

NEW
EXPANDED RANGE OF
SHOULDER WASHERS

supreme

FASTENERS & COMPONENTS

CATALOGUE 2024/26



NATURAL NYLON | BLACK NYLON | GF NYLON | TPR | NEOPRENE
PVDF | POLYPROPYLENE | PVC | PTFE | PEEK | POLYCARBONATE

Australia's **LEADING SUPPLIER** of High Quality Nylon and Other
Plastics Fasteners & Components for **OVER 50 YEARS.**

FOR ALL PRODUCT & SALES ENQUIRIES: + 61 2 9450 0991 / sales@supfast.com.au

WHEN YOUR APPLICATIONS REQUIRE THE FOLLOWING

- ✓ High Dielectric Strength
- ✓ Low Conductivity of Heat or Cold
- ✓ Chemical Resistance
- ✓ Extreme Operating Temperatures
- ✓ Non Flammability
- ✓ Lightweight
- ✓ Dimensional Stability
- ✓ Corrosion Resistance
- ✓ Isolation with Other Materials
- ✓ Weather Resistance
- ✓ Low Coefficient of Friction
- ✓ Non Magnetic with High Volume Resistance
- ✓ Sealant Properties

SUPREME FASTENERS & COMPONENTS CAN HELP

Our worldwide engineering teams can offer customer assistance in the areas of material selection and design for both our **STANDARD** and **CUSTOM** parts.



WASHERS & SPACERS



STANDARD SCREWS



THREADED RODS



PROTECTING CAPS & COVER CAPS



NUTS



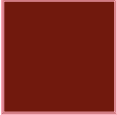












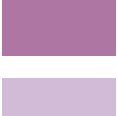

ASSEMBLY SYSTEMS

SUPREME FASTENERS & COMPONENTS HAVE BEEN INVOLVED IN THE MANUFACTURE OF MOULDED & PRECISION MACHINED PLASTIC ITEMS FOR MORE THAN 50 YEARS.

Through our worldwide resources of having access to manufacturing plants in Australia, the USA and Europe we are able to offer our customers the most comprehensive range of plastic fasteners and components possible.

This catalogue details our MAIN products range.

STAINLESS

	CHEESE HEAD SCREWS	2
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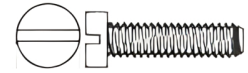
NOTE: Unless otherwise indicated most items in this catalogue are moulded from PA 6 or PA 6.6 (Nylon).

METRIC (DIN 84)

NATURAL NYLON

Dia.	Length	Length	Pack
M3	4MM	5MM	*
	6MM	8MM	
	10MM	12MM	
	16MM	20MM	
	25MM	30MM	
	35MM	42MM	
M4	5MM	6MM	*
	8MM	10MM	
	12MM	16MM	
	20MM	25MM	
	30MM	35MM	
	40MM	45MM	
M5	6MM	8MM	*
	10MM	12MM	
	16MM	20MM	
	25MM	30MM	250
	35MM	40MM	*
	50MM	60MM	
M6	5MM	8MM	250
	10MM	12MM	
	16MM	20MM	
	25MM	30MM	250
	35MM	40MM	
	45MM	50MM	
M8	60MM	70MM	*
	10MM	16MM	100
	20MM	25MM	
	30MM	35MM	
	40MM	50MM	
60MM	70MM		

Dia.	Length	Length	Pack
M10	6MM	8MM	*
	10MM	12MM	
	16MM	20MM	100
	25MM	30MM	
	35MM	40MM	
	50MM	60MM	
M12	70MM		*
	16MM	20MM	
	25MM	30MM	
	35MM	40MM	
	50MM	60MM	



**OTHER HEAD STYLES AVAILABLE
ON REQUEST INCLUDE:**

PAN SLOT, PAN PHILLIPS, FILLISTER SLOT,
ROUND HEAD & WING SCREWS.

BLACK NYLON VERSUS BLACKENED NYLON

Dyeing individual items (mainly in Black) has always been available as a cosmetic alternative to Natural Nylon.

Blackened Nylon, however, has limited outdoor use as the dye can often wash out.

Moulding in Black Nylon is the best way to get increased outdoor performance and in this catalogue only items made this way are shown in each section under the heading BLACK NYLON.

Black moulded items are available in limited sizes and subject to minimum order levels.

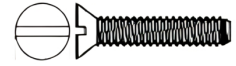
ITEMS MARKED * MINIMUM ORDER LEVELS APPLY. CONTACT US FOR DETAILS.

METRIC (DIN 963)

NATURAL NYLON

Dia.	Length	Length	Pack
M3	4MM	5MM	*
	6MM	8MM	
	10MM	12MM	
	15MM	16MM	
	20MM	25MM	
	30MM	35MM	
M4	5MM	6MM	*
	8MM	10MM	
	12MM	16MM	
	20MM	25MM	
	30MM	35MM	
	40MM		
M5	8MM	10MM	250
	12MM	15MM	
	20MM	25MM	
	30MM	35MM	
	40MM	50MM	
	60MM	70MM	
M6	10MM	12MM	250
	16MM	20MM	
	25MM	30MM	
	35MM	40MM	
	45MM	50MM	
	55MM	65MM	
M8	10MM	12MM	100
	16MM	20MM	
	25MM	30MM	
	35MM	40MM	
	45MM	50MM	250
	55MM	60MM	
	65MM	75MM	
	85MM		

Dia.	Length	Length	Pack
M10	20MM	25MM	100
	30MM	35MM	
	40MM	45MM	
	50MM	55MM	
	60MM	65MM	
	75MM	85MM	
M12	20MM	25MM	250
	30MM	35MM	
	40MM	45MM	
	50MM	55MM	
	65MM	85MM	



**ALSO AVAILABLE
ON REQUEST:**

PHILLIPS HEAD &
HEXAGONAL SLOT



ITEMS MARKED * MINIMUM ORDER LEVELS APPLY. CONTACT US FOR DETAILS.

METRIC DIN 933

NATURAL NYLON

Dia.	Length	Length	Pack
M3	5MM	6MM	*
	8MM	10MM	
	12MM	16MM	
	20MM	25MM	
	30MM	35MM	
	40MM		
M4	5MM	6MM	*
	8MM	10MM	
	12MM	16MM	
	20MM	25MM	
	30MM	35MM	
	40MM		
M5	5MM	6MM	500
	8MM	10MM	250
	12MM	16MM	
	20MM	25MM	
	30MM	35MM	
	40MM	45MM	
	50MM	60MM	
70MM			
M6	10MM	12MM	250
	16MM	20MM	100
	25MM	30MM	
	35MM	40MM	
	45MM	50MM	
	60MM	70MM	
75MM	80MM	250	
M8	10MM	12MM	100
	16MM	20MM	
	25MM	30MM	
	35MM	40MM	
	45MM	50MM	250
	60MM	70MM	
	75MM	80MM	
	100MM		

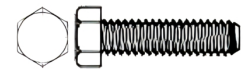
Dia.	Length	Length	Pack
M10	16MM	20MM	100
	25MM	30MM	
	35MM	40MM	
	45MM	50MM	
	60MM	70MM	
	75MM	80MM	
	100MM		
M12	20MM	25MM	50
	30MM	35MM	
	40MM	45MM	
	50MM	60MM	
	70MM	75MM	
	80MM	100MM	
M16	20MM	25MM	100
	30MM	35MM	
	40MM	45MM	
	50MM	55MM	
	60MM	65MM	
	70MM	75MM	
	80MM	100MM	
M20	25MM	30MM	100
	35MM	40MM	
	45MM	50MM	
	55MM	60MM	
	65MM	70MM	
	75MM	80MM	
	100MM		
M24	20MM	25MM	100
	30MM	35MM	
	40MM	45MM	
	50MM	55MM	
	60MM	65MM	
	70MM	75MM	
	80MM	100MM	

BLACK NYLON

Dia.	Length	Length	Pack
M8	20MM	30MM	500
	40MM	50MM	
	60MM	70MM	
	80MM		
M10	20MM	25MM	250
	30MM	40MM	
	50MM	60MM	
	70MM		
M12	25MM	30MM	250
	40MM	50MM	
	60MM	70MM	

50% GF BLACK NYLON

Dia.	Length	Length	Pack
M8	20MM	30MM	250
	40MM	50MM	
	60MM		
M10	20MM	30MM	250
	40MM	50MM	
	60MM		
M12	20MM	30MM	250
	40MM	50MM	
	60MM	80MM	
M16	40MM	50MM	250
	60MM	80MM	
	100MM	150MM	



ITEMS MARKED * MINIMUM ORDER LEVELS APPLY. CONTACT US FOR DETAILS.

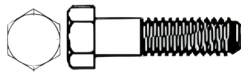
HEXAGONAL HEAD BOLTS

METRIC
(NON FULL THREAD)

NATURAL NYLON

Dia.	Length	Length	Pack
M6	100MM		*
	75MM	80MM	
M8	100MM	120MM	*
	125MM	130MM	
M10	100MM	110MM	*
	120MM	125MM	
	130MM	150MM	
M12	40MM	100MM	*
	110MM	120MM	
	125MM	130MM	
M16	100MM	110MM	*
	120MM	130MM	
	140MM	150MM	
M20	100MM	110MM	*
	120MM	130MM	
	140MM	150MM	
M24	100MM	110MM	*
	120MM	130MM	
	140MM	150MM	

ATTENTION: THREAD LENGTH IN METRIC MAY VARY ACCORDING TO BOLT LENGTH.



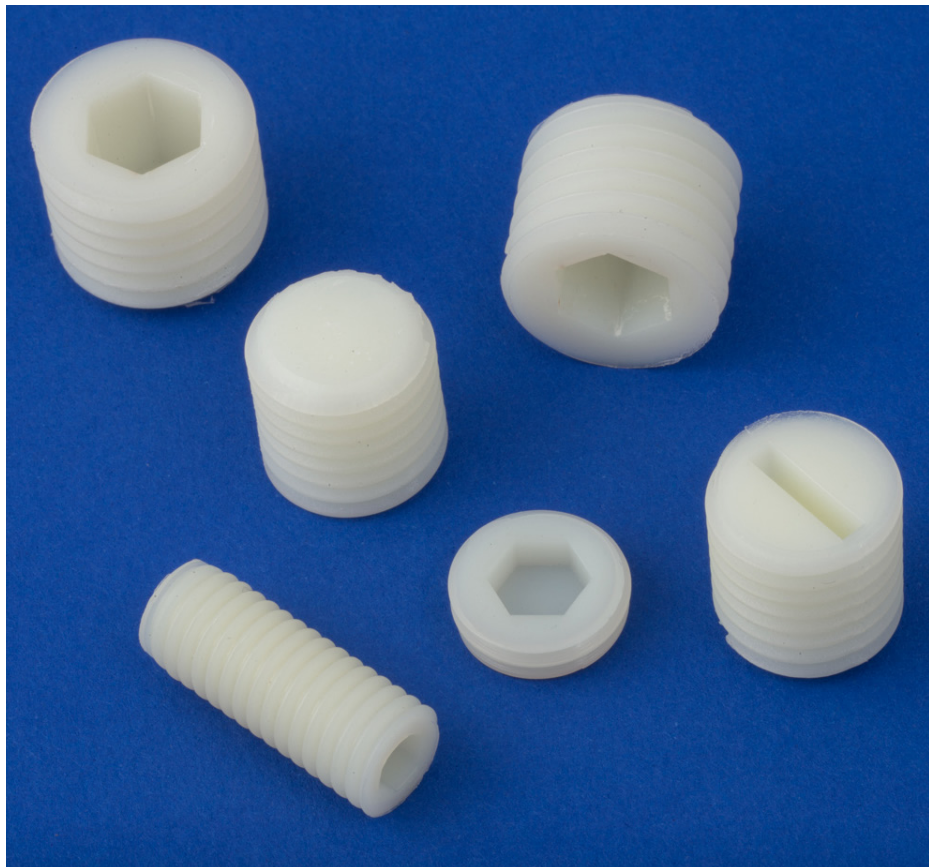
SLOTTED GRUB SCREWS & HEX SOCKET GRUB SCREWS

METRIC DIN 551 / DIN 913

NATURAL NYLON

Dia.	Length	Length	Pack
M8	10MM	12MM	*
	16MM	20MM	
	25MM	30MM	
M10	10MM	12MM	*
	16MM	20MM	
	25MM	30MM	

Dia.	Length	Length	Pack
M12	20MM	25MM	*
	30MM	35MM	
	40MM		
M16	20MM	25MM	*
	30MM	35MM	
	40MM		
M20	20MM	25MM	*
	30MM	35MM	
	40MM	45MM	
	50MM		
M24	20MM	25MM	*
	30MM	35MM	
	40MM		



*ITEMS MARKED * MINIMUM ORDER LEVELS APPLY. CONTACT US FOR DETAILS.

HEXAGONAL NUTS

METRIC DIN 934

NATURAL NYLON

Size	H	A/F	Pack
M2	1.2	3.9	*
M2.5	1.8	4.9	
M3	2.4	5.4	
M3.5	2.7	6.9	500
M4	3.2	7.0	
M5	4.0	8.0	
M6	5.0	10.0	250
M8	6.5	13.0	
M10	8.0	16.0	
M12	10.0	18.0	
M14	11.0	22.0	
M16	13.0	24.0	
M18	15.0	27.0	100
M20	16.0	30.0	
M24	19.0	36.0	
M30	25.0	45.0	

BLACK

Size	H	A/F	Pack
M3	2.4	5.5	
M4	3.2	7.0	*
M5	4.2	8.0	
M6	5.0	10.0	
M8	6.5	13.0	
M10	8.0	17.0	*
M12	10.8	18.0	

H= HEIGHT (MM)
A/F = ACROSS THE FLATS (MM)

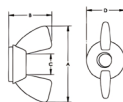
A LIMITED RANGE OF METRIC HEX JAM NUTS
CAN ALSO BE SUPPLIED.

WING NUTS

METRIC (Millimetres)

NATURAL NYLON

Size	A	B	C	D	Pack
M4	22.8	12.2	5.8	10.2	
M5	22.8	12.2	5.8	10.2	
M6	27.7	16.0	7.6	14.2	100
M8	34.8	18.3	9.6	16.2	
M10	34.8	18.3	9.6	16.2	
M12	44.7	22.7	15.0	21.1	*

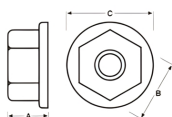


WASHER FACED NUTS

METRIC (Millimetres)

NATURAL NYLON

Size	A	B	C	Pack
M3	3.4	5.5	7.0	
M4	4.2	7.0	9.5	250
M5	5.2	8.0	11.0	
M6	6.0	10.0	13.0	
M8	7.4	13.0	16.8	
M10	9.5	16.0	21.7	100
M12	12.7	18.0	27.1	
M16	16.6	23.7	35.0	
M20	20.0	30.0	44.0	*
M24	23.8	36.0	53.0	



DOME NUTS

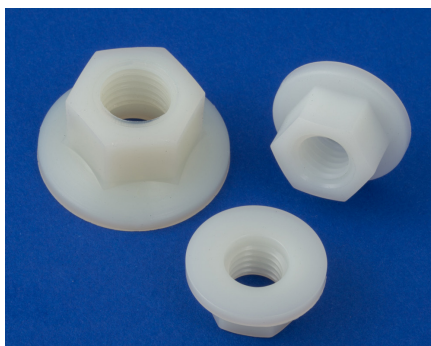
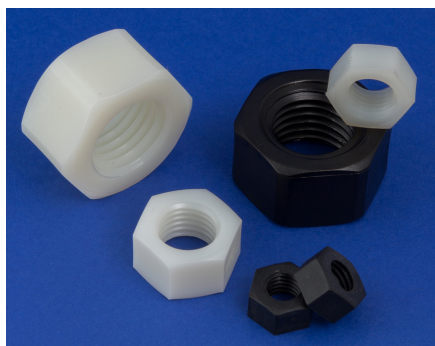
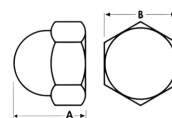
METRIC DIN 1587

NATURAL NYLON

Size	A	B	Pack
M3	6.3	5.5	
M4	8.0	7.0	250
M5	10.0	8.0	
M6	12.0	10.0	
M8	15.0	13.0	
M10	18.0	17.0	
M12	22.0	19.0	100
M16	25.0	24.0	
M20	29.0	27.0	
M24	42.0	36.0	

BLACK

Size	A	B	Pack
M3	6.0	5.5	
M4	8.0	7.0	*
M5	10.0	8.0	
M6	12.0	10.0	
M8	15.0	13.0	
M10	18.0	17.0	*
M12	22.0	19.0	



ITEMS MARKED * MINIMUM ORDER LEVELS APPLY. CONTACT US FOR DETAILS.

METRIC (Millimetres)

POLYETHYLENE

Size	A	B	Pack
M4	7.0	8.5	250
M5	8.0	10.5	
M6	10.0	12.8	
M8	13.0	15.5	
M10	16.0	19.0	
M10	17.0	19.0	100
M12	18.0	20.5	
M12	19.0	20.5	
M14	22.0	23.8	
M16	24.0	26.5	
M18	27.0	30.0	
M20	30.0	31.5	
M24	36.0	39.0	
M27	42.0	46.0	
M30	46.0	50.0	
M33	50.0	53.0	*
M36	55.0	56.0	
M39	60.0	59.0	
M42	65.0	62.0	
M45	70.0	69.0	
M48	75.0	79.0	
M52	80.0	80.0	
M56	85.0	90.0	
M64	95.0	103.0	



**PROTECTING CAPS FIT SNUGLY ONTO
HEXAGONAL HEAD FASTENERS. JUST PRESS IT ON FOR
A SAFE, CONCEALED BOLT OR NUT.**

**A= ACROSS THE FLATS INTERNAL
B= HEIGHT**

**STANDARD COLOURS:
WHITE, GREY, OR BROWN: M4 – M20
BLACK: M4 – M64**

**OTHER COLOURS:
AVAILABLE ON REQUEST SUBJECT TO MINIMUM ORDER LEVELS.
CONTACT US FOR DETAILS.**

ITEMS MARKED * MINIMUM ORDER LEVELS APPLY. CONTACT US FOR DETAILS.

METRIC (Millimetres)

NATURAL NYLON

BLACK

Size	I.D.	O.D.	Thick	Pack
M2	2.2	5.0	0.3	1000
	2.2	5.0	0.8	
M2.5	2.7	6.0	0.6	1000
	2.6	5.6	0.8	
M3	3.2	7.0	0.5	1000
	3.2	8.0	0.8	
	3.2	9.0	0.8	
	3.7	8.0	0.5	
	3.7	8.0	0.8	
M4	4.3	9.0	0.8	1000
	4.3	12.0	1.0	
	4.3	12.0	1.2	
	4.3	16.0	1.5	
M5	5.3	9.0	1.0	1000
	5.3	10.0	1.0	
	5.3	11.0	1.0	
	5.3	15.0	1.2	
	5.3	15.0	1.5	
M6	6.2	10.0	1.6	500
	6.4	11.0	1.6	
	6.4	12.0	1.0	
	6.4	12.0	1.5	
	6.4	12.0	1.6	
	6.4	12.5	1.6	
	6.4	14.0	0.8	
	6.4	14.0	1.2	
	6.4	14.0	1.6	
	6.4	18.0	1.6	
	6.4	32.0	1.6	
	7.4	14.0	1.6	
M8	8.4	16.0	1.0	250
	8.4	16.0	1.6	
	8.4	17.0	1.0	
	8.4	17.0	1.6	
	8.4	17.0	2.0	
	8.4	18.0	1.6	
	8.4	18.0	2.0	
	8.4	21.0	2.0	
	8.4	24.0	2.0	
	8.4	25.0	2.0	
M10	10.5	20.0	2.0	100
	10.5	20.0	2.5	
	10.5	21.0	1.0	
	10.5	21.0	1.5	
	10.5	21.0	2.0	
	10.5	22.0	2.0	
	10.5	22.0	2.5	

Size	I.D.	O.D.	Thick	Pack
M10	10.5	24.0	2.0	100
	10.5	30.0	2.5	
M12	10.5	32.0	1.6	100
	10.5	50.0	3.0	
	13.0	24.0	2.0	
	13.0	24.0	2.5	
M14	13.0	40.0	3.0	100
	15.0	30.0	3.0	
M16	15.0	44.0	3.0	100
	17.0	30.0	2.0	
	17.0	30.0	3.0	
M18	17.0	50.0	3.0	100
	19.0	34.0	3.0	
M20	21.0	37.0	3.0	100
	21.0	39.0	3.0	
	21.0	60.0	4.0	
M22	23.0	39.0	3.0	100
	25.0	44.0	4.0	
M24	25.0	50.0	4.0	100
	26.0	72.0	5.0	
M27	28.0	50.0	4.0	100
	28.0	56.0	4.0	
M30	31.0	56.0	4.0	100
	34.0	66.0	5.0	
M33	34.0	60.0	5.0	100
	34.0	66.0	5.0	
M36	37.0	66.0	5.0	100
	39.0	72.0	6.0	
M42	43.0	72.0	6.0	100
	46.0	85.0	7.0	
M48	50.0	92.0	8.0	*
	54.0	98.0	8.0	
M56	58.0	105.0	9.0	*
	62.0	110.0	9.0	
M64	66.0	115.0	9.0	*
	70.0	120.0	10.0	
M72	74.0	125.0	10.0	*
	78.0	135.0	10.0	
M80	82.0	140.0	12.0	*
	87.0	145.0	12.0	
M90	93.0	160.0	12.0	*
	93.0	160.0	12.0	

Size	I.D.	O.D.	Thick	Pack
M3	3.2	7.0	0.5	*
	3.2	8.0	0.8	
M4	4.3	9.0	0.8	1000
	5.1	10.0	1.0	
M5	5.1	11.0	1.0	1000
	6.4	12.0	1.5	
M6	6.4	12.0	1.6	500
	6.4	12.5	1.6	
	6.4	18.0	1.6	
	8.4	16.0	1.6	
M8	8.4	17.0	1.6	250
	8.4	18.0	2.0	
	8.4	24.0	2.0	
	10.5	20.0	2.0	
M10	10.5	22.0	2.0	100
	10.5	30.0	2.5	
	13.0	24.0	2.5	
M12	13.0	40.0	3.0	100
	15.0	28.0	2.5	
M14	15.0	28.0	2.5	100
	17.0	30.0	3.0	
M16	17.0	50.0	3.0	100
	21.0	37.0	3.0	
M20	25.0	44.0	4.0	100
	25.0	44.0	4.0	
M24	25.0	44.0	4.0	100
	28.0	50.0	4.0	
M27	28.0	50.0	4.0	100
	28.0	56.0	4.0	
M30	31.0	56.0	4.0	100
	34.0	66.0	5.0	
M33	34.0	60.0	5.0	100
	34.0	66.0	5.0	
M36	37.0	66.0	5.0	100
	40.0	72.0	6.0	
M39	40.0	72.0	6.0	100
	43.0	72.0	6.0	
M42	43.0	72.0	6.0	100
	46.0	85.0	7.0	
M45	46.0	85.0	7.0	*
	50.0	92.0	8.0	
M48	50.0	92.0	8.0	*
	54.0	98.0	8.0	
M52	54.0	98.0	8.0	*
	58.0	105.0	9.0	
M60	62.0	110.0	9.0	*
	66.0	115.0	9.0	
M64	66.0	115.0	9.0	*
	70.0	120.0	10.0	
M68	70.0	120.0	10.0	*
	74.0	125.0	10.0	
M72	74.0	125.0	10.0	*
	78.0	135.0	10.0	
M76	78.0	135.0	10.0	*
	82.0	140.0	12.0	
M80	82.0	140.0	12.0	*
	87.0	145.0	12.0	
M85	87.0	145.0	12.0	*
	93.0	160.0	12.0	
M90	93.0	160.0	12.0	*
	93.0	160.0	12.0	

ITEMS MARKED IN BOLD ARE STOCK ITEMS, ALL OTHERS ARE SUBJECT TO MINIMUM ORDER REQUIREMENTS.



ITEMS MARKED * MINIMUM ORDER LEVELS APPLY. CONTACT US FOR DETAILS.

METRIC (Millimetres)

P.V.D.F

Size	I.D.	O.D.	Thick	Pack
M4	4.3	9.0	0.8	1000
M5	5.3	10.0	1.0	
M6	6.4	12.0	1.6	
M8	8.4	16.0	1.6	500
M10	10.5	20.0	2.0	
M12	13.0	24.0	2.5	
M16	17.0	30.0	3.0	

NEOPRENE (BLACK)

Size	I.D.	O.D.	Thick	Pack
M3	3.2	7.0	0.5	1000
M4	4.3	9.0	0.8	
M5	5.3	10.0	1.0	
M6	6.4	12.0	1.5	500
M8	8.4	16.0	1.5	
M10	10.5	20.0	2.0	250
M12	13.0	24.0	2.0	
M16	17.0	30.0	3.0	

POLYCARBONATE (CLEAR)

Size	I.D.	O.D.	Thick	Pack
M3	3.2	7.0	0.5	500
M4	4.3	9.0	0.8	
M5	5.3	10.0	1.0	
M6	6.4	12.0	1.5	
M8	6.4	16.0	1.5	

POLYPROPYLENE

Size	I.D.	O.D.	Thick	Pack
M3	3.2	7.0	0.5	500
M4	4.3	9.0	0.8	
M5	5.3	10.0	1.0	
M6	6.4	12.0	1.5	
M8	8.4	17.0	1.6	
M10	10.5	20.0	2.0	250
M12	13.0	24.0	2.5	
M16	17.0	30.0	3.0	
M20	21.0	37.0	3.0	

P.T.F.E. (TEFLON)

Size	I.D.	O.D.	Thick	Pack
M3	3.2	7.0	0.5	1000
M4	4.3	9.0	0.8	
M5	5.3	10.0	1.0	
M6	6.4	12.0	1.5	500
M8	8.4	16.0	1.5	
M10	10.5	20.0	2.0	250
M12	13.0	24.0	2.5	
M16	17.0	30.0	3.0	
M20	21.0	37.0	3.0	

FIBRE (ORANGE/RED)

Size	I.D.	O.D.	Thick	Pack
M3	3.2	7.0	0.5	500
M4	4.3	9.0	0.8	
M5	5.3	10.0	1.0	
M6	6.4	12.0	1.5	
M8	8.4	16.0	1.5	
M10	10.5	20.0	2.0	

SOFT P.V.C

Size	I.D.	O.D.	Thick	Pack
M3	3.2	7.0	0.5	500
M4	4.3	9.0	1.0	
M5	5.3	10.0	1.0	
M6	6.4	12.5	1.5	
M8	8.4	17.0	1.5	
M10	10.5	21.0	2.0	250
M12	13.0	24.0	2.5	
M16	17.0	30.0	3.0	

HARD P.V.C

Size	I.D.	O.D.	Thick	Pack
M3	3.2	7.0	0.5	500
M4	4.3	9.0	0.8	
M5	5.3	10.0	1.0	
M6	6.4	12.0	1.5	
M8	8.4	16.0	1.5	
M10	10.5	20.0	2.0	
M12	13.0	24.0	2.0	
M16	17.0	30.0	3.0	

WE CAN PROVIDE A RANGE OF OTHER SIZES AND MATERIALS.

THESE INCLUDE:
EPDM | BUTYL | HD & LD POLYETHYLENE.

ALL ORDERS ARE SUBJECT TO MINIMUM ORDER LEVELS.

ITEMS MARKED IN BOLD ARE STOCK ITEMS, ALL OTHERS ARE SUBJECT TO MINIMUM ORDER REQUIREMENTS.

BLACK TPR

Size	I.D.	O.D.	Thick	Pack
M3	3.2	8.0	0.8	*
M4	4.3	10.0	0.8	
	4.3	9.0	0.8	
M5	5.3	10.0	1.0	
	5.3	12.0	1.0	
M6	6.4	12.0	1.6	
	6.4	18.0	1.6	

Size	I.D.	O.D.	Thick	Pack
M8	8.4	16.0	1.6	*
	8.4	18.0	1.5	
M10	10.5	20.0	2.0	
	10.5	22.0	2.0	
M12	13.0	24.0	2.5	
	13.0	27.0	2.5	
M16	17.0	30.0	3.0	

ITEMS MARKED * MINIMUM ORDER LEVELS APPLY.
CONTACT US FOR DETAILS.

METRIC (Millimetres)

NATURAL NYLON

Size	Sleeve OD	ID	Sleeve Length	Head Dia.	Thick	Pack
M4	6.0	4.1	3.0	8.4	1.5	500
	6.0	4.1	4.0	8.4	1.5	
	6.0	4.1	5.0	8.4	1.5	
	6.0	4.1	7.0	8.4	1.5	
	6.0	4.1	9.0	8.4	1.5	
M5	7.0	5.1	3.0	10.2	2.0	500
	7.0	5.1	4.0	10.2	2.0	
	7.0	5.1	5.0	10.2	2.0	
	7.0	5.1	7.0	10.2	2.0	
	7.0	5.1	9.0	10.2	2.0	
M5	8.0	5.1	3.5	14.0	1.5	500
	8.0	5.1	6.5	14.0	1.5	
	8.0	5.1	13.5	14.0	1.5	
	8.0	5.1	18.5	14.0	1.5	
	8.0	5.1	23.5	14.0	1.5	
M6	8.0	6.1	3.0	12.2	2.0	500
	8.0	6.1	4.0	12.2	2.0	
	8.0	6.1	6.0	12.2	2.0	
	8.0	6.1	8.0	12.2	2.0	
	8.0	6.1	10.0	12.2	2.0	
	8.0	6.1	12.0	12.2	2.0	
	9.0	6.1	3.5	16.0	1.5	
	9.0	6.1	8.5	16.0	1.5	
	9.0	6.1	13.5	16.0	1.5	
	9.0	6.1	18.5	16.0	1.5	
M8	10.0	8.1	3.0	14.2	2.5	250
	10.0	8.1	4.0	14.2	2.5	
	10.0	8.1	6.0	14.2	2.5	
	10.0	8.1	8.0	14.2	2.5	
	10.0	8.1	10.0	14.2	2.5	
	10.0	8.1	12.0	14.2	2.5	
	11.0	8.1	5.0	20.0	2.0	
	11.0	8.1	6.0	20.0	2.0	
	11.0	8.1	13.0	20.0	2.0	
	11.0	8.1	18.0	20.0	2.0	
M8	11.0	8.1	23.0	20.0	2.0	250
	11.0	8.1	28.0	20.0	2.0	
	11.0	8.1	33.0	20.0	2.0	
	11.0	8.1	38.0	20.0	2.0	
	11.0	8.1	43.0	20.0	2.0	
	11.0	8.5	3.0	21.0	1.5	

Size	Sleeve OD	ID	Sleeve Length	Head Dia.	Thick	Pack
M10	11.0	10.1	11.0	24.0	2.0	100
	11.2	10.5	12.0	30.0	1.5	
	11.7	10.4	4.0	20.0	2.0	
	11.9	10.5	6.0	20.0	2.0	
	11.9	10.5	10.0	20.0	2.0	
	13.0	10.1	3.0	23.7	2.0	
	13.0	10.1	8.0	23.7	2.0	
	13.0	10.1	10.0	23.7	2.0	
	13.0	10.1	13.0	23.7	2.0	
	13.0	10.1	18.0	23.7	2.0	
	13.0	10.1	23.0	23.7	2.0	
	13.0	10.1	28.0	23.7	2.0	
	13.0	10.1	33.0	23.7	2.0	
	13.0	10.1	38.0	23.7	2.0	
13.0	10.1	43.0	23.7	2.0		
M12	13.7	12.5	4.0	25.0	2.0	100
	13.8	12.4	18.0	25.0	2.5	
	13.8	12.4	20.0	25.0	2.5	
	13.9	12.1	5.0	25.0	2.0	
	13.9	12.1	6.0	25.0	2.0	
	13.9	12.1	8.0	25.0	2.0	
	13.9	12.5	10.0	25.0	2.0	
	13.9	12.1	12.0	24.0	1.0	
	13.9	12.1	12.5	24.0	2.0	
	14.0	12.2	12.5	24.0	2.0	
	14.8	12.1	2.0	25.6	3.0	
	14.8	12.1	3.0	25.6	2.0	
	14.8	12.1	7.0	25.6	3.0	
	14.8	12.1	8.0	25.6	2.0	
14.8	12.1	10.0	25.6	2.0		
14.8	12.1	13.0	25.6	2.0		
14.8	12.1	18.0	25.6	2.0		
14.8	12.1	22.0	25.6	3.0		
14.8	12.1	23.0	25.6	2.0		
14.8	12.1	28.0	25.6	2.0		
14.8	12.1	33.0	25.6	2.0		
14.8	12.1	38.0	25.6	2.0		
14.8	12.1	43.0	25.6	2.0		
14.8	12.1	48.0	25.6	2.0		

**SOME SIZES ALSO AVAILABLE IN ACETAL,
POLYPROPYLENE AND
BLACK GLASS FILLED NYLON -
SUBJECT TO MINIMUM ORDER LEVELS.**

ITEMS MARKED * MINIMUM ORDER LEVELS APPLY. CONTACT US FOR DETAILS.

METRIC (Millimetres)

NATURAL NYLON

Size	Sleeve OD	ID	Sleeve Length	Head Dia.	Thick	Pack
M16	17.9	16.5	6.0	30.0	3.0	100
	17.9	16.5	10.0	30.0	3.0	
	17.9	16.1	12.5	34.5	3.0	
	18.0	16.1	13.0	26.0	2.0	
	19.0	16.1	2.0	34.5	3.0	
	19.0	16.1	3.0	34.5	3.0	
	19.0	16.1	5.0	34.5	3.0	
	19.0	16.1	7.0	34.5	3.0	
	19.0	16.1	10.0	34.5	3.0	
	19.0	16.1	12.0	34.5	3.0	
	19.0	16.1	15.0	34.5	3.0	
	19.0	16.1	17.0	34.5	3.0	
	19.0	16.1	22.0	34.5	3.0	
	19.0	16.1	27.0	34.5	3.0	
	19.0	16.1	32.0	34.5	3.0	
	19.0	16.1	37.0	34.5	3.0	
	19.0	16.1	42.0	34.5	3.0		250
19.0	16.1	47.0	34.5	3.0		
M20	21.9	20.5	6.0	37.0	3.0	100
	21.9	20.5	10.0	37.0	3.0	
	22.0	20.2	5.0	36.0	2.0	
	22.0	20.2	12.0	36.0	2.0	
	22.0	20.2	15.0	36.0	2.0	
	22.0	20.2	17.5	36.0	2.0	
	22.0	20.2	20.0	36.0	2.0	
	22.2	20.2	22.0	35.3	3.0	
22.2	20.2	28.0	36.0	3.0		
M24	25.9	24.1	10.0	44.0	4.0	50
	26.0	24.1	3.0	44.0	2.0	
	26.0	24.2	12.5	44.0	2.0	
	26.0	24.5	17.0	46.0	3.0	
	26.5	24.5	19.0	44.0	1.6	
M27	32.0	28.0	20.0	40.0	3.0	100
	32.0	28.0	20.0	50.0	3.0	
M30	30.5	32.5	34.0	50.0	3.0	50
	33.0	31.0	20.0	56.0	3.0	
	33.0	31.0	40.0	56.0	3.0	
M33	37.0	34.0	20.0	60.0	2.0	50
M36	40.0	37.0	20.0	66.0	5.0	50
M39	43.0	40.5	25.0	66.0	5.0	50

ITEMS MARKED IN BOLD ARE STOCK ITEMS,
ALL OTHERS ARE SUBJECT TO MINIMUM ORDER
REQUIREMENTS.

BLACK NYLON

Size	Sleeve OD	ID	Sleeve Length	Head Dia.	Thick	Pack
M5	7.0	5.1	3.0	10.2	2.0	500
	7.0	5.1	4.0	10.2	2.0	
	7.0	5.1	5.0	10.2	2.0	
	7.0	5.1	7.0	10.2	2.0	
	7.0	5.1	9.0	10.2	2.0	
M6	8.0	6.1	4.0	12.2	2.0	500
	8.0	6.1	6.0	12.2	2.0	
	8.0	6.1	8.0	12.2	2.0	
	8.0	6.1	10.0	12.2	2.0	
	8.0	6.1	12.0	12.2	2.0	
M8	10.0	8.1	3.0	14.2	2.5	250
	10.0	8.1	4.0	14.2	2.5	
	10.0	8.1	6.0	14.2	2.5	
	10.0	8.1	8.0	14.2	2.5	
	10.0	8.1	10.0	14.2	2.5	
	10.0	8.1	12.0	14.2	2.5	
	11.0	8.1	3.0	20.0	2.0	
	11.0	8.1	3.0	20.0	2.0	
M10	11.0	10.1	11.0	24.0	2.0	100
	11.2	10.5	12.0	30.0	1.5	
	11.2	10.5	15.0	30.0	1.5	
	11.2	10.5	23.0	30.0	1.5	
	11.7	10.3	6.0	20.0	2.5	
	11.7	10.4	4.0	20.0	2.0	
	11.9	10.5	6.0	20.0	2.0	
	11.9	10.5	10.0	20.0	2.0	
	13.0	10.1	3.0	23.7	2.0	
	13.0	10.1	8.0	23.7	2.0	
	13.0	10.1	10.0	23.7	2.0	
	13.0	10.1	13.0	23.7	2.0	
13.0	10.1	18.0	23.7	2.0		
13.0	10.1	23.0	23.7	2.0		

NEW

GREY NYLON
ALL ITEMS AVAILABLE IN BLACK NYLON CAN
ALSO BE SUPPLIED IN GREY.
SUBJECT TO MINIMUM ORDER QUANTITIES.

**SCREW INSULATORS / SHOULDER WASHERS
ARE SUITABLE FOR A LARGE VARIETY OF
INSULATION AND MECHANICAL APPLICATIONS:**

- ISOLATE METAL SCREWS ELECTRICALLY
- THEY SEAL
- REDUCE VIBRATION
- ACT AS SPACERS AND GUIDES

METRIC (Millimetres)

BLACK NYLON

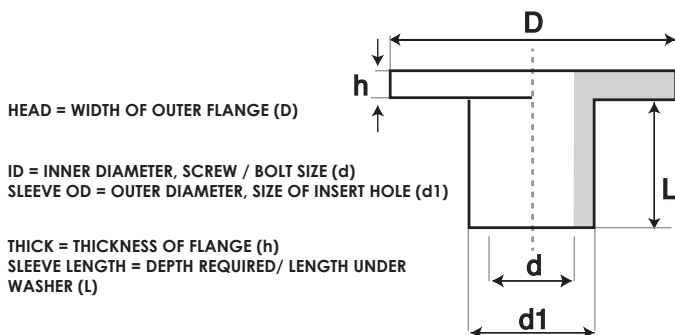
Size	Sleeve OD	ID	Sleeve Length	Head Dia.	Thick	Pack
M12	13.7	12.5	4.0	25.0	2.5	100
	13.8	12.4	18.0	25.0	2.5	
	13.8	12.4	20.0	25.0	2.5	
	13.9	12.1	5.0	25.0	2.0	
	13.9	12.1	6.0	25.0	2.0	
	13.9	12.1	8.0	25.0	2.0	
	13.9	12.1	10.0	25.0	2.0	
	13.9	12.1	12.0	25.0	2.0	
	13.9	12.1	12.5	25.0	2.0	
	14.8	12.1	3.0	25.6	2.0	
	14.8	12.1	7.0	25.6	2.0	
	14.8	12.1	8.0	25.6	2.0	
	14.8	12.1	10.0	25.6	2.0	
	14.8	12.1	13.0	25.6	2.0	
14.8	12.1	18.0	25.6	2.0		
M16	17.9	16.1	12.5	34.5	3.0	100
	17.9	16.5	6.0	30.0	3.0	
	17.9	16.5	10.0	30.0	3.0	
	18.0	16.1	13.0	26.0	2.0	
	19.0	16.1	2.0	34.5	3.0	
	19.0	16.1	3.0	34.5	3.0	
	19.0	16.1	5.0	34.5	3.0	
	19.0	16.1	7.0	34.5	3.0	
	19.0	16.1	10.0	34.5	3.0	
	19.0	16.1	12.0	34.5	3.0	
	19.0	16.1	15.0	34.5	3.0	
	19.0	16.1	17.0	34.5	3.0	
	19.0	16.1	22.0	34.5	3.0	

Size	Sleeve OD	ID	Sleeve Length	Head Dia.	Thick	Pack
M20	21.9	20.5	6.0	37.0	3.0	100
	21.9	20.5	10.0	37.0	3.0	
	22.0	20.2	5.0	36.0	2.0	
	22.0	20.2	12.0	36.0	2.0	
	22.0	20.2	15.0	36.0	2.0	
	22.0	20.2	17.5	36.0	2.0	
	22.0	20.2	20.0	36.0	2.0	
	22.0	20.2	22.0	35.3	3.0	
	22.0	20.2	28.0	36.0	3.0	
M24	25.9	24.1	10.0	44.4	4.0	100
	26.0	24.1	3.0	44.0	2.0	
	26.0	24.2	12.5	44.0	2.0	
	26.0	24.5	17.0	46.0	3.0	
	26.5	24.5	19.0	44.0	1.6	
M27	32.0	28.0	20.0	40.0	3.0	*
	32.0	28.0	20.0	50.0	3.0	
M30	33.0	31.0	20.0	56.0	3.0	100
	33.0	31.0	40.0	56.0	3.0	
M33	37.0	34.0	20.0	60.0	2.0	100
M36	40.0	37.0	20.0	66.0	5.0	100
M39	43.0	40.5	25.0	66.0	5.0	*

**OTHER SIZES ARE ALSO AVAILABLE.
CONTACT US FOR DETAILS.**

**ITEMS MARKED IN BOLD ARE STOCK ITEMS,
ALL OTHERS ARE SUBJECT TO MINIMUM ORDER
REQUIREMENTS.**

**SCREWS INSULATORS / SHOULDER (TOP HAT) WASHERS
HAVE FIVE (5) MEASUREMENTS THAT NEED TO BE INCLUDED
WHEN YOU ARE ORDERING:**

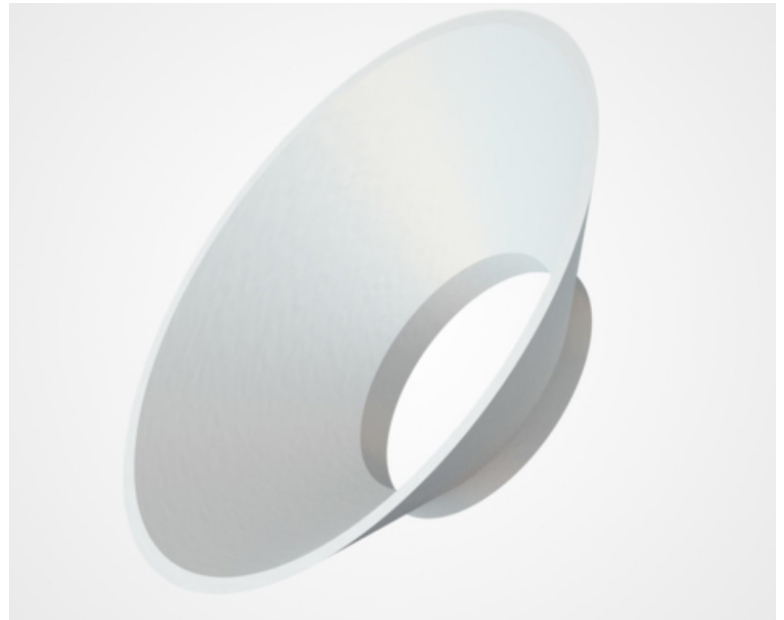
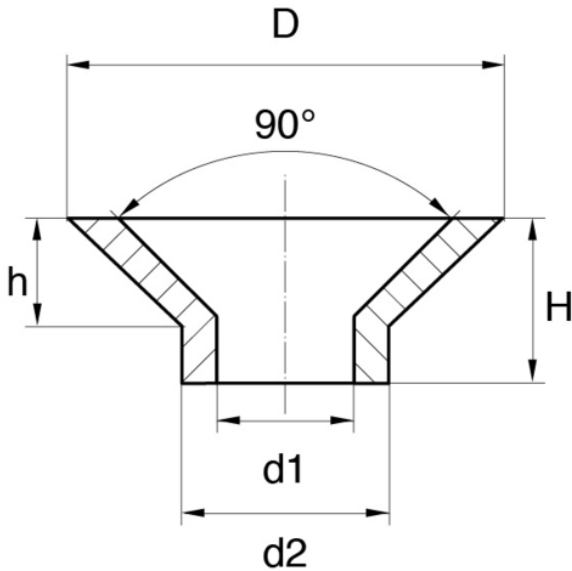


METRIC (Millimetres)

NYLON

Size	d1	d2	D	H	h	Pack
M4	4.1	5.9	10.4	4.3	2.3	1000
M5	5.1	6.9	12.4	4.5	2.8	
M6	6.1	7.9	14.4	5.0	3.3	
M8	8.1	9.9	18.6	6.0	4.4	500
M10	10.0	11.9	22.8	7.0	5.5	
M12	12.1	13.9	27.5	8.5	6.6	
M16	16.2	19.2	35.4	10.8	8.1	

INSULATING WASHERS HELPS PREVENT FASTENERS AND SCREWS FROM LOOSENING BY ABSORBING SHOCKS.



ITEMS MARKED * MINIMUM ORDER LEVELS APPLY. CONTACT US FOR DETAILS.

METRIC (Millimetres)

NATURAL NYLON

Size	O.D.	#	Pack
3.2	5.0	B	1000
	8.0	B	
3.6	6.0	B	1000
	8.0	B	
4.3	10.0	B	1000
	12.0	B	
	10.0	D	
5.2	8.0	D	1000
	10.0	B	
	12.0	D	
5.3	14.0	D	1000
	15.0	B	
	20.0	B	
	24.0	B	
	28.0	B	
6.4	10.0	C	1000
	12.5	B	
	15.0	B	
	18.0	B	
8.2	12.0	D	1000
	20.0	B	
8.4	15.0	B	1000
	20.0	B	
	25.0	B	
10.2	20.0	B	1000
10.5	15.0	B	1000
	21.0	B	
	30.0	B	
12.2	18.0	B	1000
	20.0	B	
13.0	24.0	B	1000
	28.0	B	

HEAT STABILISED BLACK NYLON

Size	O.D.	#	Pack
5.3	10.0	3.0	500
	10.0	5.0	
	10.0	7.5	
	10.0	10.0	
	10.0	15.0	
6.3	10.0	20.0	500
	10.0	3.0	
	10.0	5.0	
	10.0	7.5	
	10.0	10.0	
	10.0	15.0	
6.5	10.0	20.0	500
	10.0	25.0	
	10.0	30.0	
	15.0	3.0	
	15.0	5.0	
6.5	15.0	7.5	500
	15.0	10.0	
	15.0	15.0	
	15.0	20.0	
	15.0	30.0	

Size	O.D.	#	Pack
8.3	12.0	3.0	500
	12.0	5.0	
	12.0	7.5	
	12.0	10.0	
	12.0	15.0	
	12.0	20.0	
	12.0	30.0	
	18.0	3.0	
	18.0	5.0	
	18.0	7.5	
10.4	18.0	10.0	500
	18.0	15.0	
	18.0	20.0	
	18.0	25.0	
	18.0	30.0	
	15.0	3.0	
	15.0	5.0	
	15.0	7.5	
13.3	15.0	10.0	500
	15.0	15.0	
	22.0	5.0	
	22.0	10.0	
	22.0	15.0	
	22.0	20.0	
	18.0	3.0	
	18.0	5.0	
	18.0	7.5	
	18.0	10.0	
13.3	18.0	15.0	500
	18.0	20.0	
	18.0	25.0	
	25.0	5.0	
	25.0	10.0	
	25.0	15.0	
	25.0	20.0	

OTHER SIZES AVAILABLE ON REQUEST.
SUBJECT TO MINIMUM ORDER LEVELS.
- I.E.

- 3.2 X 5.0 (O.D.)
- 3.2 X 8.0 (O.D.)
- 4.3 X 8.0 (O.D.)



**ITEMS MARKED * MINIMUM ORDER LEVELS APPLY.
CONTACT US FOR DETAILS.**

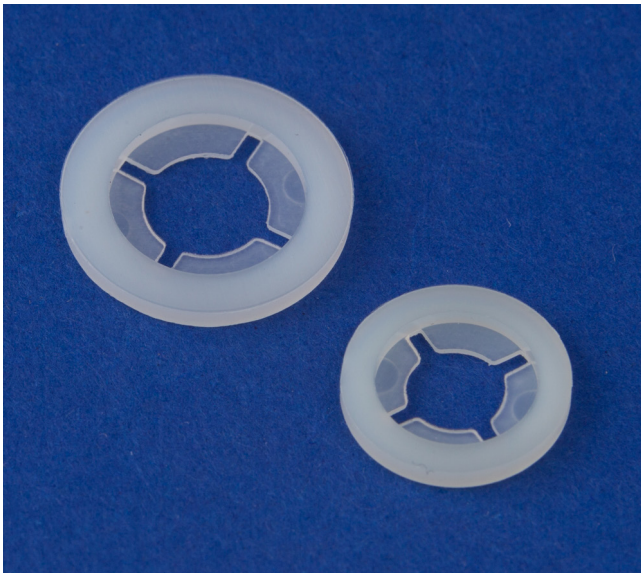
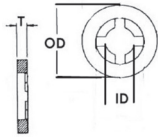
#	POSSIBLE LENGTHS
A	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20
B	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30
C	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40
D	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50.

ANTI-LOSS / RETAINING WASHERS

METRIC (Millimetres)

NATURAL NYLON

Size	I.D.	O.D.	THICK	Pack
M3	2.4	7.0	1.0	1000
M4	3.4	9.0	1.0	
M5	4.5	10.0	1.0	
M6	5.5	12.5	1.5	
M8	7.0	16.0	1.5	
M10	10.5	21.0	2.5	500



DOUBLE RETAINING WASHERS - 'DUBO'

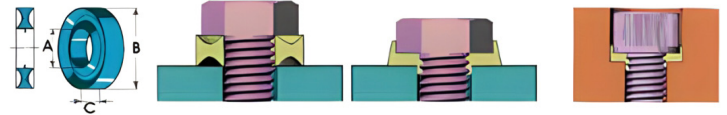
METRIC (Millimetres)

IMPERIAL (Inches) EQUIVALENT

NATURAL NYLON

Size	Imperial Equivalent	ID (A)	OD (B)	TH. (C)	Pack
M3	1/8	3.1	8.0	2.5	500
M4	5/32	4.2	10.0	2.8	
M5	3/16	5.2	10.7	3.0	
M6	1/4	6.2	12.7	3.8	
M8	5/16	8.2	16.2	4.2	
M10	3/8	10.2	20.0	5.0	250
M12	7/16	12.2	24.0	5.2	
M14	X	14.2	26.0	5.6	
M16	5/8	16.2	30.0	5.9	100
M18	11/16	18.2	34.0	5.4	
M20	3/4	20.3	36.0	6.8	

M22 UP TO M52 ALSO AVAILABLE ON REQUEST.
MINIMUM ORDER NUMBERS APPLY.



ADVANTAGES

- ✓ Locks Nuts
- ✓ Bites into Thread
- ✓ Gives 100% Sealing of Penetration Hole
- ✓ Centres the Fastener
- ✓ Absorbs Vibration
- ✓ Suppresses Noise
- ✓ Reduces Dynamic Load of Fasteners
- ✓ Enables Separation of Different Metals
- ✓ Prevents Moisture Penetration
- ✓ Protects Against Electrolytic Corrosion
- ✓ Offers Non-Problematic Assembly

APPLICATIONS

The 'DUBO' Washer is suitable for a wide variety of uses.
These include: Automation industry, Automotive Industry, Construction Industry, Electrical Manufacturing, Electronic Equipment, Food Production, Furniture Manufacturing, Hydraulic Industry, Marine Industry, Mining Equipment, Power Tool Assembly, Telecommunications Industry, Thermal Insulation.

METRIC

NATURAL NYLON
(MINIMUM ORDER NUMBERS APPLY)

D (MM)	Pitch	L (MM)
M4	0.7	1000
M5	0.8	1000
M6	1.0	1000
M8	1.25	1000
M10	1.5	1000
M12	1.75	1000
M14	2.0	1000
M16	2.0	1000
M18	2.5	1000
M20	2.5	1000
M24	3.0	1000
M30	3.5	1000

BLACK NYLON
(MINIMUM ORDER NUMBERS APPLY)

D (MM)	Pitch	L (MM)
M6	1.0	1000
M8	1.25	1000
M10	1.5	1000
M12	1.75	1000
M16	2.0	1000
M20	2.5	1000
M24	3.0	1000

30% GF BLACK NYLON
(MINIMUM ORDER NUMBERS APPLY)

D (MM)	Pitch	L (MM)
M6	1.0	1000
M8	1.25	1000
M10	1.5	1000
M12	1.75	1000
M16	2.0	1000
M20	2.5	1000
M24	3.0	1000

ADVANTAGES

- ✓ Is Versatile & Can Be Easily Cut to Size
- ✓ Resistant to Most Chemicals
- ✓ Electrically Insulating
- ✓ Non-Magnetic
- ✓ Lightweight
- ✓ Has Low Thermal Conductivity
- ✓ Vibration & Abrasion Resistant



POLYPROPYLENE
(MINIMUM ORDER NUMBERS APPLY)

D (MM)	Pitch	L (MM)
M6	1.0	1000
M8	1.25	1000
M10	1.5	1000
M12	1.75	1000
M16	2.0	1000
M20	2.5	1000
M24	3.0	1000

OTHER MATERIALS AVAILABLE:
POM (ACETAL) - PTFE - PVDF.

MUSHROOM HEAD SCREWS

METRIC

POLYCARBONATE

Dia.	Length	Length	Pack
M5	10MM	16MM	*
	30MM		
M6	10MM	16MM	*
	30MM		
M8	16MM	25MM	*
	35MM		

OTHER SIZES M2, M4 AVAILABLE ON REQUEST.

POLYCARBONATE SCREWS

Polycarbonate Screws are also available in a wide range of Head Styles including Countersunk – both Cross Recessed and Slot, Hex Head, Hex Slot and Hexagonal Socket Head.

(Minimum Purchase Quantities apply)

HEXAGONAL HEAD SET SCREWS

METRIC DIN 933

POLYPROPYLENE

Size	Length	Length	Pack
M4	10MM	16MM	*
	20MM		
M5	12MM	16MM	*
	20MM	25MM	
	30MM		
M6	16MM	20MM	*
	25MM	40MM	
M8	20MM	30MM	100
	40MM	60MM	
M10	20MM	60MM	100
M12	40MM	60MM	100

PEEK

Size	Length	Length	Pack
M6	20MM	25MM	*
	30MM	40MM	
	50MM		
M8	20MM	25MM	*
	30MM	40MM	
	50MM		
M10	20MM	25MM	*
	30MM	40MM	
	50MM		
M12	20MM	25MM	*
	30MM	40MM	
	50MM		

P.V.D.F.

Size	Length	Length	Pack
M4	10MM	16MM	*
	20MM	30MM	
M5	12MM	16MM	*
	20MM	25MM	
	30MM		
M6	10MM	12MM	*
	16MM	20MM	
	25MM	40MM	
M8	20MM	30MM	*
	40MM	60MM	
M10	20MM	40MM	*
	50MM	60MM	
M12	40MM		*

POLYCARBONATE

Size	Length	Length	Pack
M6	20MM	25MM	*
	30MM	40MM	
M8	16MM	20MM	*
	25MM	30MM	
	40MM	50MM	
M10	20MM	25MM	*
	30MM	40MM	
	50MM		
M12	25MM	30MM	*
	40MM	50MM	
	60MM	70MM	

***SPECIAL ORDERS.
MINIMUM ORDER LEVELS APPLY.**

PEEK SCREWS

PEEK Screws are also available in other Head Styles including; Cross Recessed Pan, Hex Socket Grub and Cross Recessed Countersunk. Sizes range from M2 to M12.

(Minimum Purchase Quantities apply)

PTFE (TEFLON)

A small range of PTFE Hexagonal Head Set Screws are available in sizes **M10 to M16**.

(Minimum Purchase Quantities apply)

ITEMS MARKED * MINIMUM ORDER LEVELS APPLY.

HEXAGONAL NUTS
METRIC DIN 934
POLYPROPYLENE

Size	H	A/F	Pack
M4	3.2	7.0	250
M5	4.2	8.0	
M6	5.0	10.0	
M8	6.5	13.0	100
M10	8.0	17.0	
M12	10.8	18.0	
M16	14.8	24.0	

P.V.D.F.

Size	H	A/F	Pack
M4	3.2	7.0	*
M5	4.2	8.0	
M6	5.0	10.0	
M8	6.5	13.0	*
M10	8.0	17.0	
M12	10.8	18.0	
M16	14.8	24.0	

PEEK

Size	H	A/F	Pack
M4	3.2	7.0	*
M5	4.2	8.0	
M6	5.0	10.0	
M8	6.5	13.0	*
M10	8.0	17.0	
M12	10.0	19.0	

PTFE (TEFLON)

Size	H	A/F	Pack
M4	3.2	7.0	*
M5	4.2	8.0	
M6	5.0	10.0	
M8	6.5	13.0	*
M10	8.0	17.0	
M12	10.0	19.0	

30% GF BLACK NYLON

Size	H	A/F	Pack
M4	3.2	7.0	*
M5	4.2	8.0	
M6	5.0	10.0	
M8	6.5	13.0	*
M10	8.0	17.0	
M12	10.8	18.0	
M16	14.8	24.0	

50% GF BLACK NYLON

Size	H	A/F	Pack
M4	3.2	7.0	*
M5	4.2	8.0	
M6	5.0	10.0	
M8	6.5	13.0	*
M10	8.0	17.0	
M12	10.8	18.0	
M16	14.8	24.0	

ITEMS MARKED * MINIMUM ORDER LEVELS APPLY. CONTACT US FOR DETAILS.

WE WORK WITH OVER 200 HIGH PERFORMANCE PLASTIC MATERIALS...THE MAJOR ONES BEING

PA 6.6 (NYLON)

Our standard polymer. The best trade-off against cost for mechanical, temperature and aging resistance. Supplied in a Natural Colour (which may vary slightly according to material used) most items are available in black by dyeing the original item after manufacture.

PA 6.6 (BLACK NYLON)

All the enhancements of Natural PA 6.6 but with increased outdoor stability and weatherability.

30% GF NYLON (GLASS FILLED)

Compared with virgin PA 66 this 30% glass fibre reinforced nylon grade offers increased strength, stiffness, creep resistance and dimensional stability whilst retaining an excellent wear resistance. It also allows higher maximum service temperatures.

TPR (THERMOPLASTIC RUBBER)

Excellent UV resistance especially in high ozone areas. Extremely pliable without deforming its shape.

PP (POLYPROPYLENE) AND PE (POLETHYLENE)

For good chemical resistance and pliability. Complies with Food standards. Both materials are available in a wide range of densities.

PC (POLYCARBONATE)

Highest impact strength over a wide range of temperatures. The best product when transparency is required.

PTFE (TEFLON)

High chemical resistance and good resistance to weathering. Known for its "slipperiness".

PEEK

Heat resistance (up to 180 degrees Celsius) and impenetrable to most chemicals. A high strength alternative to most polymers.

PVDF (POLYVINYLIDENE FLUORIDE)

Combines excellent cold and hot mechanical strength with universal chemical resistance.

POM (ACETAL)

Acetal products are characterised by their strength, stiffness and hardness and are stable over a wide range of temperatures, humidity, environments and stress. High load bearing characteristics – absorbs little moisture.

TABLE OF RESISTANCE TO LIQUIDS

Material	Liquids																	Humidity absorption % to ASTM D 570								
	Cold Water	Hot Water	Diluted Acid	Concentrated Acid	Oxidized Acid	Hydrofluoric Acids	Diluted Potassium	Concentrated Potassium	Inorganic Bases	Dry Halogen	Hydrocarbons	Hydrocarbons (chlorinated)	Alcohols	Ester	Cetone	Ether	Aldehyde		Amino Acids	Organic Acids	Aromatic Hydrocarbons	Petrol	Mineral Oils	Greases and Oils	Hydrocarbons (Non-Saturated Chlorinates)	Oil of Turpentine
PA 6.6	Good	Limited	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	1.3 to 1.9
PE - HD	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	< 0.01
PE - LD	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	< 0.01
PP	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	0.01 to 0.03
PVC - U	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	0.04 to 0.4
PVC - P	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	0.15 to 0.75
PC	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	0.1 to 0.2
PTPE	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	0
POM	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	0.22 to 0.25
TPR	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	0.1 to 0.3
PEEK	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	0.1
PVDF	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	Good	0.03

Good Resistance Limited Resistance Not Resistant

Note: The above information is given according to the raw materials manufacturer's data.

MATERIAL PROPERTIES

PHYSICAL PROPERTIES		UNITS	PA 6.6	TPR	PP	PVDF	PEEK	HDPE	PC	PTFE
Density (RH 0°)	ISO1183/ASTM D-792 / DIN53479	g/cm ³	1.14	0.96	0.90	1.78	1.32	0.95	1.20	2.16
Moisture Absorption (cold water 24 hrs at 23°C) (RH 0°)		%	1-2	1.03	0.01	0.04	0.15	0.01	0.1	0.01
MECHANICAL PROPERTIES										
TENSILE STRENGTH										
Stress	ISO527/ASTM D-638/DIN53455	MPa	60-80	60-80	20-40	40-50	100	30-35	60-70	26.9
Elongation	ISO527/ASTM D-638/DIN53455	%	80-180	80-180	150-160	50-300	35	700-1000	110-120	300
Modulus of elasticity	ISO527/ASTM D-638/DIN5345	MPa	1500-2000	1500-2000	1100-1600	1500-2500	3800	400-1200	2300-2500	550
BENDING STRENGTH										
Stress	ISO178/ASTM D-790/DIN53452	MPa	50-75	50-75	.....	94	165	.....	90	-
Modulus	ISO178/ASTM D-790/DIN53457	MPa	1200-1600	1200-1600	1000-2500	1000-2500	4100	1200-1500	2400-2500	480
COMPRESSION										
Stress	ISO604/ASTM D-695/DIN53454	MPa	100-110	100-110	.....	85	120	.....	.....	25
Modulus	ISO604/ASTM D-695/DIN53457	MPa	2000-2100	2000-2100	.....	2900	4500	.....	.....	500
Charpy test un-notched	ISO179/DIN53453	kJ/m ²	No Break	No Break	.....	.....	-	.....	.....	No Break
Charpy test notched	ISO179/ASTM D-256B/DIN53453	kJ/m ²	12-16	12-16	7-10	.....	-	.....	30	.....
IZOD test un-notched	ISO180/D-256E	kJ/m ²	No Break	No Break	.....	.....	-	.....	.....	.....
IZOD test notched	ISO180/D-256A	kJ/m ²	8-12	.....	.....	10-20	.....	.....	6-7	4.7
Rockwell hardness A	ISO239-2/ASTM D-785A		R100-R115	.....	R80-R85	R110-R115	R126	.....	.....	-
SHORE hardness	ISO868/ASTM D-2240/DIN53505		77-82	35.90	60-70	77-82	100	60-70	80-90	50
THERMAL PROPERTIES										
75-95Heat distortion under load (RH 0°)		°C								
Method A - 1.85 MPa	ISO75/ASTM D-648/DIN53461	°C	75-95	75-95	50-60	100-120		45-55	130-150	
Method B - 0/45 MPa	ISO75/ASTM D-648/DIN53461	°C	200-200	200-200	95-100	150		.....	150-160	
Vicat softening point										
Method A - 1 daN	ISO306/ASTM D-1525	°C	250	250	140-150	.....	.....	120-130	140-150	
Method B - 5 daN	ISO306/ASTM D-1525	°C	.....	.....	80-85	150	.....	.....	.....
Melting point	ISO1218/ASTM D-2117/DIN53736	°C	255-260	255-260	165-170	165-178	340	130-140	230-250	335
Service temperature:	NORMAL	°C	-20 to +120	-40 to 135	-10 to +120	-50 to +160	-20 to +200	-60 to +110	-100 to +120	
	PEAK	°C	150	.....	130	160	250	110	130	260
Flammability rating (RH 0°)	UL94		V-2	HB	HB	V-0	V-0	HB	V-2 - V-0	V-0
ELECTRICAL PROPERTIES										
Resistance										
Transversal	ISO CEI 93/ASTM D-257/DIN53482	0hm.cm	1.10 ⁴	1.10 ⁴	10 ⁶	5.10 ⁶	-	10 ⁶	2.10 ⁶	-
Surface	ISO CEI 93/ASTM D-257/DIN53482	0hm	2.10 ²	2.10 ²	.....	10 ⁵	-	.....	.....	-
Dielectric strength	ISO CEI 243/ASTM D-149/DIN53481	kV/mm	26.3 - 45	26.3-45	.....	.....	-	.....	.....	-
<p>The use of specific formulations with their different physical, mechanical, thermal, electrical and other properties can enhance the properties sought.</p> <p>The above information, which has the benefit of our current knowledge, is given solely by way of guidance in your choice of material and to indicate possible applications.</p> <p>The manufacturers of the following raw materials have indicated their properties.</p> <p>We cannot give any absolute guarantee for the properties for a specific usage.</p> <p>An appropriate feasibility study may be deemed necessary.</p> <p>RH 0° = Humidity 0% V-0 = SELF-EXTINGUISHING V-1 = NON-FLAMMABLE V-2 = SLOW BURNING HB = SLOW BURNING</p>										
<p>PEEK Good chemical and water resistance especially at high temperatures. Can be used in contact with organic solvents (Cetane) and in hot water or steam without permanent loss of physical properties. Low smoke and toxic gas emission when exposed to flames.</p> <p>PEEK Good chemical and water resistance especially at high temperatures. Can be used in contact with organic solvents (Cetane) and in hot water or steam without permanent loss of physical properties. Low smoke and toxic gas emission when exposed to flames.</p> <p>POLYIMIDE FLUORIDE Meets today's most stringent criteria. Outstanding chemical inertia. Good mechanical properties, excellent abrasion resistance - friction coefficient low. Very high dielectric constants, radiation stability. Very large service temperature range, inflammable and self-extinguishing. Suitable for use in food and medical sectors.</p> <p>POLYPROPYLENE Excellent fatigue and bending properties (hinge effect). No cracking under load and good impact resistance. Chemically inert. Good acoustically, withstands vibrations. Suitable for food use.</p> <p>TPR Thermoplastic elastomers have replaced rubber in many applications, especially in the automotive industry. Able to be repeatedly stretched without permanently deforming the shape of the part. Suitable for outdoor use because they offer good weather (especially ozone) resistance and UV properties. Chemical resistance is also high against a broad range.</p> <p>POLYAMIDE 6-9 Currently offers the best value for money in terms of reliability. Excellent mechanical properties: tensile strength, fatigue, impact strength, friction and abrasion resistance. Very good solvent resistance: oil, lubricants, petrol, benzol, acetone, trichloroethylene, white spirit. Resists most diluted acids. Combustion difficult to self-extinguishing.</p> <p>HIGH DENSITY POLYETHYLENE Excellent electrical insulation properties, high resistance and rigidity, low loss factor. Suitable for food use. Friction coefficient low.</p> <p>POLYCARBONATE The best transparent material. Excellent mechanical properties, particularly impact resistance between -100° and +120°C. Electrical insulation properties, retains dimensional stability even in humid environment. Self-extinguishing, suitable for food and medical use (can be sterilized), can be US welded. Gas permeable.</p> <p>PTFE (TEFLON) High chemical resistance, low and high chemical capabilities, excellent resistance to weathering. Low friction with excellent insulation properties and "slipperiness".</p>										

supreme

FASTENERS & COMPONENTS



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