

# CMM probe heads and shanks

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## 1 Introduction

This internal sales/support document can be used to establish the correct shank type to use with Renishaw probe heads. It provides a detailed listing of CMM manufacturers that use specific shanks and offer Renishaw part number equivalents.

## 2 Use

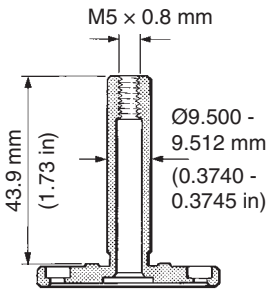
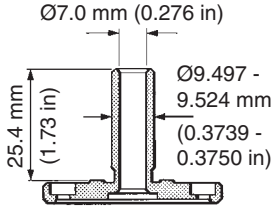
To use this guide, establish what CMM type the customer has, choose the Renishaw probe head type they require and match these to the correct part number in the enclosed 'look-up' tables.

In addition to this, the PH6 probe heads also need to be specified with the correct hardwired cable length and type as well as the electrical connector plug required.

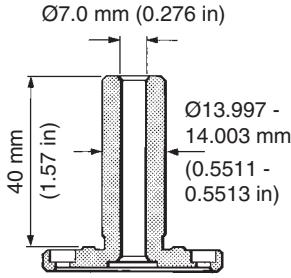
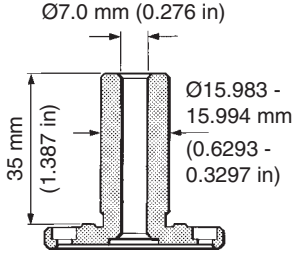
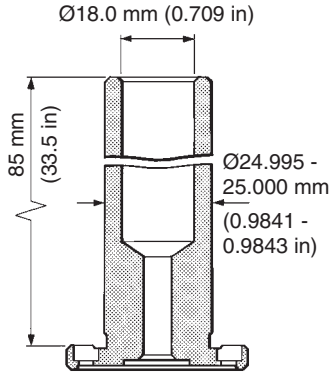
The PH6 and MH20 probe heads use shanks fitted to them using 1/4 inch BSF threads. To identify these shanks simply look up the length and diameter in the standard 'MS' listing and compare these to the 'MS##/T' information on the PH6 and MH20 pages.

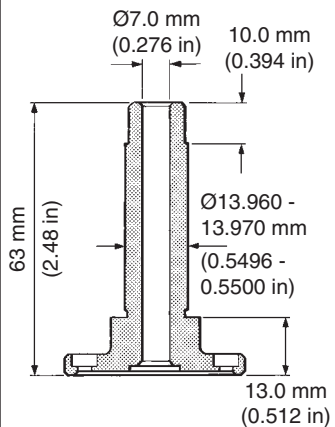
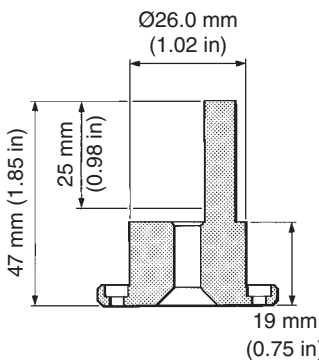
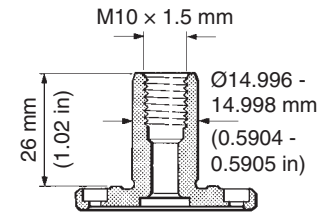
For any queries regarding selection of correct shank / probe head combinations please contact the CMM Product Support Team on Renishaw New Mills extension 3444 or at [cmm.support@renishaw.com](mailto:cmm.support@renishaw.com).

### 3 Head/shank combinations

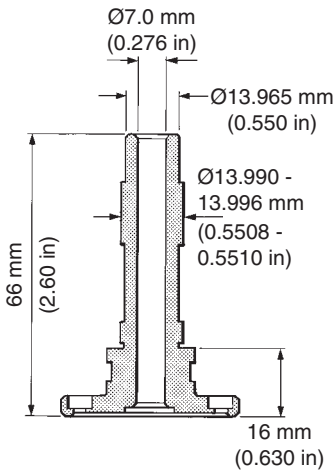
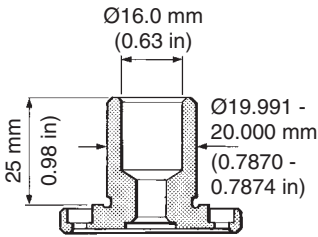
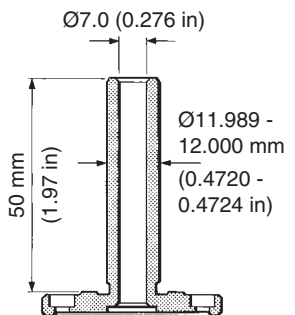
Shank	No shank	MS1	MS2
<b>Shank dimensions</b>			
<b>User</b>		Bridgeport Brown & Sharpe / Tesa Elm Systems Fanamation Giddings & Lewis I.T.P Poli Portage Machines Sheffield  MS1 (S) A-1041-7114 For new Zeiss CMM's	Boice Co-ord 3 (old specification) Federal Products Fujioka Helmel Kemco Metrologic MFO Mitutoyo (QV machine) Mora Numerex – older Zeiss Real Meca Starrett Toyko-Boeki Tri-mesures TSK Wenzel
<b>Shank part number</b>		M-1041-2146	M-1041-1650
<b>Probe head</b>		<b>Shank/head part numbers</b>	
<b>TP1 (S)</b>	A-1041-7660	A-1041-7555	A-1041-7547
<b>TP1 (SM)</b>	A-1041-7541	A-1041-7662	A-1041-7663
<b>PH1</b>	A-1049-1795	A-1049-6030	A-1049-6021
<b>PH5</b>	A-1045-1883	A-1045-6030	A-1045-6021
<b>PH5/1</b>		A-1045-6130	A-1045-6121
<b>PH6M</b>	A-1074-0020	A-1074-0031	A-1074-0032
<b>MIH</b>	A-1070-0001	A-1070-0201	A-1070-0202
<b>MIH-S</b>			
<b>MIP</b>	A-1305-0002	A-1305-0003	A-1305-0004
<b>MH8</b>		A-1332-0003	A-1332-0004
<b>PH10T</b>			
<b>PH10M</b>	A-1025-0050	A-1025-0139	A-1025-0135
<b>PH10M + AM1</b>	A-1025-0060	A-1025-0149	A-1025-0145

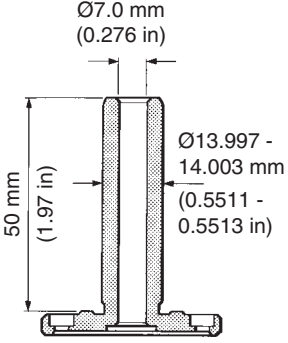
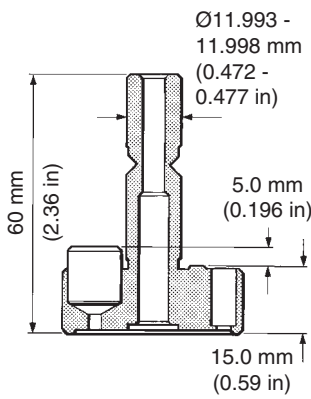
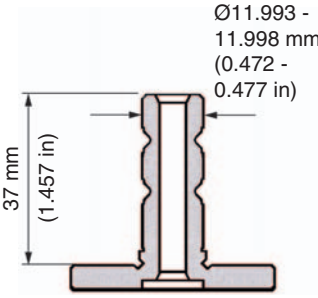
Shank	MS3	MS4	MS5
<b>Shank dimensions</b>	<p> <math>\text{Ø}20 \text{ mm (0.787 in)}</math>  <math>50.8 \text{ mm (2.0 in)}</math>  <math>\text{Ø}9.500 - 9.512 \text{ mm (0.3740 - 0.3745 in)}</math> </p>	<p> <math>\text{Ø}1/4 \text{ in BSF} \times 26\text{TPI}</math>  <math>36.68 \text{ mm (1.44 in)}</math>  <math>\text{Ø}10.008 - 10.013 \text{ mm (0.3940 - 0.3942 in)}</math> </p>	<p> <math>\text{Ø}1/4 \text{ in BSF} \times 26\text{TPI}</math>  <math>45.47 \text{ mm (1.79 in)}</math>  <math>\text{Ø}10.008 - 10.013 \text{ mm (0.3940 - 0.3942 in)}</math>  <math>11 \text{ mm (0.43 in)}</math>          Circlip          Washer          Bush       </p>
<b>User</b>	Eley & Warren Ferranti L.K. (Maxi-check) Metre 4 Tarus (Maxi-check) SNK W & A	LK	Ferranti
<b>Shank part number</b>	M-1041-1656	M-1041-1658	M-1041-1652 All with bush fitted
<b>Probe head</b>	<b>Shank/head part numbers</b>		
<b>TP1 (S)</b>	A-1041-7551	A-1041-7553	A-1041-7545
<b>TP1 (SM)</b>			
<b>PH1</b>	A-1049-6026	A-1049-6028	A-1049-6022
<b>PH5</b>	A-1045-6026	A-1045-6028	A-1045-6022
<b>PH5/1</b>	A-1045-6126		A-1045-6122
<b>PH6M</b>	A-1074-0033		
<b>MIH</b>	A-1070-0203	A-1070-0204	A-1070-0205
<b>MIH-S</b>			
<b>MIP</b>	A-1305-0031	A-1305-0005	A-1305-0006
<b>MH8</b>		A-1332-0005	A-1332-0006
<b>PH10T</b>			
<b>PH10M</b>	A-1025-0144	A-1025-0138	A-1025-0143
<b>PH10M + AM1</b>	A-1025-0154	A-1025-0148	A-1025-0153

Shank	MS6	MS7	MS8
<b>Shank dimensions</b>	 <p> <math>\text{Ø}7.0 \text{ mm (0.276 in)}</math>  <math>40 \text{ mm (1.57 in)}</math>  <math>\text{Ø}13.997 - 14.003 \text{ mm (0.5511 - 0.5513 in)}</math> </p>	 <p> <math>\text{Ø}7.0 \text{ mm (0.276 in)}</math>  <math>35 \text{ mm (1.387 in)}</math>  <math>\text{Ø}15.983 - 15.994 \text{ mm (0.6293 - 0.3297 in)}</math> </p>	 <p> <math>\text{Ø}18.0 \text{ mm (0.709 in)}</math>  <math>85 \text{ mm (33.5 in)}</math>  <math>\text{Ø}24.995 - 25.000 \text{ mm (0.9841 - 0.9843 in)}</math> </p>
<b>User</b>	C.E.Johansson Kanon	Renault (Seiv) Tri-mesures MS7 (S) M-1041-1657 Starrett (new CMM's)	Olivetti
<b>Shank part number</b>	M-1041-1653	M-1041-1654	M-1041-1657
<b>Probe head</b>	<b>Shank/head part numbers</b>		
<b>TP1 (S)</b>	A-1041-7548	A-1041-7549	A-1041-7552
<b>TP1 (SM)</b>			
<b>PH1</b>	A-1049-6023	A-1049-6024	A-1049-6027
<b>PH5</b>	A-1045-6023	A-1045-6024	A-1045-6027
<b>PH5/1</b>	A-1045-6123	A-1045-6124	A-1045-6127
<b>PH6M</b>			
<b>MIH</b>	A-1070-0206	A-1070-0207	A-1070-0208
<b>MIH-S</b>			
<b>MIP</b>	A-1035-0018	A-1305-0007	
<b>MH8</b>		A-1332-0007	
<b>PH10T</b>			
<b>PH10M</b>	A-1025-0136	A-1025-0137	
<b>PH10M + AM1</b>	A-1025-0146	A-1025-0147	

Shank	MS9	MS10	MS11
<b>Shank dimensions</b>			
<b>User</b>	Mitutoyo (fixed head)	Mitutoyo (TP1 only)	Crown Windley
<b>Shank part number</b>	M-1041-4843	M-1041-7507	M-1041-1088
<b>Probe head</b>	<b>Shank/head part numbers</b>		
<b>TP1 (S)</b>	A-1041-7560		A-1041-7546
<b>TP1 (SM)</b>		A-1041-7661	
<b>PH1</b>	A-1049-6135		A-1049-8000
<b>PH5</b>	A-1045-6035		
<b>PH5/1</b>	A-1045-6135		
<b>PH6M</b>	A-1074-0039		
<b>MIH</b>	A-1070-0209	A-1070-0210	A-1070-0211
<b>MIH-S</b>			
<b>MIP</b>	A-1035-0008	A-1305-0009	
<b>MH8</b>	A-1332-0008	A-1332-0009	
<b>PH10T</b>			
<b>PH10M</b>	A-1025-0141		
<b>PH10M + AM1</b>	A-1025-0151		



Shank	MS12	MS13	MS14
<b>Shank dimensions</b>			
<b>User</b>	Mitutoyo (indexing head)	Co-ord 3 (new specification) DEA (special version with in-shank connector) MH20i with a DEA in-quill coaxial connector is A-4099-0501-00 NOTE: this 'special' does NOT come with any TP20 module.	CTA Real meca
<b>Shank part number</b>	M-1041-7068	M-1041-5348 (A-1045-7532 – “D”)	M-1041-5981
<b>Probe head</b>	<b>Shank/head part numbers</b>		
<b>TP1 (S)</b>		A-1041-7563	A-1041-7561
<b>TP1 (SM)</b>			
<b>PH1</b>	A-1049-8021	A-1049-6038	A-1049-6036
<b>PH5</b>		A-1045-6038 A-1045-7530 – PH5 D	
<b>PH5/1</b>			
<b>PH6M</b>		A-1074-0043	
<b>MIH</b>	A-1070-0212	A-1070-0213 A-1070-0755 – PH5 D	A-1070-0214
<b>MIH-S</b>			
<b>MIP</b>	A-1035-0014		
<b>MH8</b>			
<b>PH10T</b>			
<b>PH10M</b>	A-1025-0155		
<b>PH10M + AM1</b>	A-1025-0156		

Shank	MS15	MS17	MS18
<b>Shank dimensions</b>	 <p> <math>\text{Ø}7.0 \text{ mm}</math>  <math>(0.276 \text{ in})</math>  <math>\text{Ø}13.997 - 14.003 \text{ mm}</math>  <math>(0.5511 - 0.5513 \text{ in})</math>  <math>50 \text{ mm}</math>  <math>(1.97 \text{ in})</math> </p>	 <p> <math>\text{Ø}11.993 - 11.998 \text{ mm}</math>  <math>(0.472 - 0.477 \text{ in})</math>  <math>60 \text{ mm}</math>  <math>(2.36 \text{ in})</math>  <math>5.0 \text{ mm}</math>  <math>(0.196 \text{ in})</math>  <math>15.0 \text{ mm}</math>  <math>(0.59 \text{ in})</math> </p>	 <p> <math>\text{Ø}11.993 - 11.998 \text{ mm}</math>  <math>(0.472 - 0.477 \text{ in})</math>  <math>37 \text{ mm}</math>  <math>(1.457 \text{ in})</math> </p>
<b>User</b>	C.E.Johansson	Stiefelmayer	Mora
<b>Shank part number</b>	M-1041-2153	A-1041-7113	
<b>Probe head</b>	<b>Shank/head part numbers</b>		
TP1 (S)	A-1041-7556	A-1041-7126	
TP1 (SM)			
PH1	A-1049-6031	A-1049-8039	
PH5	A-1045-6031		
PH5/1			
PH6M	A-1074-0045		
MIH	A-1070-0215	A-1070-0751	
MIH-S			
MIP	A-1305-0011		
MH8	A-1332-0011	A-1332-0014	
PH10T			
PH10M	A-1025-0140		
PH10M + AM1	A-1025-0150	A-1025-0991	

## 4 PH6 head/shank combinations

Cable description							
Identification		PL1	PL2	PL3	PL4	PL14	
<b>Length</b>		315 mm - 715 mm	465 mm - 1290 mm	765 mm - 2415 mm	4510 mm	595 mm - 1830 mm	150 mm - 250 mm
<b>Type</b>		Curly	Curly	Curly	Straight	Curly	Curly
<b>Connector</b>		5 pin DIN	5 pin DIN	5 pin DIN	5 pin DIN	7 pin Amphenol	5 pin DIN
PH6 assembly part numbers							
No shank		A-1046-5097	A-1046-5098	A-1046-5099	A-1046-5094	A-1046-5096	A-1046-5101
MS1/T	M-1046-1121	A-1046-6013	A-1046-6014	A-1046-6015	A-1046-6010	A-1046-6012	A-1046-6017
MS2/T	M-1046-1120	A-1046-6003	A-1046-6004	A-1046-6005	A-1046-6000	A-1046-6002	
MS3/T	M-1046-1126	A-1046-6053		A-1046-6055	A-1046-6050	A-1046-6052	A-1046-6057
MS5/T	M-1046-1122	A-1046-6023	A-1046-6024		A-1046-7154		A-1046-6027
MS7/T	M-1046-1124	A-1046-7043	A-1046-7044	A-1046-7045			A-1046-7047
MS8/T	M-1046-1802		A-1046-6074		A-1046-6070		
MS9/T	M-1046-4545						
MS11/T	M-1046-2661		A-1046-6094			A-1046-6092	
MS15/T	M-1046-7074	A-1046-7202			A-1046-7192		A-1046-7157
MS18/T	M-1046-7107	A-1046-7103	A-1046-7104	A-1046-7105			

Please refer to the HEAD / SHANK COMBINATIONS listing for details of the shank dimensions and OEMs that use the respective shank.



## 5 MH20 head/shank and TP20 probe module combinations

TP20 module				
	Low force module	Standard force module	Medium force module	Extended force module
<b>MH20 assembly part numbers</b>				
No shank	A-4043-0000	A-4043-0100	A-4043-0200	A-4043-0300
MS1/T	A-4043-0001	A-4043-0101	A-4043-0201	A-4043-0301
MS2/T	A-4043-0002	A-4043-0102	A-4043-0202	A-4043-0302
MS3/T	A-4043-0003	A-4043-0103	A-4043-0203	A-4043-0303
MS5/T	A-4043-0005	A-4043-0105	A-4043-0205	A-4043-0305
MS7/T	A-4043-0007	A-4043-0107	A-4043-0207	A-4043-0307
MS8/T	A-4043-0008	A-4043-0108	A-4043-0208	A-4043-0308
MS9/T	A-4043-0009	A-4043-0109	A-4043-0209	A-4043-0309
MS11/T	A-4043-0011	A-4043-0111	A-4043-0211	A-4043-0311
MS15/T	A-4043-0015	A-4043-0115	A-4043-0215	A-4043-0315
MS18/T	A-4043-0018	A-4043-0118	A-4043-0218	A-4043-0318



## 6 MH20i head/shank and TP20 probe module combinations

TP20 module				
	Low force module	Standard force module	Medium force module	Extended force module
<b>MH20i assembly part numbers</b>				
No shank	A-4099-0000	A-4099-0100	A-4099-0200	A-4099-0300
MS1	A-4099-0001	A-4099-0101	A-4099-0201	A-4099-0301
MS2	A-4099-0002	A-4099-0102	A-4099-0202	A-4099-0302
MS3	A-4099-0003	A-4099-0103	A-4099-0203	A-4099-0303
MS4	A-4099-0004	A-4099-0104	A-4099-0204	A-4099-0304
MS5	A-4099-0005	A-4099-0105	A-4099-0205	A-4099-0305
MS6	A-4099-0006	A-4099-0106	A-4099-0206	A-4099-0306
MS7	A-4099-0007	A-4099-0107	A-4099-0207	A-4099-0307
MS8	A-4099-0008	A-4099-0108	A-4099-0208	A-4099-0308
MS9	A-4099-0009	A-4099-0109	A-4099-0209	A-4099-0309
MS10	A-4099-0010	A-4099-0110	A-4099-0210	A-4099-0310
MS11	A-4099-0011	A-4099-0111	A-4099-0211	A-4099-0311
MS12	A-4099-0012	A-4099-0112	A-4099-0212	A-4099-0312
MS13	A-4099-0013	A-4099-0113	A-4099-0213	A-4099-0313
MS14	A-4099-0014	A-4099-0114	A-4099-0214	A-4099-0314
MS15	A-4099-0015	A-4099-0115	A-4099-0215	A-4099-0315
MS18	A-4099-0018	A-4099-0118	A-4099-0218	A-4099-0318

Please refer to the head/shank combinations listing for details of the shank dimensions and OEMs that use the respective shank.

MH20i with a DEA in-quill coaxial connector is A-4099-0501-00, this 'special' does NOT come with any TP20 module.



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