ALLIED MACHINE & ENGINEERING

Holemaking Solutions for Today's Manufacturing

Drilling

Reaming

Burnishing

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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.

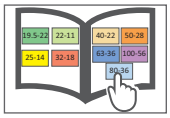
NOTE and **IMPORTANT** are also used. These are important that you read and follow but are not safety-related.

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

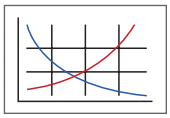
Applicable Industries

Aerospace | Agriculture | Automotive | Firearms | General Machining | Oil & Gas | Renewable Energy

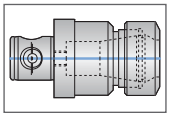
Reference Icons
The following icons will appear throughout the catalog to help you navigate between products.



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



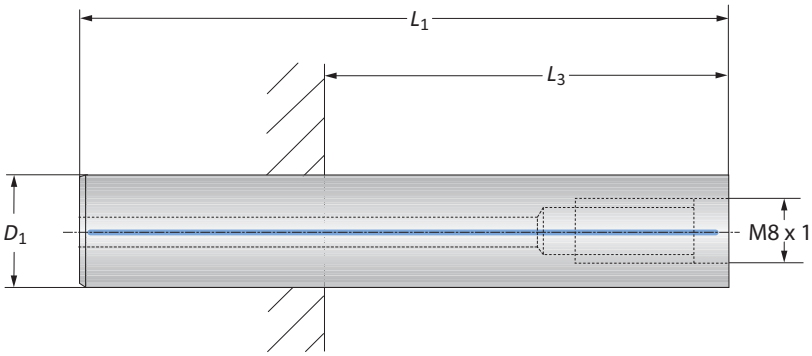
Clamping Elements
Collet chucks for carbide shanks

Coolant-Through Option
Indicates that the product is coolant through

Master Shanks with MVS Connection Table of Contents

249 (248) Shanks

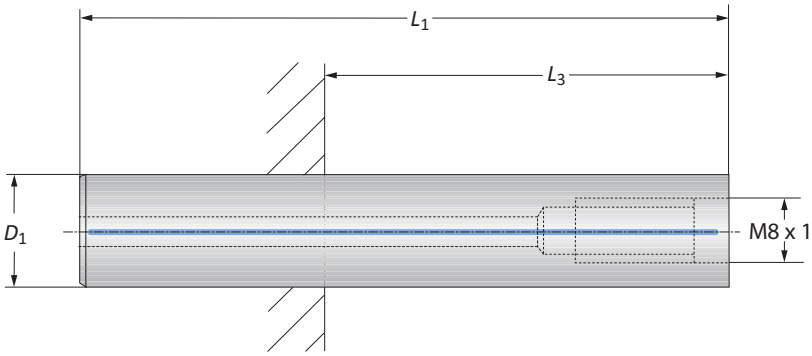
Steel | Carbide



Steel Shanks

	Connection	Shank D_1	Shank L_1	Shank $L_{3\ max}$*	$L_{3\ min}$* SK 40+50	$L_{3\ min}$* HSK-A 63	$L_{3\ min}$* HSK-A 100	Weight	Part No.
i	M8 x 1	0.591	3.346	1.456	–	–	–	0.220 (lbs)	**248136**
i	M8 x 1	0.709	3.937	2.047	–	0.196	0.472	0.440 (lbs)	**248137**
i	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**
m	M8 x 1	18.00	100.00	52.00	–	5.00	12.00	0.20 (kg)	**248137**
m	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 D_1	Shank L_1	Shank $L_{3\ max}$*	$L_{3\ min}$* SK 40	$L_{3\ min}$* SK 50	$L_{3\ min}$* HSK-A 63	$L_{3\ min}$* HSK-A 100	Weight	Part No.
i	M8 x 1	0.591	5.118	3.228	0.787	0.787	1.377	1.653	0.661 (lbs)	**248142**
i	M8 x 1	0.709	6.102	4.212	1.535	0.826	2.362	2.637	1.322 (lbs)	**248143**
i	M8 x 1	0.906	7.086	5.196	2.519	1.811	3.346	3.622	2.425 (lbs)	**248144**
i	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**
m	M8 x 1	18.00	155.00	107.00	39.00	21.00	60.00	67.00	0.60 (kg)	**248143**
m	M8 x 1	23.00	180.00	132.00	64.00	46.00	85.00	92.00	1.10 (kg)	**248144**
m	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

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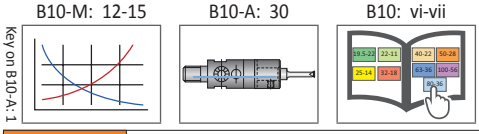

i = Imperial (in)
m = Metric (mm)

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
-When using a NOVI^{TECH} module, do not exceed recommended 10xD length-to-diameter ratio
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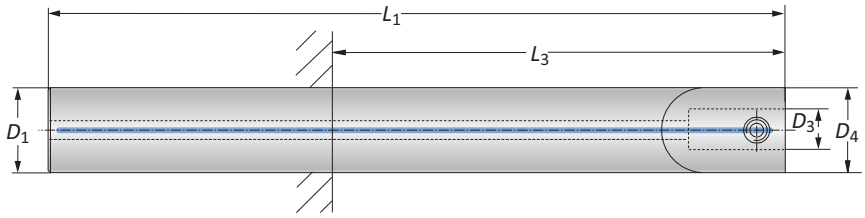
Carbide Master Shanks

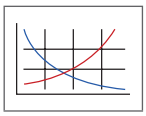


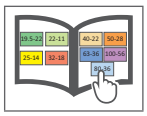
	Connection D_4 | D_3	Shank L_1	D_1	$L_{3\,max}$	$L_{3\,min}$ SK 40	SK 50	HSK-A 63	HSK-A 100	Weight	Part No.
	18 - 11	6.102	0.709	4.213	1.535	1.024	2.362	2.638	1.102 (lbs)	**299009***
	22 - 11	5.512	0.866	3.622	1.102	1.102	1.772	2.047	1.543 (lbs)	**299001***
	22 - 11	7.480	0.866	5.591	2.913	2.205	3.740	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****
	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****

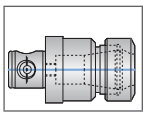
NOTE: Adapter shanks are used for extensions up to 10xD
*Recommended clamping element: collet chuck ISO 15488 (DIN 6499-B) (pg. B10-I: 5)
**Recommended clamping element: collet chuck ISO 10897 (DIN 6388) (pg. B10-I: 5)

B10-M: 12-15 | B10: vi-vii | B10-I: 5

Key on B10-F: 1







ⓘ = Imperial (in)
ⓜ = Metric (mm)

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-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
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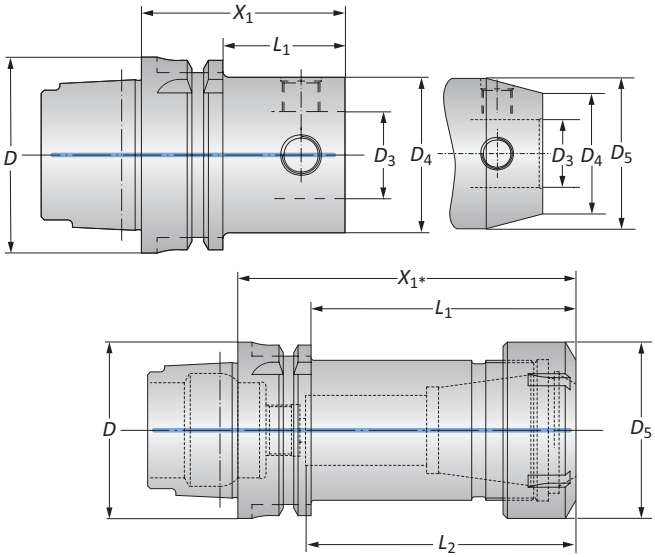
HSK Master Shanks (DIN 69893)

Imperial | Balanced



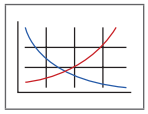
	Taper Size	Connection	Shank					
	D	D4 | D3	X1	L1	L2	D5	Weight	Part No.
	40	40 - 22	2.205	–	–	–	0.881 (lbs)	**246016**
	40	50 - 28	2.756	–	–	–	1.543 (lbs)	**246004**
	50	40 - 22	2.205	1.181	–	–	1.322 (lbs)	**246015**
	50	50 - 28	2.559	–	–	–	1.763 (lbs)	**245011**
	63	25 - 14	1.811	0.787	–	–	1.543 (lbs)	**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

*D_4 = 49.50

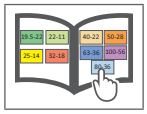
**Balanced without clamping nut

B10-M: 12-15



Key on B10-F: 1

B10: vi-vii



ⓘ = Imperial (in)
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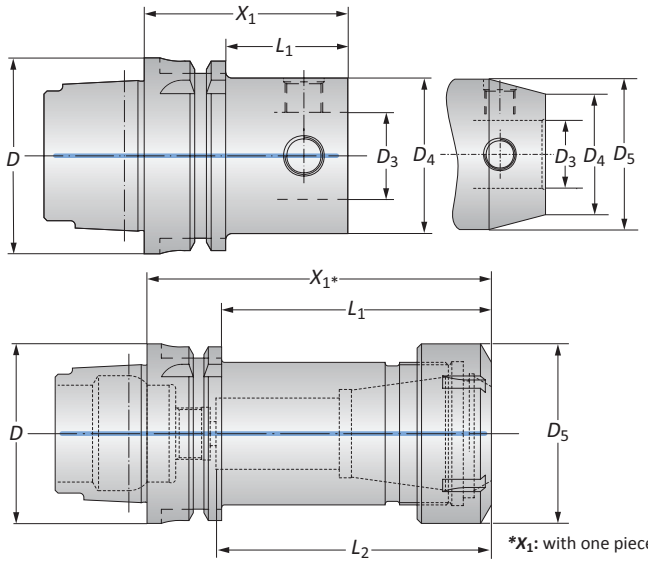
HSK Master Shanks (DIN 69893)

Metric | Balanced



***X_1**: with one piece clamping nut

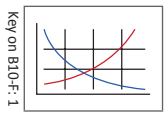
	Taper Size	Connection	Shank					
	D	D_4 | D_3	X_1	L_1	L_2	D_5	Weight	Part No.
	40	40 - 22	56.00	–	–	–	0.40 (kg)	**246016**
	40	50 - 28	70.00	–	–	–	0.70 (kg)	**246004**
	50	40 - 22	56.00	30.00	–	–	0.60 (kg)	**246015**
	50	50 - 28	65.00	–	–	–	0.80 (kg)	**245011**
	63	25 - 14	46.00	20.00	–	–	0.70 (kg)	**246012**
	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

*D_4 = 49.50mm

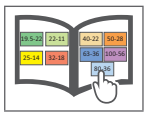
**Balanced without clamping nut

B10-M: 12-15



Key on B10-F: 1

B10: vi-vii



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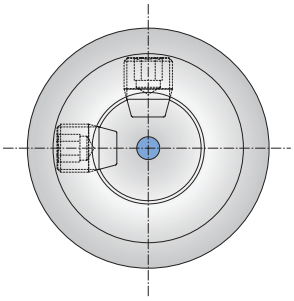
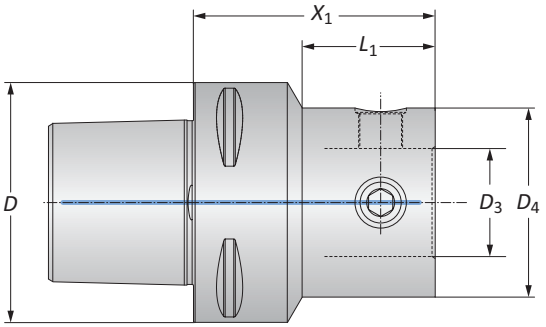
Polygon Shaft Master Shanks (PSC) (ISO 26623-1)

Balanced

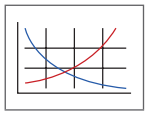




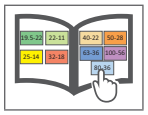
	PSC	Connection	Shank			
	D	D_4 | D_3	X_1	L_1	Weight	Part No.
	50	40 - 22	2.126	1.224	1.543 (lbs)	**227014**
	50	50 - 28	2.559	–	2.205 (lbs)	**227001**
	50	63 - 36	3.150	–	3.307 (lbs)	**227002**
	50	80 - 36	3.150	–	5.512 (lbs)	**227012**
	63	25 - 14	2.126	0.838	1.984 (lbs)	**227010**
	63	32 - 18	2.126	0.917	2.205 (lbs)	**227009**
ⓘ	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**
	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**
ⓜ	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**

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

B10-M: 12-15



B10: vi-vii



ⓘ = Imperial (in)
ⓜ = Metric (mm)

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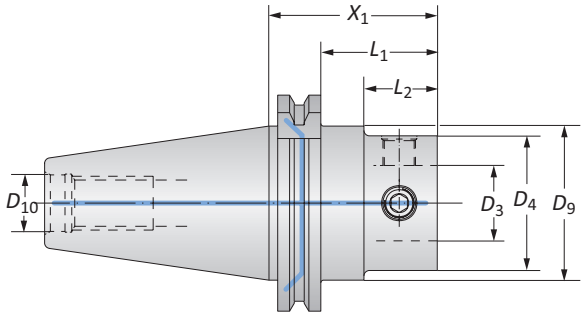
-When using a heavy metal reducer, do not exceed recommended 8xD length-to-diameter ratio
-When using a carbide shank, do not exceed recommended 9xD length-to-diameter ratio
-When using a NOVI^{TECH} module, do not exceed recommended 10xD length-to-diameter ratio
-Refer to examples on pages B10-M: 8-10 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**

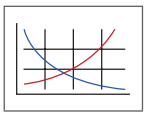
Dual Contact CAT Master Shanks with Imperial Threads



	Taper Size	Connection D_4 | D_3	Shank X_1	L_1	L_2	D_9	D_{10}	Weight	Part No.
	40	50 - 28	2.440	1.688	1.062	1.752	⅝ - 11	2.866 (lbs)	**353062**
	40	50 - 28	5.394	4.642	4.016	1.752	⅝ - 11	5.292 (lbs)	**353076**
	40	63 - 36	3.228	2.440	1.850	1.752	⅝ - 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**
	40	50 - 28	62.00	42.90	27.00	44.50	⅝ - 11	1.30 (kg)	**353062**
	40	50 - 28	137.00	117.90	102.00	44.50	⅝ - 11	2.40 (kg)	**353076**
	40	63 - 36	82.00	62.90	47.00	44.50	⅝ - 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**

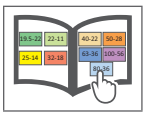
*D_4 = 49.50

B10-M: 12-15



Key on B10-F: 1

B10: vi-vii



ⓘ = Imperial (in)
ⓜ = Metric (mm)

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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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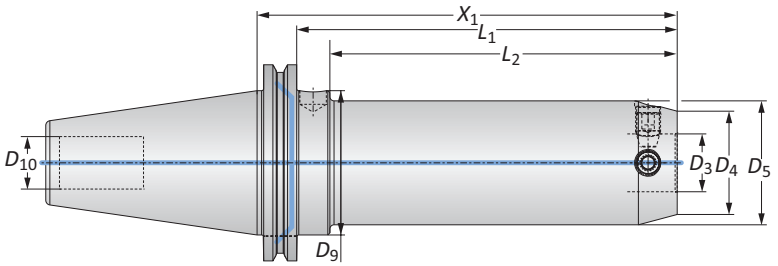
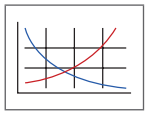
CAT Master Shanks with Imperial Threads



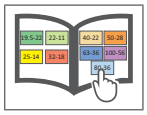
	Taper Size	Connection $D_4 \mid D_3$	Shank X_1	L_1	L_2	D_5	D_9	D_{10}	Weight	Part No.
	30	40 - 22	2.362	1.612	–	–	–	½ - 13	1.322 (lbs)	**353001**
	30	50 - 28	2.756	2.006	–	–	–	½ - 13	1.763 (lbs)	**353002**
	40	25 - 14	2.165	1.415	0.787	-	1.750	⅝ - 11	2.204 (lbs)	**353011**
	40	25 - 14	5.551	4.800	4.173	1.102	1.750	⅝ - 11	3.306 (lbs)	**353012**
	40	32 - 18	2.559	1.809	1.181	-	1.750	⅝ - 11	2.425 (lbs)	**353013**
	40	32 - 18	6.732	5.982	5.354	1.378	1.750	⅝ - 11	4.188 (lbs)	**353014**
	40	40 - 22	2.165	1.415	0.787	–	1.750	⅝ - 11	2.491 (lbs)	**353003**
	40	40 - 22	6.378	5.628	-	1.850	1.750	⅝ - 11	5.511 (lbs)	**353015**
	40	50 - 28	2.441	1.691	–	–	1.750	⅝ - 11	2.821 (lbs)	**353004**
	40	50 - 28	5.394	4.644	-	-	1.750	⅝ - 11	5.291 (lbs)	**353016**
	40	63 - 36	3.228	2.478	–	–	1.750	⅝ - 11	4.034 (lbs)	**353005**
	40	63 - 36	6.181	5.431	-	-	1.750	⅝ - 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

B10-M: 12-15



B10: vi-vii



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-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
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-When using a carbide shank, do not exceed recommended 9xD length-to-diameter ratio
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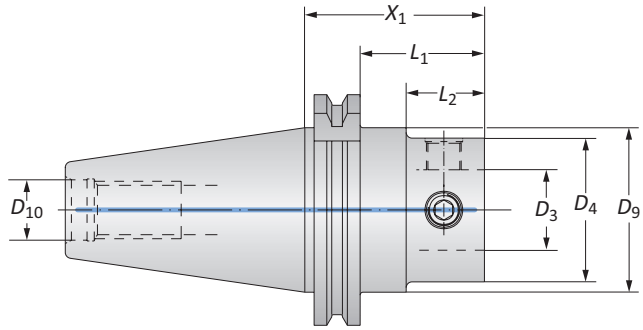
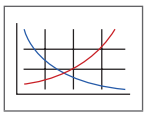
Factory technical assistance is available for your specific applications through our Application Engineering department. *ext:* **7611** | *email:* **appeng@alliedmachine.com**

CAT Master Shanks with Metric Threads



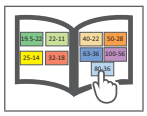
	Taper Size	Connection D_4 | D_3	Shank X_1	L_1	L_2	D_9	D_{10}	Weight	Part No.
	40	50 - 28	62.00	42.90	–	44.45	M16 x 2	1.30 (kg)	**132022T016960**
	40	63 - 36	82.00	62.90	–	44.45	M16 x 2	1.80 (kg)	**132066T016960**
ⓜ	50	50 - 28	62.00	42.90	27.00	69.85	M24 x 3	3.40 (kg)	**132022T016962**
	50	63 - 36	72.00	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



Key on B10-F: 1

B10: vi-vii



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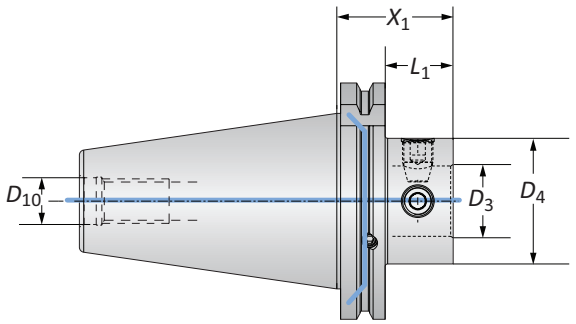
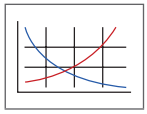
Dual Contact SK Master Shanks (DIN 69871-AD / B-D)



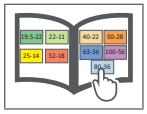
	Taper Size	Connection D_4 | D_3	Shank X_1	Shank L_1	Shank D_{10}	Weight	Part No.
ⓘ	40	50 - 28	1.811	1.059	M16 x 2	2.426 (lbs)	**353064**
	40	63 - 36	2.598	1.846	M16 x 2	6.395 (lbs)	**353065**
	50	50 - 28	1.811	1.059	M24 x 3	6.395 (lbs)	**353066**
	50	63 - 36	2.205	1.453	M24 x 3	7.056 (lbs)	**353067**
	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**
ⓜ	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**

B10-M: 12-15



Key on B10-F: 1

B10: vi-vii



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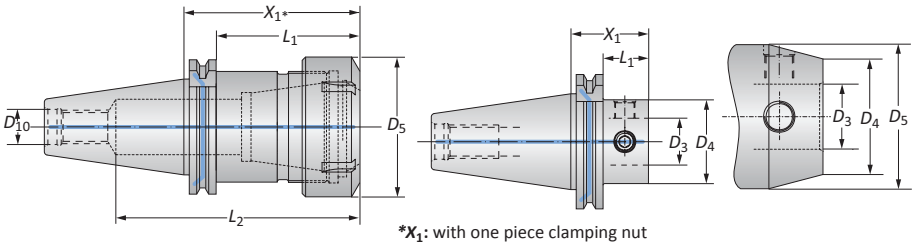
SK Master Shanks (DIN 69871-AD / B-D)

Balanced



***X_1:** with one piece clamping nut

	Taper Size	Connection D_4 | D_3	Shank X_1	L_1	L_2	D_5	D_{10}	Weight	Part No.
	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****
	30	40 - 22	46.00	26.90	–	–	M12 x 1.75	0.50 (kg)	**327001**
	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

ⓘ = Imperial (in)
ⓜ = 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**

⚠ 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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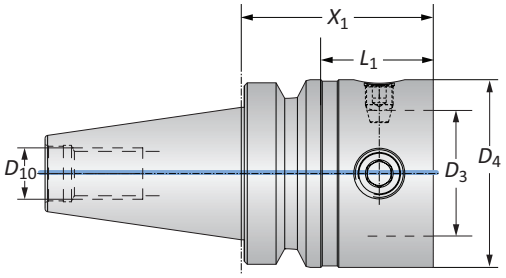
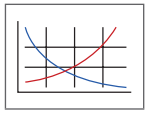
Dual Contact BT Master Shanks (JIS B 6339)



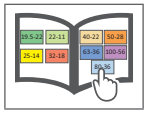
	Taper Size	Connection D_4 | D_3	Shank X_1	Shank L_1	Shank D_{10}	Weight	Part No.
ⓘ	40	50 - 28	2.126	1.063	M16 x 2	2.646 (lbs)	**353070**
	40	63 - 36	2.520	1.457	M16 x 2	3.308 (lbs)	**353071**
	50	50 - 28	2.559	1.055	M24 x 3	8.820 (lbs)	**353072**
	50	63 - 36	2.953	1.449	M24 x 3	9.261 (lbs)	**353073**
	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**
ⓜ	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**

B10-M: 12-15



Key on B10-F: 1

B10: vi-vii



ⓘ = Imperial (in)
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-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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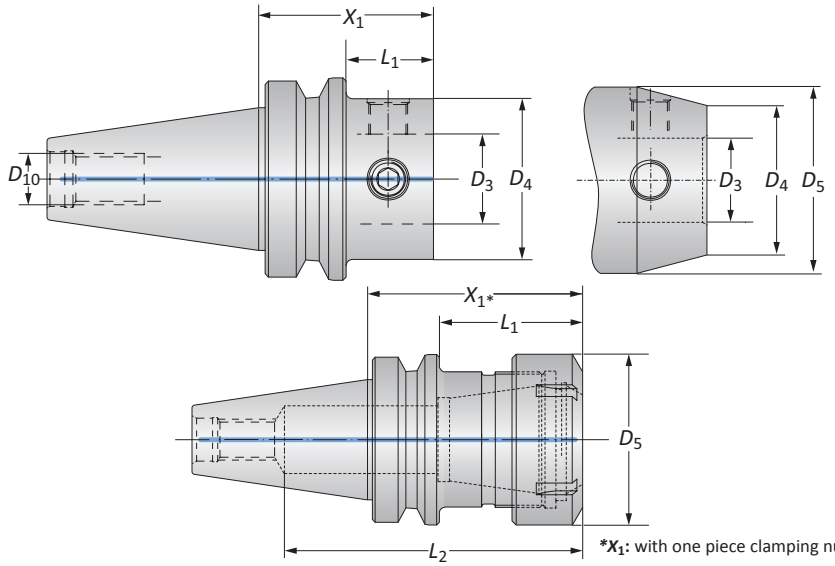
BT Master Shanks (JIS B 6339)

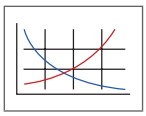
Balanced



	Taper Size	Connection D_4 | D_3	Shank X_1	L_1	L_2	D_5	D_{10}	Weight	Part No.
	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***
	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***

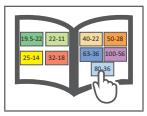
NOTE: Balanced refers to a specific residual imbalance of ≤4.00 gmm/kg
*Balanced without clamping nut

B10-M: 12-15



Key on B10-F: 1

B10: vi-vii



ⓘ = Imperial (in)
ⓜ = Metric (mm)

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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
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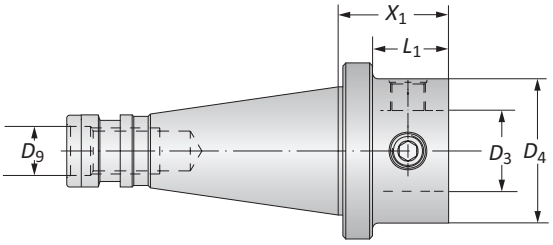
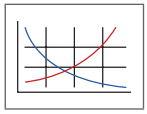
NMTB Master Shanks

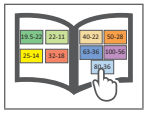


	Taper Size	Connection D_4 | D_3	Shank X_1	Shank L_1	Shank D_9	Weight	Part No.
ⓘ	40	50 - 28	1.496	1.039	⅝ - 11	2.900 (lbs)	**132022T004498**
	40	63 - 36	1.890	1.433	⅝ - 11	3.300 (lbs)	**132066T004498**
	50	50 - 28	1.654	1.060	1 - 8	6.600 (lbs)	**132022T004480**
	50	63 - 36	2.047	1.450	1 - 8	7.700 (lbs)	**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**
ⓜ	40	50 - 28	38.00	26.40	⅝ - 11	1.30 (kg)	**132022T004498**
	40	63 - 36	48.00	36.40	⅝ - 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**

B10-M: 12-15
Key on B10-F: 1



B10: vi-vii



ⓘ = Imperial (in)
ⓜ = Metric (mm)

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-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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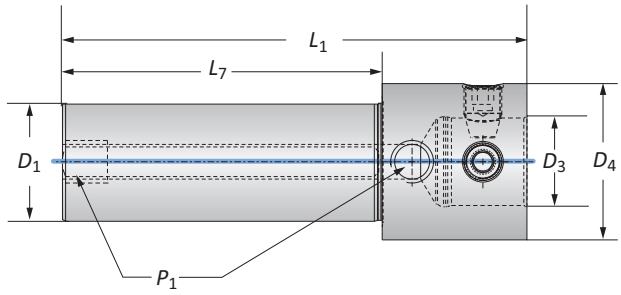
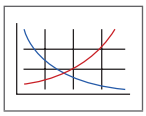
Imperial Straight Master Shanks



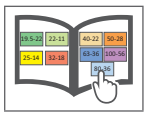
	Connection D_4 | D_3	Shank L_7	D_1	P_1	L_1	Weight	Part No.
ⓘ	40 - 22	3-½	1-¼	⅛-27 NPTF	5.080	1.764 (lbs)	**K71547**
	50 - 28	4	1-½	¼-18 NPTF	5.810	3.086 (lbs)	**K71548**
	63 - 36	4-½	2	¼-18 NPTF	6.700	5.952 (lbs)	**K71549**
	80 - 36	4-½	2	¼-18 NPTF	6.700	7.716 (lbs)	**K71550**

B10-M: 12-15



Key on B10-F: 1

B10: vi-vii



ⓘ = Imperial (in)
ⓜ = Metric (mm)

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-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
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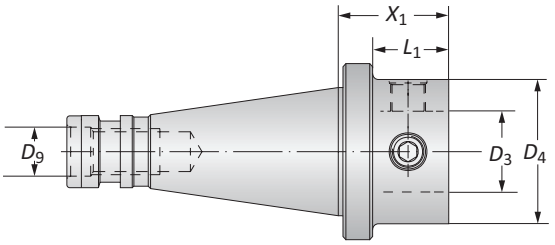
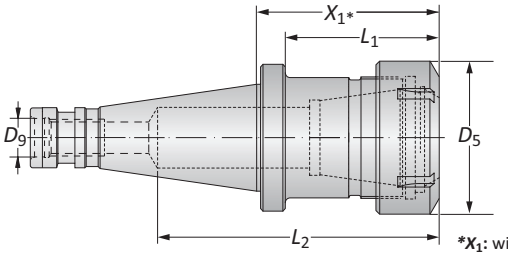
DIN 2080 Master Shanks

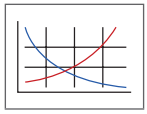




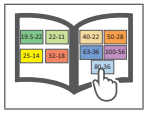
***X_1:** with one piece clamping nut

	Taper Size	Connection D_4 | D_3	Shank X_1	L_1	L_2	D_5	D_9	Weight	Part No.
	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**

B10-M: 12-15
Key on B10-F: 1



B10: vi-vii



ⓘ = Imperial (in)
ⓜ = Metric (mm)

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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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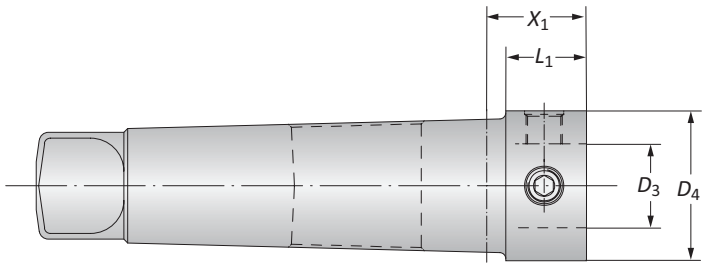
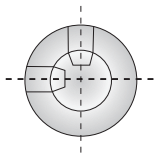
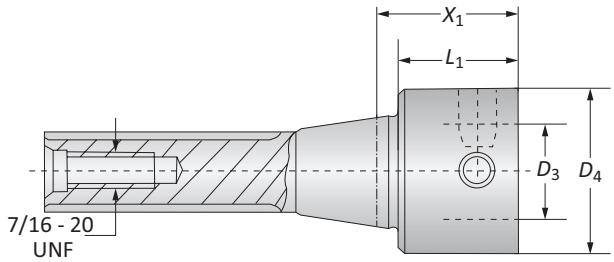
DIN 1806 Morse Taper Master Shanks | R8 Master Shanks



DIN 1806 Master Shanks

	Morse Taper Size	Connection D_4 | D_3	Shank X_1	Shank L_1	Weight	Part No.
i	4	50 - 28	1.693	1.440	2.425 (lbs)	**132022T003590**
i	5	50 - 28	1.299	1.050	3.968 (lbs)	**132022T003920**
i	5	63 - 36	2.087	1.840	4.850 (lbs)	**132066T003920**
m	4	50 - 28	43.00	36.50	1.10 (kg)	**132022T003590**
m	5	50 - 28	33.00	26.70	1.80 (kg)	**132022T003920**
m	5	63 - 36	53.00	46.70	2.20 (kg)	**132066T003920**

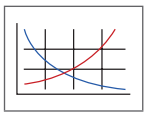




R8 Master Shanks

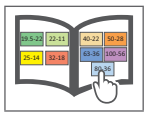
	Connection D_4 | D_3	Shank X_1	Shank L_1	Weight	Part No.
i	50 - 28	1.770	1.417	2.204 (lbs)	**132022T007166**
i	63 - 36	2.362	2.008	2.866 (lbs)	**132066T007166**
m	50 - 28	45.00	36.00	1.00 (kg)	**132022T007166**
m	63 - 36	60.00	51.00	1.30 (kg)	**132066T007166**

B10-M: 12-15



Key on B10-F: 1

B10: vi-vii



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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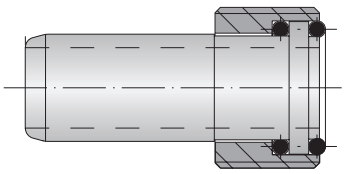
Accessories

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

Coolant Adapter Sets

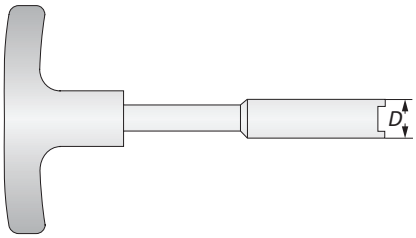
HSK Shank Size	Thread	Part No.
32	M10 x 1.5 x 1.0	**262002**
40	M12 x 1.75 x 1.0	**262003**
50	M16 x 2 x 1.0	**262004**
63	M18 x 2.5 x 1.0	**262005**
80	M20 x 2.5 x 1.5	**262006**
100	M24 x 3 x 1.5	**262007**



Service Keys

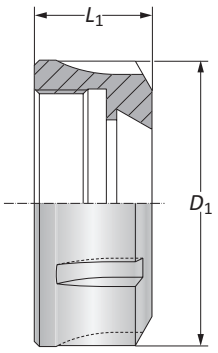
HSK Shank Size	*D*	Part No.
32	8.50	**315234**
40	10.50	**315235**
50	14.50	**215726**
63	16.50	**215727***
80	18.00	**415127**
100	22.00	**215728**

*Two piece



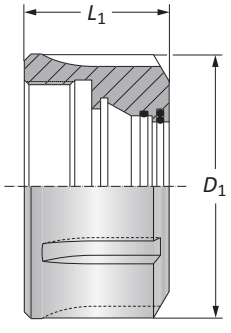
ISO 15488 (DIN 6499-B) One Piece Clamping Nut

	Nominal Size	Clamping Nut L_1	Clamping Nut D_1	Part No.
i	ER 40	1.004	2.480	**215926**
m	ER 40	25.50	63.00	**215926**

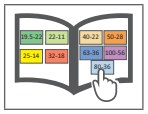


ISO 15488 (DIN 6499-B) Sealing Disk Clamping Nut

	Nominal Size	Sealing Disk Clamping Nut L_1	Sealing Disk Clamping Nut D_1	Part No.
i	ER 40	1.339	2.480	**278001**
m	ER 40	34.00	63.00	**278001**



B10-M: 12-15
Key on B10-F.1



B10: vi-vii

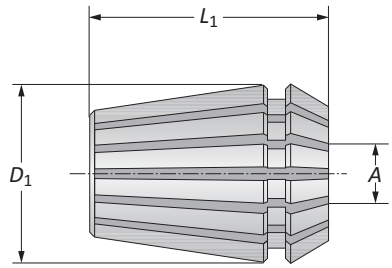
i = Imperial (in)
m = Metric (mm)

Accessories

ISO 15488 (DIN 6499-B) Collet Chuck Accessories

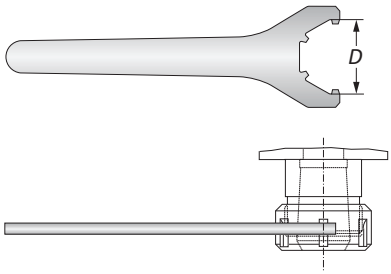
ISO 15488 (DIN6499-B) Collets

	Clamping Range	Collet		
	A	L_1	D_1	Part No.
ⓘ	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**
ⓜ	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**



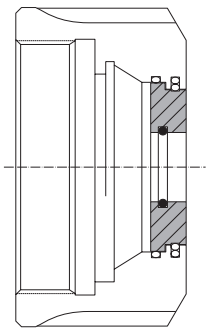
ISO 15488 (DIN 6499-B) Service Keys

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

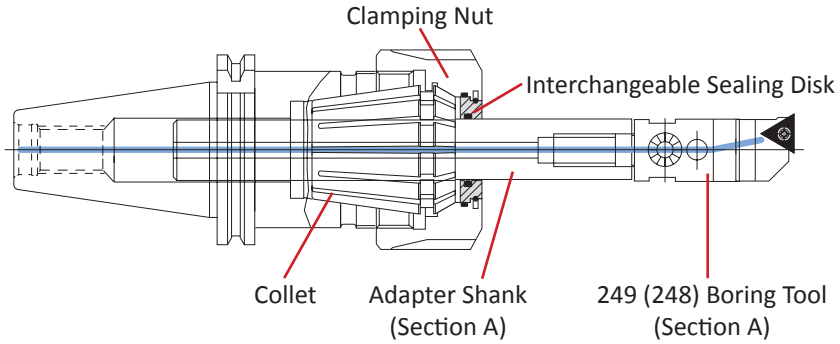


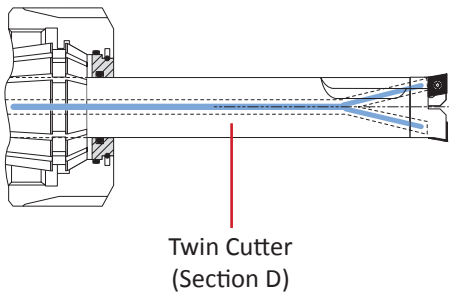
ISO 15488 (DIN 6499-B) Sealing Disks

	Clamping Range	Part No.
ⓘ	0.591 - 0.551	**278029**
	0.709 - 0.669	**278035**
	0.787 - 0.748	**278039**
	0.906 - 0.866	**278045**
ⓜ	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:





B10-M: 12-15
Key on B10-F: 1
B10: vi-vii

ⓘ = Imperial (in)
ⓜ = Metric (mm)

Accessories

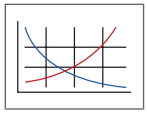
Mounting Fixtures

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**

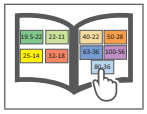
*Basic body and adapters sold separately

B10-M: 12-15

Key on B10-F: 1



B10: vi-vii



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ⓜ = Metric (mm)

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Notes

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:
- ☐ Excellent
- ☐ Good
- ☐ Poor

Orientation:
- ☐ Vertical
- ☐ Horizontal

Tool Rotating:
- ☐ Yes
- ☐ No

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

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Dover, OH 44622

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Toll Free USA & Canada: (800) 321-5537
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ALLIED MACHINE & ENGINEERING

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Allied Machine's sole and exclusive obligation under this warranty is limited to, at its option, without additional charge, replacing or repairing this product or issuing a credit. For this warranty to be applied, the product must be returned freight prepaid to the plant designated by an Allied Machine representative and which, upon inspection, is determined by Allied Machine to be defective in material and workmanship.

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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