length-to-diameter ratio
 -When using tool steel components, do not exceed recommended 6xD length-to-diameter ratio
 -When using a heavy metal reducer, do not exceed recommended 8xD length-to-diameter ratio
 -When using a carbide shank, do not exceed recommended 9xD length-to-diameter ratio
 -When using a NOVI^{TECH} module, do not exceed recommended 10xD length-to-diameter ratio
 -Refer to examples on pages B10-M: 8-10 for calculating length-to-diameter ratio
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DIN 2080 Master Shanks



Taper Size	Connection $D_4 D_3$	Shank					Weight	Part No.
		X_1	L_1	L_2	D_5	D_9		
40	50 - 28	1.496	1.039	-	-	M16 x 2	2.866 (lbs)	132022T010229
40	63 - 36	1.889	1.433	-	-	M16 x 2	3.306 (lbs)	132066T010229
50	50 - 28	1.653	1.055	-	-	M24 x 3	6.613 (lbs)	132022T003704
50	63 - 36	2.047	1.448	-	-	M24 x 3	7.716 (lbs)	132066T003704
50	80 - 36	2.047	1.448	-	-	M24 x 3	8.818 (lbs)	132088T003704
50	100 - 56	3.543	2.945	-	-	M24 x 3	10.800 (lbs)	132076T003704
50	ER 40	3.149	2.551	5.276	2.480	M24 x 3	7.275 (lbs)	259084
40	50 - 28	38.00	26.40	-	-	M16 x 2	1.30 (kg)	132022T010229
40	63 - 36	48.00	36.40	-	-	M16 x 2	1.50 (kg)	132066T010229
50	50 - 28	42.00	26.80	-	-	M24 x 3	3.00 (kg)	132022T003704
50	63 - 36	52.00	36.80	-	-	M24 x 3	3.50 (kg)	132066T003704
50	80 - 36	52.00	36.80	-	-	M24 x 3	4.00 (kg)	132088T003704
50	100 - 56	90.00	74.80	-	-	M24 x 3	4.90 (kg)	132076T003704
50	ER 40	80.00	64.80	134.00	63.00	M24 x 3	3.30 (kg)	259084



i = Imperial (in)
m = Metric (mm)

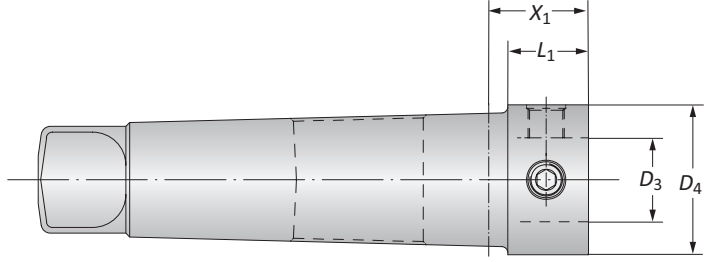
WARNING Exceeding weight capacity for machine tool spindle and tool changer can cause machine damage and/or serious injury. To prevent:

- Consult machine tool builder for machine's weight limitations.
 - Refer to example on page B10-M: 11 for calculating tool assembly weight
- Factory technical assistance is also available for specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

WARNING Tool failure can cause serious injury. To prevent:

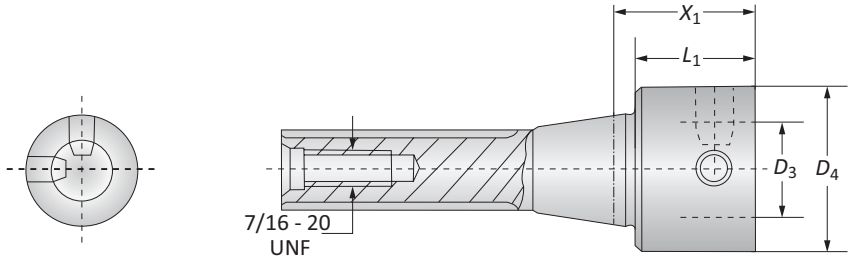
- Do not exceed recommended 10xD length-to-diameter ratio or exceed 4 total components (including shank)
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 - When using tool steel components, do not exceed recommended 6xD length-to-diameter ratio
 - When using a heavy metal reducer, do not exceed recommended 8xD length-to-diameter ratio
 - When using a carbide shank, do not exceed recommended 9xD length-to-diameter ratio
 - When using a NOVI^{TECH} module, do not exceed recommended 10xD length-to-diameter ratio
 - Refer to examples on pages B10-M: 8-10 for calculating length-to-diameter ratio
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DIN 1806 Morse Taper Master Shanks | R8 Master Shanks



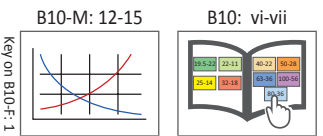
DIN 1806 Master Shanks

	Morse Taper Size	Connection	Shank		Weight	Part No.
		D ₄ D ₃	X ₁	L ₁		
i	4	50 - 28	1.693	1.440	2.425 (lbs)	132022T003590
	5	50 - 28	1.299	1.050	3.968 (lbs)	132022T003920
	5	63 - 36	2.087	1.840	4.850 (lbs)	132066T003920
m	4	50 - 28	43.00	36.50	1.10 (kg)	132022T003590
	5	50 - 28	33.00	26.70	1.80 (kg)	132022T003920
	5	63 - 36	53.00	46.70	2.20 (kg)	132066T003920



R8 Master Shanks

	Connection	Shank		Weight	Part No.
	D ₄ D ₃	X ₁	L ₁		
i	50 - 28	1.770	1.417	2.204 (lbs)	132022T007166
	63 - 36	2.362	2.008	2.866 (lbs)	132066T007166
m	50 - 28	45.00	36.00	1.00 (kg)	132022T007166
	63 - 36	60.00	51.00	1.30 (kg)	132066T007166



i = Imperial (in)
m = Metric (mm)

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 -Consult machine tool builder for machine's weight limitations.
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 -When using a heavy metal reducer, do not exceed recommended 8xD length-to-diameter ratio
 -When using a carbide shank, do not exceed recommended 9xD length-to-diameter ratio
 -When using a NOVI^{TECH} module, do not exceed recommended 10xD length-to-diameter ratio
 -Refer to examples on pages B10-M: 8-10 for calculating length-to-diameter ratio
 Factory technical assistance is available for your specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

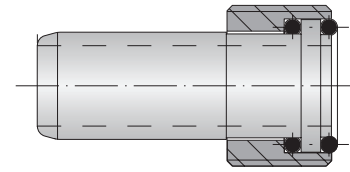
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Accessories

Coolant Adapter Sets | Service Keys | ISO 15488 (DIN 6499-B) Collet Chuck Accessories

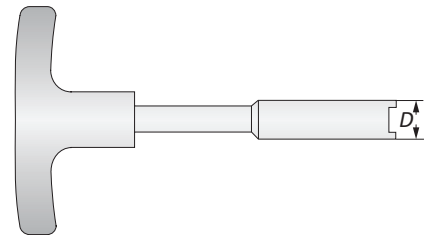
Coolant Adapter Sets

HSK Shank Size	Thread	Part No.
32	M10 x 1.5 x 1.0	262002
40	M12 x 1.75 x 1.0	262003
50	M16 x 2 x 1.0	262004
63	M18 x 2.5 x 1.0	262005
80	M20 x 2.5 x 1.5	262006
100	M24 x 3 x 1.5	262007



Service Keys

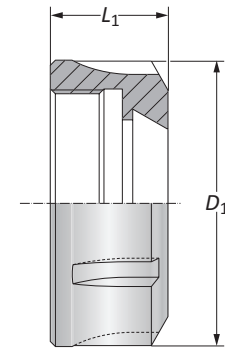
HSK Shank Size	D	Part No.
32	8.50	315234
40	10.50	315235
50	14.50	215726
63	16.50	215727*
80	18.00	415127
100	22.00	215728



*Two piece

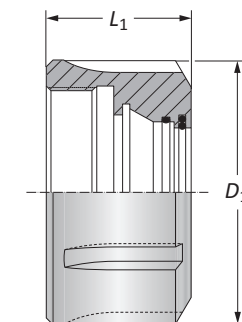
ISO 15488 (DIN 6499-B) One Piece Clamping Nut

	Nominal Size	Clamping Nut		Part No.
		L ₁	D ₁	
i	ER 40	1.004	2.480	215926
m	ER 40	25.50	63.00	215926



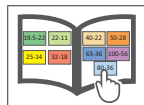
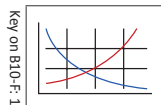
ISO 15488 (DIN 6499-B) Sealing Disk Clamping Nut

	Nominal Size	Sealing Disk Clamping Nut		Part No.
		L ₁	D ₁	
i	ER 40	1.339	2.480	278001
m	ER 40	34.00	63.00	278001



B10-M: 12-15

B10: vi-vii



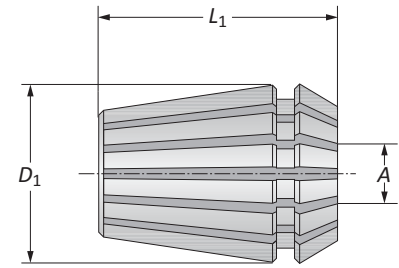
i = Imperial (in)
m = Metric (mm)

Accessories

ISO 15488 (DIN 6499-B) Collet Chuck Accessories

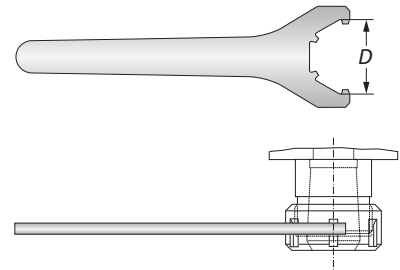
ISO 15488 (DIN6499-B) Collets

	Clamping Range		Collet		Part No.
	A	L ₁	D ₁		
i	0.591 - 0.551	1.811	1.575		071790
	0.709 - 0.669	1.811	1.575		071793
	0.787 - 0.748	1.811	1.575		071795
	0.906 - 0.866	1.811	1.575		071798
m	15.00 - 14.00	46.00	40.00		071790
	18.00 - 17.00	46.00	40.00		071793
	20.00 - 19.00	46.00	40.00		071795
	23.00 - 22.00	46.00	40.00		071798



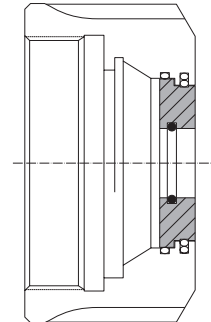
ISO 15488 (DIN 6499-B) Service Keys

	Service Key		Part No.
	Nominal Size	D	
m	ER 40	63.00	215931

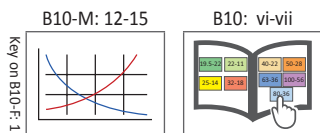
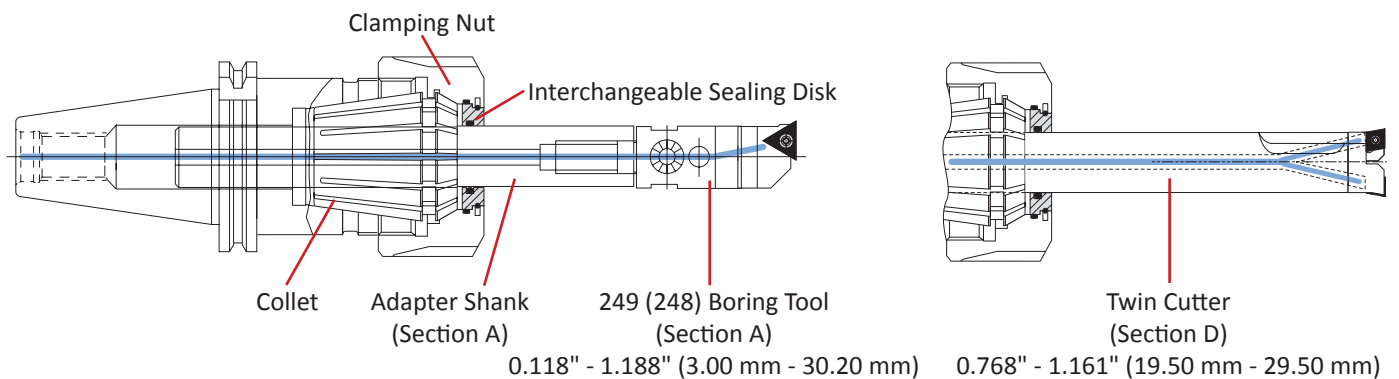


ISO 15488 (DIN 6499-B) Sealing Disks

	Clamping Range		Part No.
	A	D	
i	0.591 - 0.551		278029
	0.709 - 0.669		278035
	0.787 - 0.748		278039
	0.906 - 0.866		278045
m	15.00 - 14.50		278029
	18.00 - 17.50		278035
	20.00 - 19.50		278039
	23.00 - 22.50		278045



Application with clamping nuts and sealing disks when using central coolant feed:



i = Imperial (in)
m = Metric (mm)

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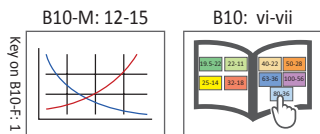
Accessories

Mounting Fixtures



Mounting Fixture		
Code	Type	Part No.
Basic Body*	-	098060
Adapter	30 Taper	098073
Adapter	40 Taper	098061
Adapter	50 Taper	098062
Adapter	HSK-A 32	098063
Adapter	HSK-A 40	098064
Adapter	HSK-A 50	098065
Adapter	HSK-A 63	098066
Adapter	HSK-A 80	098067
Adapter	HSK-A 100	098068
Adapter	PSC 50	098069
Adapter	PSC 63	098070
Adapter	PSC 80	098071

*Basic body and adapters sold separately



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⚠ WARNING Tool failure can cause serious injury. To prevent:

- Do not exceed recommended 10xD length-to-diameter ratio or exceed 4 total components (including shank)
 - When using Alu-Line components, do not exceed recommended 5xD length-to-diameter ratio
 - When using tool steel components, do not exceed recommended 6xD length-to-diameter ratio
 - When using a heavy metal reducer, do not exceed recommended 8xD length-to-diameter ratio
 - When using a carbide shank, do not exceed recommended 9xD length-to-diameter ratio
 - When using a NOVI^{TECH} module, do not exceed recommended 10xD length-to-diameter ratio
 - Refer to examples on pages B10-M: 8-10 for calculating length-to-diameter ratio
- Factory technical assistance is available for your specific applications through our Application Engineering department. ext: 7611 | email: appeng@alliedmachine.com

Guaranteed Test / Demo Application Form

Distributor PO # _____

The following must be filled out completely before your test will be considered

IMPORTANT: For processing, send Purchase Order to your Allied Field Sales Engineer (FSE). Please clearly mark the paperwork as "Test Order."

Distributor Information

Company Name: _____
 Contact: _____
 Account Number: _____
 Phone: _____
 Email: _____

End User Information

Company Name: _____
 Contact: _____
 Industry: _____
 Phone: _____
 Email: _____

Current Process List all tooling, coatings, substrates, speeds and feeds, tool life, and any problems you are experiencing

Test Objective List what would make this a successful test (i.e. penetration rate, finish, tool life, hole size, etc.)

Application Information

Hole Diameter: _____ in/mm	Tolerance: _____	Material: _____ (4150 / A36 / Cast Iron / etc.)
Preexisting Diameter: _____ in/mm	Depth of Cut: _____ in/mm	Hardness: _____ (BHN / Rc)
Required Finish: _____ RMS	State: _____	(Casting / Hot rolled / Forging)

Machine Information

Machine Type: _____ (Lathe / Screw machine / Machine center / etc.)	Builder: _____ (Haas, Mori Seiki, etc.)	Model #: _____
Shank Required: _____ (CAT50 / Morse taper, etc.)	Power: _____ HP/KW	Thrust: _____ lbs/N
Rigidity: _____	Orientation: _____	Tool Rotating: _____
<input type="checkbox"/> Excellent	<input type="checkbox"/> Vertical	<input type="checkbox"/> Yes
<input type="checkbox"/> Good	<input type="checkbox"/> Horizontal	<input type="checkbox"/> No
<input type="checkbox"/> Poor		

Coolant Information

Coolant Delivery: _____ (Through tool / Flood)	Coolant Pressure: _____ PSI / bar
Coolant Type: _____ (Air mist, oil, synthetic, water soluble, etc.)	Coolant Volume: _____ GPM / LPM

Requested Tooling

QTY	Item Number	QTY	Item Number



Allied Machine & Engineering
 120 Deeds Drive
 Dover, OH 44622

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 Toll Free USA & Canada: (800) 321-5537
 Fax: (330) 602-3400
 Email: info@alliedmachine.com

Warranty Information



Allied Machine & Engineering ("Allied Machine") warrants to original equipment manufacturers, distributors, industrial and commercial users of its products for one year from the original date of sale that each new product manufactured or supplied by Allied Machine shall be free from defects in material and workmanship.

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Complete information as to operating conditions, machine, setup, and the application of cutting fluid should accompany any product returned for inspection. This warranty shall not apply to any Allied Machine products which have been subjected to misuse, abuse, improper operating conditions, improper machine setup or improper application of cutting fluid or which have been repaired or altered if such repair or alteration, in the judgement of Allied Machine, would adversely affect the performance of the product.

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