



SPACERS & PILLARS

www.trfastenings.com

Edition 4

Product Information & Specials

Product Information

All of our pillars come as standard with undercut or non standard without undercut.

Advantages of undercut (standard):

- No need for washers in assembly
- Flush fit

Standard spacers:

- Brass, steel, stainless steel and aluminium
- Key lengths in brass:
 - Width across flats 4 to 13 with M2, M2.5, M3, M4, M5, M6, ST2.2, ST2.4, ST2.8, ST3.2 and ST4.2
 - Lengths - see catalogue

Plastic spacers with brass thread inserts:

- Width across flats 5, 6, 8 and 10

Surfaces are available with various coatings:

- Tin plating, zinc plating, nickel plating, gold plating, chromate coated



Specials

- Thread sizes from 1mm to 32mm
- Lengths up to 2000mm
- Available in a wide range of materials. Small batch plastic parts where injection moulding is not feasible
- Special parts can be manufactured to customer drawings. Bespoke machinery enables us to offer a solution for complicated designs and installations

Contact us with your requirements and we will find a solution for you.

Contents

Brass Nickel Plated	
F/F Female/Female Threaded Spacer HSBFF	4
M/F Male/Female Threaded Pillar HPBMF	5

Steel Zinc Plated (CR3)	
F/F Female/Female Threaded Spacer HSSFF	6
M/F Male/Female Threaded Pillar HPSMFF	7

Stainless Steel	
F/F Female/Female Threaded Spacer HS2FF	8
M/F Male/Female Threaded Pillar HP2MF	9

Aluminium	
F/F Female/Female Threaded Spacer HSAFF	10
M/F Male/Female Threaded Pillar HPAMF	11

Nylon 6/6 Black	
F/F Female/Female Threaded Spacer - Hexagon HSNBFF	12
M/F Male/Female Threaded Pillar - Hexagon HPNMF	13
M/M Male/Male Threaded Pillar - Hexagon HPNMM	14
F/F Female/Female Threaded Spacer - Round RSNBFF	15
M/F Male/Female Threaded Pillar - Round RPNMF	15

Nylon 6/6 White, Brass Nickel Plated Thread	
F/F Female/Female Threaded Spacer - Hexagon HSNBFF	16
M/F Male/Female Threaded Pillar - Hexagon HPNBMF	16
M/M Male/Male Threaded Pillar - Hexagon HPNBMM	17

Nylon 6/6 Natural, Brass Nickel Plated Thread	
F/F Female/Female Threaded Spacer - Hexagon HSNBFF	18
M/F Male/Female Threaded Pillar - Hexagon HPNBMF	18
M/M Male/Male Threaded Pillar - Hexagon HPNBMM	19

Brass Nickel Plated, Self Tapping Thread	
M/F Male/Female Threaded Pillar HPBMF	20

Steel Zinc Plated, Self Tapping Thread	
M/F Male/Female Threaded Pillar HPSMF	21

Brass Nickel Plated, UNC Thread	
F/F Female/Female Threaded Spacer HSBFF	22
M/F Male/Female Threaded Pillar HPBMF	23

Thru Hole Spacers	
Nylon 6/6 Black RTSN	24
Brass Nickel Plated RTSB	25
Aluminium RTSA	25
A2 RTS2	25
Stainless Steel RTSS	25

TR Product Range	26
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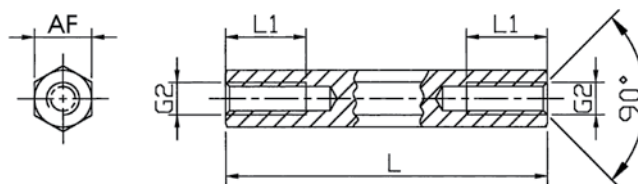
TR Global Website	27
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Brass Nickel Plated

Product Overview

- Material acc. to DIN 17660: Cu Zn 39 Pb 3
- Min. tensile strength: 430 N/mm²
- Surface finish acc. to DIN 267: nickel plated (G 3 E)
- Material number: 2.0401
- Tolerance for length dimensions: +/- 0.1 mm
- All products are also available without undercut



Other materials available:

- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



F/F - Female / Female Thread Spacer - HSBFF

Internal Thread Lengths (mm)						
L1	G2					
Length	M2	M2.5	M3	M4	M5	M6
5	5	5	5	5	5	5
6	6	6	6	6	6	6
8	8	8	8	8	8	8
10	10	10	10	10	10	10
12	6	12	12	12	12	12
15	6	15	15	15	15	15
18	6	9	9	9	9	9
from 20	6	10	10	10	10	10

Preferred Range

		Standard Lengths (mm)																							
		5	6	8	10	12	15	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Thread x Across Flats (AF)	M2 x 4	•	•	•	•	•	•	•	•	•	•	•	•	•	•										
	M2.5 x 4	•	•	•	•	•	•	•	•	•	•	•	•	•	•										
	M2.5 x 5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
	M3 x 5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
	M3 x 5.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•							
	M4 x 7	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	M5 x 8			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	M6 x 10				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•



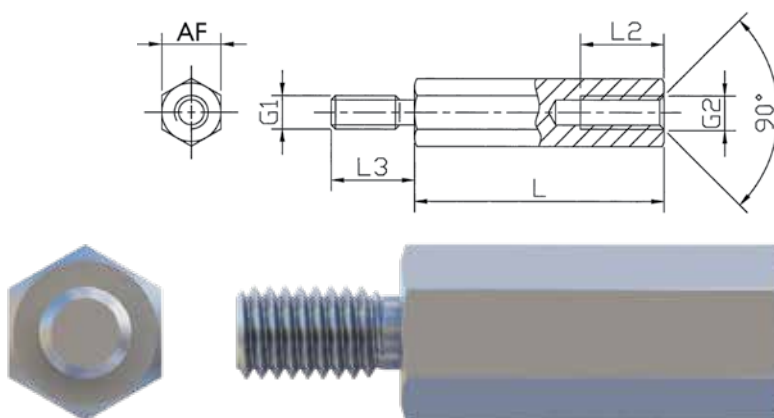
Brass Nickel Plated

Product Overview

- Material acc. to DIN 17660: Cu Zn 39 Pb 3
- Min. tensile strength: 430 N/mm²
- Surface finish acc. to DIN 267: nickel plated (G 3 E)
- Material number: 2.0401
- Tolerance for length dimensions: +/- 0.1 mm
- All products are also available without undercut

Other materials available:

- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



M/F - Male / Female Thread Pillar - HPBMF

Internal Thread Lengths (mm)						
L2 (mm)	G2					
Length	M2	M2.5	M3	M4	M5	M6
5	3	3	3	3	3	-
6	4	4	4	4	4	-
8	5	5	5	5	5	-
10	6	6	6	6	6	6
12	6	7	7	7	7	7
15	6	10	10	10	10	10
18	6	10	10	10	10	10
from 20	6	10	10	10	10	12

External Thread Lengths (G1) (mm)						
	M2	M2.5	M3	M4	M5	M6
L3	5	6	6k 8	8	8	10

Preferred Range

		Standard Lengths (mm)																							
		5	6	8	10	12	15	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Thread x Across Flats (AF)	M2 x 4	•	•	•	•	•	•	•	•	•	•	•	•	•	•										
	M2.5 x 4	•	•	•	•	•	•	•	•	•	•	•	•	•	•										
	M2.5 x 5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•									
	M3 x 5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•									
	M3 x 5.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
	M4 x 7	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•							
	M5 x 8			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•						
	M6 x 10				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•					

M3, 8mm part number example - HPBMFM3-10-5

M3, 6mm part number example - HPBMFM3-10K-5

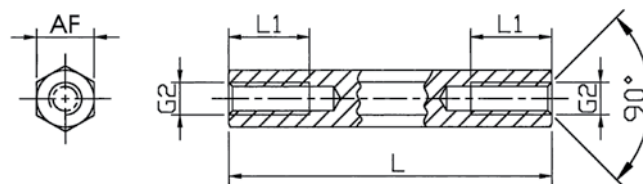
Note: M3 threads also come in 6mm external thread lengths - add suffix K to the length as per example.



Steel Zinc Plated (CR3)

Product Overview

- Material acc. to DIN 176: 11 SMn Pb30
- Minimum tensile strength: 500 N/mm²
- Surface finish acc. to DIN 267: Zinc (A3 F)
- Material number: 1.0718
- Tolerance for length dimensions +/- 0.1 mm
- (DIN 2768-m applies to AF13)
- All products are also available without undercut



Other materials available:

- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



F/F - Female / Female Thread Spacer - HSSFF

Internal Thread Lengths (mm)							
L1	G2						
Length	M2	M2.5	M3	M4	M5	M6	M8
5	5	5	5	5	5	5	-
8	8	8	8	8	8	8	-
10	10	10	10	10	10	10	-
12	6	12	12	12	12	12	-
15	6	15	15	15	15	15	15
18	6	9	9	9	9	9	-
20	6	10	10	10	10	10	20
from 30	6	10	10	10	10	12	14

Preferred Range

		Standard Lengths (mm)																							
		5	8	10	12	15	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Thread x Across Flats (AF)	M2 x 4	•	•	•	•	•	•	•	•	•	•	•													
	M2.5 x 4	•	•	•	•	•	•	•	•	•	•	•													
	M3 x 5	•	•	•	•	•	•	•	•	•	•	•	•	•											
	M3 x 5.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•							
	M3 x 6	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	M4 x 7	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	M4 x 8	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	M5 x 8		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	M6 x 10			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	M8 x 13					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

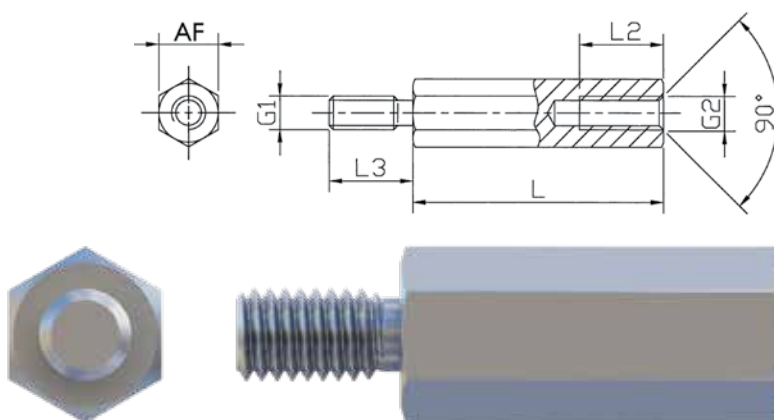
Steel Zinc Plated (CR3)

Product Overview

- Material acc. to DIN 17660: Cu Zn 39 Pb 3
- Min. tensile strength: 430 N/mm²
- Surface finish acc. to DIN 267: nickel plated (G 3 E)
- Material number: 2.0401
- Tolerance for length dimensions: +/- 0.1 mm
- All products are also available without undercut

Other materials available:

- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



M/F - Male / Female Thread Pillar - HPSMF

Internal Thread Lengths (mm)							
L2	G2						
Length	M2	M2.5	M3	M4	M5	M6	M8
5	3	3	3	3	3	-	-
8	5	5	5	5	5	-	-
10	6	6	6	6	6	6	-
12	6	7	7	7	7	7	-
15	6	10	10	10	10	10	10
18	6	10	10	10	10	10	-
from 20	6	10	10	10	10	12	14

External Thread Lengths (G1) (mm)							
	M2	M2.5	M3	M4	M5	M6	M8
L3	5	6	6	8	8	10	14

Preferred Range

		Standard Lengths (mm)																							
		5	8	10	12	15	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Thread x Across Flats (AF)	M2 x 4	•	•	•	•	•	•	•	•	•	•	•													
	M2.5 x 4	•	•	•	•	•	•	•	•	•	•	•													
	M3 x 5	•	•	•	•	•	•	•	•	•	•	•	•	•											
	M3 x 5.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•							
	M3 x 6	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M4 x 7	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M4 x 8	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M5 x 8		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M6 x 10			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M8 x 13					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	

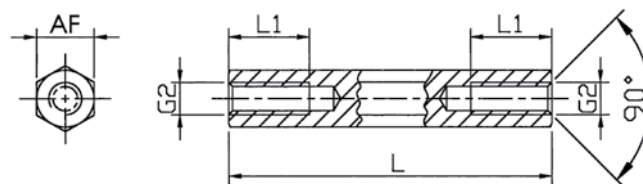
Part number example - HPSMF6-50-10



Stainless Steel

Product Overview

- Material acc. to EN DIN 10088: X8CrNiS18-9
- Minimum tensile strength: 750 N/mm²
- Material number: 1.4305
- Tolerance for length dimensions +/- 0.1 mm
- (DIN 2768-m applies to AF13)
- All products are also available without undercut



Other materials available:

- Brass
- Steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



F/F - Female / Female Thread Spacer - HS2FF

Internal Thread Lengths (mm)					
L1	G2				
Length	M3	M4	M5	M6	M8
5	5	5	-	-	-
8	8	8	8	-	-
10	10	10	10	10	-
12	12	12	12	12	-
15	7	15	15	15	15
18	7	9	9	9	18
20	7	9	10	10	20
25	7	9	10	12	12
from 30	7	9	10	12	14

Preferred Range

		Standard Lengths (mm)																							
		5	8	10	12	15	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Thread x Across Flats (AF)	M3 x 5.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
	M4 x 7	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M5 x 8		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M6 x 10			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M8 x 13					•	•	•	•	•	•	•	•	•		•		•		•		•		•	



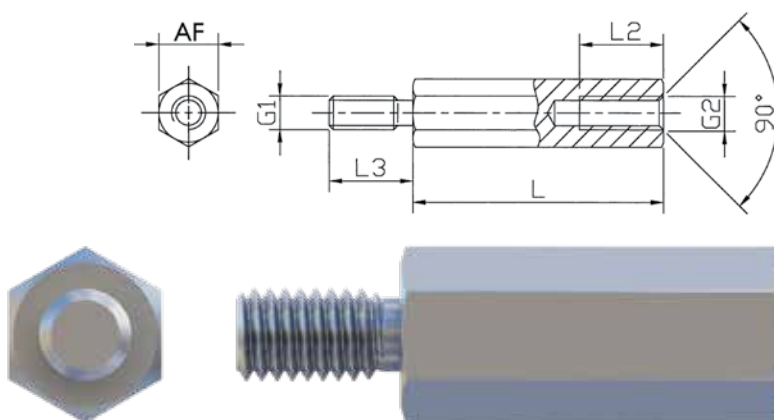
Stainless Steel

Product Overview

- Material acc. to EN DIN 10088: X8CrNiS18-9
- Minimum tensile strength: 750 N/mm²
- Material number: 1.4305
- Tolerance for length dimensions +/- 0.1 mm
- (DIN 2768-m applies to AF13)
- All products are also available without undercut

Other materials available:

- Brass
- Steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



M/F - Male / Female Thread Pillar - HP2MF

Internal Thread Lengths (mm)					
L2	G2				
Length	M3	M4	M5	M6	M8
5	2.5	-	-	-	-
8	5	5	-	-	-
10	6	6	6	5	-
12	7	8	8	7	-
15	7	9	10	10	10
18	7	9	10	12	12
from 20	7	9	10	12	14

External Thread Lengths (G1) (mm)					
	M3	M4	M5	M6	M8
L3	6	8	8	10	14

Preferred Range

		Standard Lengths (mm)																							
		5	8	10	12	15	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Thread x Across Flats (AF)	M3 x 5.5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
	M4 x 7		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M5 x 8			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M6 x 10			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M8 x 13					•		•	•	•	•	•	•	•		•		•		•		•		•	

Part number example - HP2MFM4-50-7



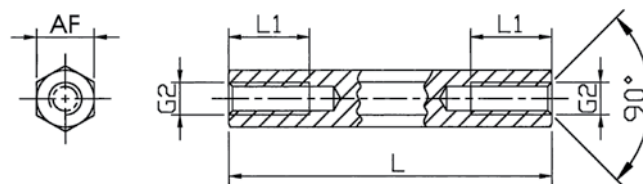
Aluminium

Product Overview

- Material acc. to EN AW 2011: AlCuBiPb
- Minimum tensile strength: 310 N/mm²
- Material number: 3.1655
- Tolerance for length dimensions +/- 0.1 mm
- (DIN 2768-m applies to AF13)

Other materials available:

- Brass
- Steel
- Stainless steel
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



F/F - Female / Female Thread Spacer - HSAFF

Internal Thread Lengths (mm)					
L1	G2				
Length	M3	M4	M5	M6	M8
5	5	5	-	-	-
8	8	8	8	-	-
10	10	10	10	10	-
12	12	12	12	12	-
15	7	15	15	15	15
18	7	9	9	9	18
20	7	9	10	10	20
25	7	9	10	12	12
from 30	7	9	10	12	14

Preferred Range

		Standard Lengths (mm)																							
		5	8	10	12	15	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Thread x Across Flats (AF)	M3 x 6	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•							
	M4 x 7	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M5 x 8		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M6 x 10			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M8 x 13					•		•	•	•	•	•	•	•		•		•		•		•		•	

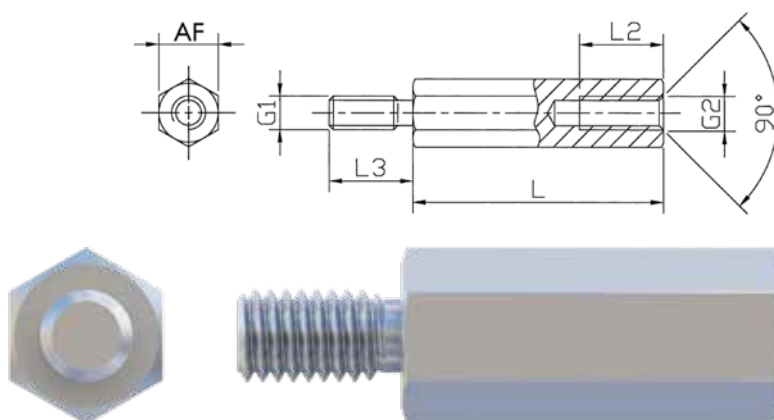
Aluminium

Product Overview

- Material acc. to EN AW 2011: AlCuBiPb
- Minimum tensile strength: 310 N/mm²
- Material number: 3.1655
- Tolerance for length dimensions +/- 0.1 mm
- (DIN 2768-m applies to AF13)

Other materials available:

- Brass
- Steel
- Stainless steel
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



M/F - Male / Female Thread Pillar - HPAMF

Internal Thread Lengths (mm)					
L2	G2				
Length	M3	M4	M5	M6	M8
5	2.5	-	-	-	-
8	5	5	-	-	-
10	6	6	6	5	-
12	7	8	8	7	-
15	7	9	10	10	10
18	7	9	10	12	12
from 20	7	9	10	12	14

Preferred Range

		Standard Lengths (mm)																							
		5	8	10	12	15	18	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
Thread x Across Flats (AF)	M3 x 6	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•								
	M4 x 7		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M5 x 8			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M6 x 10			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	M8 x 13					•		•	•	•	•	•	•	•		•		•		•		•		•	



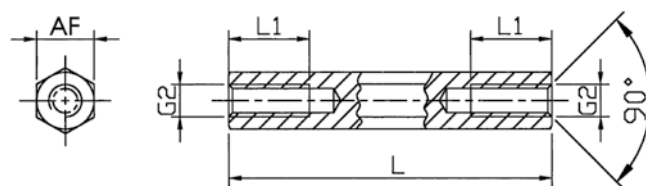
Nylon 6/6 Black

Product Overview

- Temperature resistance: up to approx. 110°
- Contact resistance DIN 53 482: $>10^{12}$ Ohm/cm
- Dielectric strength DIN 54 481: 40 kV/mm
- Tolerance for length dimensions: ± 0.1 mm

Other materials available:

- Brass
- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



F/F - Female / Female Thread Spacer - HSNGFF

Internal Thread Lengths (mm)		
G2	L	L1
M2/M2.5	to 14	Through Thread
	15–20	Half Length Blind
	from 21	10
M3	to 15	Through Thread
	16–20	Half Length Blind
	from 21	10
M4/M5/M6	to 20	Through Thread
	from 21	10

Preferred Range

		Standard Lengths (mm)																	
		4	5	8	10	12	15	18	20	25	30	35	40	45	50	55	60	65	68
Thread x Across Flats (AF)	M2 x 5				•				•		•		•	•					
	M2.5 x 5				•				•		•		•		•	•			
	M3 x 6				•				•		•		•		•		•	•	
	M4 x 8				•				•		•		•		•		•		
	M5 x 10				•	•			•		•		•		•		•	•	
	M6 x 10				•				•		•		•		•		•	•	

Material: Nylon 6/6 Glass Filled Black

Part number example - HSNGFFM3-20-6

Our Hexagon Nylon female threaded spacers have a nominal rounded section at the end of the body



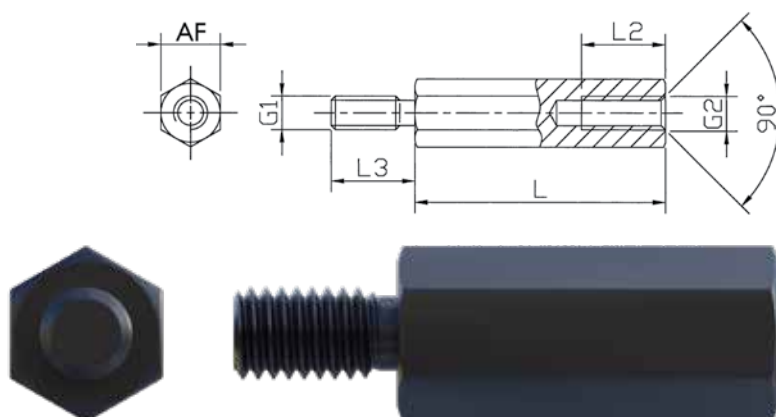
Nylon 6/6 Black

Product Overview

- Temperature resistance: up to approx. 110°
- Contact resistance DIN 53 482: $>10^{12}$ Ohm/cm
- Dielectric strength DIN 54 481: 40 kV/mm
- Tolerance for length dimensions: +/- 0.1 mm

Other materials available:

- Brass
- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



M/F - Male / Female Thread Pillar - HPNMF

Internal Thread Lengths (mm)	
L	L2
5	3.0
from 6	4.0
from 8	6.0
from 10	8.0
from 12	10.0

External Thread Lengths (mm)	
G1	L3
M2.5	8
M3	8
M4	8
M5	8
M6	10

Preferred Range

		Standard Lengths (mm)																	
		4	5	8	10	12	15	18	20	25	30	35	40	45	50	55	60	65	68
Thread x Across Flats (AF)	M2.5 x 5				•				•		•		•	•					
	M3 x 6				•				•		•		•		•		•		
	M4 x 8				•				•		•		•		•		•		
	M5 x 10				•				•		•		•		•		•	•	
	M6 x 10				•		•		•		•		•		•		•		

Material: Nylon 6/6 Black

Part number example - HPNMF4-10-8

Our Hexagon Nylon female threaded spacers have a nominal rounded section at the end of the body



Nylon 6/6 Black

Product Overview

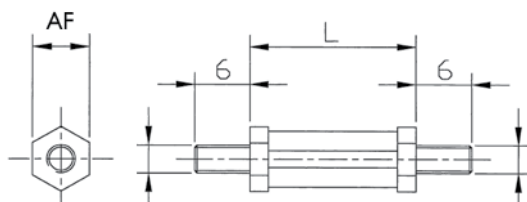
- Temperature resistance: up to approx. 110°
- Contact resistance DIN 53 482: $>10^{12}$ Ohm/cm
- Dielectric strength DIN 54 481: 40 kV/mm
- Tolerance for length dimensions: ± 0.1 mm

Other materials available:

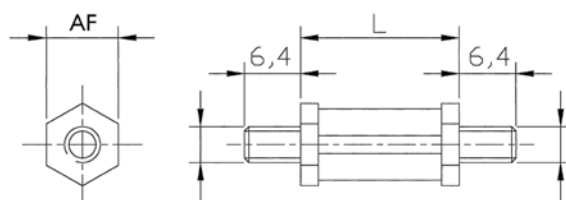
- Brass
- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



M/M - Male / Male Thread Pillar - HPNMM



Thread	Across Flats (AF) (mm)
M2.5	5
M3	6



Thread	Across Flats (AF) (mm)
M4	8

Preferred Range

		Standard Lengths (mm)																	
		3	4	5	8	10	12	15	18	20	25	30	36	40	45	50	55	60	65
Thread x Across Flats (AF)	M2.5 x 5					•				•		•		•		•		•	•
	M3 x 6					•				•		•	•	•		•		•	•
	M4 x 8					•				•		•		•		•		•	•

Material: Nylon 6/6 Black

Part number example - HPNMMM3-65-6



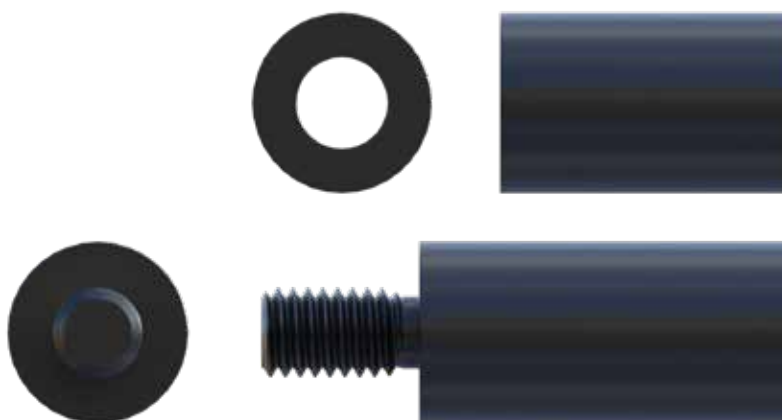
Nylon 6/6 Black - Round

Product Overview

- Temperature resistance: up to approx. 110°
- Contact resistance DIN 53 482: >10¹² Ohm/cm
- Dielectric strength DIN 54 481: 40 kV/mm
- Tolerance for length dimensions: +/- 0.1 mm

Other materials available:

- Brass
- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread
- Natural Nylon - Brass thread



F/F - Female / Female Thread Spacer - RSNGFF

		Standard Lengths (mm)																Thread Lengths (mm)		
		4	5	8	10	12	15	18	20	25	30	35	40	45	50	55	60	G2	L	L1
Thread x Diameter	M2 x 4		•	•	•	•	•	•	•	•	•	•	•	•				M2/ M2.5	to 14	Through Thread
	M2.5 x 5	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			15–20	Half Length Blind
	M3 x 6		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		from 21	10
	M4 x 8		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	M3	to 15	Through Thread
																			16–20	Half Length Blind
																			from 21	10
																		M4/M5/ M6	to 20	Through Thread
																			from 21	10

Material: Nylon 6/6 Glass Filled, Black

M/F - Male / Female Thread Pillar - RPNMF

		Standard Lengths (mm)																Internal Thread Lengths (mm)		External Thread Lengths (mm)	
		4	5	8	10	12	15	18	20	25	30	35	40	45	50	55	60	L	L2	G1	L3
Thread x Diameter	M3 x 6		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	5	3.0	M2.5	8
	M4 x 8		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	from 6	4.0	M3	8
																		from 8	6.0	M4	8
																		from 10	8.0	M5	8
																		from 12	10.0	M6	10

Material: Nylon 6/6 Black

Part number example - RSNGFFM3-60-6



Nylon 6/6 White, Brass Nickel Plated Thread

Product Overview

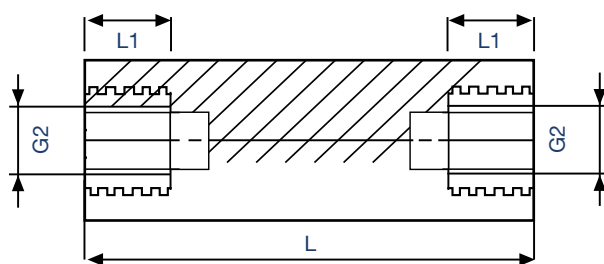
- Body material: Nylon 6/6 white
- Thread inserts: Nickel-plated brass
- Temperature resistance: up to 110°C
- Fire class: UL 94-V2
- Contact resistance: 1012 Ohm/cm
- Dielectric strength: 50kV/mm
- Tolerance for length dimensions: +/- 0.1 mm

Other materials available:

- Brass
- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- Natural Nylon - Brass thread



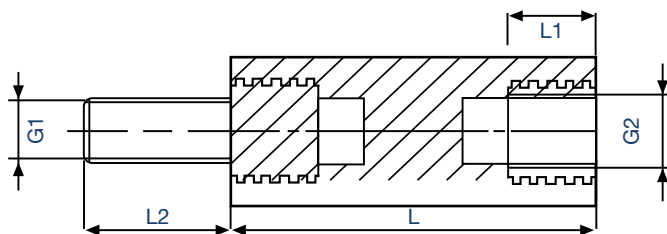
F/F - Female / Female Thread Spacer - HSNBFF



Internal Thread Lengths (mm)				
G2	M2.5	M3	M4	M5
L1	6			

Lengths (mm)		18	20	25	30	35	40	45	50	55	60	65	70
Thread x Across Flats (AF)	M2.5 x 6		•	•	•	•	•	•	•	•	•	•	
	M3 x 6	•	•	•	•	•	•	•	•	•	•	•	
	M4 x 8		•	•	•	•	•	•	•	•	•	•	
	M5 x 10		•	•	•	•	•	•	•	•	•	•	•

M/F - Male / Female Thread Pillar - HPNBMF



Thread Lengths (mm)				
G1/G2	M2.5	M3	M4	M5
L1 (G2)	6			
L2 (G1)	6		8	10

Lengths (mm)		16	20	22	25	30	35	40	45	50	55	58	60	65	70
Thread x Across Flats (AF)	M2.5 x 6		•		•	•	•	•	•	•	•		•	•	
	M3 x 6		•	•		•	•	•	•	•	•		•	•	
	M4 x 8		•		•	•	•	•	•	•	•		•	•	
	M5 x 10	•	•		•	•		•	•	•	•	•	•	•	•

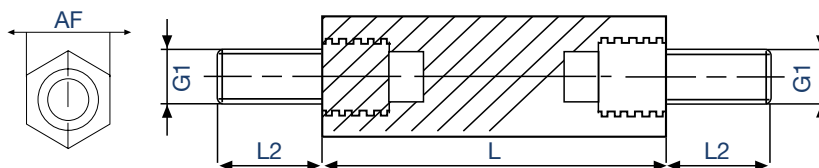
Part number example - HSNBFFM3-40-6



Nylon 6/6 White, Brass Nickel Plated Thread

Product Overview

- Body material: Nylon 6/6 white
- Thread inserts: Nickel-plated brass
- Temperature resistance: up to 110°C
- Fire class: UL 94-V2
- Contact resistance: 1012 Ohm/cm
- Dielectric strength: 50kV/mm
- Tolerance for length dimensions: +/- 0.1 mm



Other materials available:

- Brass
- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- Natural Nylon - Brass thread



F/F - Female / Female Thread Spacer - HSNBFF

External Thread Lengths (mm)				
G1	M2.5	M3	M4	M5
L2	6		8	10

Preferred Range

Lengths (mm)		17	20	25	30	35	40	45	50	55	60	65	70
Thread x Across Flats (AF)	M2.5 x 6		•	•	•	•	•	•	•	•	•	•	
	M3 x 6		•	•	•	•	•	•	•	•			
	M4 x 8	•	•	•	•	•	•	•	•	•	•	•	
	M5 x 10		•	•	•	•	•	•	•	•	•	•	•

Strength/Resistance Values

Torque (Nm)			Pull-Out Torque (N)		
AF 6	M2.5	1.3	AF 6	M2.5	300
AF 6	M3	1.3	AF 6	M3	300
AF 8	M4	3.0	AF 8	M4	600
AF 10	M5	4.5	AF 10	M5	800



Nylon 6/6 Natural, Brass Nickel Plated Thread

Product Overview

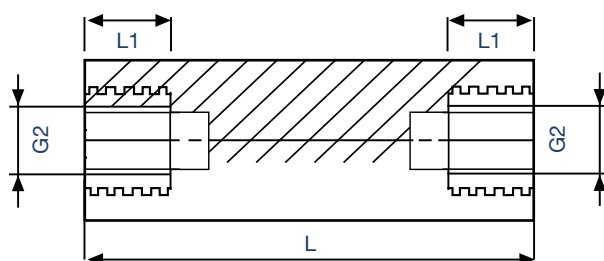
- Body material: Nylon 6/6 natural
- Thread inserts: Brass Self Finish
- Temperature resistance: up to 110°C
- Fire class: UL 94-V2
- Contact resistance: 1012 Ohm/cm
- Dielectric strength: 50kV/mm
- Tolerance for length dimensions: +/- 0.2 mm

Other materials available:

- Brass
- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread



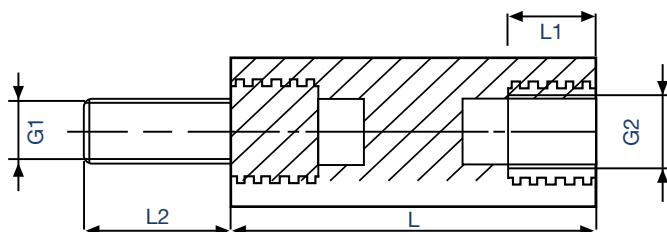
F/F - Female / Female Thread Spacer - HSNBFF



Internal Thread Lengths (mm)		
G2	M6	M8
L1	11	

Lengths (mm)		18	20	25	30	35	40	45	50	55	60	65	70
Thread x Across Flats (AF)	M6 x 13			•	•		•		•				
	M8 x 15			•	•		•		•		•		

M/F - Male / Female Thread Pillar - HPNBMF



Thread Lengths (mm)		
G1/G2	M6	M8
L1 (G2)	11	
L2 (G1)	12	14

Lengths (mm)		20	25	27	30	35	40	45	50	55	60	65	70
Thread x Across Flats (AF)	M6 x 13		•		•		•		•		•		
	M8 x 15		•	•	•		•		•		•		

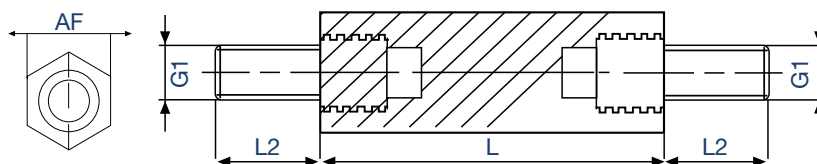
Part number example - HPNBMFM8-27-15



Nylon 6/6 Natural, Brass Nickel Plated Thread

Product Overview

- Body material: Nylon 6/6 natural
- Thread inserts: Brass Self Finish
- Temperature resistance: up to 110°C
- Fire class: UL 94-V2
- Contact resistance: 1012 Ohm/cm
- Dielectric strength: 50kV/mm
- Tolerance for length dimensions: +/- 0.2 mm



Other materials available:

- Brass
- Steel
- Stainless steel
- Aluminium
- Black Nylon - Hexagon/round
- White Nylon - Brass thread



M/M - Male / Male Thread Pillar - HPNBMM

External Thread Lengths (mm)		
G1	M6	M8
L2	12	14

Preferred Range

Lengths (mm)		17	20	25	30	35	40	45	50	55	60	65	70
Thread x Across Flats (AF)	M6 x 13			•	•		•		•		•		
	M8 x 15			•	•		•		•		•		

Strength/Resistance Values

Torque (Nm)			Pull-Out Torque (N)		
AF 13	M6	12.0	AF 13	M6	1000
AF 15	M8	18.0	AF 15	M8	1600

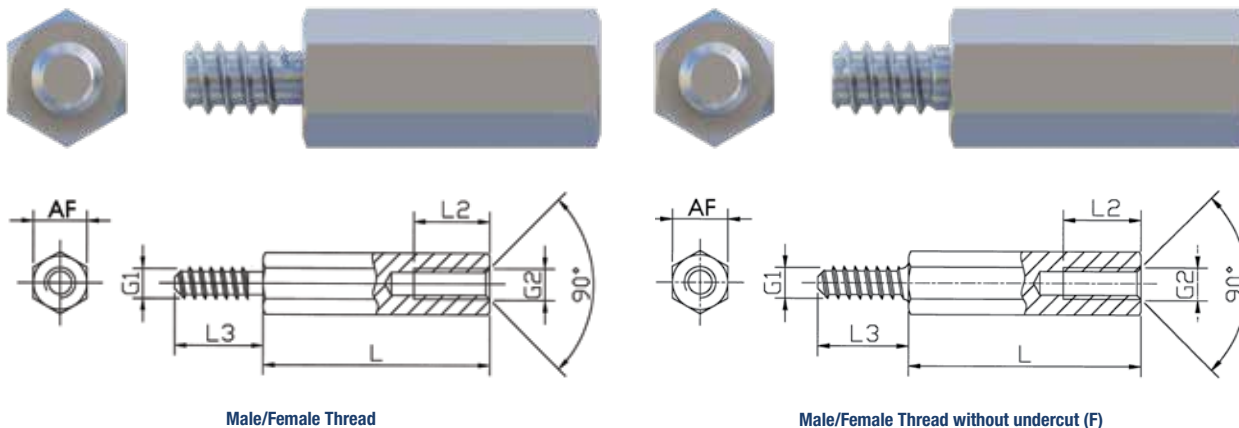


Brass Nickel Plated, Self Tapping Thread

Product Overview

- Tolerance for length dimensions: +/- 0.1 mm

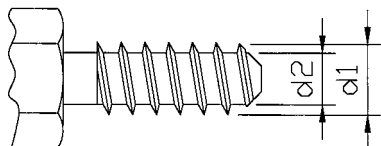
Other materials available: Steel



M/F - Male / Female Thread Pillar - HPNBMF

Internal Thread G2 (mm)	
L	L2
8	5
10	6
12	7
15	10
20	10

External Thread G1 (mm)			
Thread Size	L3	d1	d2
ST2.2	5	2.1	1.6
ST2.9	6	2.8	2.1
ST3.3	6	3.2	2.3
ST3.5	7	3.4	2.6
ST4.2	8	4.1	3.0
ST4.8	8	4.7	3.5
ST6.3	10	6.1	4.8



Preferred Range

Thread G2 x Across Flats (AF)	Thread G1	Standard Lengths (mm)				
		8	10	12	15	20
M2.5 x 5	ST2.2	•	•	•	•	•
M3 x 5.5	ST2.9	•	•	•	•	•
M3 x 5.5	ST3.3	•	•	•	•	•
M3 x 6	ST3.5	•	•	•	•	•
M4 x 7	ST4.2	•	•	•	•	•
M5 x 8	ST4.8	•	•	•	•	•
M6 x 10	ST6.3		•	•	•	•

Part number example with undercut - HPBMF2.2-08-5
Part number example without undercut - HPBMF2.2-0.8F-5

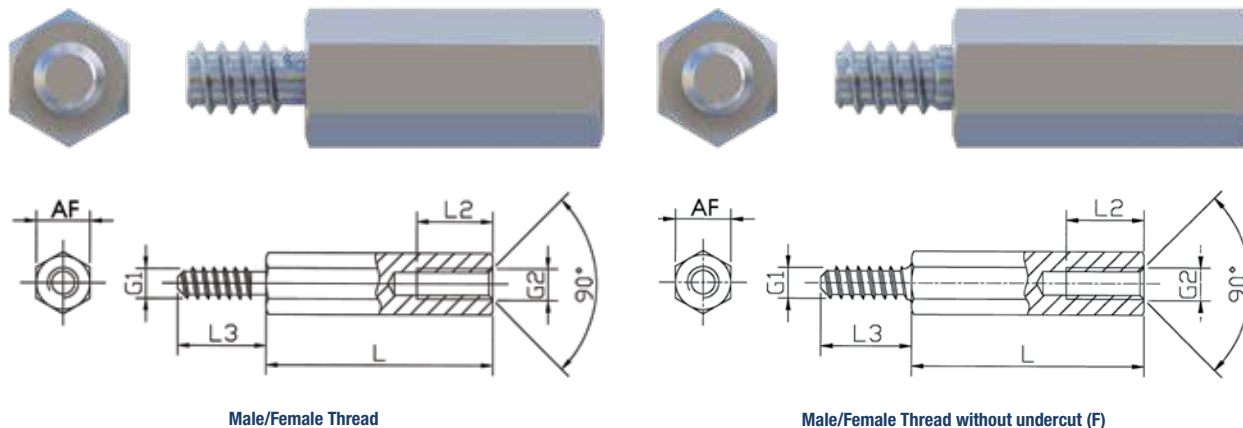


Steel Zinc Plated, Self Tapping Thread

Product Overview

- Tolerance for length dimensions: +/- 0.1 mm

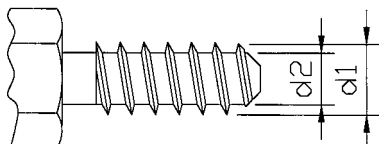
Other materials available: Brass



M/F - Male / Female Thread Pillar - HPSMF

Internal Thread G2 (mm)	
L	L2
8	5
10	6
12	7
15	10
20	10

External Thread G1 (mm)			
Thread Size	L3	d1	d2
ST2.2	5	2.1	1.6
ST2.9	6	2.8	2.1
ST3.3	6	3.2	2.3
ST3.5	7	3.4	2.6
ST4.2	8	4.1	3.0
ST4.8	8	4.7	3.5
ST6.3	10	6.1	4.8



Preferred Range

Thread G2 x Across Flats (AF)	Thread G1	Standard Lengths (mm)				
		8	10	12	15	20
M2.5 x 5	ST2.2	•	•	•	•	•
M3 x 5.5	ST2.9	•	•	•	•	•
M3 x 5.5	ST3.3	•	•	•	•	•
M3 x 6	ST3.5	•	•	•	•	•
M4 x 7	ST4.2	•	•	•	•	•
M5 x 8	ST4.8	•	•	•	•	•
M6 x 10	ST6.3		•	•	•	•

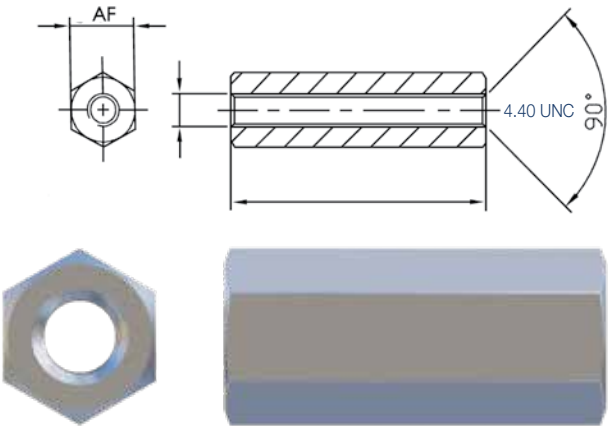
Part number example with undercut - HPSMF2.2-08-5
Part number example without undercut - HPSMF2.2-0.8F-5



Brass Nickel Plated, UNC Thread

Product Overview

- All UNC types are also available in steel, different lengths and with UNC 6-32, UNC 8-32 and UNC 2-56 thread
- Tolerance for length dimensions: +/- 0.1 mm
- All products are also available without undercut



F/F - Female / Female Thread Spacer - HSBFF

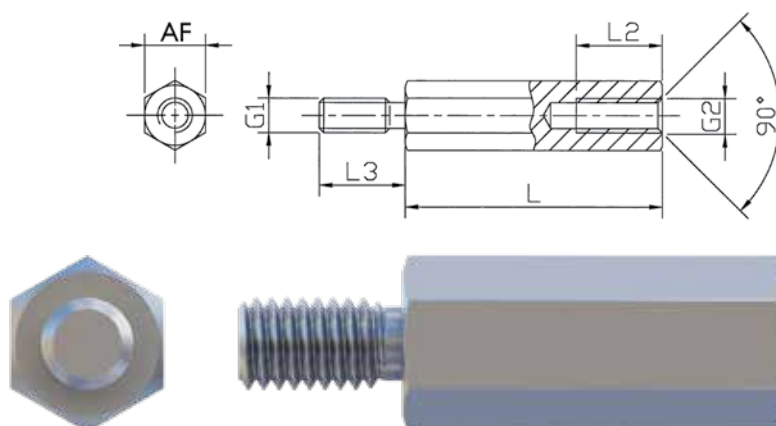
Preferred Range

		Standard Lengths (mm)					
		5	6	8	10	12	15
Thread x Across Flats (AF)	4-40 UNC x 5	•	•	•	•	•	•

Brass Nickel Plated, UNC Thread

Product Overview

- All UNC types are also available in steel, different lengths and with UNC 6-32, UNC 8-32 and UNC 2-56 thread
- Tolerance for length dimensions: +/- 0.1 mm
- All products are also available without undercut



M/F - Male / Female Thread Pillar - HPBMF

Thread Lengths (mm)		
L	L2	L3
5	3	4, 5, 6, 8, 10, 12
6	4	6, 8

Preferred Range

G1	G2	Standard Lengths (mm)					
Internal Thread x Across Flats (AF)	External Thread	5	6	8	10	12	15
4-40 UNC x 5	4-40 UNC	•	•				
4-40 UNC x 5	M3	•	•				
M3 x 5	4-40 UNC	•	•				



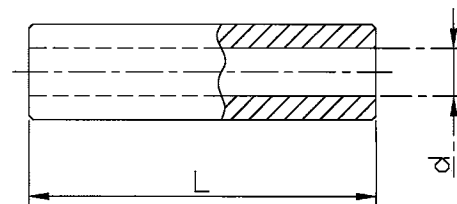
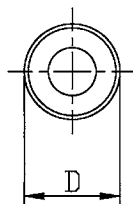
Thru Hole Spacers - Nylon 6/6 Black

Product Overview

- Tolerance for length dimensions: +/- 0.1 mm

Other materials available:

- Brass
- Aluminium
- A2
- Steel



RTSN - Nylon 6/6

Technical Data			
Material	Specific Contact Resistance	Dielectric Strength	Heat Resistance
Nylon 6/6 Black	$> 10^{12}$ Ohm/cm	80 kV/mm	110°C

Preferred Range

Diameter d (mm)	Diameter D (mm)	Standard Lengths (mm)																
		4	5	6	7	8	9	10	20	30	32	40	45	50	55	57	60	63
1.5	4	•	•	•	•	•	•	•										
2.2	4							•	•	•		•		•				
2.7	5							•	•	•		•		•	•			
3.4	6							•	•	•	•	•		•			•	
4.2	8							•	•	•		•	•	•			•	
5.2	10							•	•	•		•		•		•		
6.2	10							•	•	•		•		•	•			
8.2	12							•	•	•		•		•			•	•
10.5	16							•	•	•		•		•				

Part number example - RTSN2.2-50-4



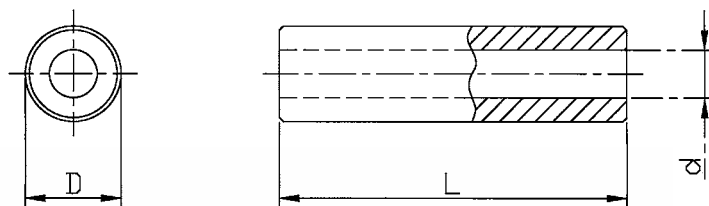
Thru Hole Spacers - Brass Nickel Plated/Aluminium/A2/Steel

Product Overview

- Tolerance for length dimensions: +/- 0.1 mm

Other materials available:

- Nylon 6/6, Black



RTSB - Brass | RTSA - Aluminium | RTS2 - A2 | RTSS - Steel

Preferred Range

Diameter d (mm)	Diameter D (mm)	Standard Lengths (mm)														
		2	3	4	5	6	7	8	9	10	12	15	18	20	25	30
2.1	4.0	•	•	•	•	•	•	•	•	•	•					
2.6	5.0	•	•	•	•	•	•	•	•	•	•	•				
3.2	6.0	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
4.3	8.0	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
5.3	10.0	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Part number example - RTSB3.2-30-6



TR Product Range

PCB Hardware and Cable Management



Range: Support post series, circuit board support, plastic rivets, plastic screws, cable ties & accessories, cable management, adhesive base.

Materials: Black nylon 6/6, white nylon 6/6, nylon 6/6 V2, nylon 6/6 VO, nylon 6 UL94V/2, nylon 46.

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Our own range of fastener solutions for specific industries and applications, including:

Fasteners for sheet metal, fasteners for plastic, security fasteners, thread-locking nuts, micro-diameter fasteners from M0.6 and enclosure hardware products.

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We stock and supply a vast range of standard fasteners to DIN, ISO & ANSI standards including:

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In addition, the website carries an extensive Engineering Knowledge Base, which includes:

- A comprehensive range of 2D/3D fastener models available to download
- Step-by-step animated installation guides
- Tooling requirements and related technical information
- Detailed performance data
- Material and finish specifications
- Fastener standards and comparison tables
- Key industries and the services we supply

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