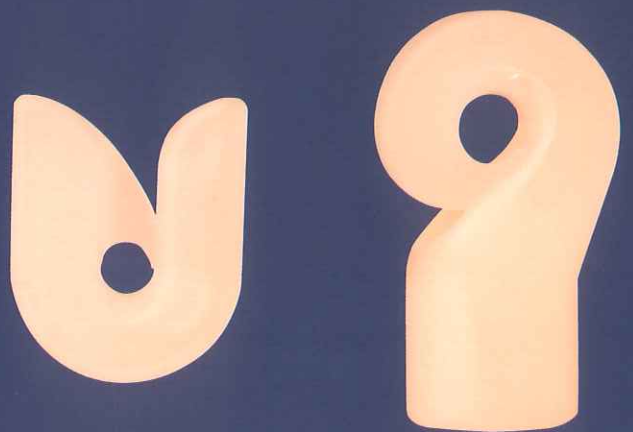


Ascotex

CERAMIC YARN GUIDES



THE NEED FOR CONSTANT DEVELOPMENT OF CERAMIC BODIES FOR YARN GUIDES

The name **ASCOTEX** has been synonymous with high quality yarn guides for more than 35 years and during this period we have constantly developed new ceramic bodies and different surface finishes to cope with the ever-increasing diversity of modern yarns and working conditions. The most recent addition to our wide range of ceramics specifically developed for textile applications is **POLYCRYSTALLINE SAPPHIRE**. Although somewhat harder and longer-lasting than A997 alumina, its prime advantage is the perfectly smooth, flawless surface which makes it a superb body for micro and super micro yarns and other fragile and sensitive yarns. The guides already available in this body are marked PCS against the photographs and it is anticipated that a further 20 or 30 will be available soon. Many of the existing tools are suitable for PCS manufacture so if you see an alumina guide in the catalogue which you would like in PCS, please let us know and we shall assess the possibility.

But it is not only the body which is important; **SURFACE FINISH** is becoming an increasingly significant factor in the choice of the correct guide and the well known convention of matt finish for flat yarn and polish finish for textured yarn no longer necessarily applies in all cases. The type of polish, the type of matt, the grain size and crystalline structure are all important, even the negative or positive surface charge has sometimes to be taken into consideration. The hardest material is not always the best in any given situation and no single body is suitable for all applications. Since our ceramics are developed solely for textile applications, we are in a position to offer a very wide range of alternative solutions.

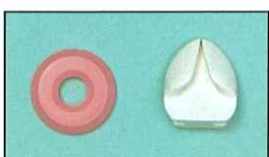
OUR MOST POPULAR MATERIALS



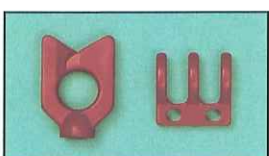
PCS Polycrystalline Sapphire (99.9999% alumina). Our hardest material but its greatest advantage is its flawless smooth surface. Ideal for micro and supermicro yarns, especially when diamond polished.
Colour: translucent.



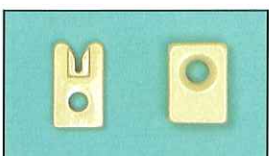
A997 An ultra high purity Al_2O_3 body, fired at very high temperature, specially developed for very high yarn speeds. Its very fine grain structure eliminates the need for diamond polish in many applications and helps to eliminate snow.
Colour: light pink or white.



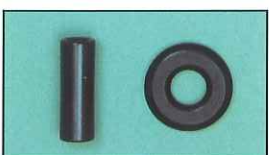
A964 High purity sintered alumina which, over the years, because of its economical production costs, has become the most popular yarn guide material. Special ceramic additives restrict crystal growth, resulting in an exceptionally fine-grained, smooth-surfaced guide with outstanding wear properties.
Colour: pink or white.



A90 A general purpose alumina which is still highly wear-resistant but less expensive than the high purity bodies.
Colour: red.



T27B Titania was one of the first hard ceramics to be used for textile applications. Not quite as hard as alumina, it has however, an extremely smooth surface and is widely used for delicate yarns where alumina, particularly without diamond polishing, is too harsh.
Colour: cream.



T27C Essential for all applications where there is a danger of build up of static electricity and almost universally used on knitting machines.
Colour: dark blue/black.

TOLERANCES: $\pm 2\%$ none less than $\pm 0.2mm$.

The drawing dimensions are approximate for identification purposes only.

The guides in this catalogue illustrate our standard range and most are normally available from stock. There are another 3000 non-standard items and we can also manufacture guides to your own drawings.

DIE NOTWENDIGKEIT DER STETIGEN ENTWICKLUNG VON KERAMIKKÖRPERN FÜR FADENFÜHRER

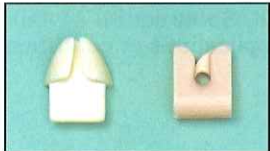
Der Name **Ascotex** ist ein Synonym für Fadenführer von höchster Qualität seit über 35 Jahren. Während dieser Zeit haben wir uns der Entwicklung neuer keramischer Körper und Oberflächenbeschaffenheiten gewidmet, um mit der zunehmenden Vielfalt an modernen Fasern und den jeweiligen Bedingungen unter denen diese verarbeitet werden, gerecht zu werden. Unsere neueste Errungenschaft im Bereich der Keramikmaterialien, die speziell für textile Anwendungen entwickelt wurden, ist **POLYKRISTALLINER SAPHIR**. Obwohl etwas härter und beständiger als A997 Aluminiumoxid, liegt dessen Hauptvorteil in seiner perfekten glatten, fehlerfreien Oberfläche, welche einen exzellenten Körper für Mikro- und Supermikrofasern und auch andere feine Fasern darstellt. Die bereits erhältlichen Fadenführer in diesem Körper sind mit „PCS“ neben den Photos gekennzeichnet. Wir rechnen derzeit mit zusätzlichen 20 oder 30 Fadenführern, die in kürzester Zeit erhältlich sein werden. Viele der bereits existierenden Werkzeuge sind für die PCS Erzeugung geeignet. Sollten Sie also einen Aluminiumoxidfadenführer in unserem Katalog sehen, den Sie in PCS möchten, werden wir gerne diese Möglichkeit prüfen.

Aber nicht nur die Form des Fadenführers ist wichtig; auch die **OBERFLÄCHENBESCHAFFENHEIT** wird zu einem immer wichtigeren Auswahlkriterium für den richtigen Fadenführer, und der altbekannte Einsatz von matter Oberfläche für glatte Garne und geschliffene oder polierte Oberfläche für texturierte Garne ist nicht mehr in allen Fällen angezeigt. Die Art der Polierung, der Typ der matten Oberflächen, die Körnungsgröße sowie die kristalline Struktur sind wichtige Kriterien. Manchmal muß man sogar die negative oder positive Oberflächenspannung in Betracht ziehen. Da unsere Keramikmaterialien ausschließlich für textile Anwendungen entwickelt werden, sind wir in der Lage, eine sehr weitgefächerte Auswahl an alternative Fadenführern anbieten zu können. Das härteste Material ist nicht unbedingt immer die beste Lösung für jede Anwendung und wir können Ihnen eine große Anzahl an Alternativen aus unserer Programm anbieten.

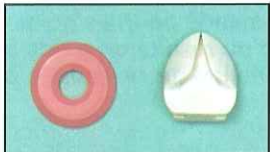
UNSERE BELIEBTESTEN MATERIALIEN



PCS Polykristalliner Saphir (99.9999% Aluminiumoxid). Dies ist unser härtestes Material dessen größter Vorteil in seiner fehlerfreien, glatten Oberfläche liegt. Ideal für Mikro- und Supermikrogarne, besonders wenn die Oberflächenbeschaffenheit diamantpoliert ist.
Farbe: durchsichtig.



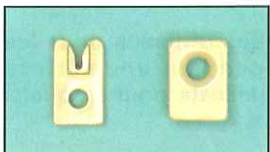
A997 Ein ultra hochreiner Aluminiumoxidkörper. Bei sehr hoher Temperatur gebrannt, speziell entwickelt für Hochgeschwindigkeitsgarne. Seine äußerst feine Körnung eliminiert in vielen Anwendungen die Notwendigkeit einer Diamantpolitur und hilft „Schnee“ auszuschalten.
Farbe: hellrosa oder weiß.



A964 Gesintertes Aluminiumoxid von hoher Reinheit. Sehr beliebtes Fadenführermaterial durch günstige Herstellung. Spezielle Keramikzusätze schränken das Kristallwachstum ein. Das Ergebnis ist ein Fadenführer mit einer außergewöhnlich feinen Körnung und glatter Oberfläche mit hervorragender Widerstandsfähigkeit.
Farbe: rosa oder weiß.



A90 Eine Standard Aluminium-Qualität für vielseitigen Einsatz, sehr dauerhaft und preisgünstiger als Teile in hoher Reinheit.
Farbe: dunkelrot.



T27B Diese Titanoxid-Keramik war eine der ersten Hartkeramiken im Textilbereich. Nicht ganz so hart wie Aluminiumoxid, hat aber eine extrem glatte Oberfläche und wird für empfindliche Garne eingesetzt, für die Aluminiumoxid, besonders ohne Diamantpolierung, zu rauh ist.
Farbe: cremefarben.



T27C Leitendes Titanoxid. Wichtig für alle Anwendungsgebiete in denen die Gefahr der statische Aufladung besteht. Am häufigsten in der Strickmaschinenindustrie verwendet.
Farbe: blau/schwarz.

TOLERANZ \pm 2% nicht weniger als 0.2mm.

Die Dimensionen der Zeichnungen sind nur ungefähre Annäherungen für die Identifizierung.

Die Fadenführer in diesem Katalog illustrieren unsere Standard Auswahl und sind normalerweise aus unserem Lager erhältlich. Zusätzlich sind noch 3000 andere Stücke erhältlich und wir können auch Fadenführer nach ihren Zeichnungen maßanfertigen.

LA NÉCESSITÉ D'UN DÉVELOPPEMENT CONSTANT DES MATÉRIAUX CÉRAMIQUES À L'USAGE DE GUIDE-FILS

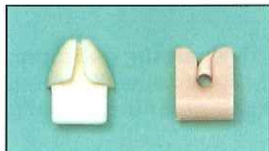
Le nom **ASCOTEX** est depuis plus de 35 ans synonyme de guide-fils de haute qualité et durant cette période, nous avons sans cesse développé de nouveaux matériaux céramiques et des finis de surface différents pour répondre à la diversité toujours croissante des fils modernes et des conditions de production. L'addition la plus récente à notre large gamme de céramiques développées spécifiquement pour les applications textiles est le **SAPHIR POLYCRISTALLIN**. Bien que légèrement plus dur et plus résistant dans le temps que l'alumine A997, son avantage primordial est sa surface parfaitement lisse et sans défaut, qui en fait un matériau superbe pour les fils composés de microfibrilles ainsi que pour tous les fils fragiles et délicats. Les guide-fils déjà livrables dans ce matériau sont identifiés par les lettres **PCS** à côté de l'illustration et il est prévu que 20 à 30 modèles supplémentaires soient livrables prochainement. Un grand nombre des outillages existants sont adéquats pour la fabrication du PCS - de ce fait, si vous voyez dans notre catalogue un guide-fil en alumine que vous souhaiteriez en PCS, veuillez nous le faire savoir et nous examinerons la possibilité.

Mais ce n'est pas seulement le matériau qui est important; le fini de surface devient un élément de plus en plus important dans le choix du guide-fil et la théorie bien connue "surface mate pour fil plat et surface brillante pour fil texturé" n'est plus forcément valable dans tous les cas. Le type de poli, le type de mat, la finesse du grain et la structure cristalline sont tous importants - la charge positive ou négative en surface doit même parfois être prise en considération. Vu que nos céramiques sont développées exclusivement pour les applications textiles, il nous est possible d'offrir une grande variété de solutions alternatives - le matériau le plus dur n'est pas toujours le meilleur pour chaque application et nous pouvons vous offrir un grand nombre d'options parmi notre gamme.

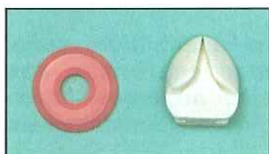
NOS MATÉRIAUX LES PLUS DEMANDÉS



PCS Saphir polycristallin (99.9999% d'alumine). Notre matériau le plus dur, mais son principal avantage est sa surface lisse et sans défaut. Idéal pour les fils en microfibrilles, spécialement quand il est poli au diamant.
Couleur: translucide.



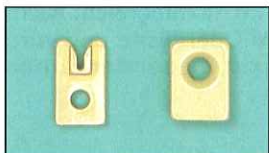
A997 Un matériau en alumine d'extrême pureté. Traité à très haute température, développé spécialement pour les très grandes vitesses de fil. Sa structure à grain très fin élimine le besoin du poli diamant pour beaucoup d'applications et contribue à éliminer la poudre.
Couleur: rose pâle ou blanc.



A964 Une alumine de grande pureté qui, au fil des années, grâce à ses coûts de production économiques, est devenue le matériau le plus demandé pour les guide-fils. Des additifs spéciaux limitent la grosseur des cristaux, d'où résulte un guide à grain fin et surface lisse, offrant des propriétés exceptionnelles de résistance à l'usure.
Couleur: rose ou blanc.



A90 Une alumine d'usage courant, toujours très résistante à l'usure et moins coûteuse que les matériaux de grande pureté.
Couleur: rouge foncé.



T27B Le titane a été l'une des premières céramiques industrielles utilisées pour les applications textiles. Moins dure que l'alumine, il a cependant une surface extrêmement douce et il est largement utilisé pour les fils délicats pour lesquels, l'alumine, particulièrement non-poli diamant, est trop rugueux.
Couleur: crème.



T27C Titane conducteur. Essentiel pour toutes les applications où il y a un danger d'accumulation d'électricité statique, il est utilisé presque universellement sur les machines à tricoter.
Couleur: bleu / noir.

TOLERANCES: $\pm 2\%$ sans être inférieure à $\pm 0,2\text{mm}$.

Les dimensions des dessins sont approximatives et seulement indicatives.

Les guides de ce catalogue font partie de notre gamme standard et sont normalement livrables de stock. Des milliers d'autres modèles, ainsi que des pièces spéciales sont fabriquées sur demande.

LA NECESIDAD DEL CONTINUO DESARROLLO TECNOLÓGICO EN GUIA-HILOS DE CERÁMICA

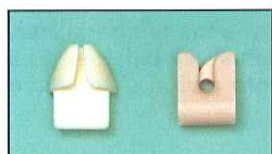
El nombre de **ASCOTEX** es sinónimo de alta calidad en guía- hilos por más de 35 años y durante este periodo hemos realizado un constante desarrollo de nuevos grupos de cerámica así como diferentes acabados de superficie para hacer frente al constante incremento en la modernidad de las diversas guía-hilos y nuevas condiciones de trabajo. La más reciente adición a nuestra gama de cerámicas, especialmente creadas para aplicaciones textiles es **ZAFIRO POLYCRISTALINO**. Aunque algo más dura y duradera que el alumina A997, su principal ventaja es su perfecto pulido y superficie sin defectos que lo hacen un material supremo para hilos micro y super micro y otros hilos frágiles y delicados. Los guía-hilos ya disponibles en este grupo son denominadas **PCS** en las fotografías y está planeado que alrededor de 20 o 30 más lo estará en poco tiempo. Muchos de los moldes existentes son aptos para producirse en PCS y aunque en el catálogo se presenten las guías en alumina, si se desea en PCS por favor haganoslo saber y estudiaremos las posibilidades para su producción.

Pero no solo el material es importante. El **ACABADO DE LA SUPERFICIE** ha aumentado significativamente su importancia como factor de elección para los guía-hilos y el convencimiento de que el acabado mate para hilos lisos y el acabado brillante para hilos texturizados no se puede aplicar en todos los casos. El tipo de brillantez, el tipo mate, el tamaño de la fibra y las estructuras cristalinas, así como el nivel de carga positiva o negativa de la superficie deben ser tomadas también en consideración: los materiales más duros no siempre son lo mejor para toda aplicación. Puesto que nuestras cerámicas han sido desarrolladas puramente para aplicaciones textiles, estamos en posición de ofrecer una amplia gama de soluciones alternas en guía-hilos.

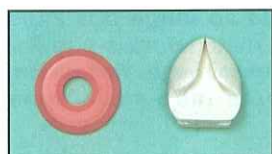
NUESTROS MATERIALES MÁS POPULARES



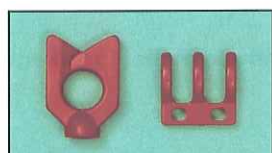
PCS Zafiro Polycristalino (99.9999% Al_2O_3). Nuestro material más duro; sin embargo, su gran ventaja es su superficie sin defectos y muy liso. Ideal para hilos micro y super micro, especialmente cuando está pulido a diamante.
Color: traslucido.



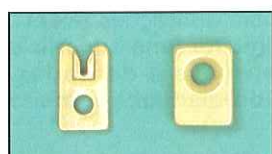
A997 Un óxido de alúmina de ultra pureza creada para velocidades de hilos muy elevados. Una estructura de granos muy finos ayuda a eliminar la "nieve" y en muchos casos evita la necesidad de pulido a diamante.
Color: rosado pálido o blanco.



A964 Una alúmina de alta pureza, que, debido a su costo económico de fabricación, es después de muchos años, el material más popular para guía-hilos. Aditivos especiales limitan el crecimiento de cristales, resultando en un grano fino, la superficie lisa y propiedades muy resistentes al desgaste.
Color: rosa o blanco.



A90 Una alumina para propósitos generales siendo aun también resistente al desgaste y menos costosa que las materiales de alta pueza.
Color: vino.



T27B Oxido de titanía fue uno de las primeras cerámicas duras utilizada para usos textiles. No es tan duro que las alúminas pero con su superficie natural de una finure casi perfecta se utiliza para hilos delicados y en sitios donde la alúmina, sobre todo sin pulido diamante, sería demasiado áspero.
Color: crema.



T27C (Conductora). Indispensable en todas las aplicaciones donde exista riesgo de formación de electricidad estática. Uso extenso para el género de punto.
Color: azul negro.

TOLERANCIAS NORMALES: ±2% sin ser menor de 0,2mm

Los dimensiones de los dibujos son aproximativas para identificación solamente.

En este catálogo se presentan solo los modelos standard, de los que en su mayor parte se hallan normalmente en existencia. Hay otros 3000 modelos y también se puede hacer a la medida de sus diseños.

A NECESSIDADE DE CONSTANTES DESENVOLVIMENTOS DE MATERIAIS CERÂMICOS PARA GUIA-FIOS

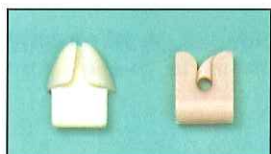
O nome **ASCOTEX** tem sido sinônimo de alta qualidade em guia-fios por mais de 35 anos, e durante esse período temos desenvolvido constantemente novos materiais e diferentes acabamentos superficiais para poder acompanhar a constante evolução dos modernos processos têxteis. A mais recente conquista incorporada a nossa linha de materiais cerâmicos, especialmente desenvolvidos para aplicações têxteis, é a **SAFIRA POLICRISTALINA**. Apesar de ser mais duro e ter uma durabilidade maior do que a Alumina A997, sua principal vantagem é o acabamento superficial, impecável e perfeitamente liso, o que o torna um magnífico material para aplicações com microfibras e outros fios ou fibras extremamente frágeis e sensíveis. Os guias já disponíveis neste material são marcados com a sigla PCS nas fotos do catálogo e antecipamos que mais 20 ou 30 modelos estarão disponíveis em breve. Muitas das ferramentas já existentes são apropriadas à fabricação com **PCS**, por isso se existir algum interesse em desenvolver alguma peça do catálogo no material PCS, informe-nos para que possamos avaliar a possibilidade.

Porém não é somente o material o único fator importante; o **ACABAMENTO SUPERFICIAL** está se tornando o fator mais significativo para a escolha do guia-fio mais adequado. A conhecida regra de acabamento acetinado para fios convencionais e acabamento polido para os fios texturizados, não mais se aplica em todos os casos. O tipo de polimento, o tipo de mate, a rugosidade, a granulação e a estrutura cristalina são também fatores importantes e até mesmo a carga superficial negativa ou positiva deve ser considerada em muitos casos. Uma vez que nossas cerâmicas são desenvolvidas especificamente para aplicações têxteis, estamos em condições de oferecer uma gama muito ampla de soluções e alternativas de guia-fios. A dureza nem sempre é o melhor parâmetro e nós podemos com certeza, oferecer um grande número de opções dentro da nossa linha de produtos.

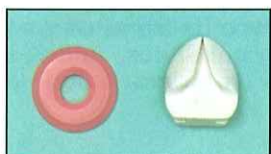
NOSSOS MATERIAIS MAIS CONHECIDOS



- PCS** Safira Policristalina (99.9999% Alumina). Nosso material mais duro, cuja maior vantagem é o acabamento superficial extremamente liso e perfeito. Ideal para microfibras e fios sensíveis e frágeis, especialmente no acabamento polido diamante.
Cor: translúcido.



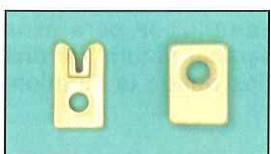
- A997** Um material com altíssimo teor de Alumina. Sinterizado em altas temperaturas, desenvolvido especialmente para trabalhar com fios em altas velocidades. Sua finíssima granulometria elimina a necessidade de acabamento polido diamante e auxilia na eliminação da neve.
Cor: rosa claro e branco.



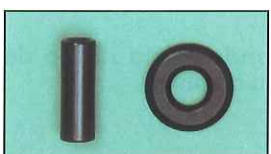
- A964** Uma Alumina com alta pureza, vem sendo muito utilizada ao longo dos anos devido ao seu econômico custo de produção, tornando-se o material mais popular na fabricação de guia-fios. Aditivos especiais restringem o crescimento dos grãos, resultando uma granulometria fina, superfície lisa, conferindo assim uma excepcional resistência ao desgaste.
Cor: rosa ou branco.



- A90** Alumina de uso geral, com alta resistência ao desgaste, porém de menor custo em relação à alumina de alta pureza.
Cor: vinho.



- T27B** Titânia foi o primeiro material cerâmico fino desenvolvido para aplicações têxteis. Não é tão duro como a alumina, entretanto possui naturalmente uma superfície extremamente lisa, e em geral é utilizado para fios sensíveis e delicados, particularmente aonde a alumina sem o acabamento polido diamante é muito agressiva.
Cor: creme.



- T27C** Titânia Condutora. Essencial para todas as aplicações onde existem problemas com eletricidade estática. Quase que mundialmente utilizado em máquinas para malharia.
Cor: preto azulado.

TOLERÂNCIAS $\pm 2\%$ e não menos do que 0,2mm.

As dimensões nos desenhos são aproximadas e servem para auxiliar na identificação das peças.

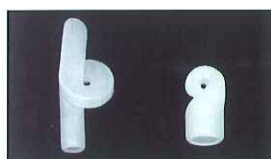
Os guias contidos neste catálogo são os de nossa linha standard e normalmente disponíveis em estoque. Milhares de outros modelos também estão disponíveis sob consulta e novos modelos ou peças especiais podem ser fabricados sob encomenda.

LA NECESSITA' DI UNO SVILUPPO COSTANTE DEL MATERIALE CERAMICO PER GUIDAFILI TESSILI

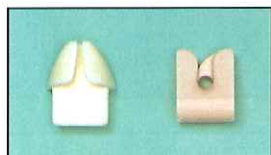
Il nome **ASCOTEX** è sinonimo di alta qualità nel campo dei guidafili da oltre 35 anni. Durante questo periodo abbiamo costantemente ricercato e sviluppato nuovi materiali ceramici e varie rifiniture di superficie per far fronte alle sempre nuove tipologie dei filati moderni e delle condizioni di lavorazione. L'ultimo ritrovato in aggiunta alla nostra vasta gamma di ceramiche sviluppato per applicazioni tessili e' lo **ZAFFIRO POLYCRISTALLINO**. Questo materiale più duro e resistente dell' allumina A997 ha come vantaggio primario una superficie perfettamente liscia e pulita ideale per filati micro e super-micro ed altre fibre sensibili e delicate. I guidafili già disponibili in questo materiale sono segnati 'PCS' sulle fotografie e vi anticipiamo che altri 20/30 particolari saranno presto disponibili. La maggior parte dei nostri stampi ed attrezzature sono adatti per la produzione di 'PCS'. Se desiderate qualche altro guidafilo a catalogo realizzato in 'PCS' vogliate comunicarlo e valuteremo la possibilità di produzione.

Importante non è soltanto il materiale ceramico ma la rifinitura della superficie che diventa sempre più significativa nella scelta del guidafilo corretto e la ben nota convinzione che una superficie opaca per filati piatti e lucida per filati texturizzati non è più applicabile per tutte le circostanze. Il tipo e grado di lucidatura e satinatura, la dimensione dei granuli e la struttura cristallina sono tutti fattori importanti, anche la carica negativa e positiva della superficie va in qualche occasione tenuta in considerazione. Poichè le nostre ceramiche sono sviluppate esclusivamente per applicazioni tessili siamo in grado di offrire un'ampia gamma di guidafili alternativi. Il materiale più duro non è sempre il migliore. Per ogni applicazione possiamo offrire parecchie soluzioni adatte alle vostre esigenze di produzione.

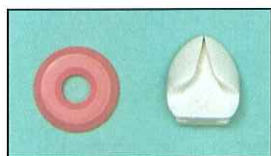
I NOSTRI MATERIALI PIU' IMPIEGATI



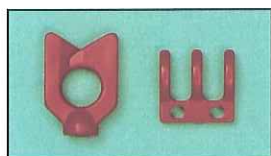
PCS Zaffiro Polycristallino (99.9999% allumina). E' il nostro materiale più duro ma la caratteristica più importante è la superficie compatta e liscia. Materiale ideale per Fibre Micro e SuperMicro, in particolare con rifinitura lucidata al diamante.
Colore: Translucido.



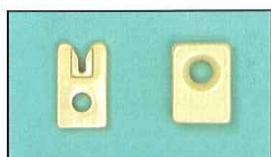
A997 Materiale in ceramica ad altissimo contenuto di allumina. Cottura ad elevata temperatura sviluppato per produzione di filo ad alta velocità. La struttura dei cristalli molto fine elimina in molte applicazioni il bisogno della lucidatura al diamante e contribuisce ad eliminare l'effetto neve.
Colori: Rosa Pallido - Bianco.



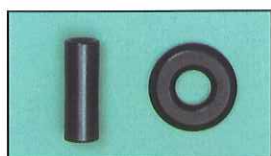
A964 Allumina sinterizzata ad alta purezza che è diventata nel tempo, grazie al contenuto costo di produzione il materiale di ceramica più impiegato per guidafili. Speciali additivi ceramici riducono la crescita dei cristalli formando una superficie fine e liscia con alta proprietà di resistenza all'usura.
Colori: Rosa - Bianco.



A90 Materiale ceramico per applicazioni diverse, sempre molto resistente all'usura e più economico delle ceramiche ad alto contenuto d'allumina.
Colore: Rubino.



T27B Il Titanio è stato uno dei primi materiali ceramici sviluppati per applicazioni industriali. La durezza è inferiore all'Allumina ma con una superficie naturale estremamente liscia ed è largamente usato per filati delicati dove l'Allumina specialmente se non lucidata al diamante, è troppo ruvida.
Colore: Avorio.

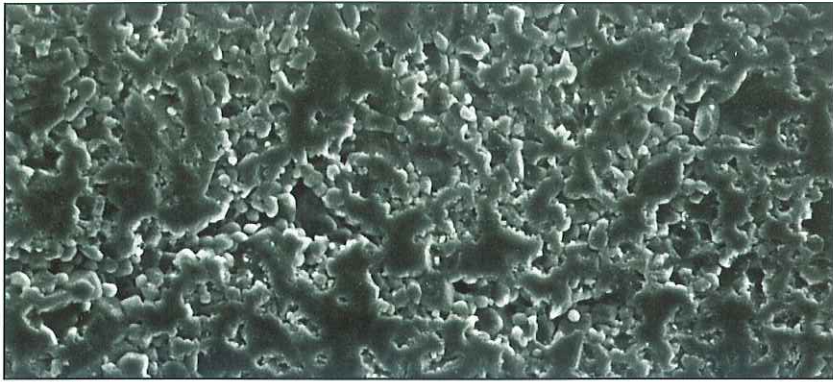


T27C Titanio Antistatico. Indispensabile per tutte quelle applicazioni dove esiste la possibilità di accumulo di elettricità statica ed è impiegato quasi universalmente per macchine di maglieria.
Colore: Blue Scuro.

TOLLERANZE $\pm 2\%$ non meno di 0,2mm.

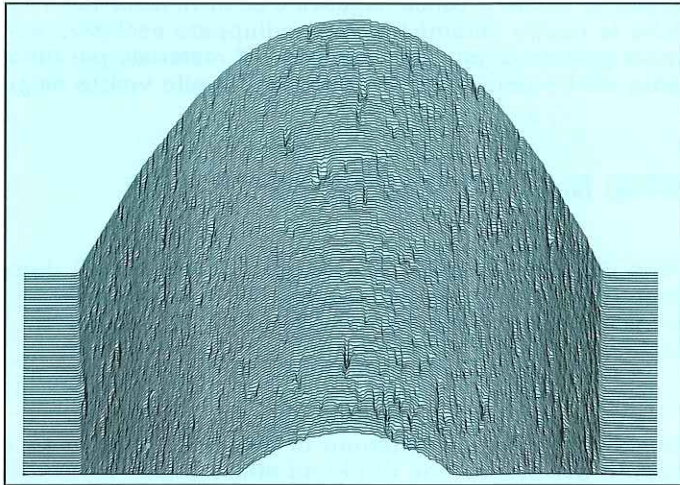
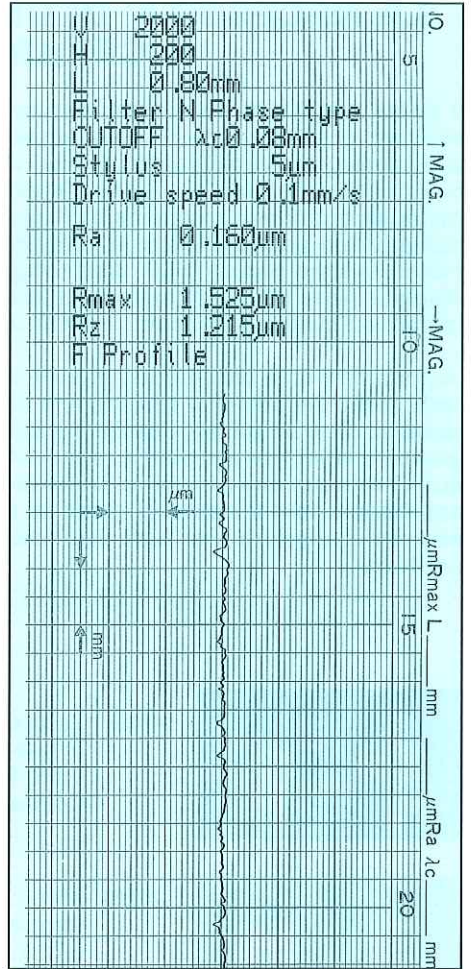
Le dimensioni dei disegni sono approssimative solamente per identificazione.

I guidafili contenuti in questo catalogo fanno parte della nostra produzione standard e sono normalmente disponibili a magazzino. Migliaia di altri guidafili ed esecuzioni speciali a disegno si possono produrre su ordinazione.



A997 N

x1,000



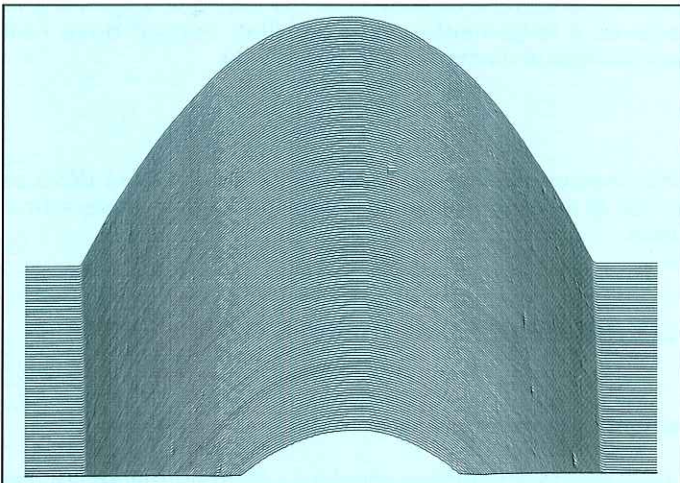
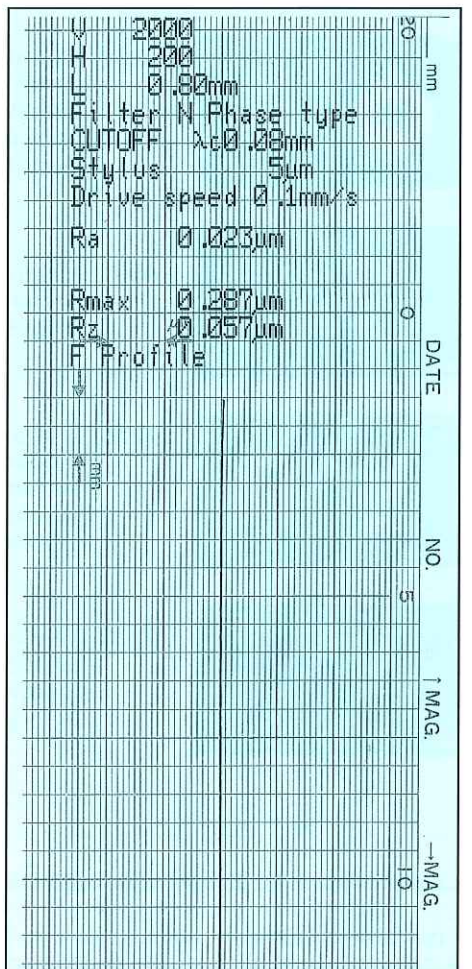
A997 N

3-D profile



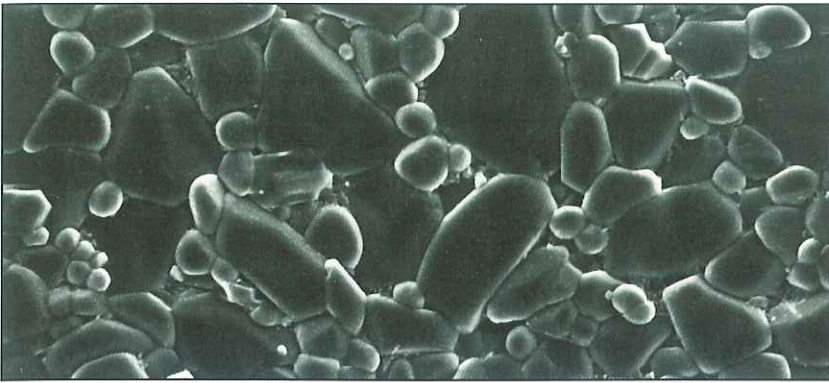
A997 DP

x1,000



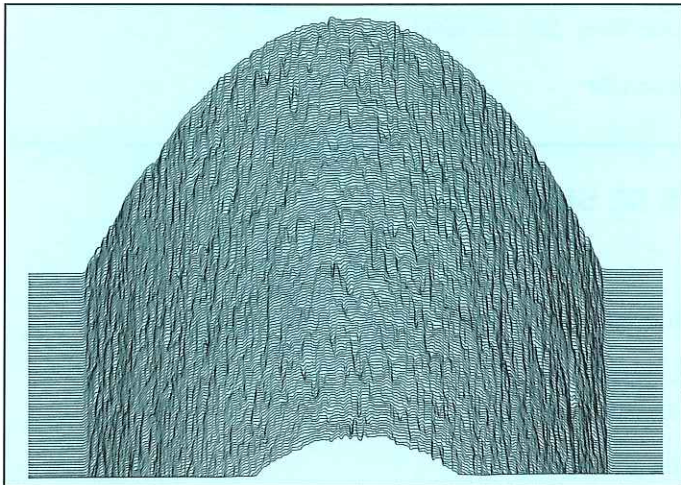
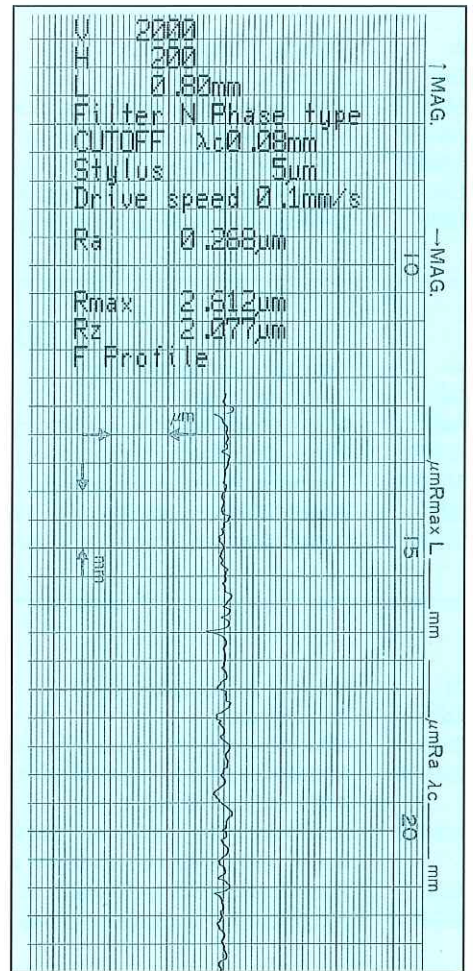
A997 DP

3-D profile



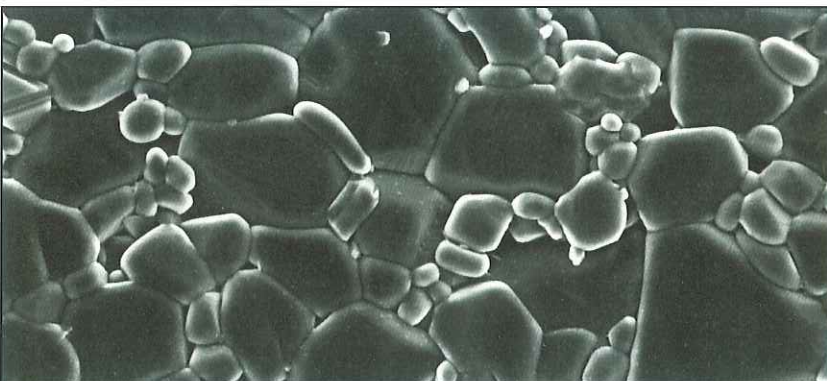
A997 MHF1

x1,000



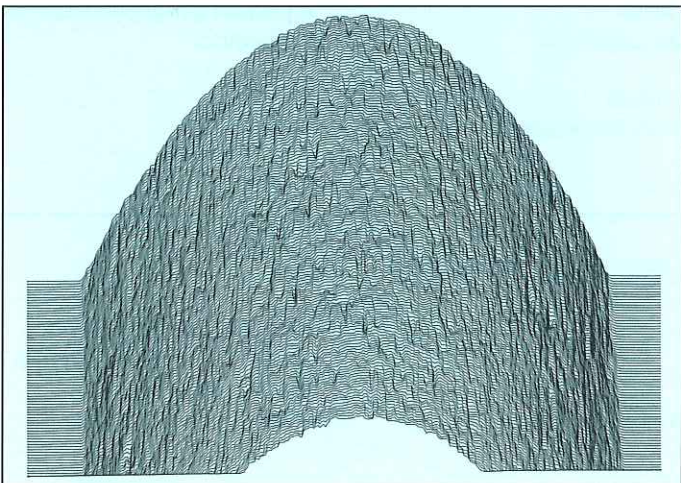
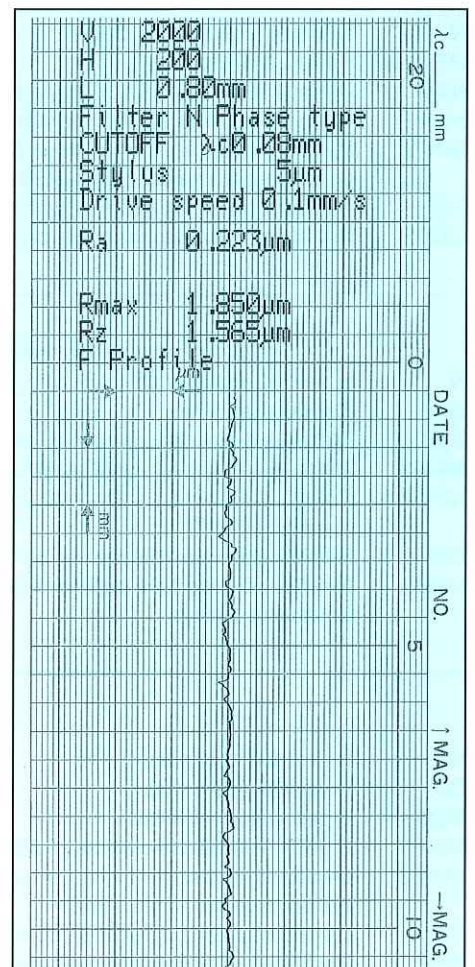
A997 MHF1

3-D profile



A997 MHF2

x1,000



A997 MHF2

3-D profile

SURFACE FINISHES

N	Normal (Velvet/Satin)	Ra & Rt values are influenced by each material. Details on request.
DP	Diamond Polish	
MM	Matt (produced by mechanical means)	
MHF1	Matt (produced by overfiring) A997 only	
MHF2	Diamond polished in the using area then overfired. A997 only	
GN	Centreless grinding on rods and tubes	
GDP	Centreless grinding on rods and tubes followed by DP	

OBERFLÄCHENBESCHAFFENHEIT

N	Normal oder samtartig	Ra & Rt Werte sind bei jedem Material beeinflusst. Details bei Nachfrage.
DP	Diamantpoliert	
MM	Matte Oberfläche (mechanisch erzeugt)	
MHF1	Matte Oberfläche (erzeugt durch 'overfiring'). Nur bei A997	
MHF2	Diamantpoliert im Fadenlauf und später 'overfired'. Nur bei A997	
GN	Geschliffen an Stäben und Rohren	
GDP	Geschliffen an Stäben und Rohren gefolgt von DP	

FINIS DE SURFACE

N	Normal (velours/satin)	Les valeurs Ra & Rt dépendent de la manière utilisée. Détails sur demande.
DP	Poli diamant	
MM	Mat (obtenue par procédés mécaniques)	
MHF1	Mat (produit par retraitement à haute température) matériau A997 exclusivement	
MHF2	Poli diamante sur les surfaces de contacts - ensuite retraité à haute température – matériau A997 exclusivement	
GN	Rectification sur bâtonnets et tubes	
GDP	Rectification sur bâtonnets et tubes suivi de poli diamant	

ACABADOS DE SUPERFICIE

N	Normal (Terciopelo/Saten)	Cada material influye los valores Ra y Rt. Detalles sobre peticiones.
DP	Pulido a diamante	
MM	Mate (Producido por medios mecanicos)	
MHF1	Mate (Mediante sobrecalentamiento). Solo A997	
MHF2	Pulido a diamante en el area de uso: seguido de sobrecalentamentó. Solo A997	
GN	Rectificado en barritas y tubos	
GDP	Rectificado en barritas y tubos seguido de DP	

ACABAMENTOS SUPERFICIAIS

N	Normal (acetinado)	Valores de Ra & Rt (rugosidade) dependem de cada material, e podem ser especificados no pedido.
DP	Polido diamante	
MM	Mate (produzido por meios mecnicos)	
MHF1	Mate (produzido por requeima) Somente A997	
MHF2	Polido diamante na área de uso seguido de requeima Somente A997	
GN	Rectificado. Normalmente para bastões e tubos	
GDP	Retificado e depois polido diamante. Normalmente para bastões e tubos	

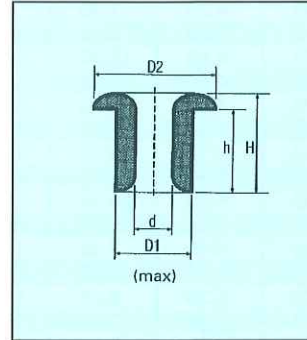
RIFINITURE DI SUPERFICIE

N	Standard (satinata)	Ra & Rt - Questi. valori variano a seconda del tipo di materiale ceramico. Dettagli su richiesta.
DP	Lucidata diamante	
MM	Opaca (a macchina)	
MHF1	Opaca (a mezzo ricottura) - solo A997	
MHF2	Lucidata diamante nella parte dello scorrimento del filo e quindi ricotta – solo A997	
GN	Rettificata per barrette e tubetti	
GDP	Rettificata per barrete e tubetti e quindi lucidata diamante	

STANDARD EYELETS

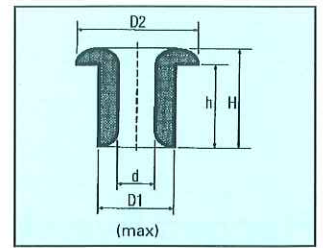
Flanged Eyelets

(On a minimum quantity of 5000 dimension h can be changed on most eyelets without additional tool cost)



Ref.No	D1 (max) mm	d mm	H mm	D2 mm	h mm
FT398	2.10	1.00	7.10	2.50	6.00
E002	2.10	1.00	3.00	3.10	2.00
E936	2.10	1.00	5.00	3.10	4.00
E885	2.15	1.00	2.10	3.20	1.20
E889S	2.60	1.40	3.00	3.80	2.00
E889	2.60	1.40	4.00	3.80	3.00
E136B	2.60	1.40	5.00	3.80	4.00
FT555	2.60	1.40	6.80	3.80	5.50
FT555L	2.60	1.40	8.30	3.80	7.00
E886	2.90	1.10	4.20	4.90	3.00
E952	2.90	1.50	6.50	4.80	5.00
E913	3.00	1.40	4.00	4.90	3.00
E972	3.00	1.50	7.50	4.80	6.00
E915	3.10	1.60	3.10	4.20	2.00
E001	3.10	1.70	2.00	4.20	1.00
E862	3.10	1.60	4.20	4.30	3.00
E971	3.30	1.60	3.20	5.50	2.40
E940	3.30	1.60	3.30	5.60	2.50
E951	3.30	1.70	4.75	5.70	3.50
E881	3.80	2.00	6.60	4.80	5.00
E176	3.85	2.00	5.25	5.50	3.20
E266	3.90	1.40	4.55	5.50	3.00
E868	3.90	1.90	4.00	7.00	2.50
E035	3.90	2.20	5.25	5.50	4.25
E948	3.95	2.00	4.20	5.50	3.00
E328	3.95	2.10	5.35	4.95	4.25
E839	4.00	1.90	4.30	5.55	3.00
E897	4.00	2.00	4.60	5.80	2.50
E923	4.10	2.70	5.00	5.00	4.00
E269S	4.30	2.50	5.85	5.80	4.70
E269	4.30	2.00	8.95	5.80	7.50
E843	4.30	2.50	4.35	5.80	3.00
E924	4.30	2.00	7.40	5.90	5.90
E953	4.60	1.90	3.80	6.60	2.80
E863	4.90	3.30	4.50	6.50	3.00
E865	4.90	3.30	5.60	6.50	4.00
E067	5.10	1.90	6.95	6.55	5.40
E864	5.10	1.90	3.50	6.60	2.50
E874	5.10	2.00	4.60	6.70	3.00
E979	5.20	3.30	7.00	6.80	5.00
E918	5.20	3.30	4.00	6.80	2.80
E918L	5.20	3.30	5.40	7.80	4.75
E906	5.30	2.30	4.70	7.00	3.20
E335	5.35	3.20	5.10	7.15	4.10
E911	5.40	3.30	5.20	7.00	4.00
E336	5.40	3.20	6.50	8.00	5.00
E892	5.40	3.30	7.40	7.00	6.00
E064	5.60	2.36	4.75	7.14	3.18
E305	5.60	4.00	4.70	7.00	3.20
E307	5.70	3.20	6.35	7.90	5.10
E849	5.90	2.90	5.90	7.70	4.00
E850	5.90	2.80	7.60	7.70	5.80
E942S	5.95	3.40	3.00	7.75	2.00
E166	6.00	2.85	10.00	8.00	7.75
E825	6.00	3.00	4.70	8.15	3.00

Ref.No	D1 (max) mm	d mm	H mm	D2 mm	h mm
E919	6.00	3.40	5.00	8.00	3.00
E942	6.00	3.40	6.00	7.80	4.00
E120	6.00	3.20	8.00	7.90	6.20
E980	6.00	4.00	5.00	9.00	3.00
E961	6.00	3.50	5.00	8.00	3.00
E941L	6.00	3.40	8.00	8.00	6.50
E914	6.10	3.30	3.50	7.50	2.00
E039	6.10	3.50	4.50	7.50	3.50
E004B	6.10	3.40	5.70	8.00	3.75
E941	6.10	3.40	6.50	7.80	5.00
E171	6.20	4.00	8.00	8.50	6.50
E963	6.20	4.00	10.00	10.25	7.80
E004D	6.25	2.80	5.80	7.90	4.00
E856	6.30	3.30	2.80	8.00	1.80
E857	6.40	3.50	3.50	7.90	2.50
E888	6.40	3.50	4.50	8.00	3.50
E870	6.40	3.90	8.00	8.70	6.40
E964	6.40	3.00	4.70	10.70	3.00
E329L	6.45	4.00	8.60	8.70	6.50
E177	6.45	3.00	10.36	10.60	8.40
E329S	6.50	4.00	4.60	8.70	3.00
E329	6.50	4.00	6.50	8.70	5.00
E848	6.70	3.80	7.50	8.80	6.00
E869	6.80	3.80	7.40	8.80	6.00
E815	7.00	4.50	8.00	9.00	6.80
E066	7.00	4.00	9.80	10.00	8.00
E965	7.00	4.00	11.80	10.00	10.00
E854	7.10	4.50	7.00	9.20	5.30
E937	7.10	2.70	4.50	9.20	2.80
E835	7.20	4.60	7.70	9.90	6.00
E958	7.15	3.80	7.10	9.20	5.30
E927	7.35	3.80	9.00	9.70	7.00
E982	7.35	4.80	3.00	10.00	1.50
E983	7.35	4.80	5.50	10.00	4.00
E921	7.40	3.50	11.00	9.00	9.00
E308	7.40	3.90	9.00	9.50	7.00
E308S	7.40	3.90	7.40	9.50	5.50
E070	7.50	3.25	7.14	9.90	5.10
E939	7.50	3.90	8.00	9.50	6.00
E954	7.50	5.50	9.00	9.60	6.80
E330	7.50	3.80	6.60	10.00	4.80
E330L	7.50	4.40	7.40	10.00	5.30
E038	7.60	4.50	7.00	9.50	5.00
E381	7.60	4.50	11.00	9.50	9.00
E950	7.60	5.50	15.85	9.50	13.30
E956	7.60	5.50	13.50	9.50	11.50
E823	7.70	4.90	3.00	8.45	2.00
E823L	7.70	4.90	3.70	10.70	2.00
E928	7.70	4.70	8.70	10.60	7.00
E341	7.70	4.75	5.55	10.80	3.65
E866S	8.10	4.10	6.40	10.00	4.40
E866	8.10	4.10	8.30	10.00	6.40
E946	8.10	6.00	5.00	11.00	3.00
E967	8.10	3.00	16.50	9.40	15.00
E946S	8.20	6.00	3.60	11.00	1.50

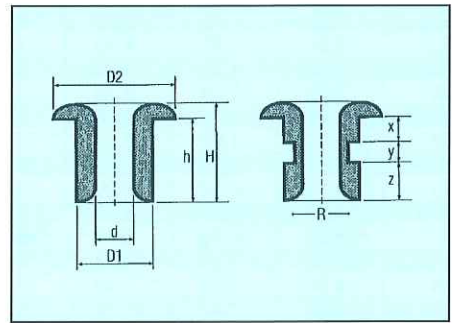


Flanged Eyelets

Ref.No	D1 (max) mm	d mm	H mm	D2 mm	h mm
E832	8.60	4.20	7.00	9.90	5.40
E829	8.70	4.80	5.00	10.70	3.50
E859	8.70	4.60	13.90	10.75	11.80
E241	8.70	4.75	7.90	10.00	5.90
E241L	8.70	4.75	10.00	10.70	8.00
E109B	8.80	5.30	13.20	12.90	11.30
E926	8.90	4.70	10.20	10.60	8.30
E103	8.90	5.30	16.00	12.90	14.00
E321	8.90	5.00	20.00	10.60	17.00
E108	9.00	4.75	13.00	10.70	11.00
E901	9.10	4.00	7.00	13.00	5.00
E109D	9.15	5.00	12.70	11.00	10.55
E049	9.20	5.30	8.60	11.50	6.85
E955	9.50	6.20	7.90	12.00	5.50
E830	9.55	6.20	6.65	12.00	4.00
E943	9.60	4.70	9.50	12.70	6.30
E968	9.60	5.50	8.20	11.70	6.00
E975	9.60	6.60	7.80	13.20	1.80
E876	9.60	2.00	8.00	12.70	5.40
E828	9.70	6.20	9.00	12.00	7.00
E063	9.70	6.20	4.70	12.00	2.50
E062	9.70	6.20	10.50	12.00	8.35
E973	9.90	4.70	7.10	12.85	4.60
E934	9.90	5.30	25.00	14.70	22.00
E878	9.95	6.10	4.40	11.90	2.80
E959	10.00	6.00	12.80	12.00	8.80
E879L	10.00	6.10	8.50	11.90	7.00
E879	10.00	6.10	4.40	11.90	2.75
E978	10.00	6.30	15.60	13.50	11.00
E384	10.00	4.00	15.00	12.00	11.00
E385	10.00	5.00	15.00	12.00	11.00
E386	10.00	6.00	15.00	12.00	11.00
E900	10.00	7.00	11.00	12.10	9.00
E900L	10.00	7.00	12.50	12.10	9.00
E042	10.00	7.00	6.00	12.10	4.00

Ref.No	D1 (max) mm	d mm	H mm	D2 mm	h mm
E935	10.10	7.00	5.00	12.10	3.00
E212	10.10	5.00	8.60	12.00	6.40
E875	10.50	7.90	8.00	12.85	4.00
E970	11.00	6.50	9.25	14.00	6.75
E969	11.00	6.50	12.70	14.00	10.20
E909	11.05	7.50	6.60	14.00	5.00
E910	11.45	7.00	9.10	14.00	7.00
E050	11.80	7.60	10.00	15.40	7.50
E377	11.95	7.60	10.20	15.45	7.20
E301B	12.00	7.60	7.00	15.40	4.00
E949	12.00	7.50	8.50	15.50	6.25
E962	12.40	8.75	9.00	16.00	7.00
E378	12.40	8.75	10.30	16.00	7.00
E144	12.55	6.80	9.80	15.80	6.30
E143	12.65	8.75	10.30	15.90	7.15
E895	12.75	4.50	7.00	15.70	4.00
E896	12.95	8.75	10.10	18.20	8.00
E041	14.15	10.00	6.00	16.00	4.00
E041L	14.15	10.00	9.60	16.00	7.50
E820	15.45	10.00	8.40	19.50	5.40
E922	15.45	9.60	17.00	19.50	14.00
E840	15.45	9.70	13.50	19.75	10.00
E842	18.55	12.00	13.60	22.00	10.00
E836	19.80	13.90	12.50	25.70	9.10
E871	22.25	16.00	11.00	28.30	7.00
E871L	22.25	16.00	14.00	28.30	10.00
E847	22.25	13.00	14.00	28.20	9.00
E960	24.25	19.00	11.00	30.00	7.00
E925	25.85	20.00	8.00	31.50	6.00
E861	30.10	20.00	25.00	35.00	20.00
E861S	30.10	20.20	10.00	35.00	5.00
E891	35.35	24.00	11.00	38.00	8.00
E966C	40.00	30.00	10.00	44.00	6.80
E938	41.80	33.00	10.80	47.50	6.80

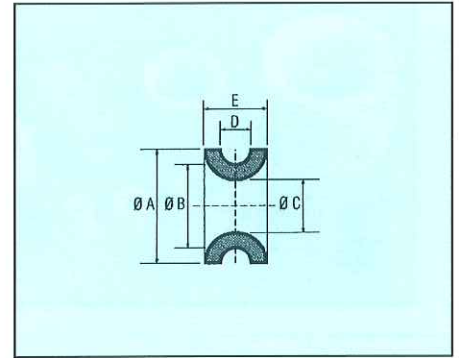
Grooved Eyelets



Ref.No	D1 (max) mm	d mm	H mm	D2 mm	h mm	x mm	y mm	z mm	R mm
E430	4.45	1.50	4.80	5.80	3.45	1.55	0.80	1.10	3.60
E474	4.60	2.00	4.80	5.80	3.70	1.90	0.80	1.00	3.80
E487	5.90	3.00	7.00	8.30	5.00	1.00	1.30	2.70	4.50
E422	6.10	3.10	5.00	7.50	3.80	1.40	1.00	1.40	5.20
E445	6.20	3.00	10.50	8.00	7.00	4.00	1.00	2.00	5.40
E472	6.30	3.00	5.80	7.90	4.00	1.60	1.00	1.40	5.20
E494	6.60	3.80	5.80	8.70	3.95	1.40	0.75	1.80	5.60
E453	6.70	3.70	9.70	8.70	7.80	5.00	1.20	1.60	5.60
E458	7.40	4.10	8.00	10.40	6.30	3.20	1.30	1.80	6.00
E473	7.40	3.40	10.60	8.80	8.40	5.90	1.10	1.40	5.90
E467	7.60	3.50	7.10	9.00	5.00	1.85	1.10	2.15	6.50
E408	7.80	4.00	7.50	9.90	5.80	3.00	1.20	1.60	6.80
E493	7.80	4.00	8.20	9.40	6.70	3.50	1.10	2.10	6.60
E431	8.00	3.90	10.50	10.00	8.30	4.80	1.00	2.50	7.00
E424	8.00	4.50	4.70	10.00	3.30	1.20	1.00	1.10	7.00
E451	8.00	3.80	6.40	9.70	4.90	1.90	1.10	1.90	7.10
E420A	8.00	1.20	8.50	9.60	6.70	3.70	1.00	2.00	7.00

Ref.No	D1 (max) mm	d mm	H mm	D2 mm	h mm	x mm	y mm	z mm	R mm
E420B	8.00	1.50	8.50	9.60	6.70	3.70	1.00	2.00	7.00
E420C	8.00	3.60	8.50	9.60	6.70	3.70	1.00	2.00	7.00
E483	8.50	4.10	7.20	10.00	5.40	2.50	1.00	1.90	7.00
E446	8.50	4.20	7.00	10.00	5.50	2.80	1.00	1.70	6.90
E441	8.80	4.50	7.20	10.00	6.00	3.00	1.00	2.00	7.70
E433	9.50	6.20	9.10	12.00	6.60	3.40	1.50	1.70	8.00
E434	9.60	6.30	10.70	12.20	8.50	4.90	1.40	2.20	8.00
E432	9.90	6.60	8.00	13.00	6.00	3.20	1.30	1.50	8.50
E466	9.90	4.70	7.10	12.90	4.65	2.15	1.10	1.40	8.60
E435	11.90	7.60	10.20	15.60	7.00	3.00	2.00	2.00	10.00
E429	12.00	8.00	11.50	15.30	8.60	5.00	1.00	2.60	10.40
E425	12.70	4.80	10.80	15.90	7.60	3.00	2.45	2.15	10.30
E402	12.90	8.70	10.30	16.00	8.00	4.20	1.80	2.00	11.20
E427	13.70	4.20	15.30	38.60	9.90	7.00	1.50	1.40	12.00
E421	15.00	9.80	9.50	20.50	6.15	2.80	1.20	2.15	13.40
E410	18.60	12.00	16.70	22.00	13.05	9.80	1.25	2.00	16.50

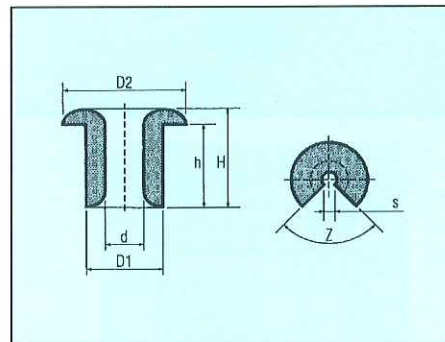
Double Flanged Eyelets



Ref.No	A mm	B mm	C mm	D mm	E mm
DF46	4.30	3.40	2.60	1.00	2.60
DF29	5.10	3.50	1.90	2.50	4.90
DF1	5.50	4.30	2.50	1.00	3.20
DF32	5.50	4.50	3.30	1.10	2.50
DF2	7.00	5.00	3.00	1.00	3.50
DF35	7.50	6.00	3.60	3.40	6.40
DF4	8.00	6.20	3.00	1.20	4.00
DF20	8.00	6.20	3.30	1.60	4.10
DF14	8.00	6.10	3.10	1.60	4.80
DF16	8.00	6.50	3.10	0.90	4.00
DF15	8.10	5.60	3.40	1.60	6.50
DF5	8.20	6.00	4.00	1.40	3.40
DF6	8.20	6.10	4.00	2.70	5.60
DF17	8.20	7.00	4.30	4.30	7.00
DF36	8.50	6.00	4.00	2.00	5.40
DF7	8.50	7.40	3.10	2.70	5.80

Ref.No	A mm	B mm	C mm	D mm	E mm
DF33	8.60	7.50	3.10	3.20	6.50
DF8	9.10	6.80	4.80	1.20	4.00
DF22	9.10	6.10	3.30	2.60	6.50
DF13	10.30	7.00	4.80	2.50	5.30
DF9	10.40	9.10	5.00	0.90	4.00
DF18	11.10	9.30	5.00	0.80	4.50
DF12	11.90	9.00	6.00	2.00	6.20
DF21	13.00	10.00	6.50	6.50	12.00
DF28	13.25	10.60	7.25	2.50	6.00
DF25	15.00	11.50	7.90	1.50	5.50
DF47	15.00	11.50	7.80	2.50	7.00
DF26	18.50	15.00	10.00	3.00	6.00
DF37	20.00	11.50	6.00	3.60	9.00
DF11	24.50	20.50	14.60	3.50	7.20
DF38	28.50	20.80	14.30	6.30	13.50
DF27	33.20	31.00	26.10	2.00	5.30

Split Eyelets

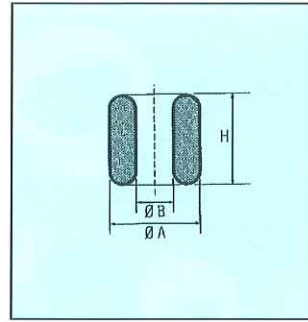
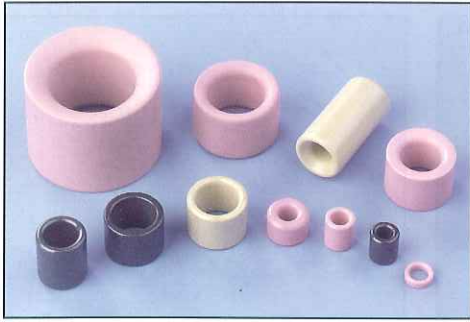


Ref.No	D1 (max) mm	d mm	H mm	D2 mm	h mm	s mm	z mm
E628	3.60	2.00	4.20	5.30	3.00	0.80	2.40
E627B	3.90	1.60	4.20	5.20	3.00	0.80	2.00
E651	6.00	3.00	2.00	10.00	1.00	1.20	5.00
E624	6.10	3.00	4.25	8.00	3.00	1.50	1.50
E653	6.60	3.00	7.60	7.80	6.40	2.60	2.60
E639	6.80	3.80	3.00	9.00	1.40	1.70	3.00
E637	6.90	3.80	6.50	9.00	5.00	1.70	3.00
E638	7.10	1.50	5.00	9.00	3.20	1.00	5.40
E617	7.40	3.80	8.00	9.60	6.50	1.00	3.00
E650	7.40	3.20	4.50	9.90	2.60	1.50	4.00
E626	7.50	5.00	5.00	10.00	3.00	2.00	2.50
E629	7.70	4.70	4.20	9.00	3.00	4.25	4.25
E642	7.80	3.10	9.80	10.20	7.20	0.90	2.50
E619B	8.10	3.20	5.50	10.50	3.50	1.00	4.50

Ref.No	D1 (max) mm	d mm	H mm	D2 mm	h mm	s mm	z mm
E619CG*	8.10	3.20	5.50	10.30	3.50	1.00	4.50
E623B	9.10	4.90	4.70	11.00	3.00	2.00	2.00
E623/90	9.10	5.00	4.50	11.00	3.00	2.00	6.50
E622	9.70	4.75	9.80	12.70	7.10	3.30	3.30
E656	9.80	5.40	5.80	14.30	3.50	1.40	5.00
E625B	10.10	6.00	4.50	12.00	3.00	2.30	2.30
E634	10.10	4.10	8.10	12.00	7.00	2.00	5.00
E655	10.10	4.10	5.50	12.00	3.60	2.00	6.00
E601	12.40	7.60	7.00	15.90	4.00	2.50	8.50
E620	13.30	4.70	12.00	17.20	9.50	1.50	7.00
E659	13.50	4.20	12.00	15.50	8.80	2.40	2.40
E603	14.40	11.00	6.00	17.40	3.00	9.00	9.00
E660	15.50	9.80	13.40	19.50	9.80	2.60	2.60
E602	19.00	9.00	27.80	28.00	21.00	5.00	5.00

*with clip groove

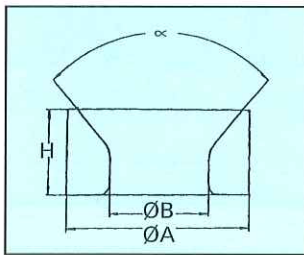
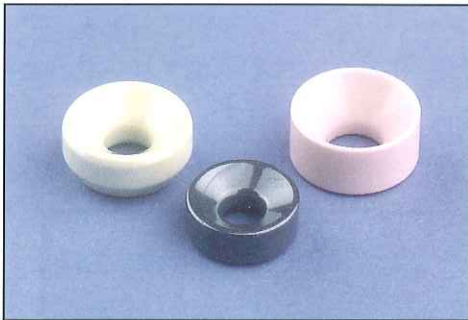
Tube Eyelets



Ref.No	A mm	B mm	H mm
TE1	4.45	2.00	4.60
TE2	5.00	2.50	6.00
TE48	5.00	3.00	5.00
TE3	6.00	3.50	6.00
TE49	6.00	3.00	2.60
TE4	6.00	3.00	8.00
TE52	6.80	4.00	2.00
TE13	7.00	3.00	5.00
TE5	7.50	4.00	4.00
TE39	7.50	4.00	12.00
TE6	8.00	3.50	10.00
TE25	8.00	4.20	2.00
TE14	8.50	6.00	4.50
TE16	8.50	5.50	10.00

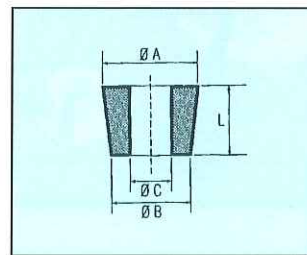
Ref.No	A mm	B mm	H mm
TE7	9.60	7.00	7.80
TE21	9.00	4.00	18.00
TE8	10.00	5.50	6.00
TE10	10.00	7.00	8.00
TE40	10.80	6.00	14.00
TE43	11.60	6.80	12.00
TE37	12.00	7.00	3.00
TE11	12.00	7.00	8.00
TE41	12.20	9.00	13.00
TE44	12.20	6.70	15.00
TE15	13.00	9.50	4.00
TE23	15.20	9.70	10.40
TE38	18.00	9.00	20.00
TE17	23.00	14.50	17.50

Ball/Spindle Eyelets



Ref.No	A mm	B mm	H mm	α
TE18	10.60	3.00	5.00	120°
TE12	11.00	4.00	4.50	120°
TE24	12.90	4.50	5.80	100°
TE26	13.00	3.00	7.00	80°
TE30	13.00	3.50	7.00	80°
TE31	13.00	4.50	6.00	76°
TE19	13.00	5.50	6.00	80°
TE32	13.00	7.10	6.00	60°
TE27*	13.90	3.00	11.00	90° & 90°
TE33	14.00	4.50	8.00	90°
TE34	17.00	4.50	8.00	84°
TE36*	20.00	3.00	17.50	90° & R8
TE35	28.00	4.80	13.00	80°

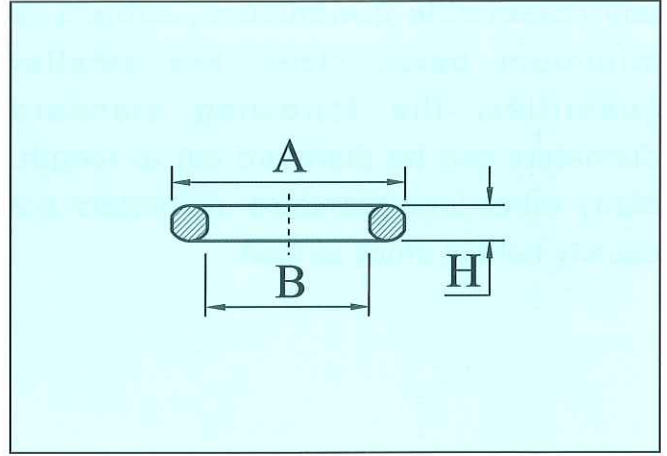
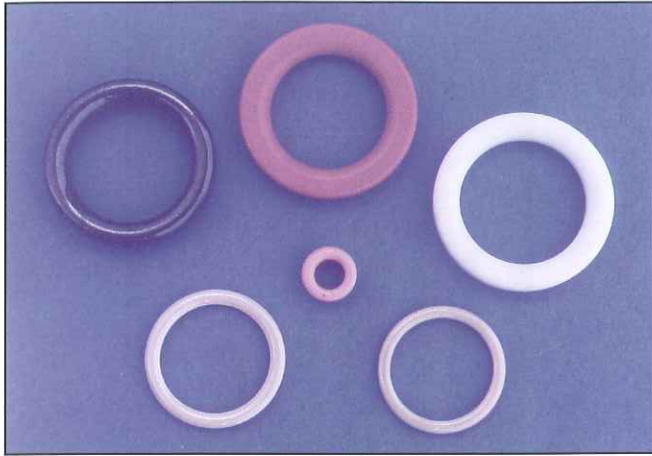
Conical Eyelets



Ref.No	A mm	B mm	C mm	L mm
CE1	6.50	6.10	3.90	4.80
CE2	6.70	6.30	3.10	4.75
CE3	6.90	6.50	3.20	5.20
CE13	8.50	8.00	5.50	5.00
CE4	10.00	9.40	6.00	12.00
CE11	10.60	8.75	3.10	17.50
CE9	12.00	11.40	7.00	12.00
CE8	12.50	11.80	6.50	15.00
CE5	14.30	13.50	6.30	6.75
CE10	18.00	17.00	10.20	15.75
CE6	20.00	19.00	8.50	6.35
CE12	32.00	28.00	16.50	35.00

*tapered both ends

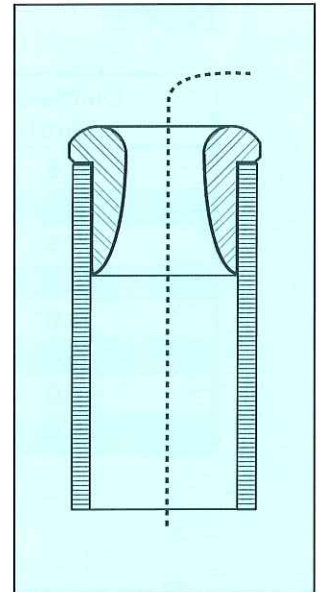
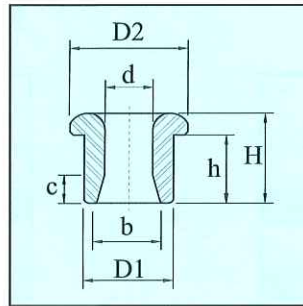
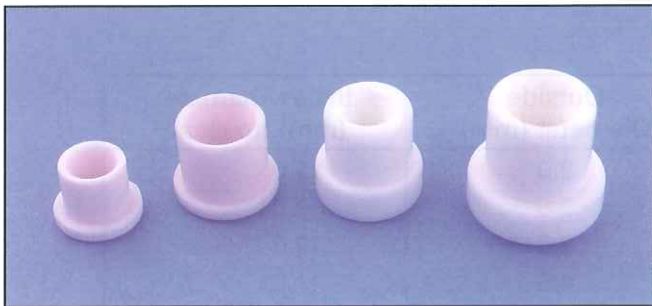
Rings



Ref.No	A mm	B mm	H mm
R52	6.80	4.00	2.00
R37	7.20	4.50	2.00
R26	8.00	4.20	2.00
R28	10.00	7.00	3.00

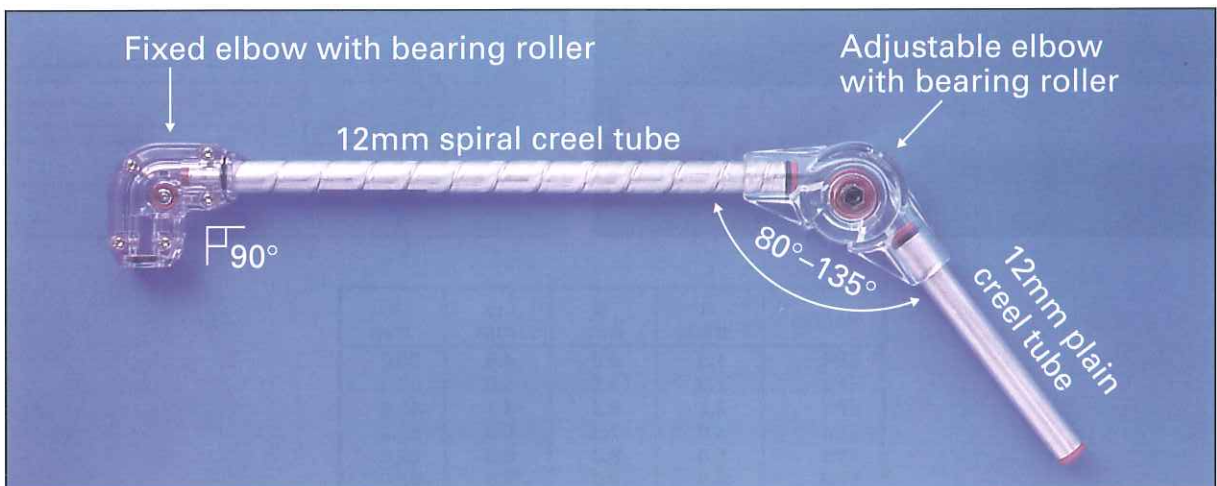
Ref.No	A mm	B mm	H mm
R19	14.00	11.00	1.30
R18	15.20	11.70	1.40
R34	18.80	13.20	3.30
R35	20.00	14.00	3.00

Flared Eyelets – for creel tubes and spindles



Ref.No	D1 (max) mm	d mm	b mm	H mm	D2 mm	h mm	c mm
FE1	6.60	4.00	5.20	6.00	8.00	4.00	4.00
FE2	7.10	3.80	5.50	7.00	9.20	5.30	2.20
FE3	7.50	4.00	5.00	8.00	10.00	6.00	6.00
FE4	9.10	6.00	7.40	7.00	11.00	5.00	3.00
FE5	9.80	4.00	6.10	12.50	12.00	7.50	4.00
FE6	10.00	6.00	7.70	10.00	12.00	8.00	6.00
FE7	11.70	5.00	8.50	13.00	15.00	9.00	6.60

Creel Tube System



Rods and Tubes can be made to any reasonable dimensions, subject to minimum batch sizes. For smaller quantities, the following standard diameters can be diamond cut to length. Many other 'non standard' diameters are usually held in stock as well.



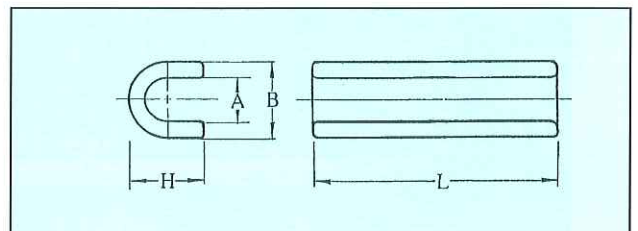
Rods

Diameter (mm)
1.5
2.0
2.5
3.0
4.0
5.0
6.0
8.0

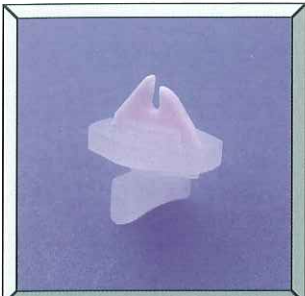
Tubes

Outside Diameter (mm)	Inside Diameter (mm) (to clear)
2.0	1.0
2.5	1.5
3.0	2.0
4.0	2.0
5.0	3.0
6.0	3.0
8.0	5.0
10.0	5.0 (6.0) (6.8)
12.0	8.0
15.0	10.0

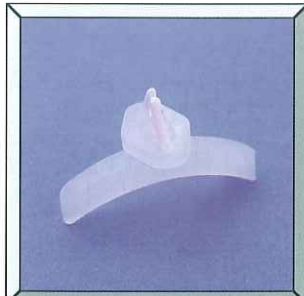
Edge Protectors (Half Tubes) can be diamond slit to length from the following standard sizes.



Ref.No	A mm	B mm	H mm	L mm
EP1	1.3	4.0	4.0	36.0
EP2	2.0	4.0	4.0	50.0
EP3	3.2	5.2	4.1	45.0
EP4	4.0	7.0	6.5	62.0
EP5	5.0	8.0	8.0	62.0
EP6	6.0	9.0	9.5	62.0



TWG7



TWG14



TWG15



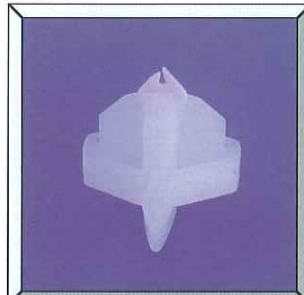
TWG25



TWG21



TWG1



TWG44



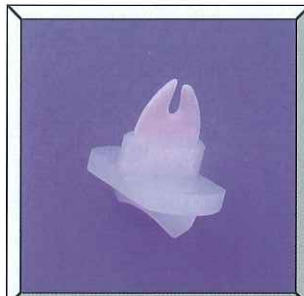
TWG65



TWG30



TWG31



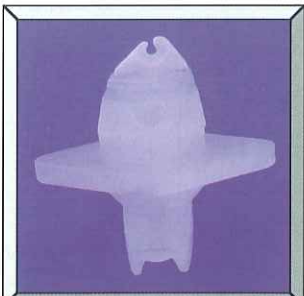
TWG16



TWG17



TWG40



TWG80
left and right hands
available



TWG84
left and right hands
available



TWG67

F15 x 0.5
F15 x 1.0
F15 x 1.5

F44

F42A

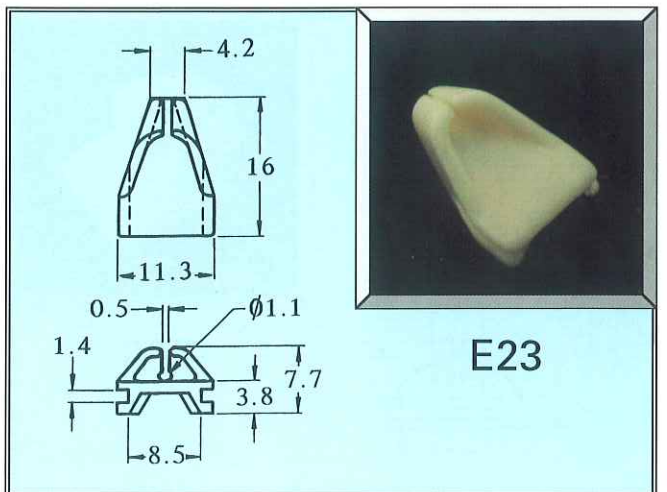
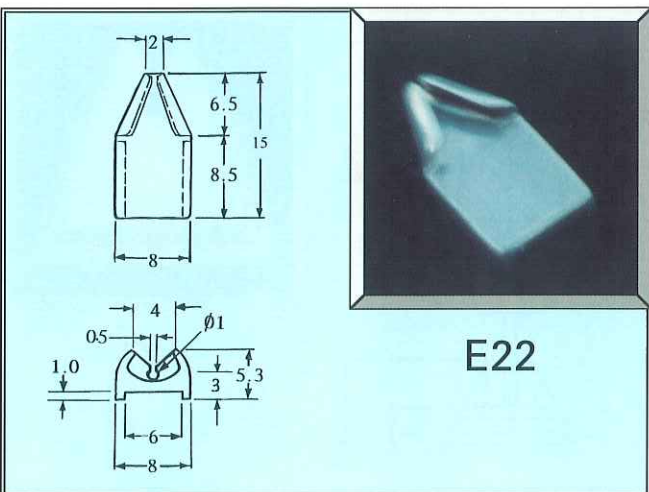
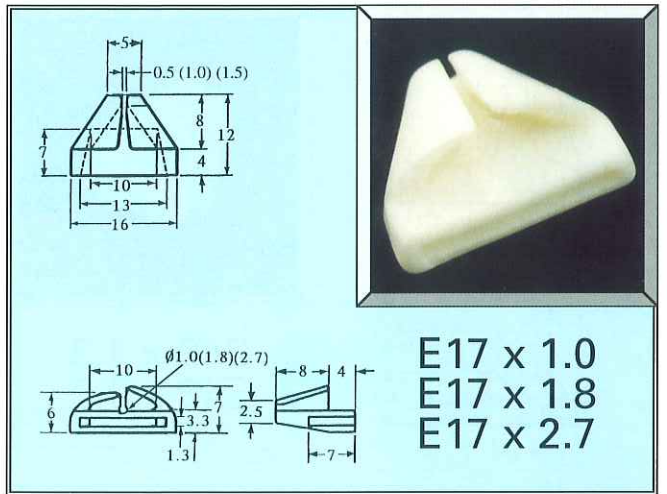
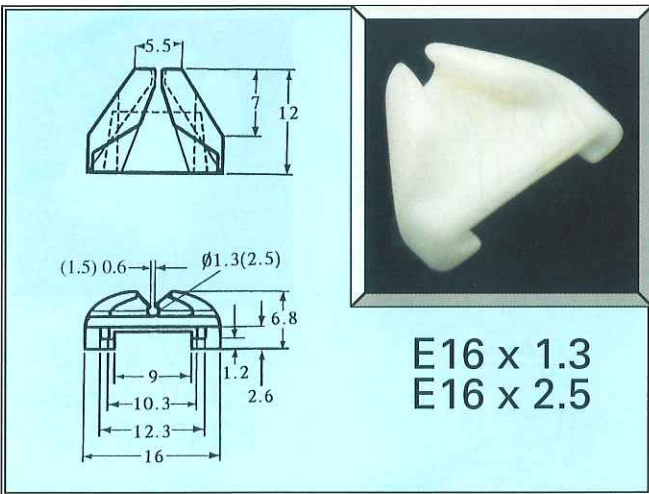
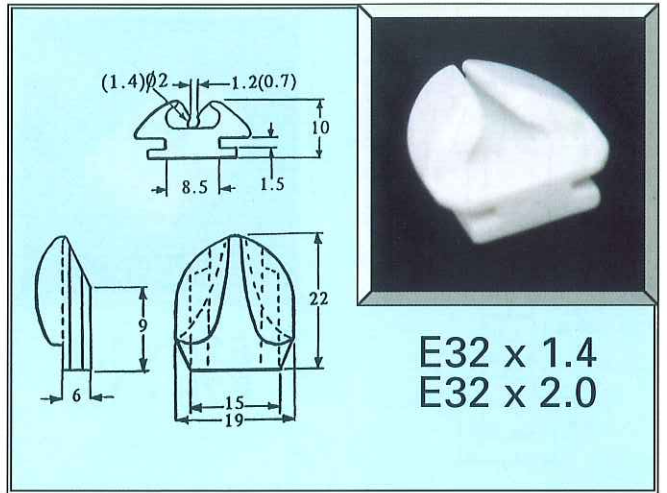
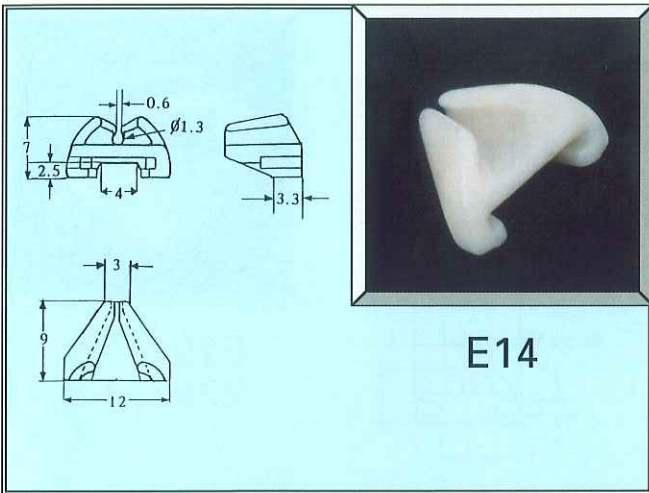
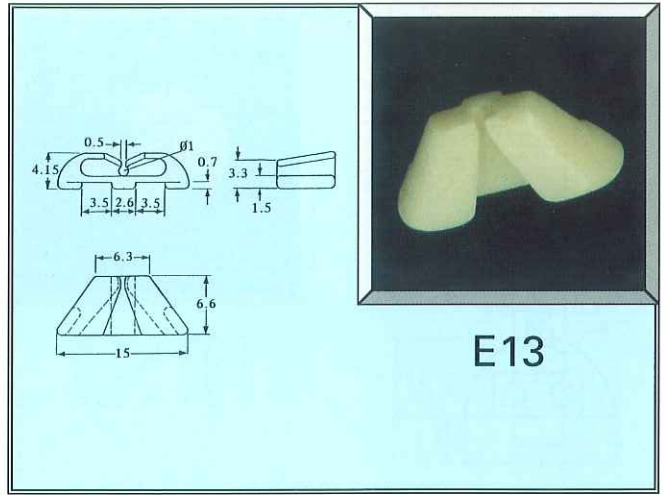
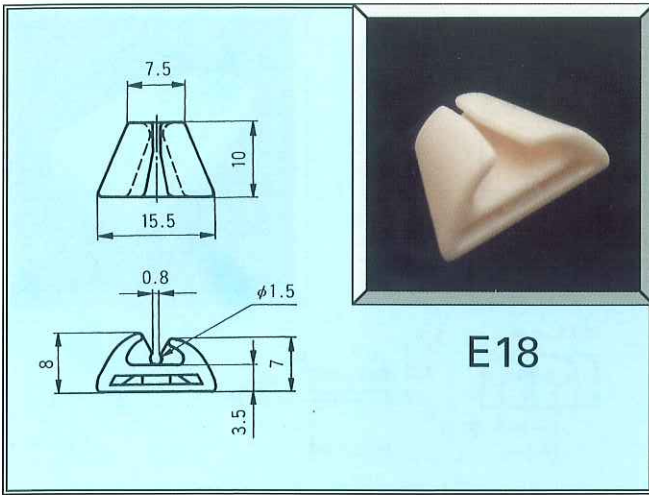
F42B

F42C

E38

E41

E19



Technical drawing showing two views of a reddish-brown component. The top view is a dome shape with a height of 21.5 and a base width of 13. The bottom view shows a cross-section with a diameter of 19 and a central hole of diameter 1.5. Other dimensions include 8.5, 4, 0.8, 8, 9, 10.6, 6.2, 7, and 3.1.

E31 x 1.5
E31 x 2.2

Technical drawing showing two views of a yellow component. The top view is a dome shape with a height of 24 and a base width of 14.8. The bottom view shows a cross-section with a diameter of 12 and a central hole of diameter 1.5. Other dimensions include 10.8, 2, 0.75, 5.2, and 8.

E33

Technical drawing showing two views of a reddish-brown component. The top view is a dome shape with a height of 21.5 and a base width of 14. The bottom view shows a cross-section with a diameter of 18 and a central hole of diameter 1.8. Other dimensions include 4.6, 0.8, 2, 12, 9.5, 8.5, 9, 4, 5, and 1.8.

E28 x 1.0
E28 x 1.8

Technical drawing showing two views of a yellow component. The top view is a dome shape with a height of 23 and a base width of 15. The bottom view shows a cross-section with a diameter of 9 and a central hole of diameter 1.3 (1.8). Other dimensions include 6, 17.5, 7.2, 0.5, 2, and 9.

E29 x 1.3
E29 x 1.8

Technical drawing showing two views of a yellow component. The top view is a dome shape with a height of 23 and a base width of 20. The bottom view shows a cross-section with a diameter of 8 and a central hole of diameter 1.0 (1.3). Other dimensions include 15, 5.5, 1.7, 10, 6, 1.5, 0.17, 8.3, and 2.

E40 x 1.3
E40 x 1.7

Technical drawing showing two views of a yellow component. The top view is a dome shape with a height of 22.6 and a base width of 15. The bottom view shows a cross-section with a diameter of 20 and a central hole of diameter 4 (2) (1.3). Other dimensions include 6.5, 2.2, 2.5, 10.6, 1.0, 2.2 (1.3) (0.6), 11, 8.5, and 15.

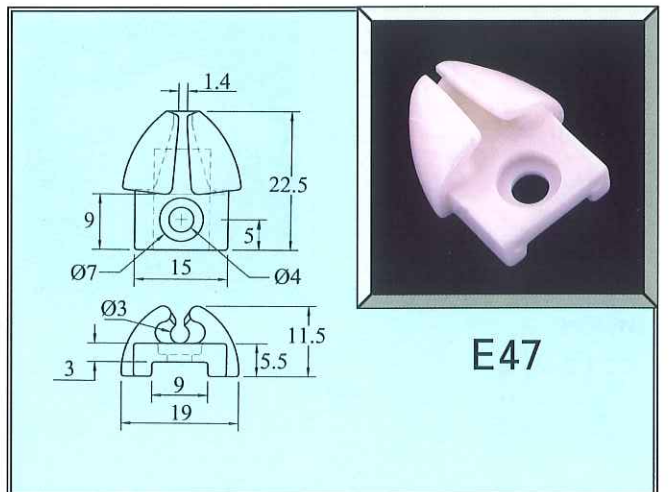
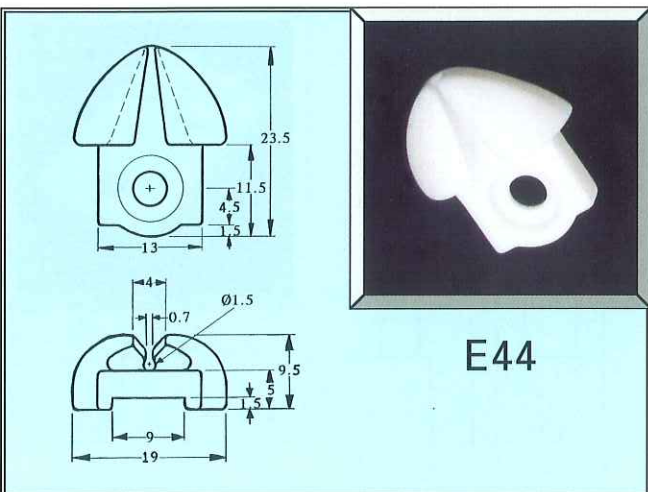
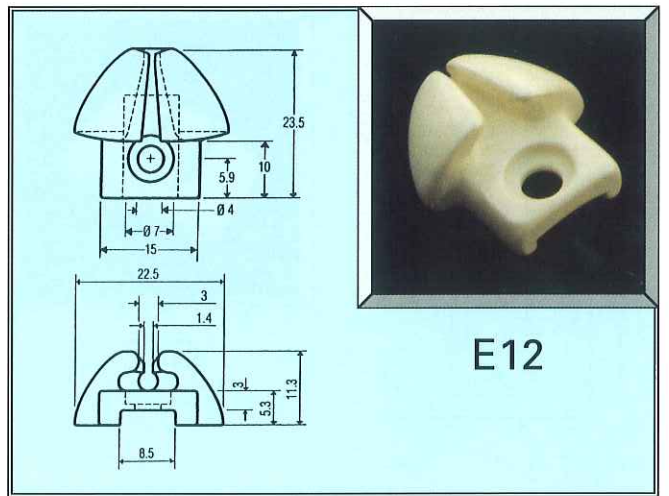
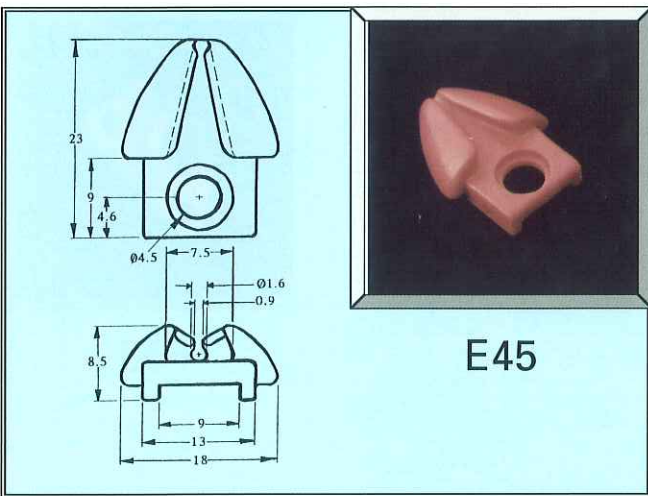
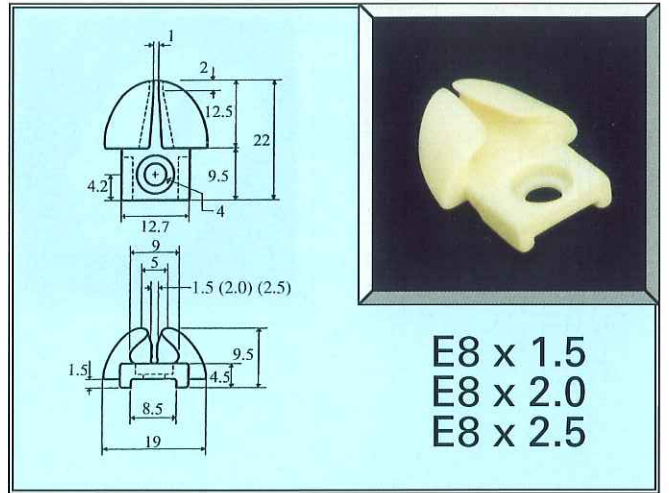
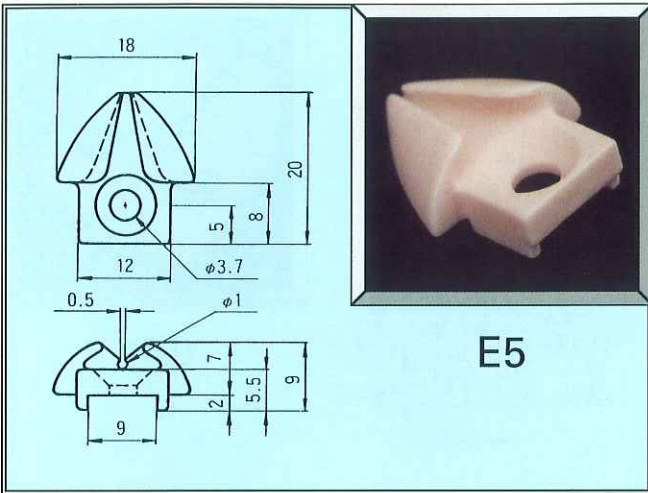
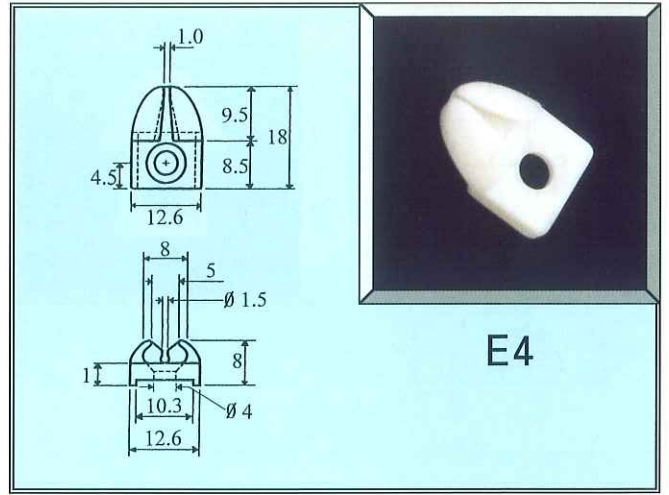
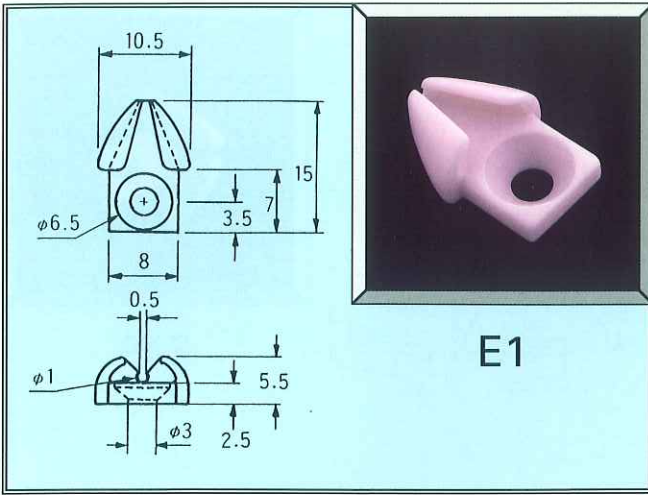
E34V x 1.3
E34V x 2.0
E34V x 4.0

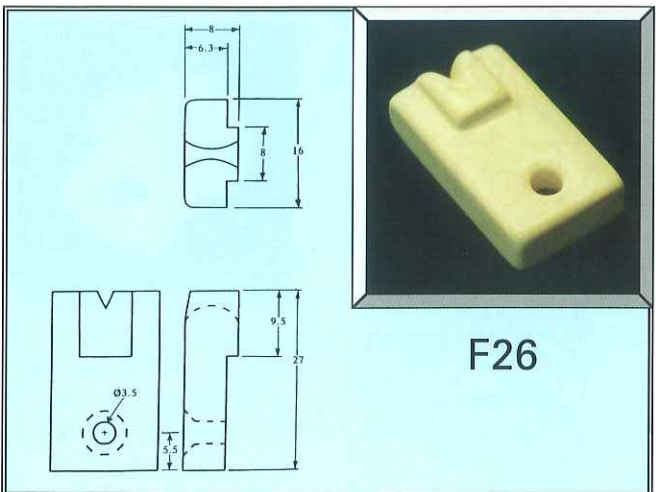
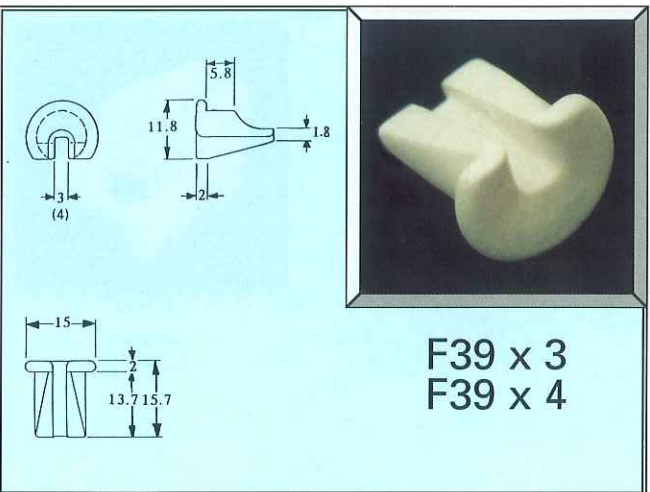
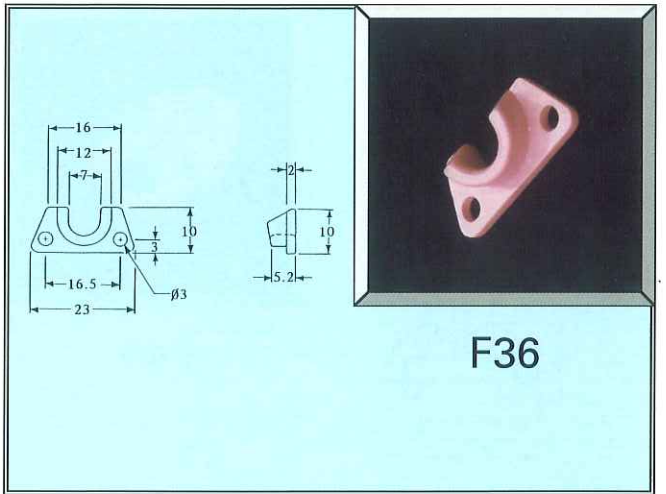
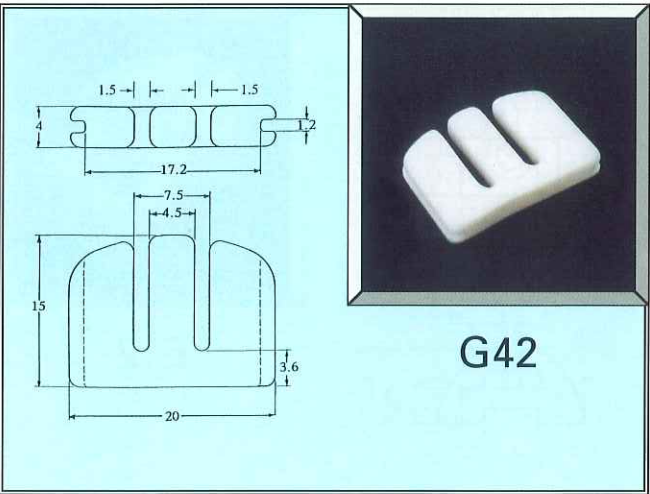
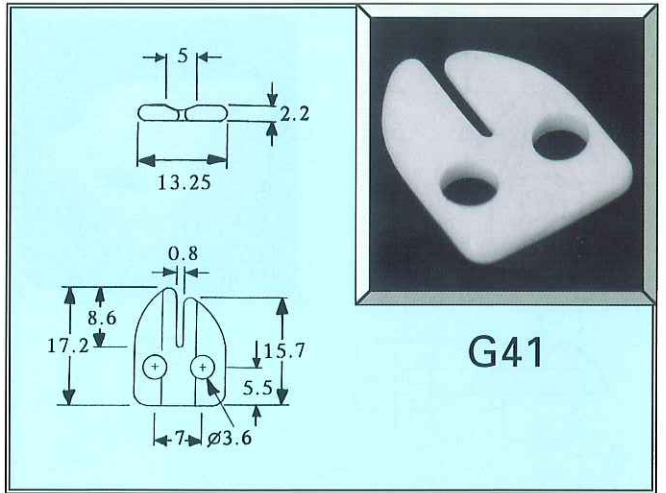
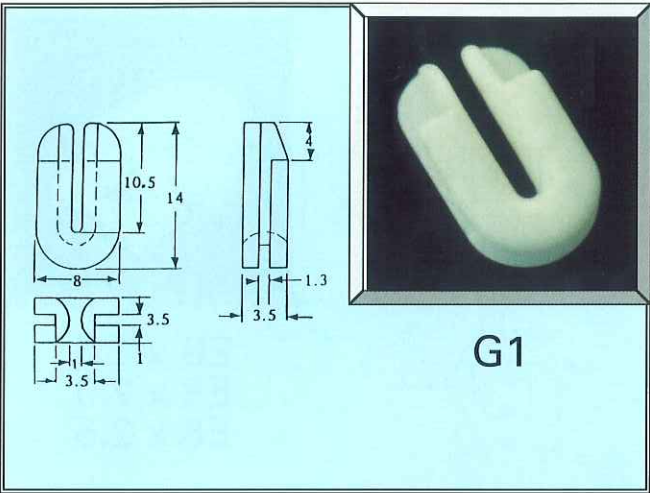
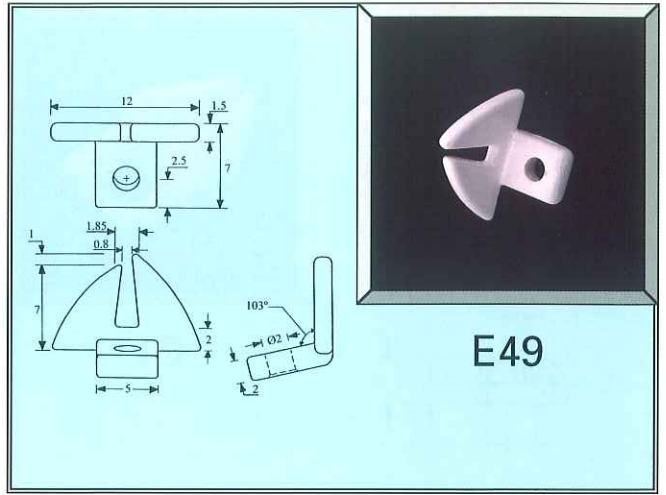
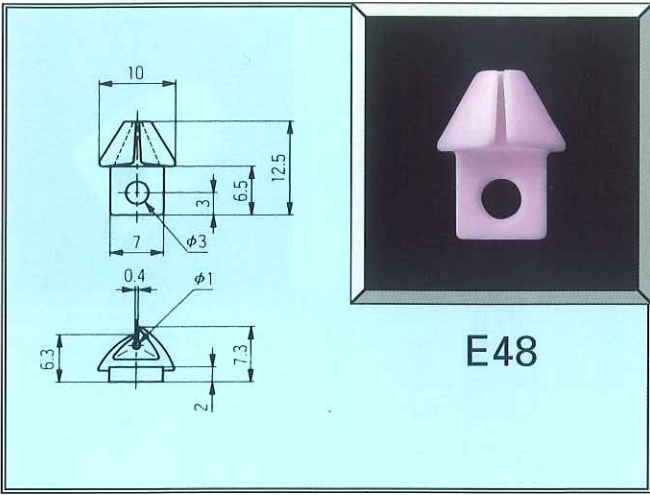
Technical drawing showing two views of a yellow component. The top view is a dome shape with a height of 24 and a base width of 15. The bottom view shows a cross-section with a diameter of 8.8 and a central hole of diameter 3.5. Other dimensions include 22.5, 10, 8, 1, 11.3, 5.3, and 2.

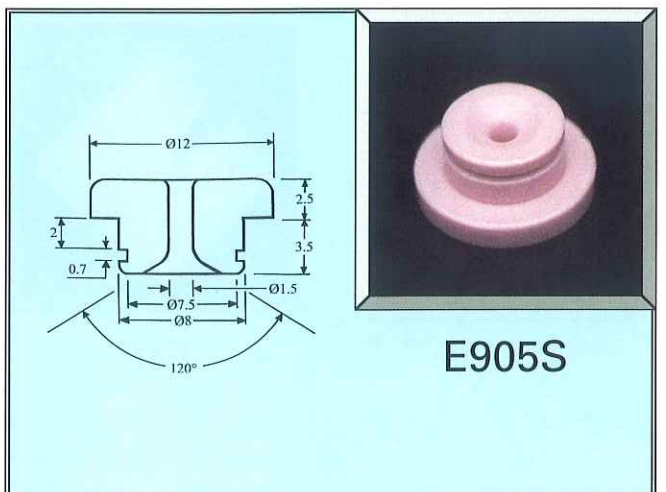
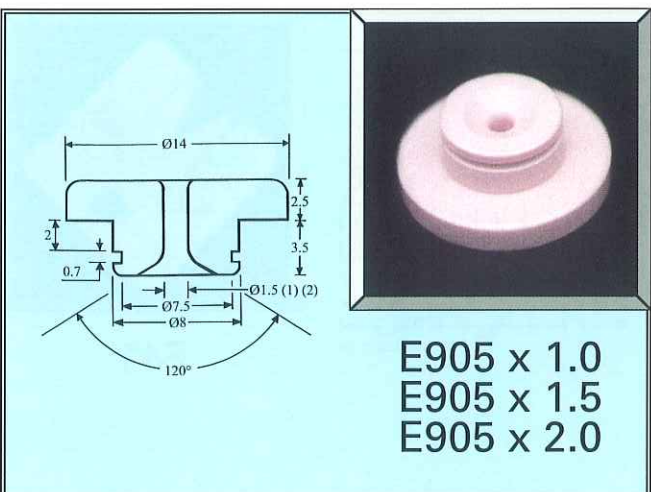
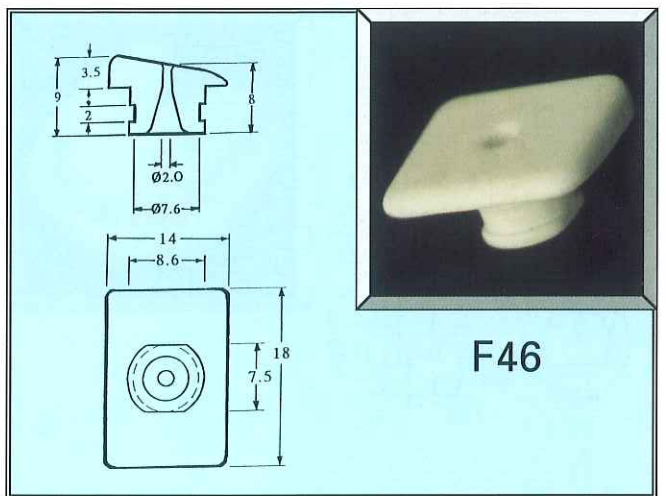
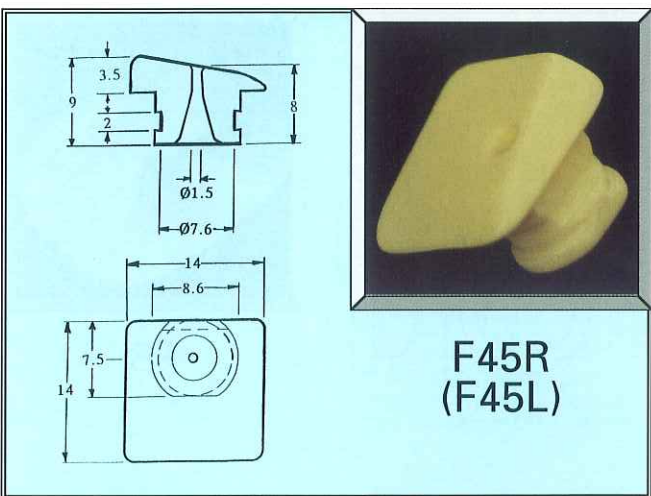
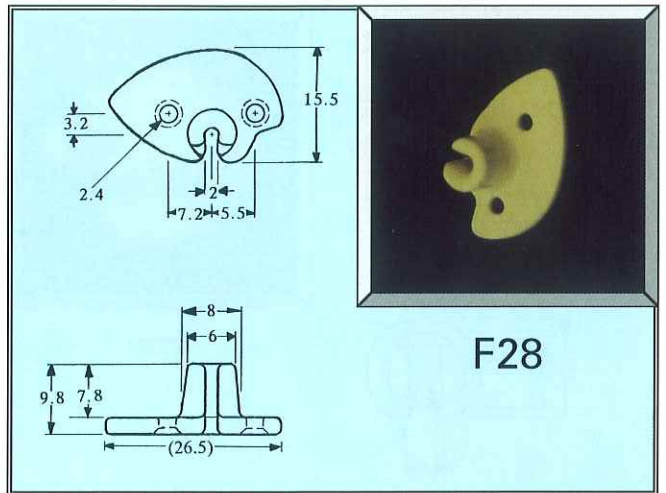
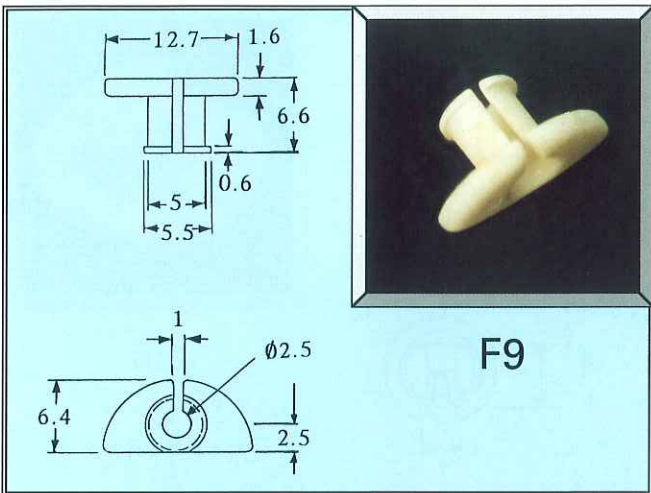
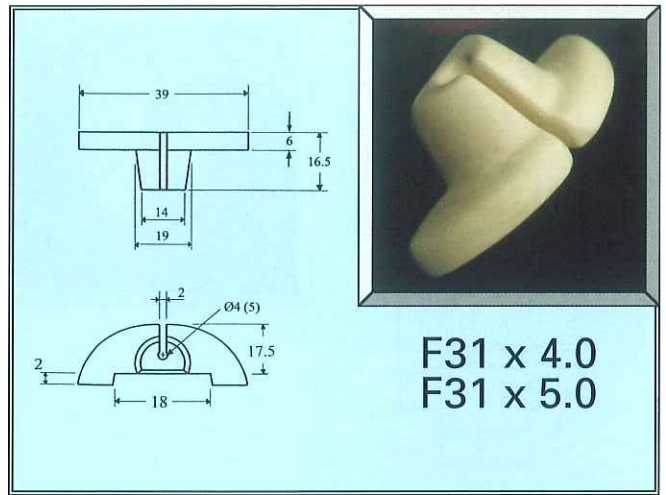
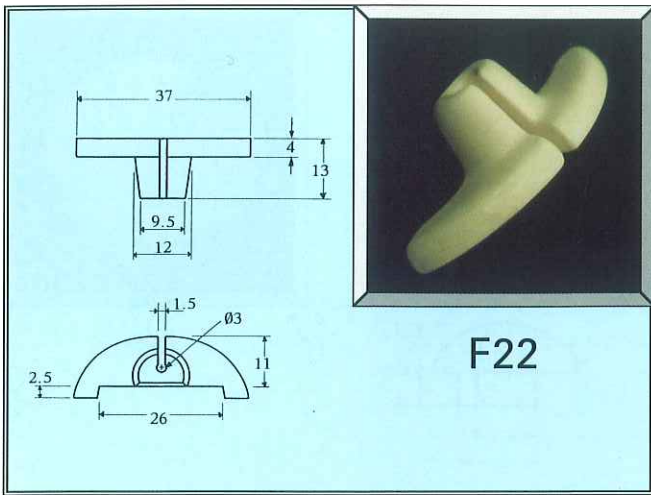
E36

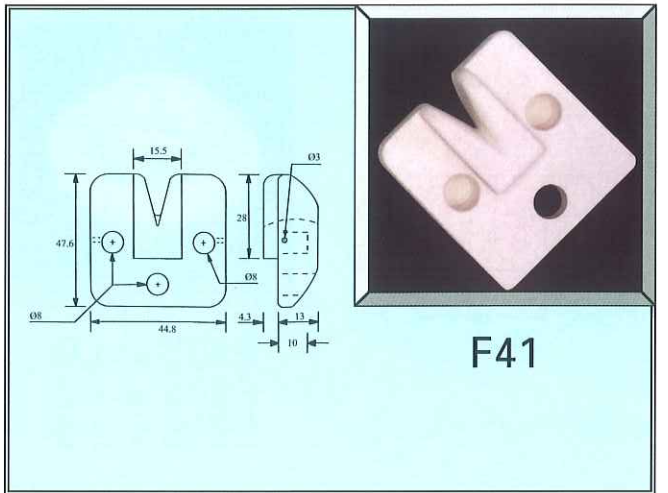
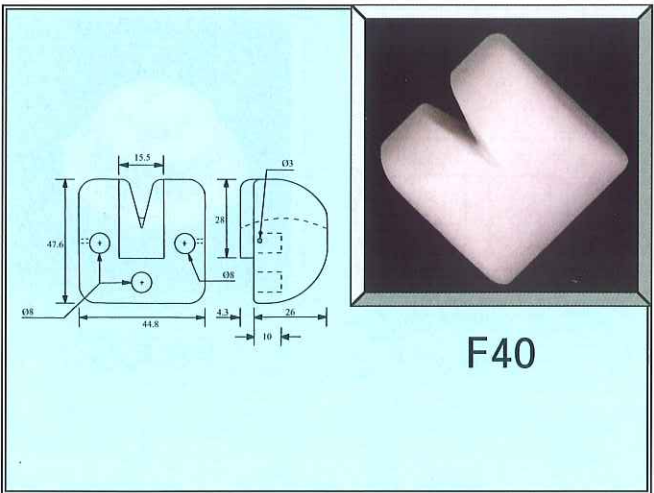
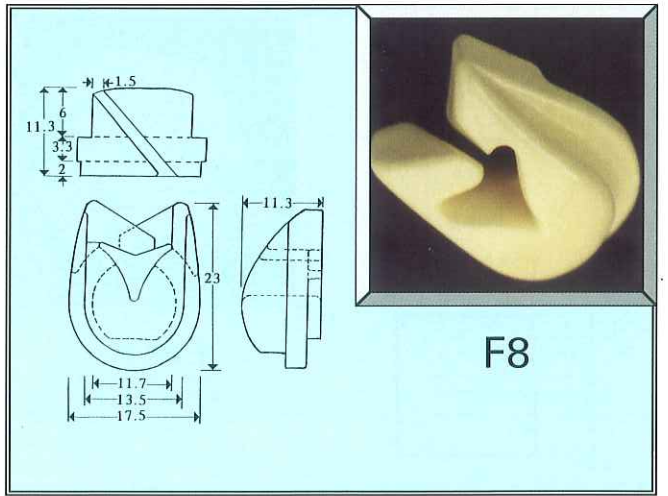
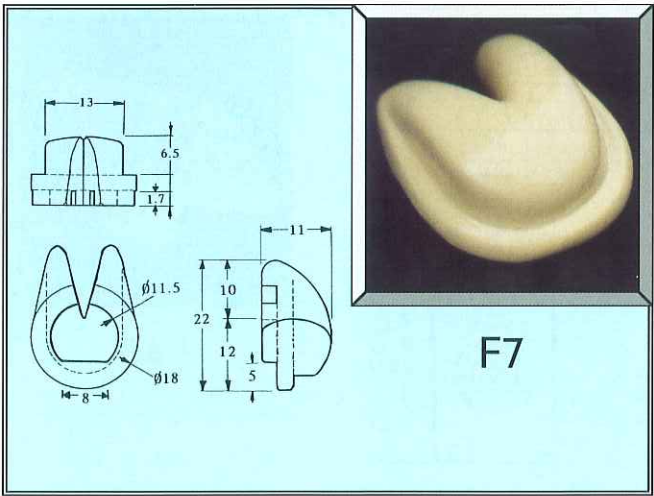
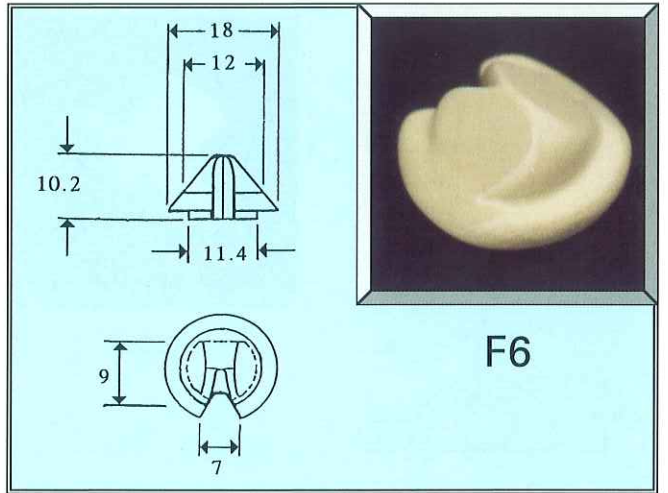
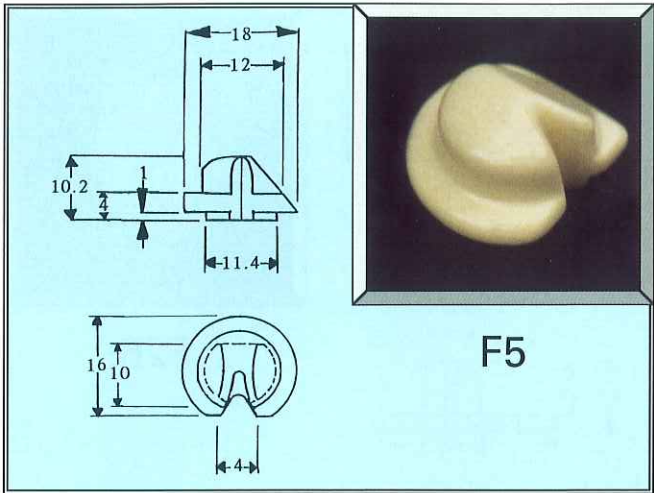
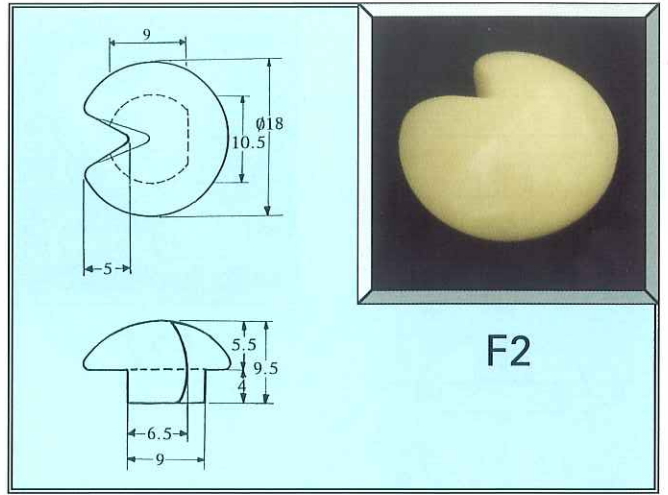
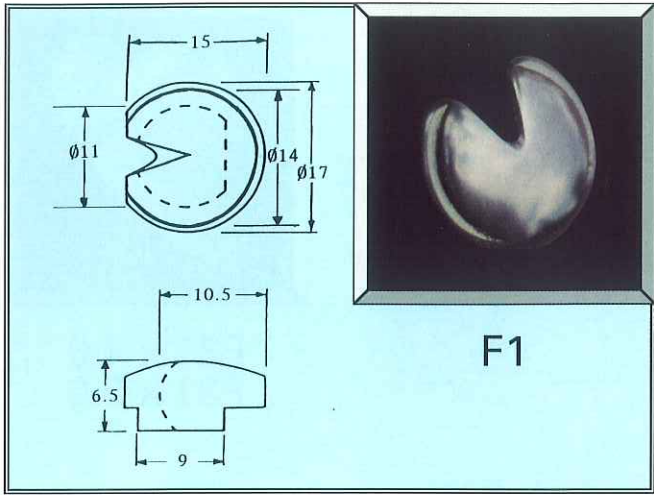
Technical drawing showing two views of a white component. The top view is a dome shape with a height of 12 and a base width of 14.8. The bottom view shows a cross-section with a diameter of 13 and a central hole of diameter 1.3. Other dimensions include 5 and 10.

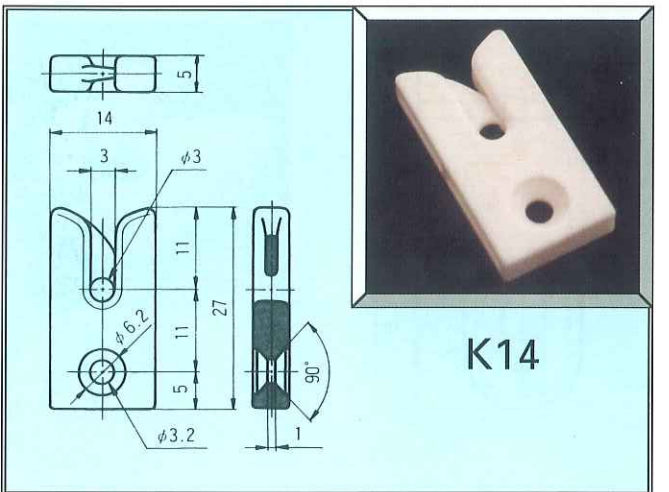
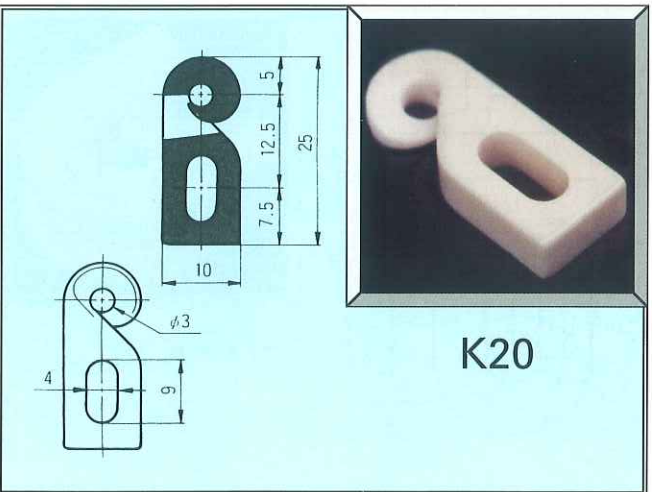
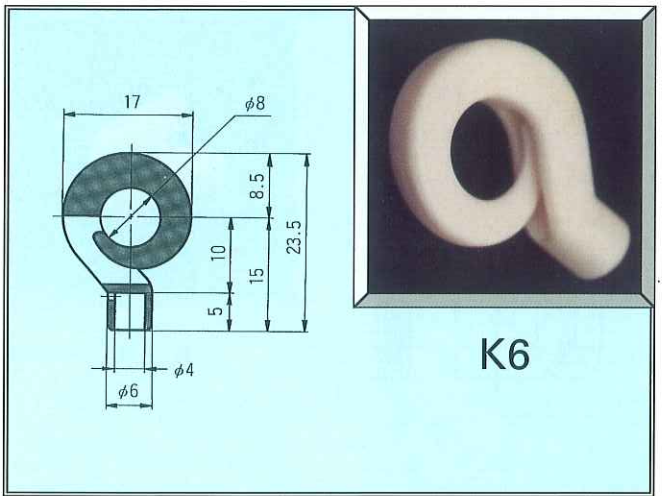
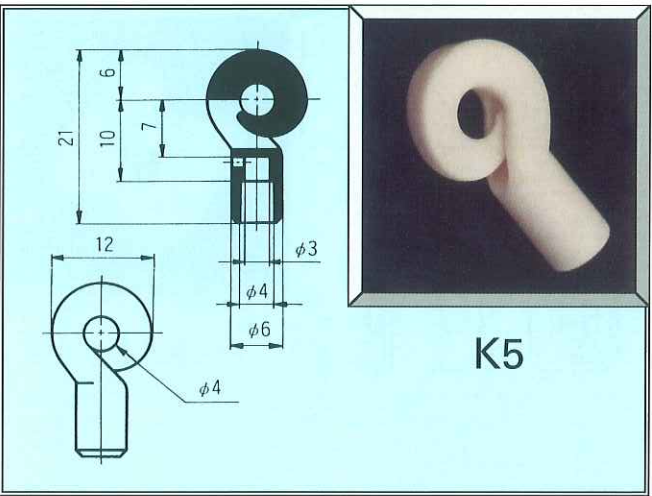
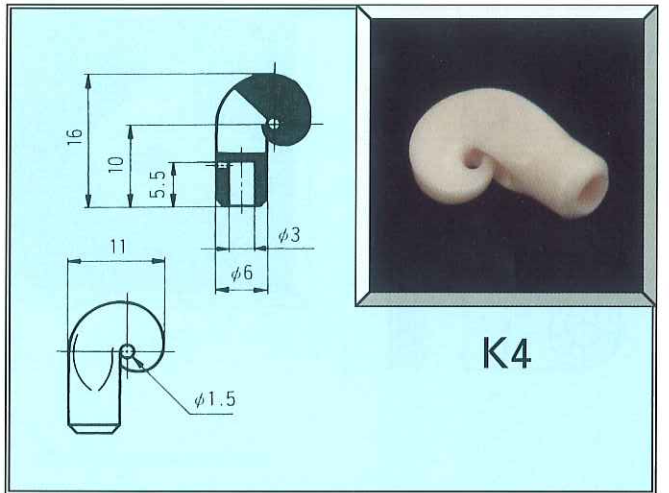
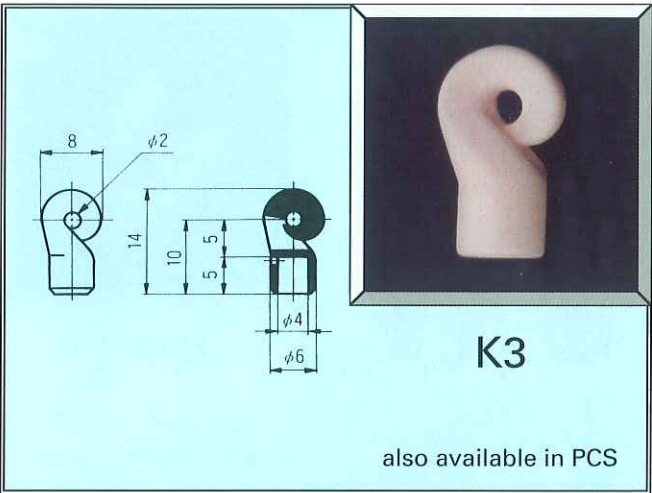
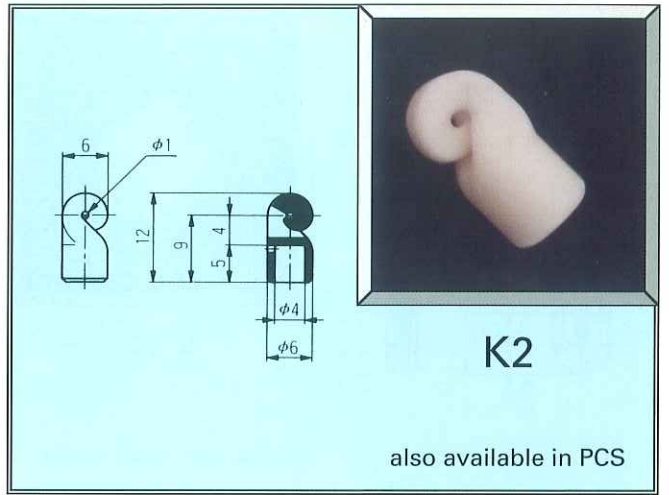
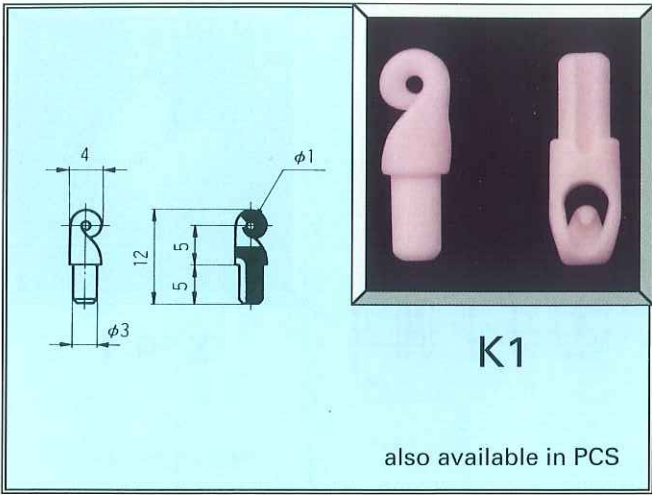
E37

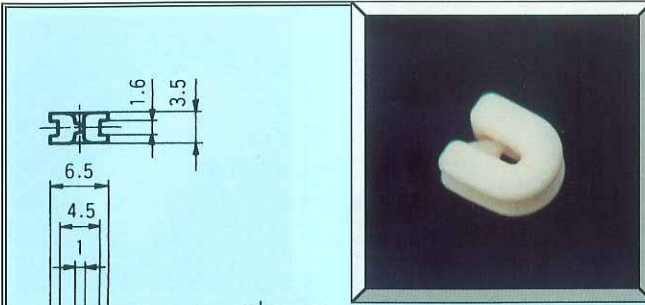








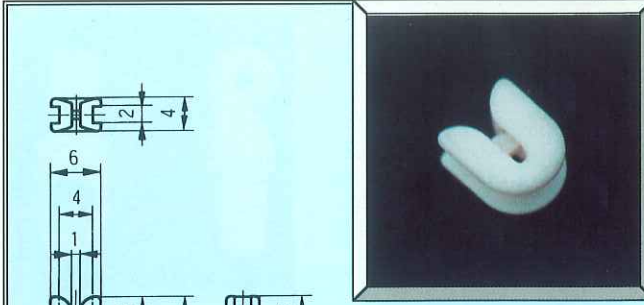




K19

also available in PCS

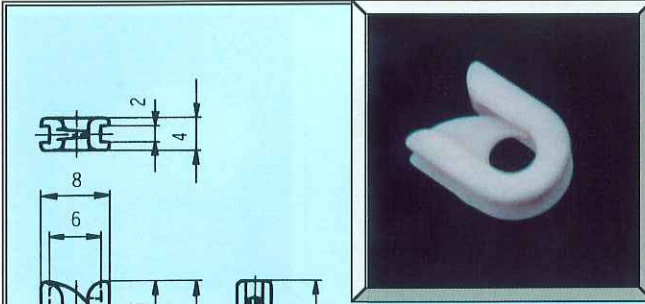
Technical drawing showing dimensions: 1.6, 3.5, 6.5, 4.5, 1, 4, 7.25, 3.25, 6.25, 1.



K19-1

with separate hook

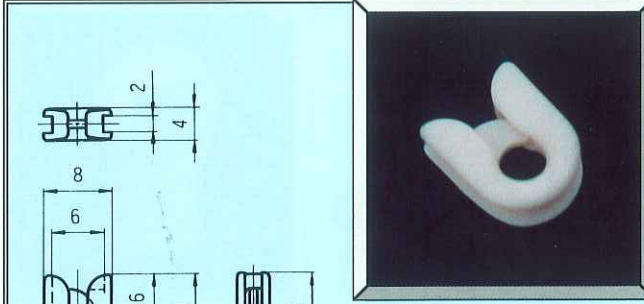
Technical drawing showing dimensions: 2, 4, 6, 4, 1, 3, 4, 7, 5.5, 1.5.



K18

also available in PCS

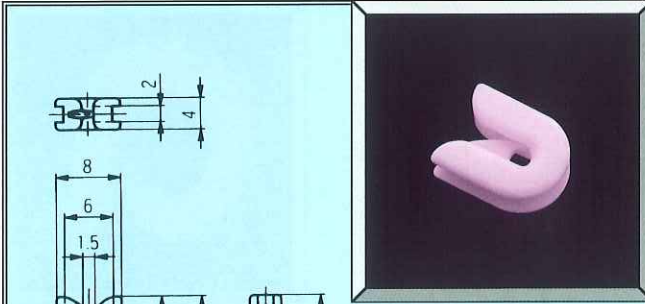
Technical drawing showing dimensions: 2, 4, 4, 8, 6, 4, 6, 10, 9, 1, $\phi 3$.



K18-1

with separate hook

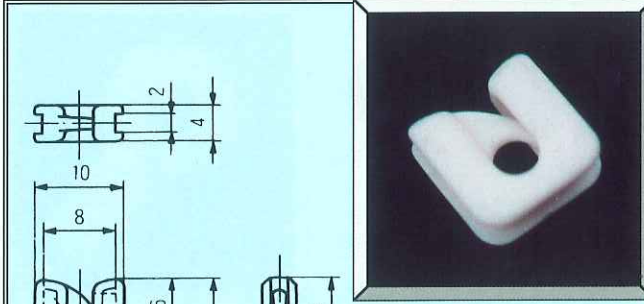
Technical drawing showing dimensions: 2, 4, 4, 8, 6, 4, 6, 10, 9, 1, $\phi 3$.



K33

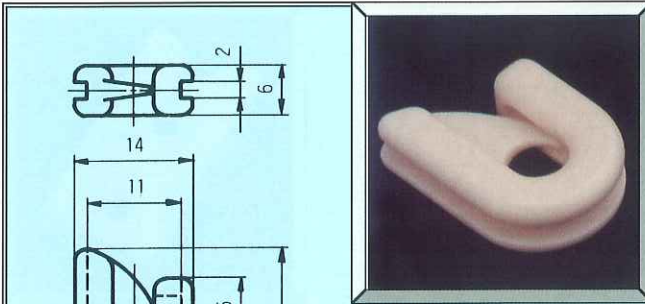
also available in PCS

Technical drawing showing dimensions: 2, 4, 4, 8, 6, 1.5, 4, 6, 10, 8, 2, $\phi 1.5$.



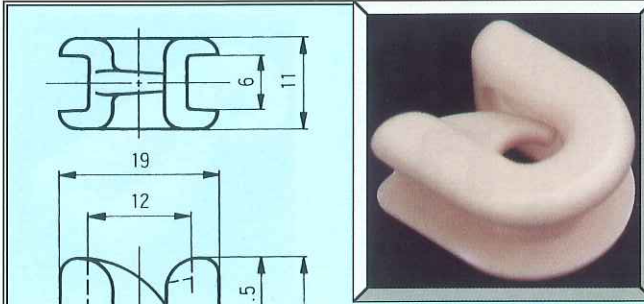
K17

Technical drawing showing dimensions: 2, 4, 4, 10, 8, 6, 4, 6, 10, 9, 1, $\phi 3$.



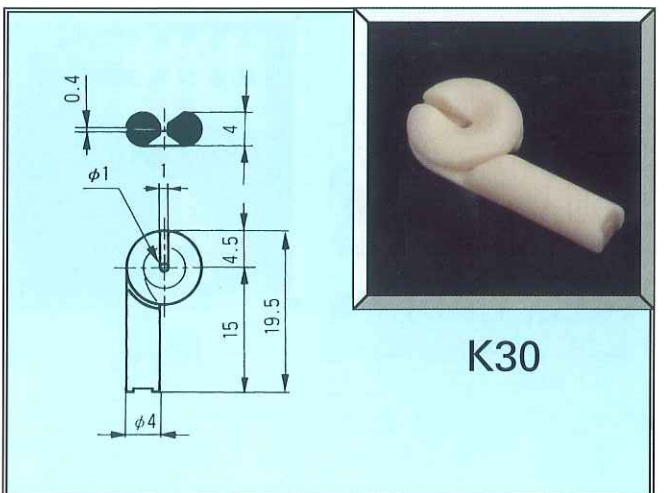
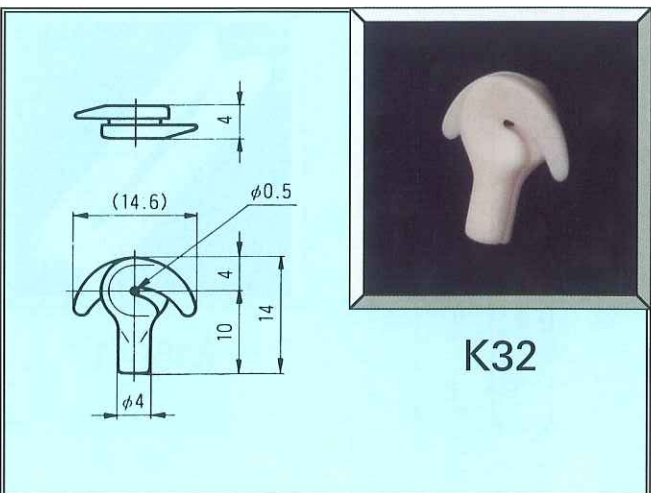
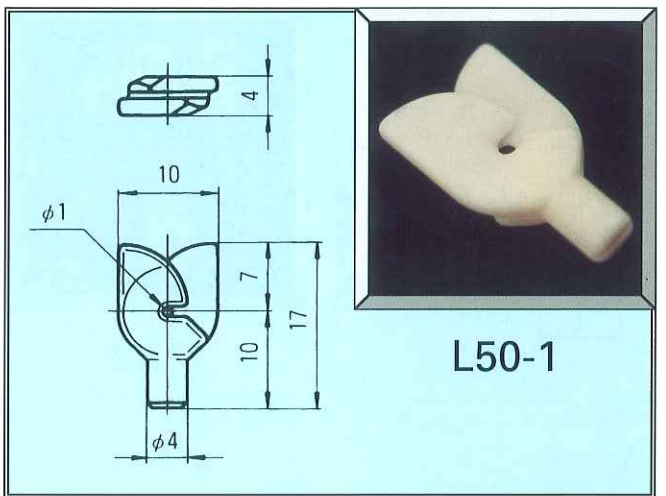
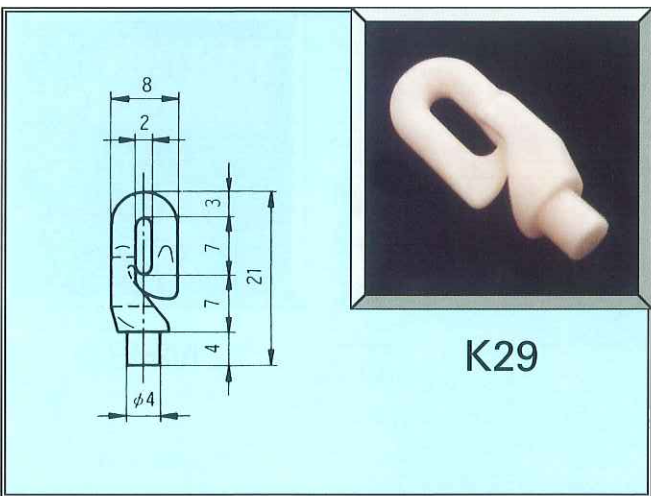
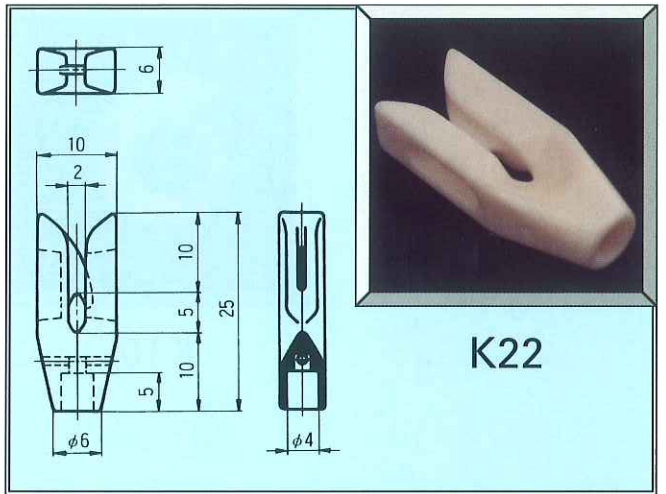
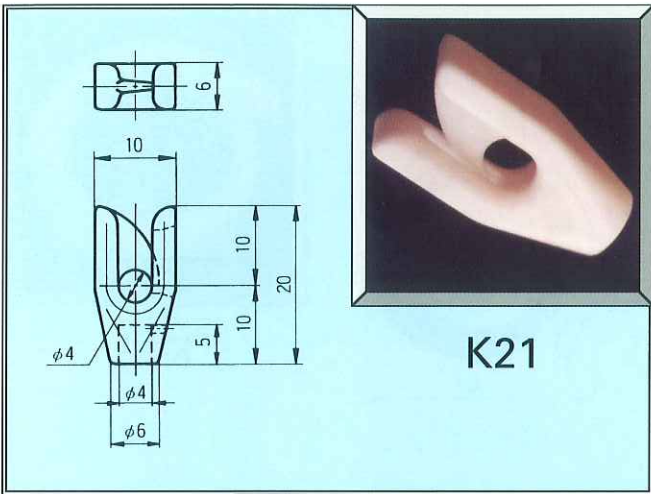
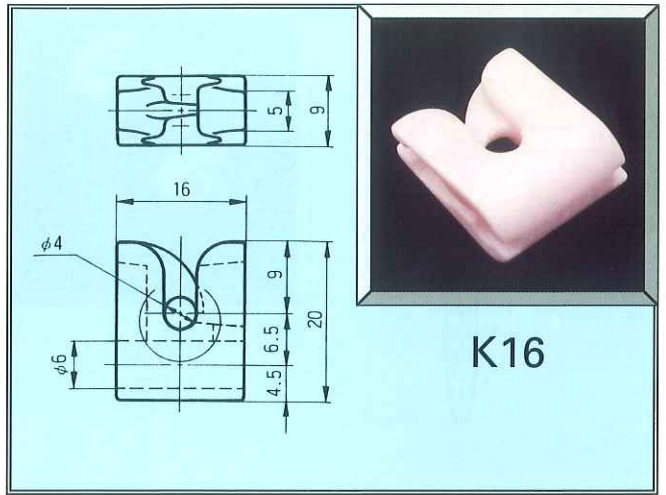
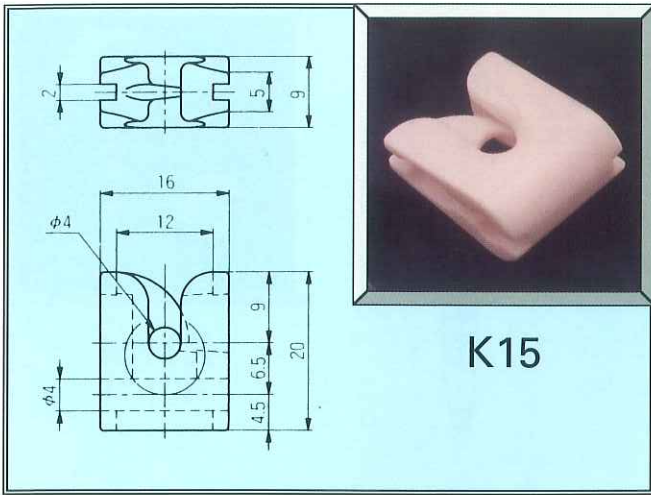
K24

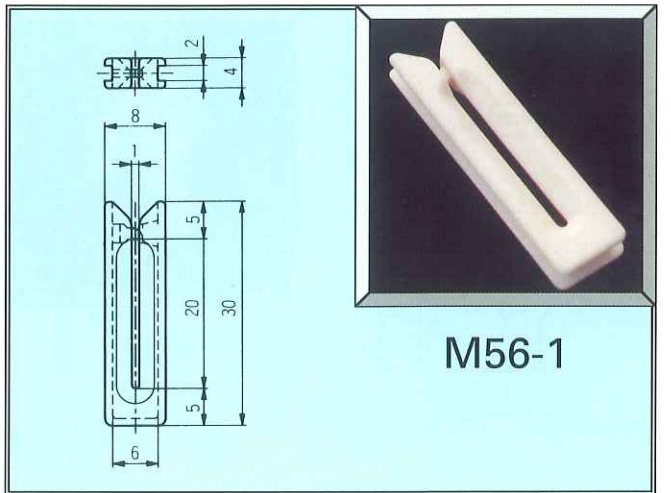
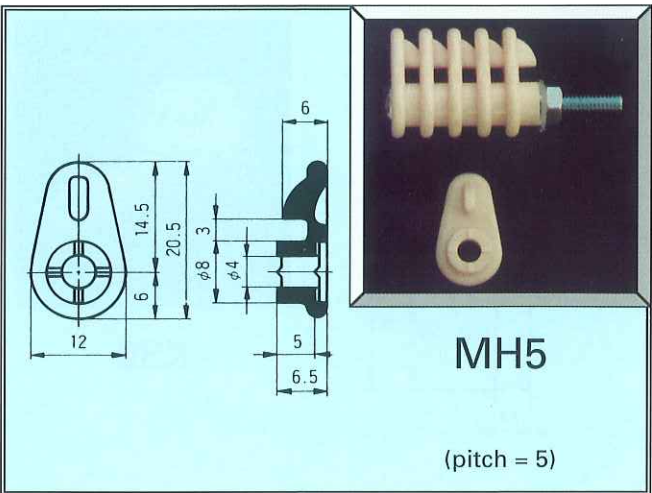
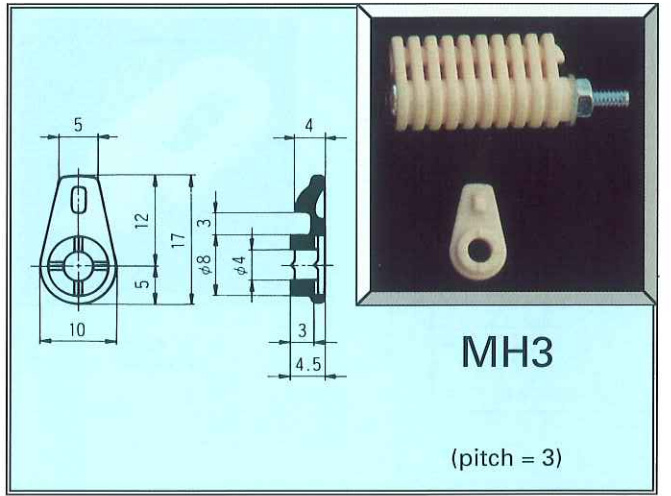
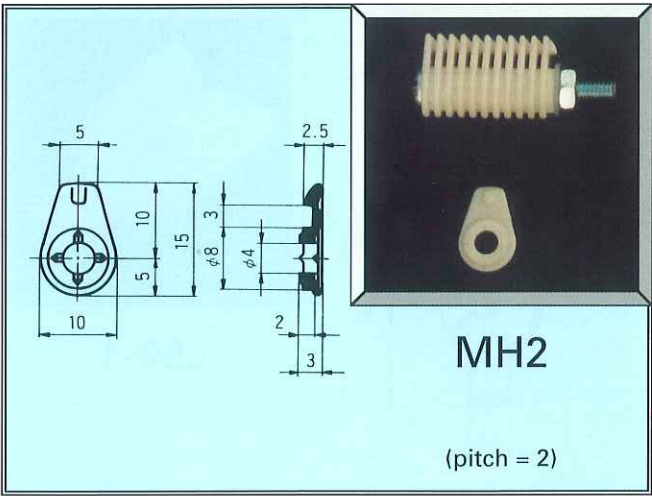
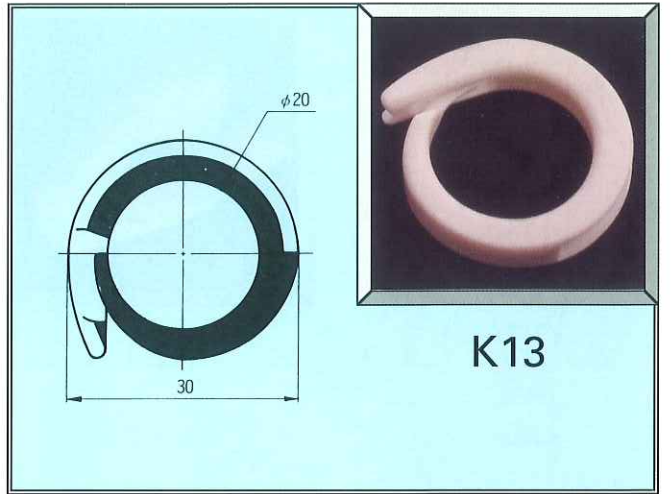
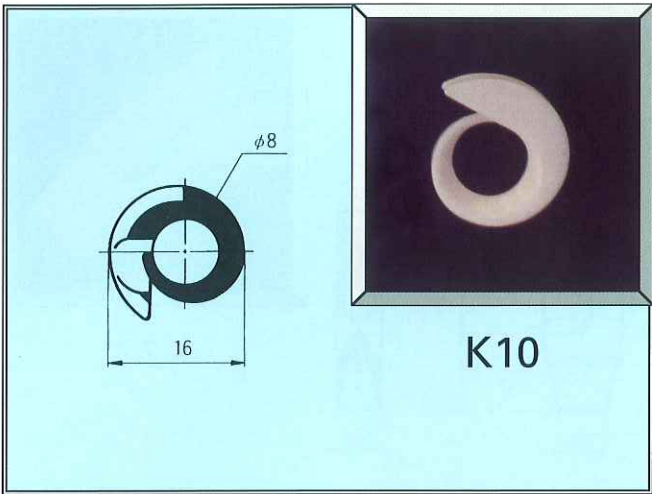
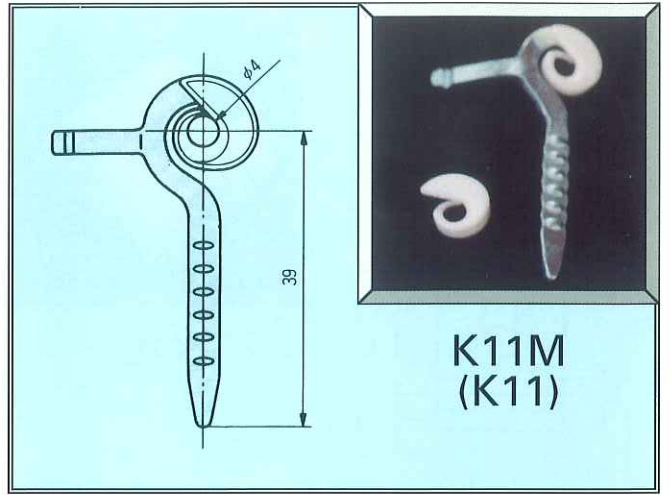
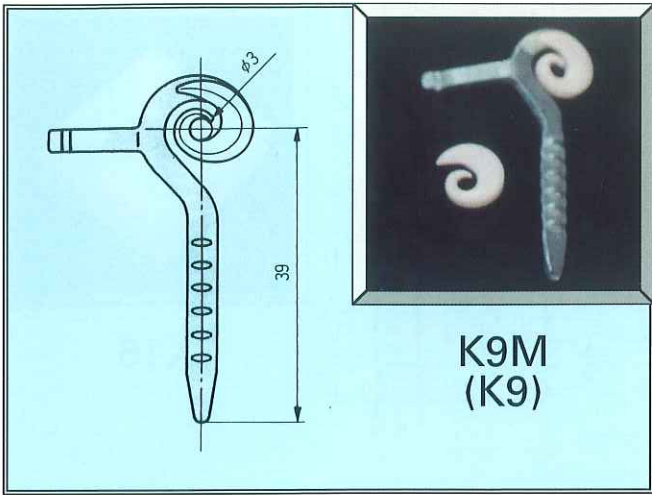
Technical drawing showing dimensions: 2, 6, 14, 11, 8.5, 19, 7, $\phi 5$.

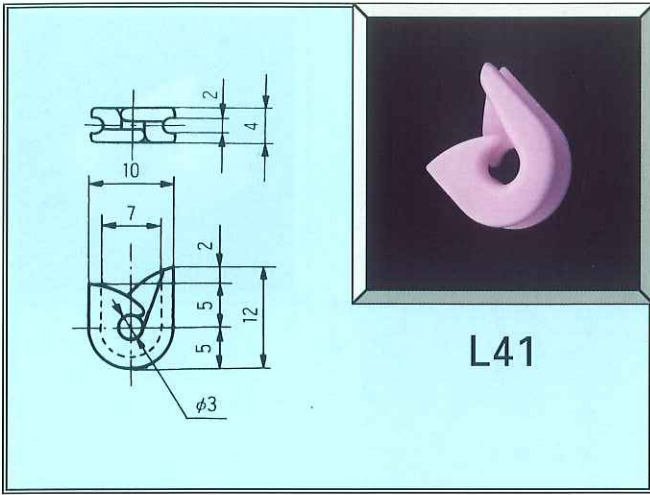


K25

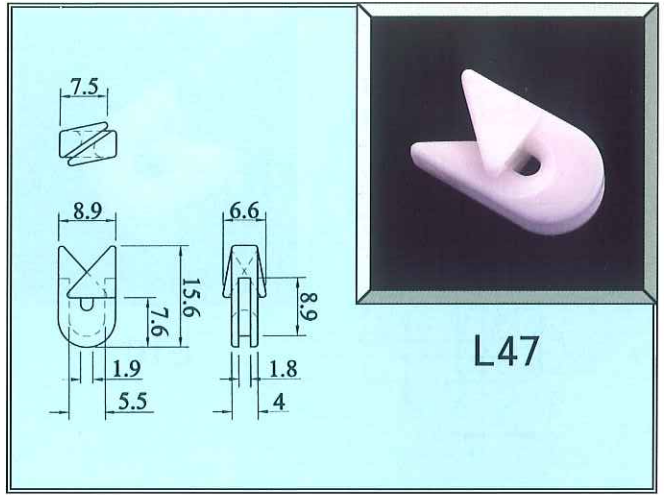
Technical drawing showing dimensions: 6, 11, 19, 12, 11.5, 21, 9.5, $\phi 6$.



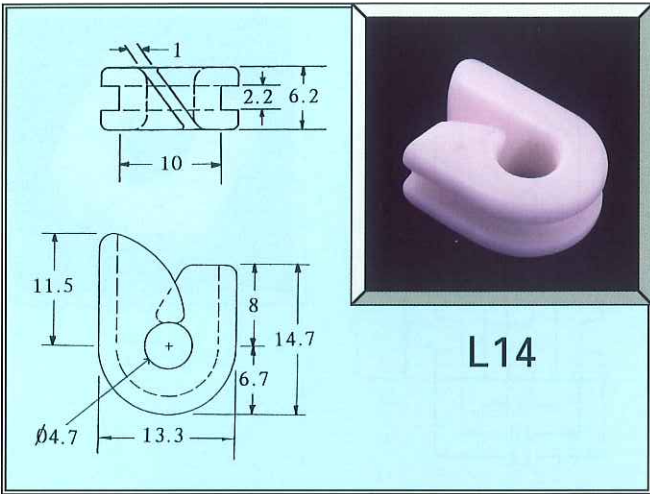




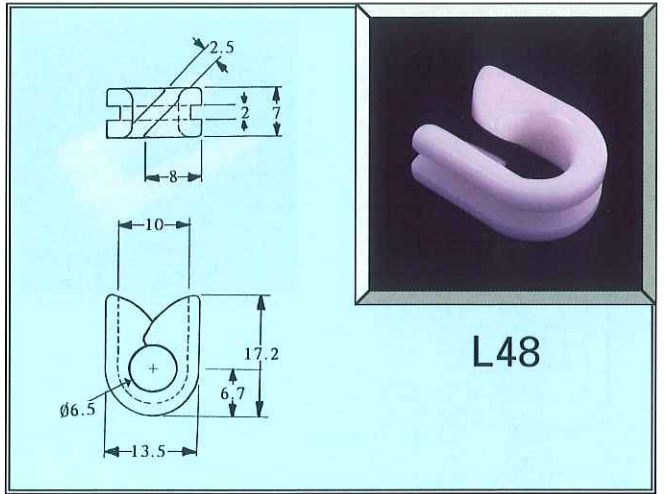
L41



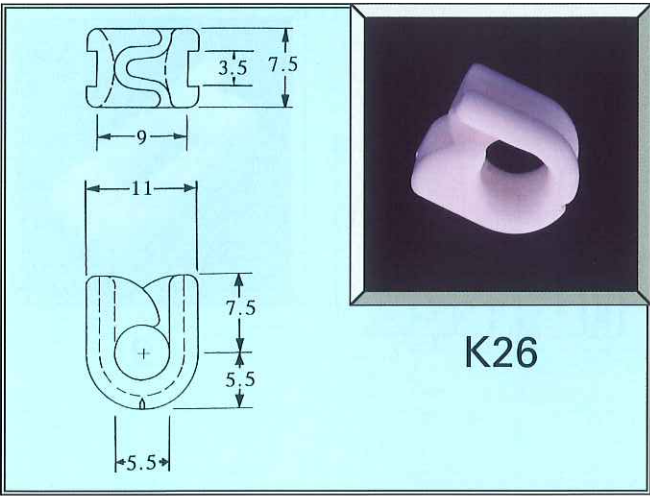
L47



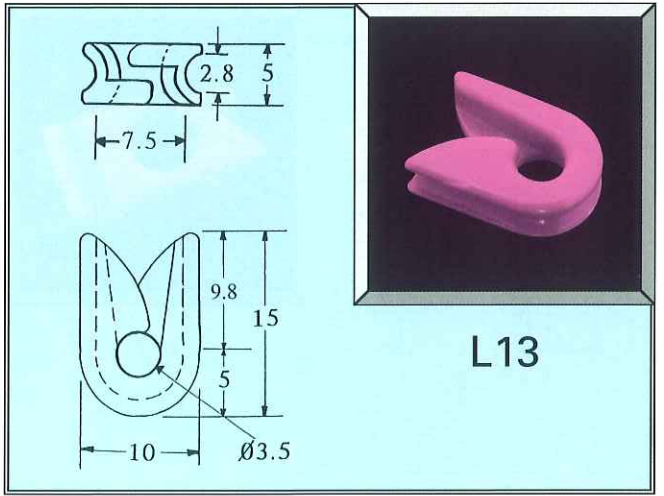
L14



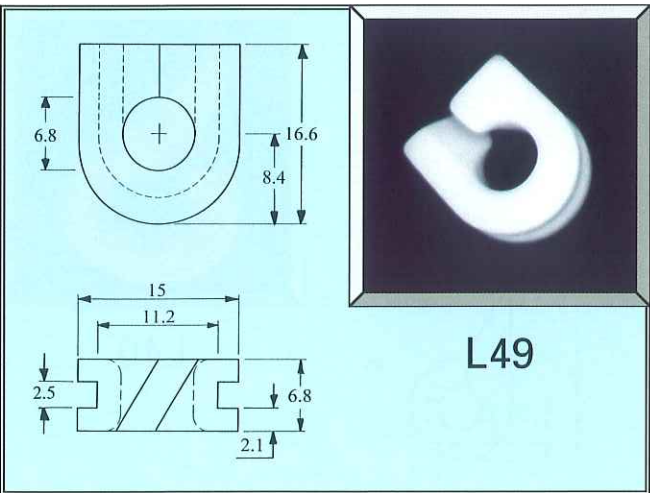
L48



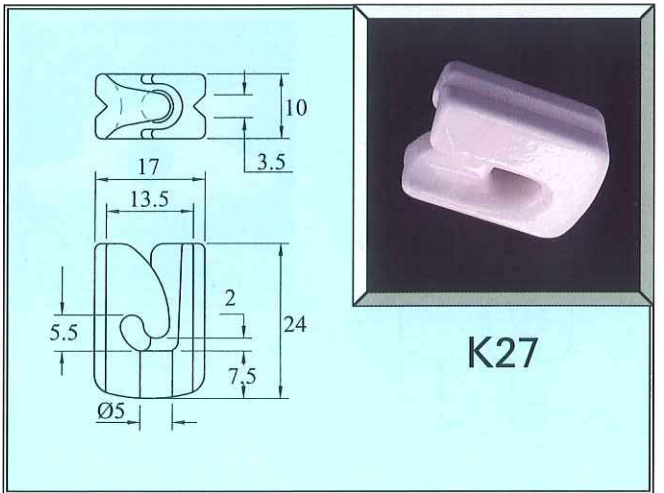
K26



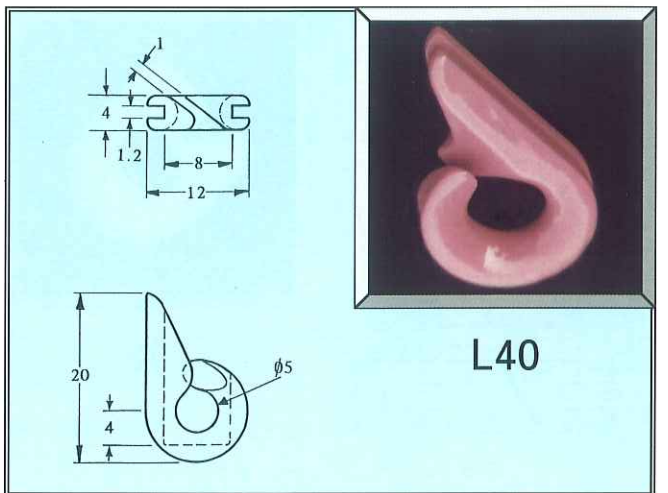
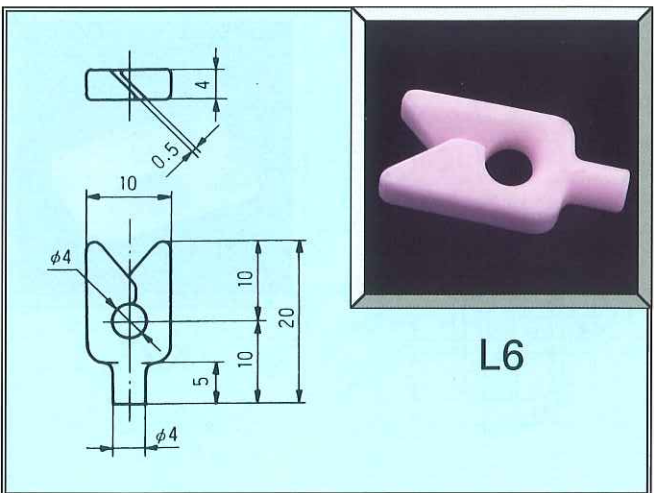
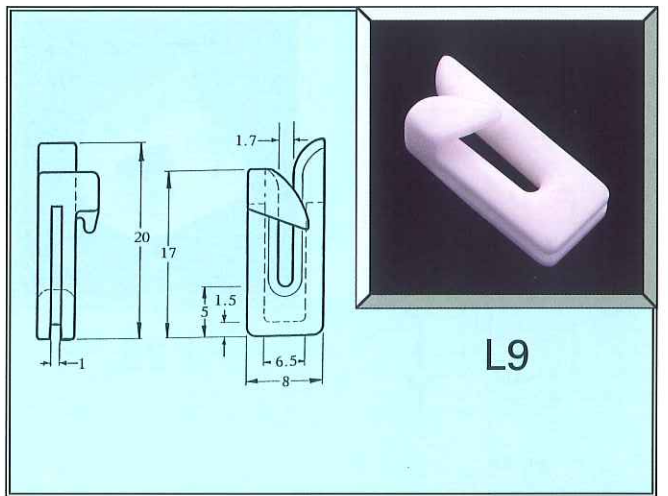
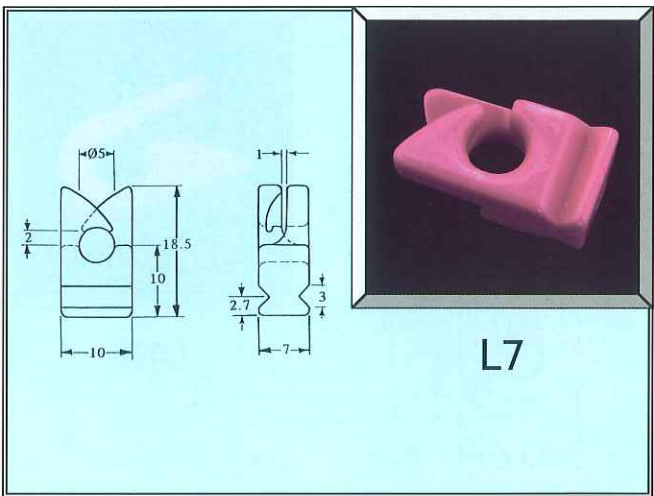
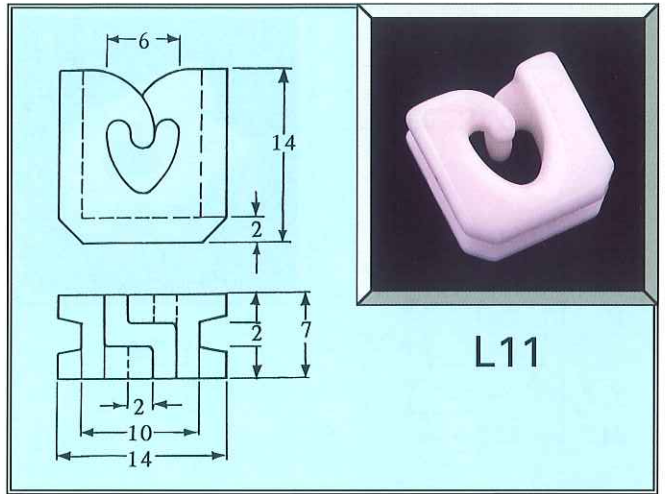
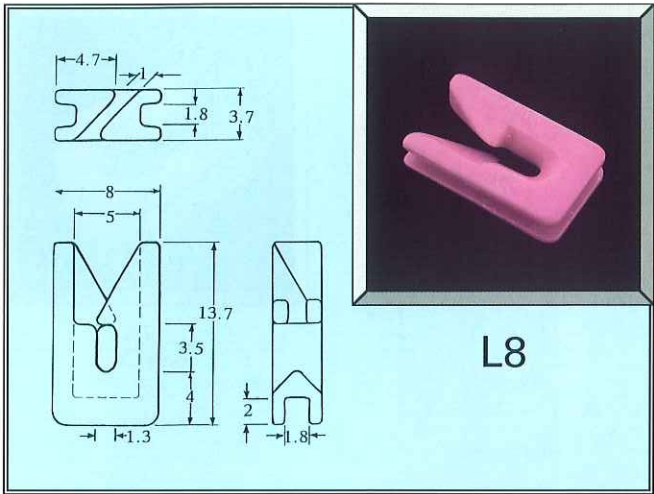
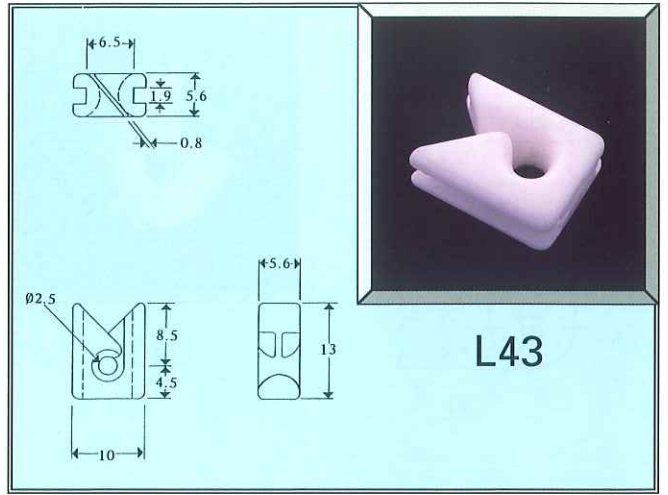
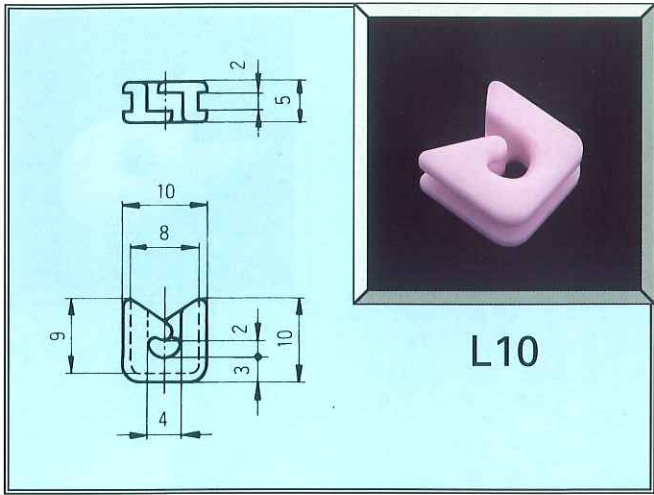
L13

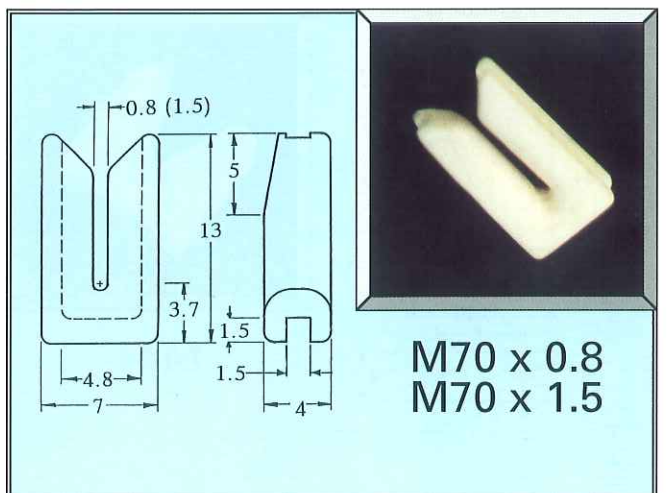
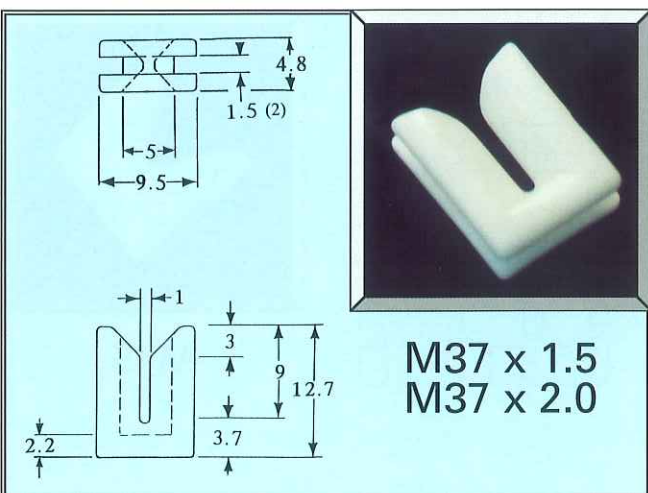
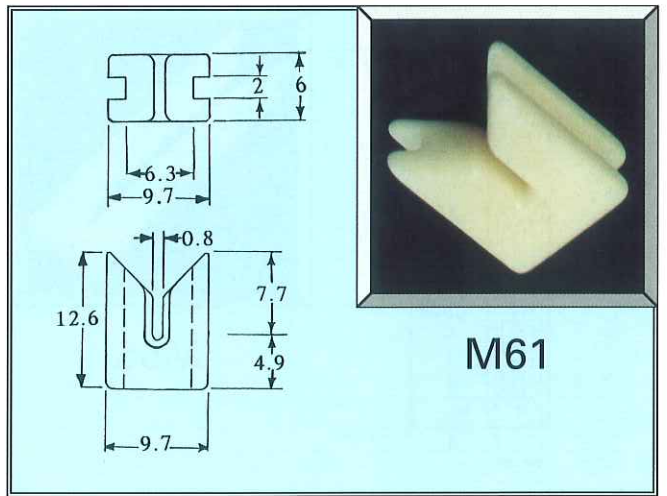
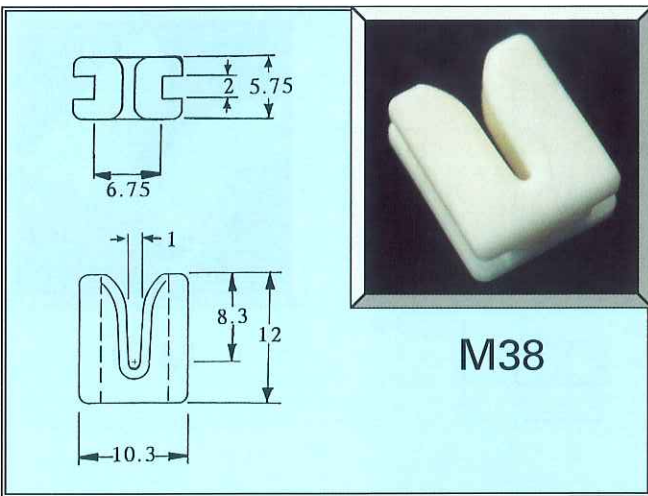
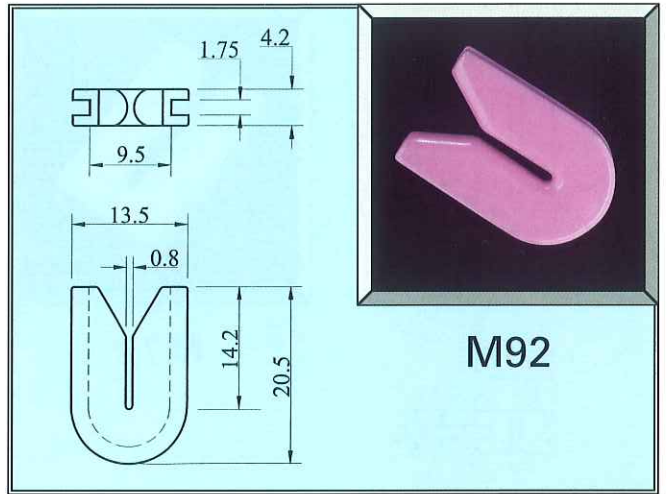
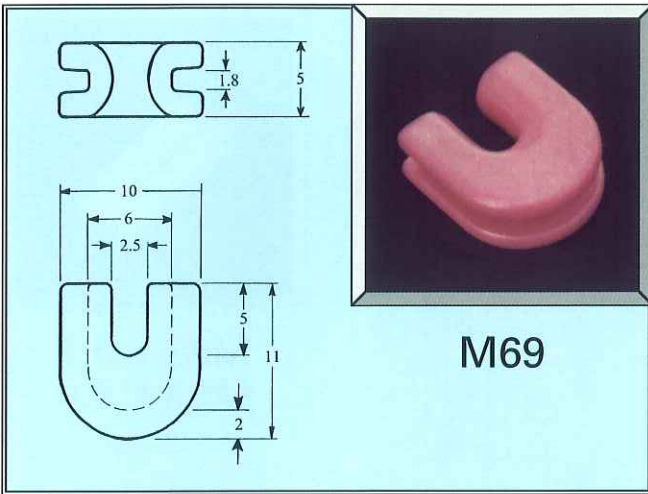
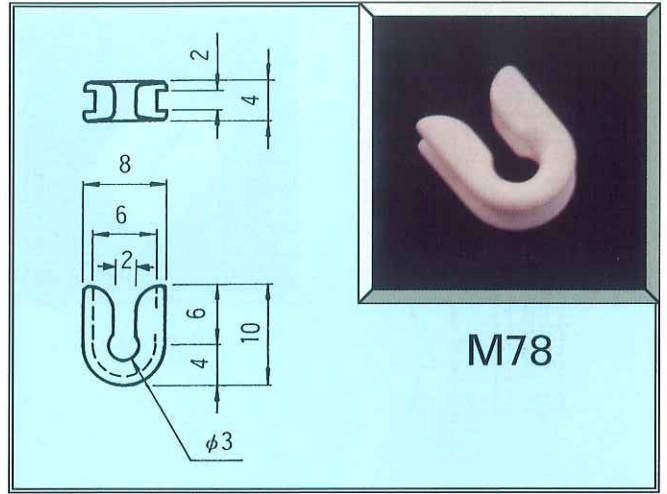
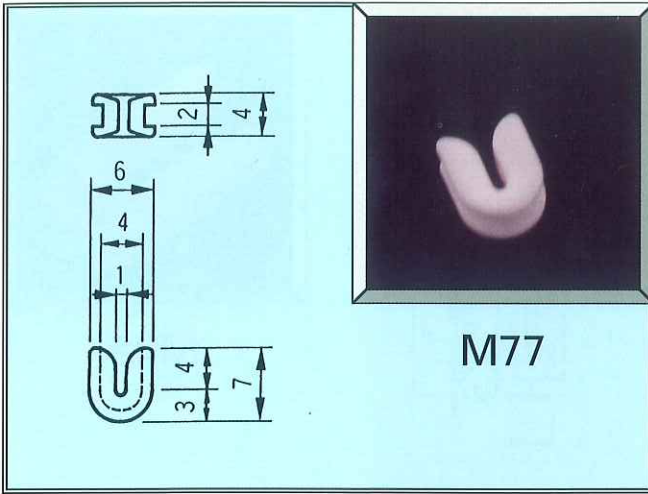


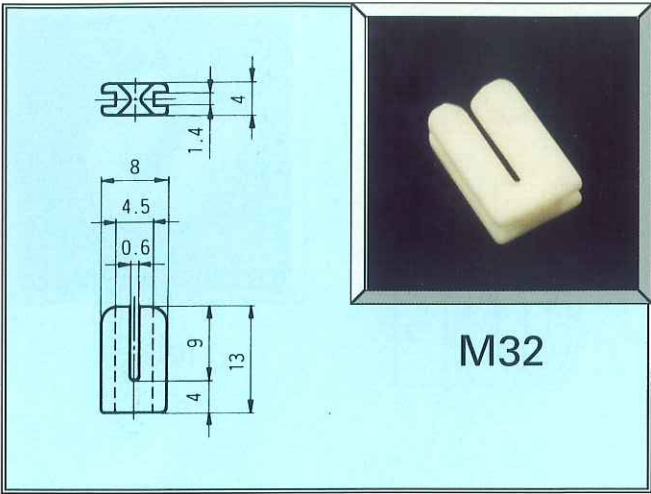
L49



K27

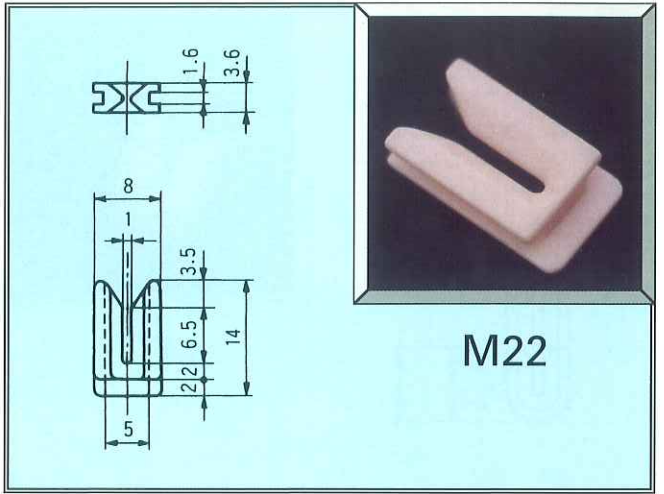






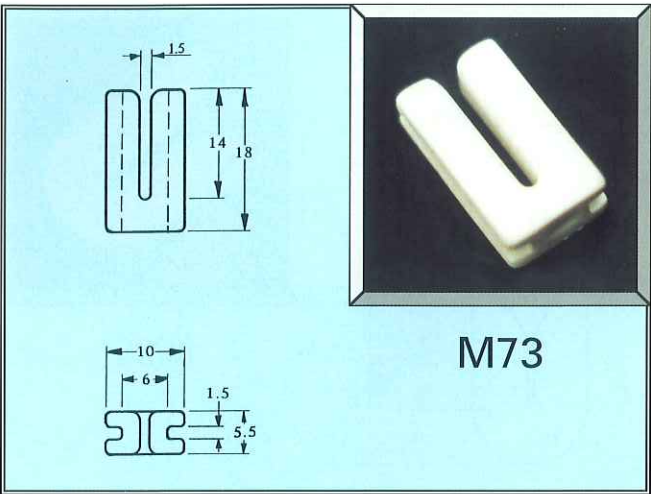
Technical drawing of M32 fastener showing dimensions: 8, 4.5, 0.6, 1.4, 4, 9, 13, 4. Photograph shows a yellow U-shaped fastener.

M32



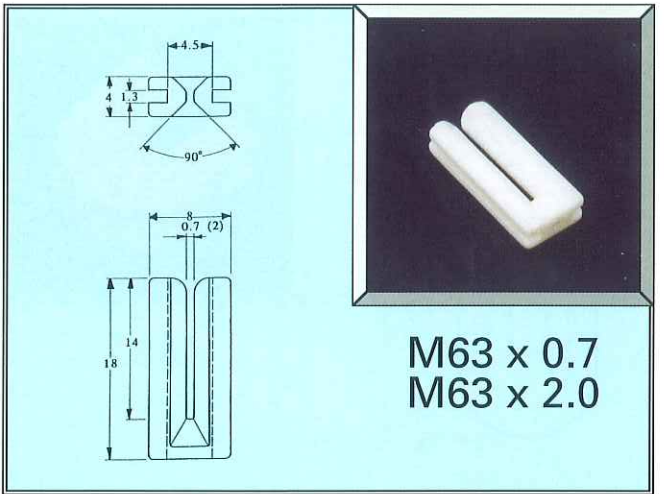
Technical drawing of M22 fastener showing dimensions: 1.6, 3.6, 8, 1, 3.5, 6.5, 14, 2.2, 5. Photograph shows a pink U-shaped fastener.

M22



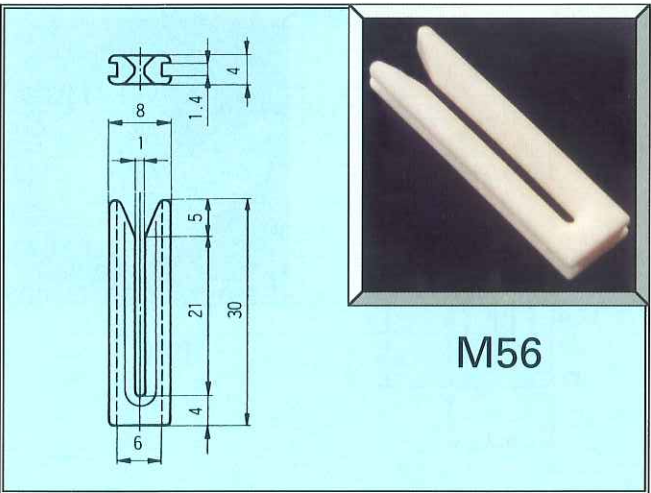
Technical drawing of M73 fastener showing dimensions: 1.5, 14, 18, 10, 6, 1.5, 5.5. Photograph shows a yellow U-shaped fastener.

M73



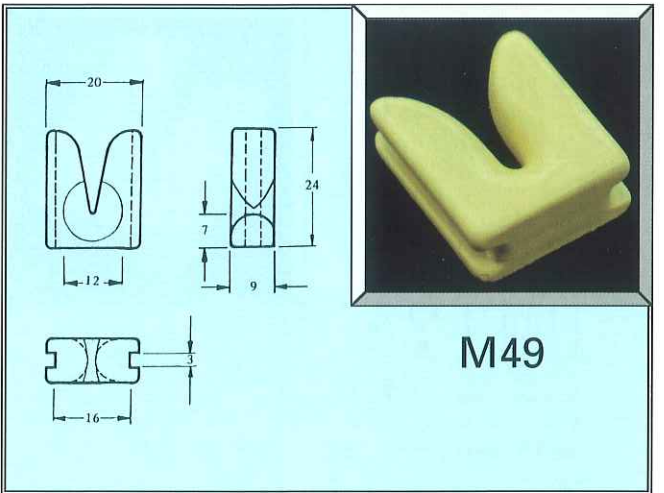
Technical drawing of M63 x 0.7 and M63 x 2.0 fasteners showing dimensions: 4.5, 4, 1.3, 90°, 0.7 (2), 14, 18. Photograph shows a white U-shaped fastener.

M63 x 0.7
M63 x 2.0



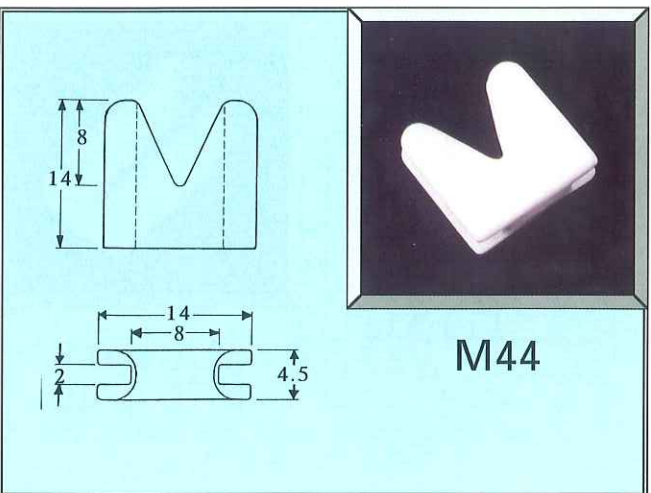
Technical drawing of M56 fastener showing dimensions: 8, 1.4, 4, 1, 5, 21, 30, 6, 4. Photograph shows a yellow U-shaped fastener.

M56



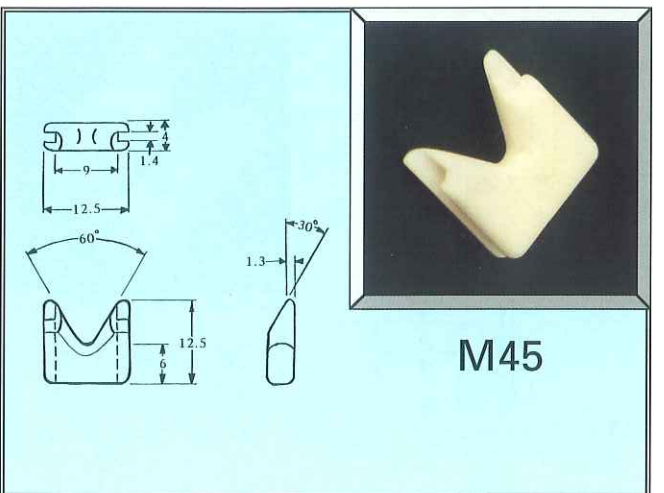
Technical drawing of M49 fastener showing dimensions: 20, 12, 24, 7, 9, 16, 5. Photograph shows a yellow L-shaped fastener.

M49



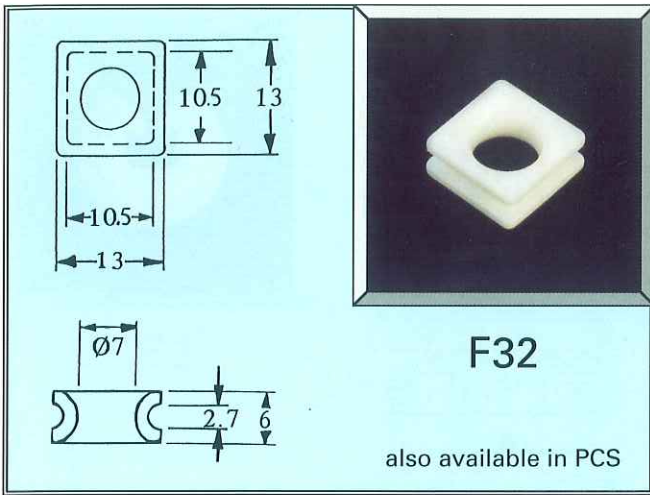
Technical drawing of M44 fastener showing dimensions: 8, 14, 14, 8, 2, 4.5. Photograph shows a white L-shaped fastener.

M44



Technical drawing of M45 fastener showing dimensions: 12.5, 9, 1.4, 60°, 12.5, 6, 30°, 1.3. Photograph shows a yellow L-shaped fastener.

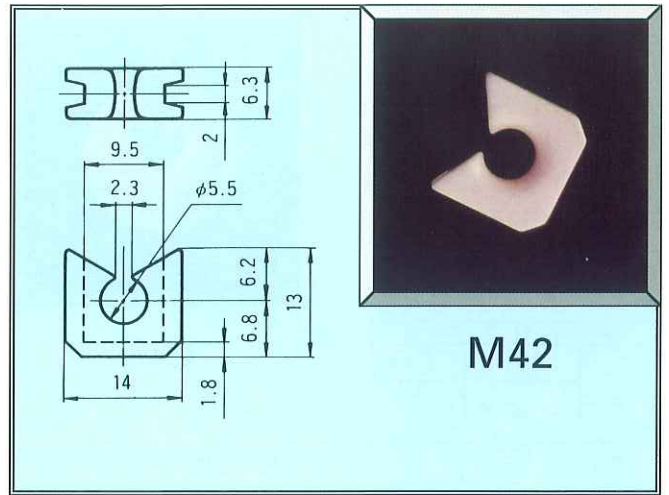
M45



Technical drawing of F32 component showing top, side, and cross-sectional views. Dimensions include 10.5, 13, 10.5, 13, 7, 2.7, and 6. A photograph of the white component is shown to the right.

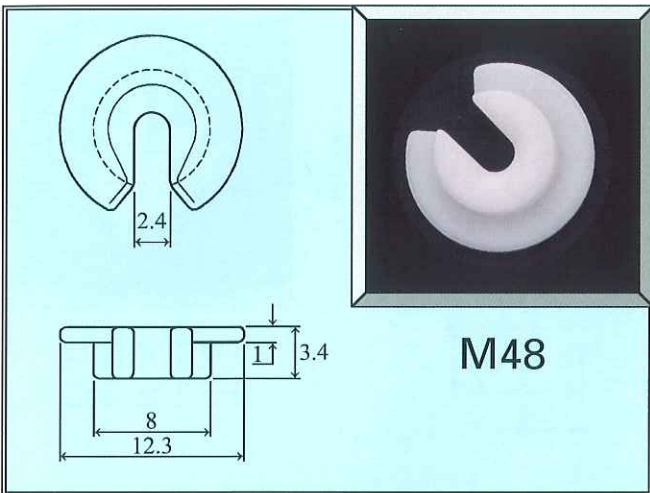
F32

also available in PCS



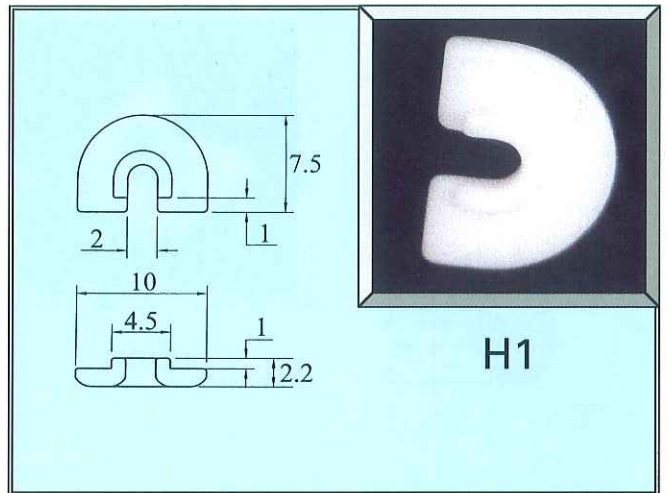
Technical drawing of M42 component showing top, side, and cross-sectional views. Dimensions include 6.3, 9.5, 2, 2.3, 5.5, 6.2, 13, 14, 1.8, and 6.8. A photograph of the white component is shown to the right.

M42



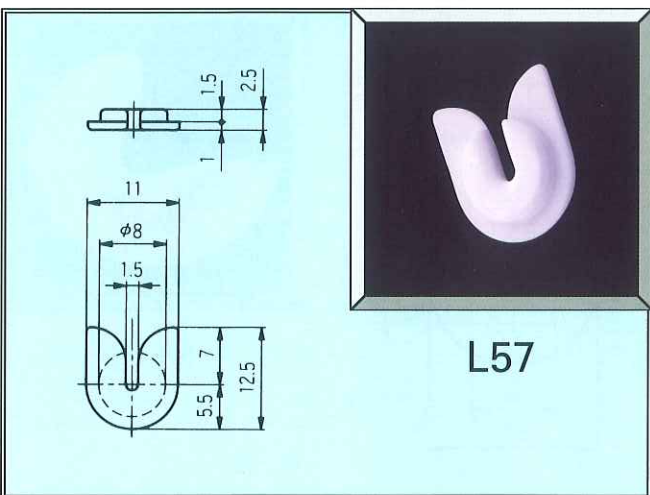
Technical drawing of M48 component showing top, side, and cross-sectional views. Dimensions include 2.4, 3.4, 8, and 12.3. A photograph of the white component is shown to the right.

M48



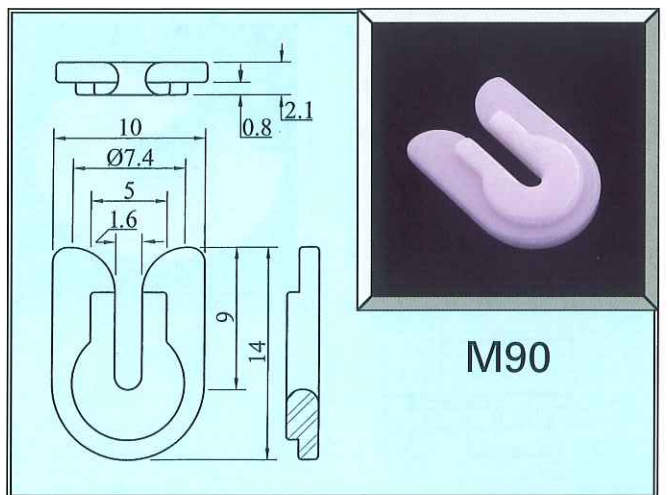
Technical drawing of H1 component showing top, side, and cross-sectional views. Dimensions include 7.5, 2, 1, 10, 4.5, 1, and 2.2. A photograph of the white component is shown to the right.

H1



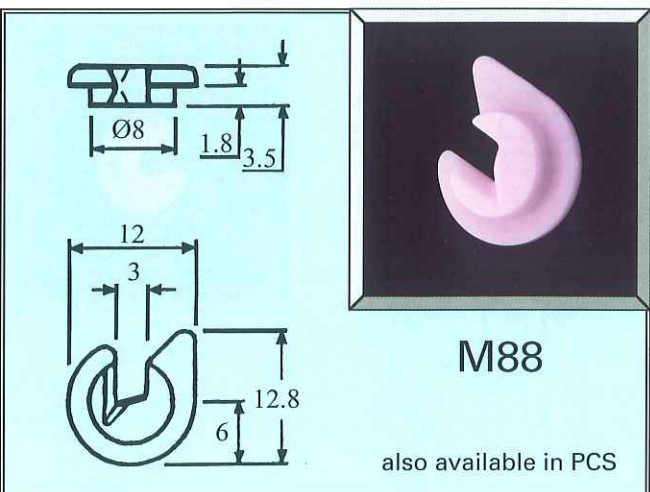
Technical drawing of L57 component showing top, side, and cross-sectional views. Dimensions include 1.5, 2.5, 1, 11, 8, 1.5, 7, 12.5, and 5.5. A photograph of the white component is shown to the right.

L57



Technical drawing of M90 component showing top, side, and cross-sectional views. Dimensions include 10, 0.8, 2.1, 7.4, 5, 1.6, 9, and 14. A photograph of the white component is shown to the right.

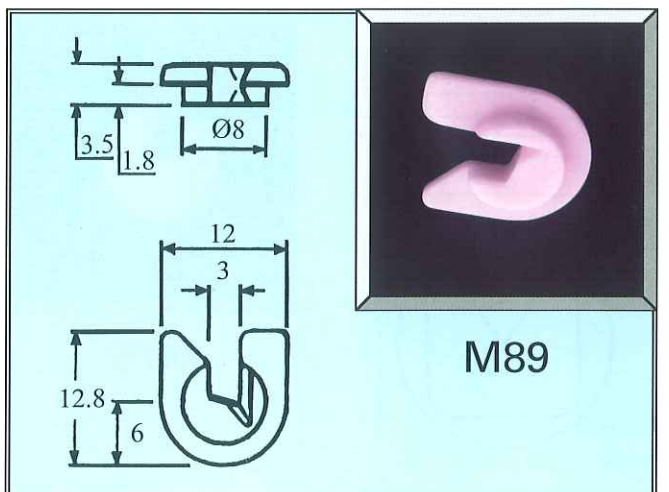
M90



Technical drawing of M88 component showing top, side, and cross-sectional views. Dimensions include 8, 1.8, 3.5, 12, 3, 12.8, and 6. A photograph of the white component is shown to the right.

M88

also available in PCS



Technical drawing of M89 component showing top, side, and cross-sectional views. Dimensions include 3.5, 1.8, 8, 12, 3, 12.8, and 6. A photograph of the white component is shown to the right.

M89

L52

also available in PCS

L58

L51

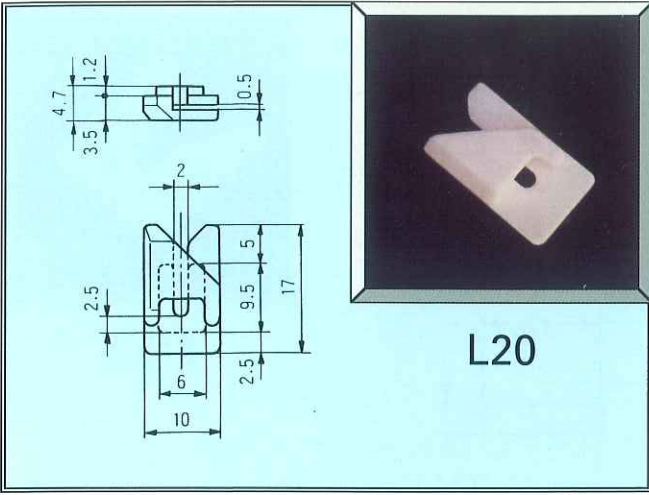
F21 x 3.0
F21 x 4.0

E618

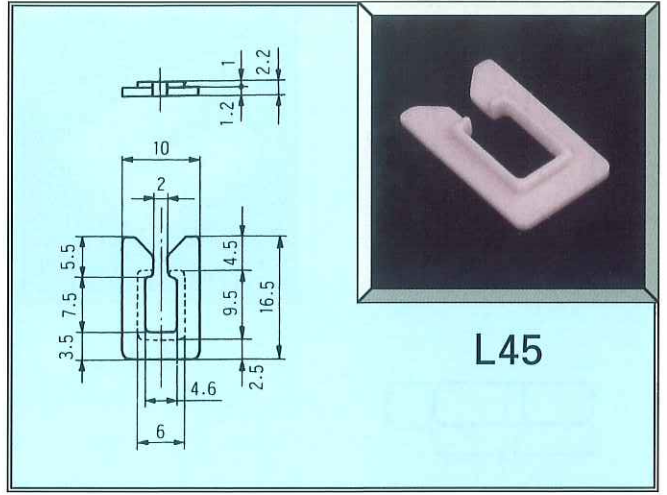
M76

M75

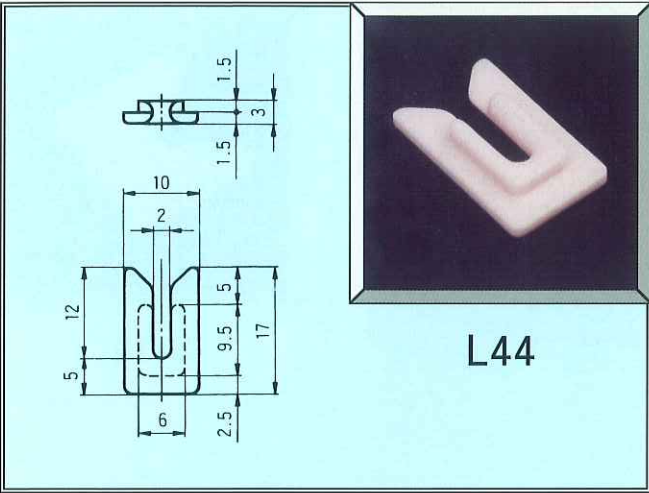
E676



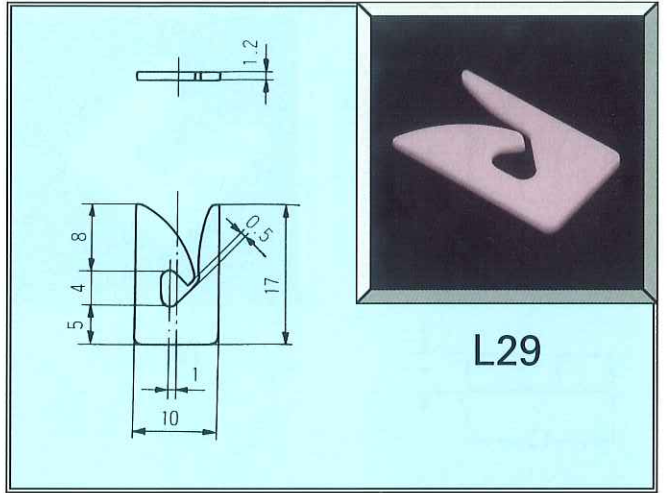
L20



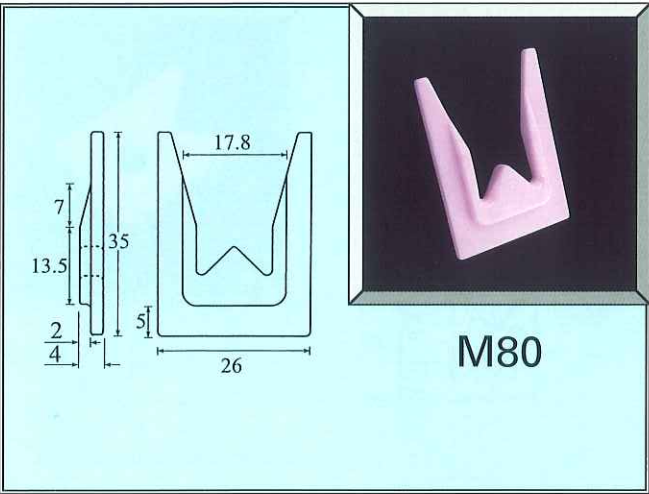
L45



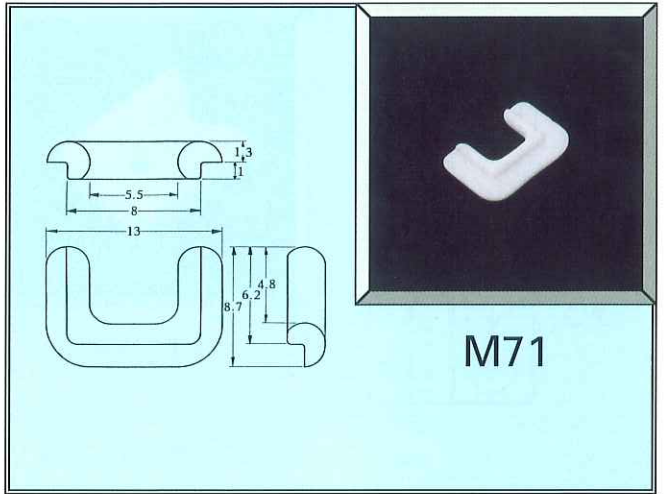
L44



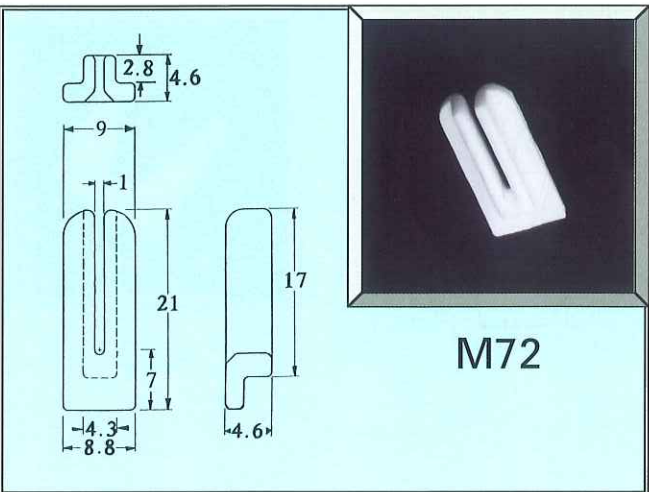
L29



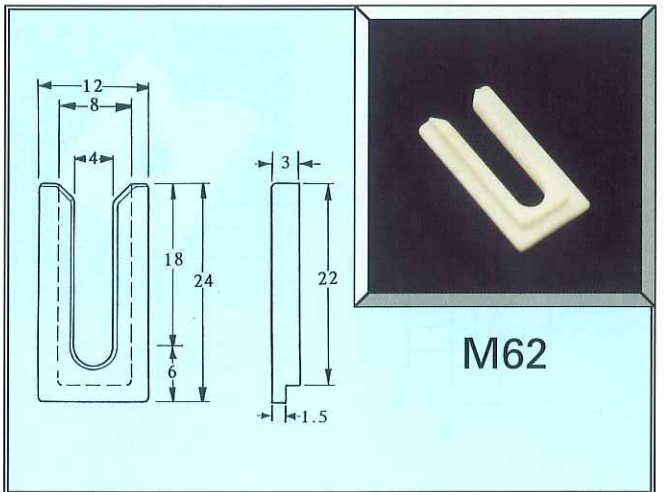
M80



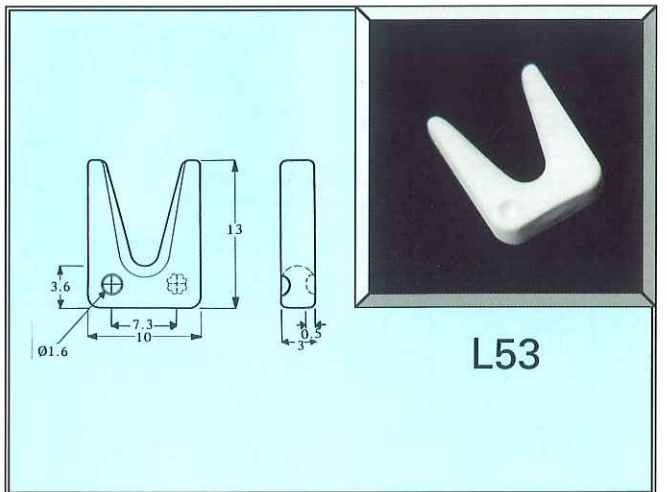
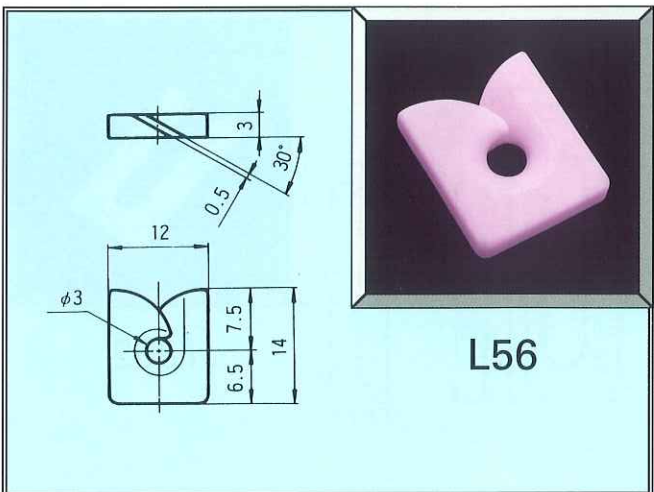
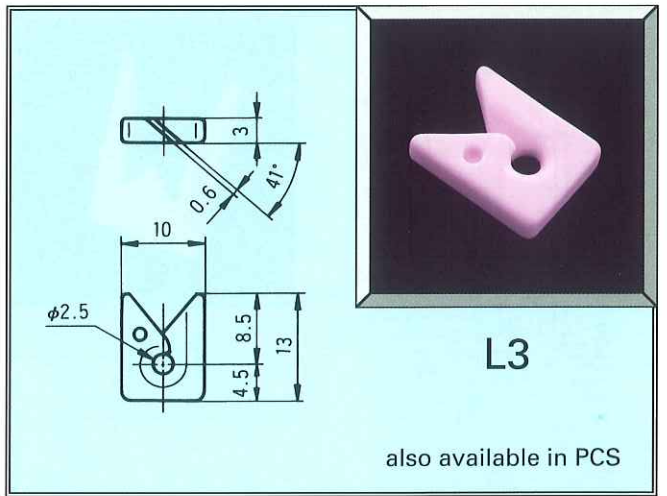
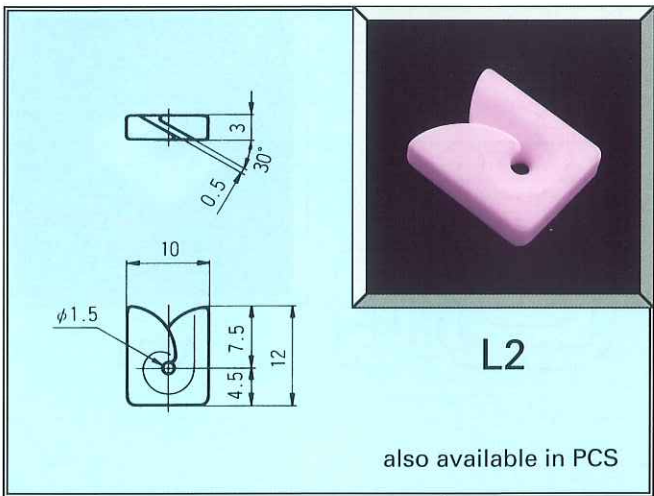
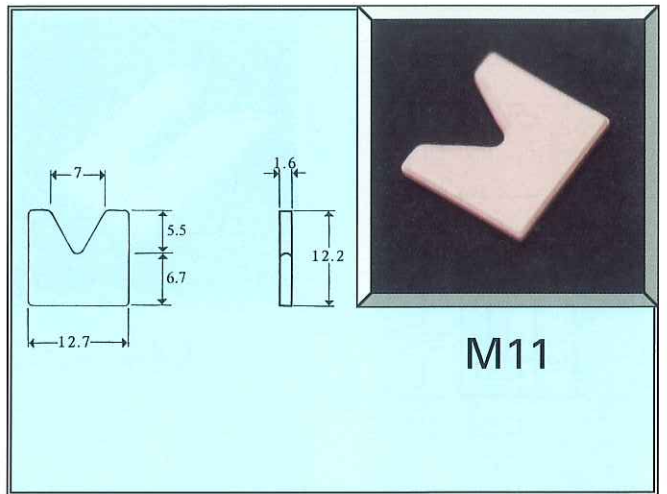
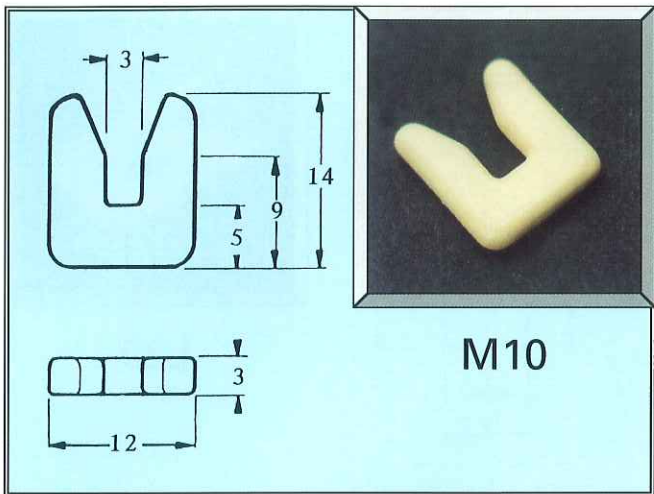
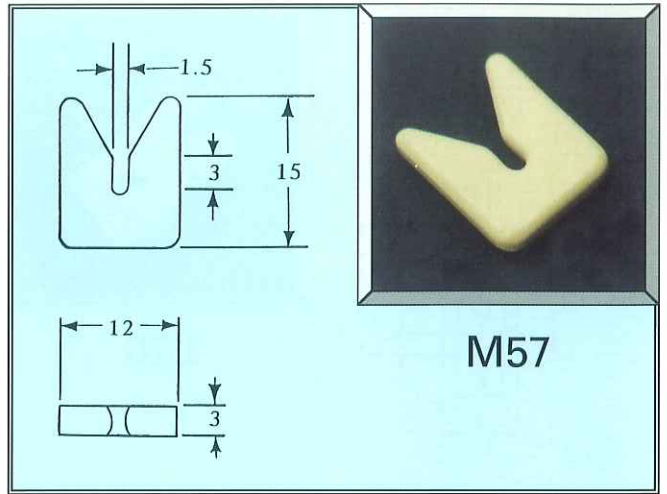
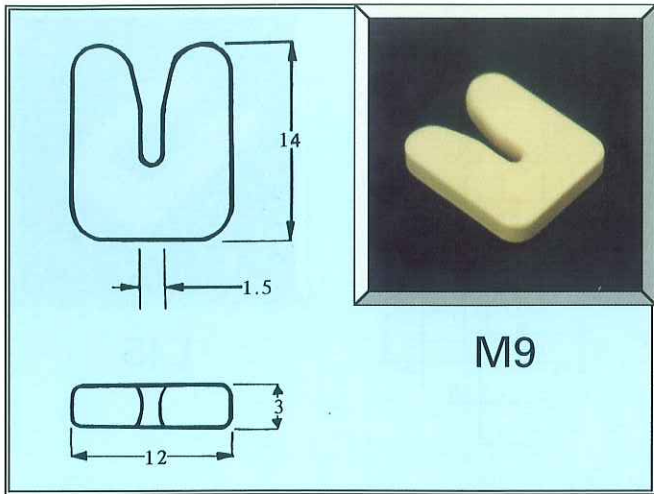
M71

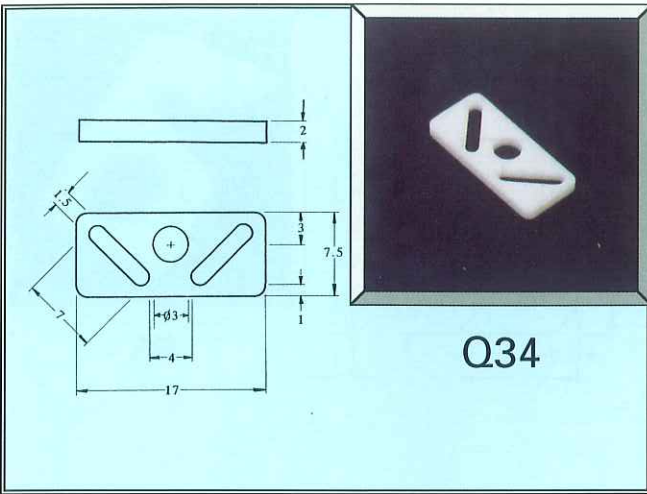


M72

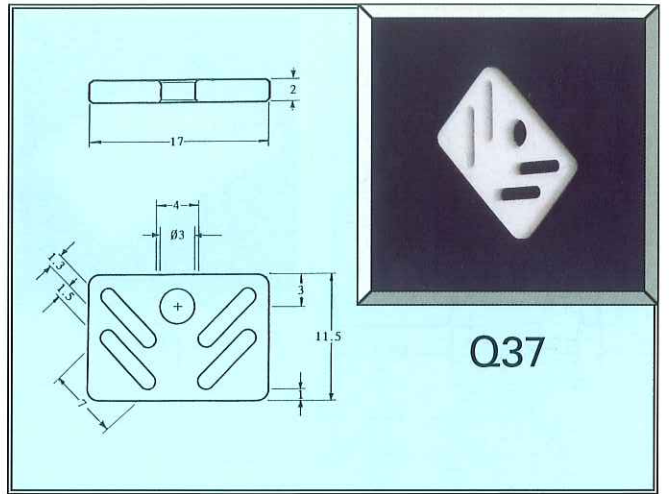


M62

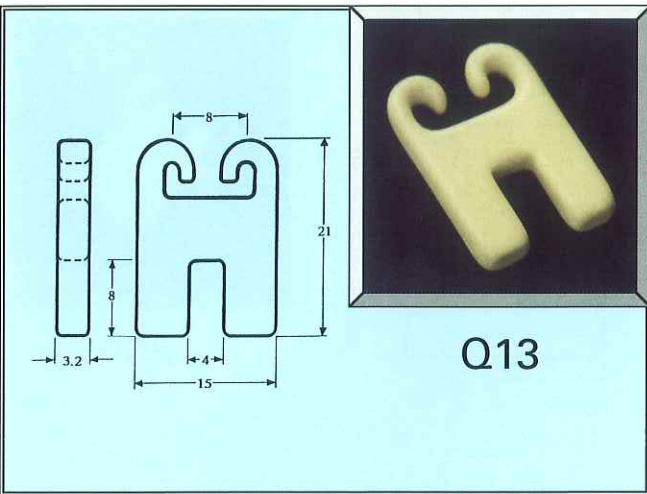




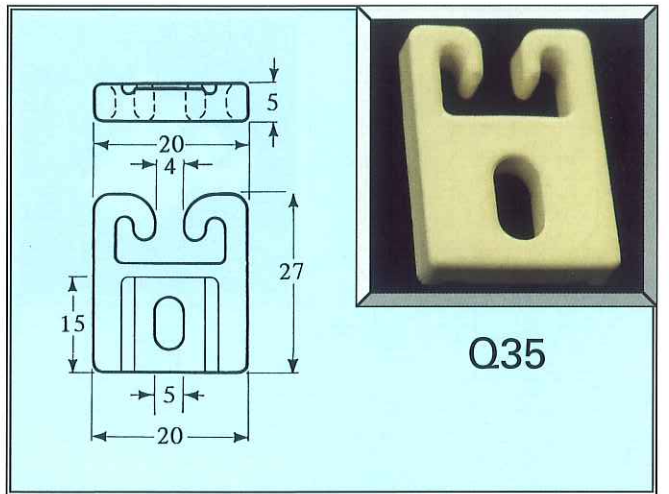
Q34



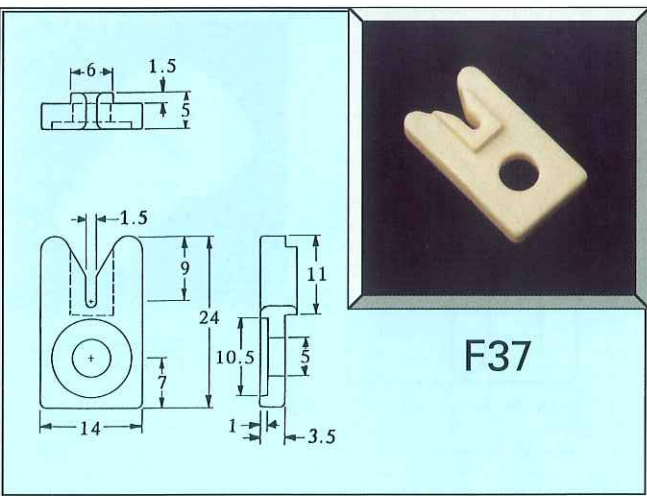
Q37



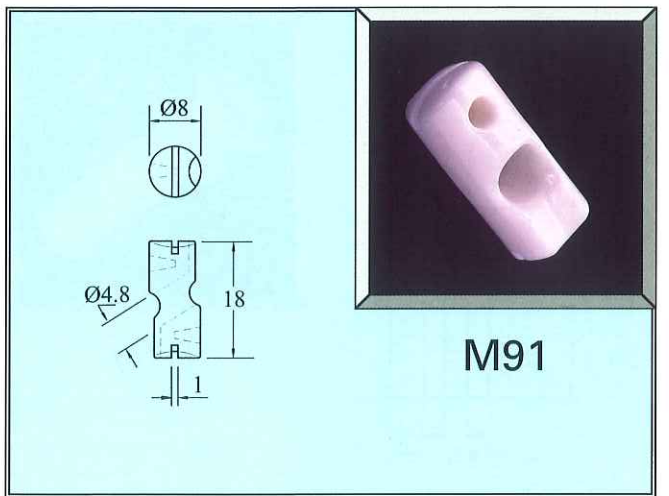
Q13



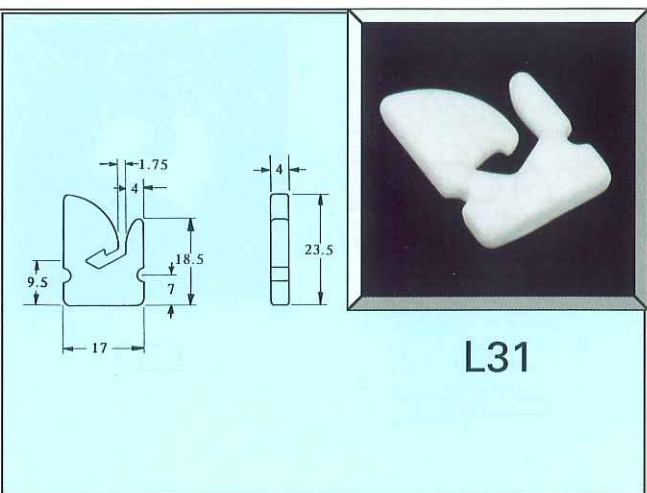
Q35



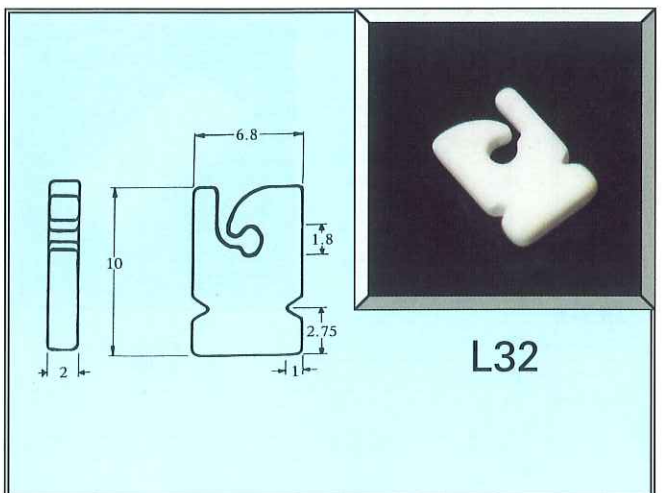
F37



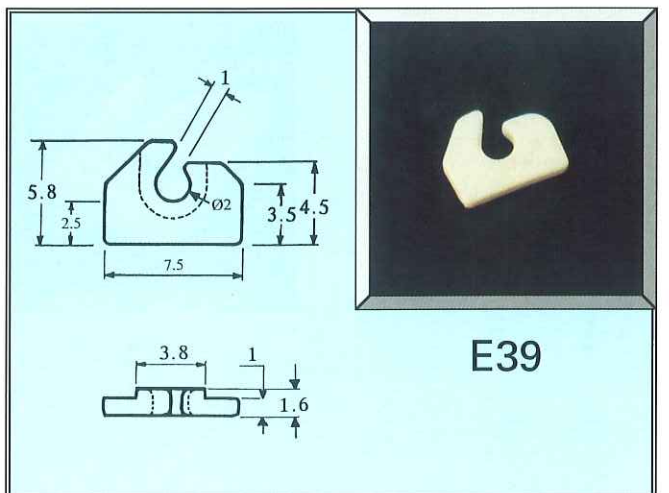
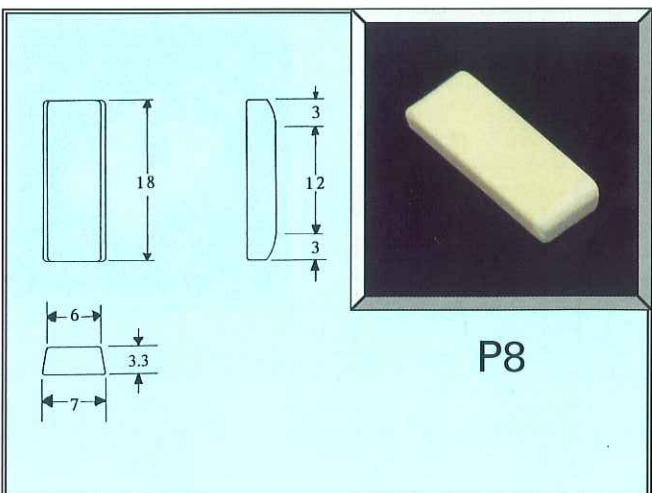
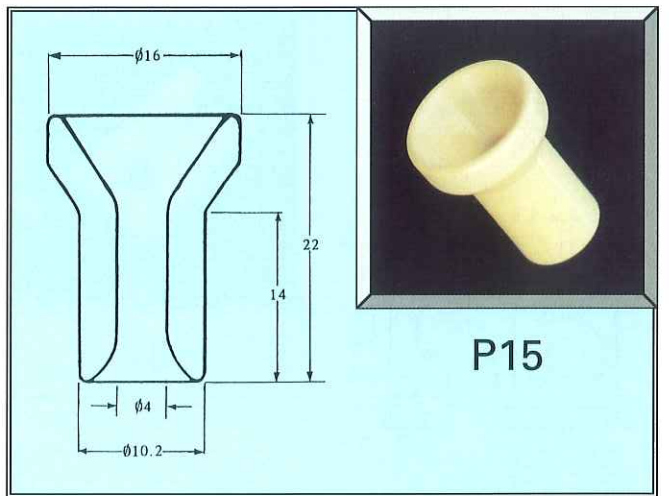
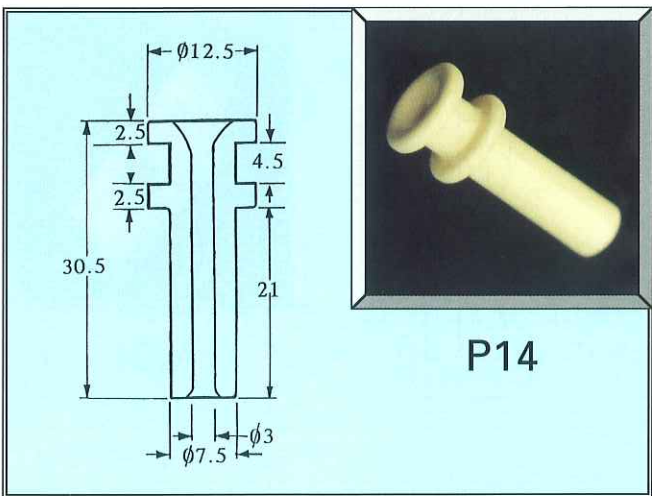
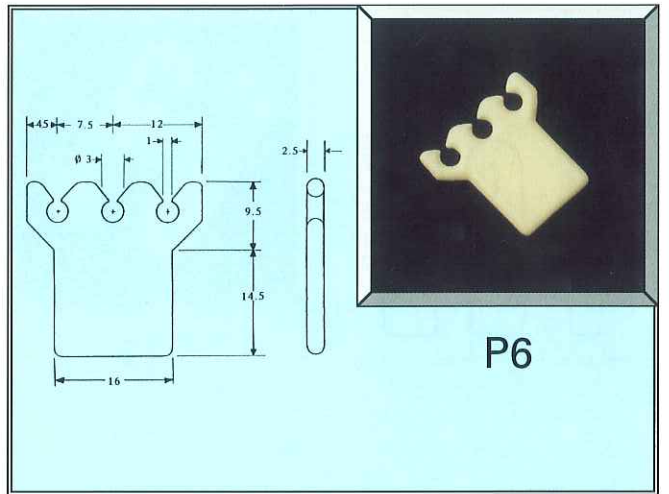
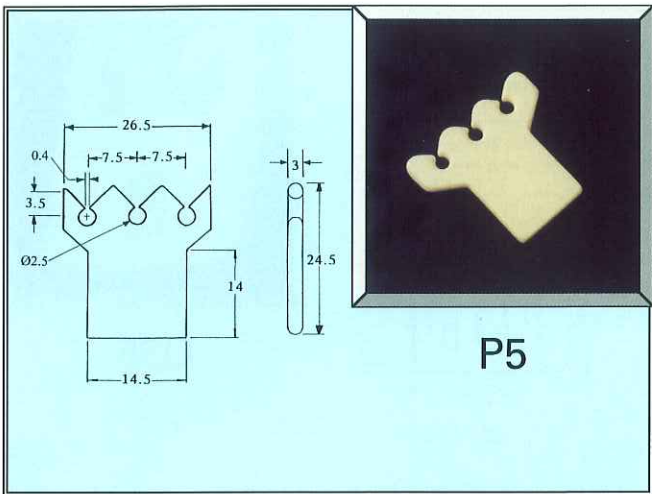
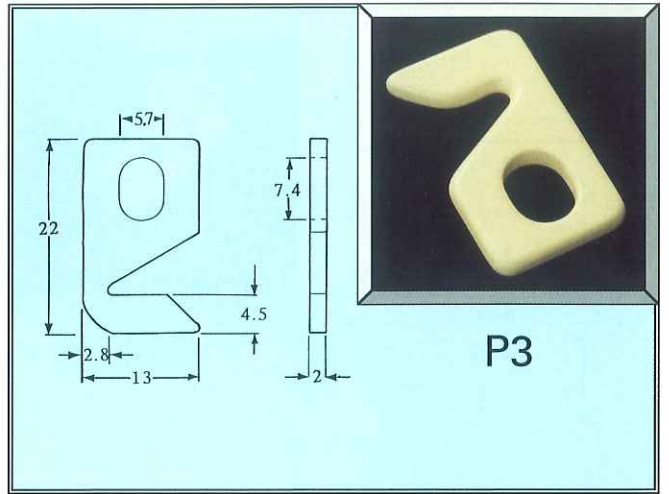
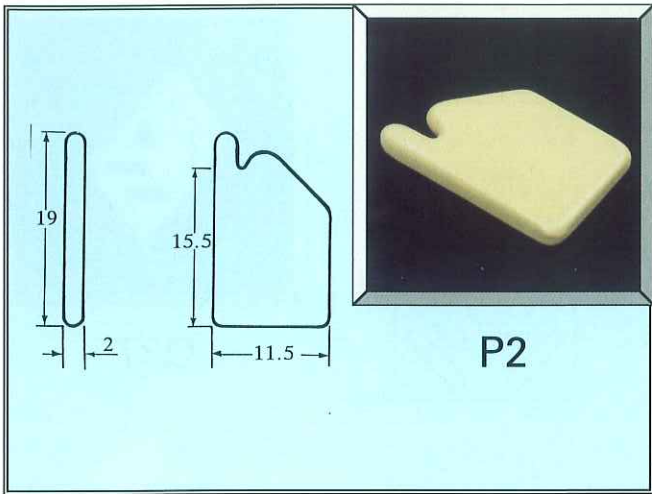
M91

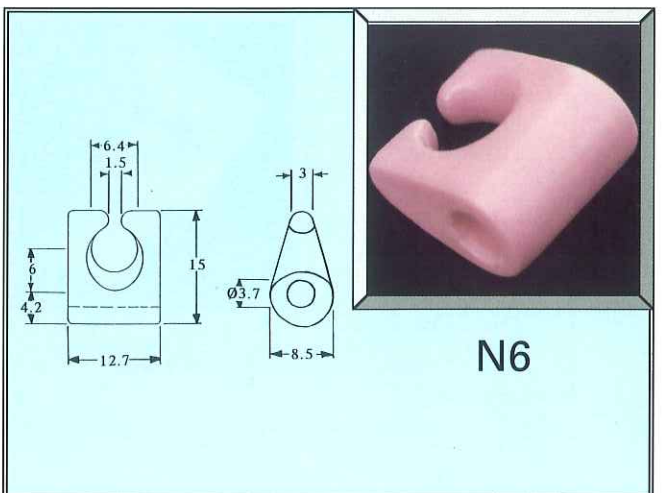
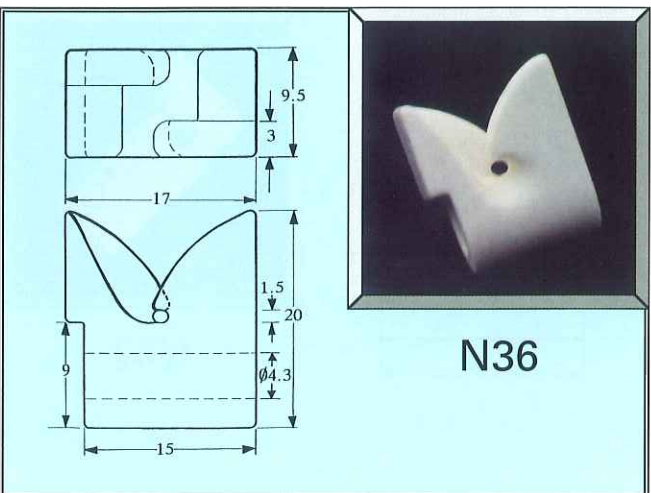
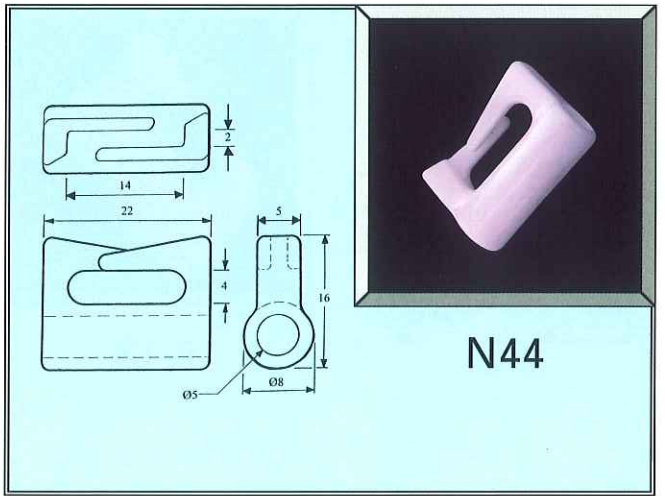
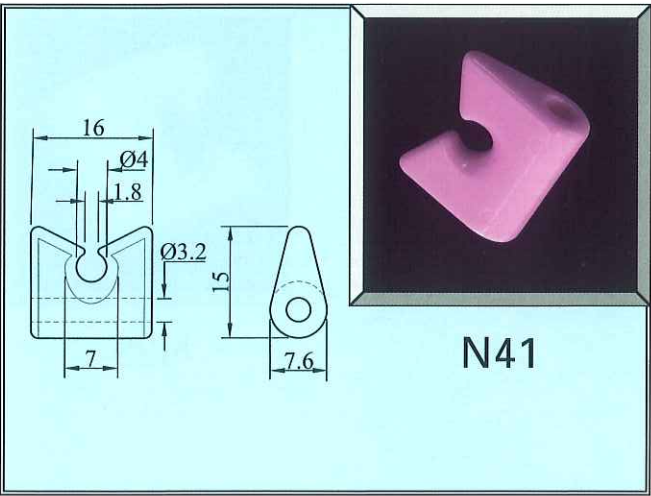
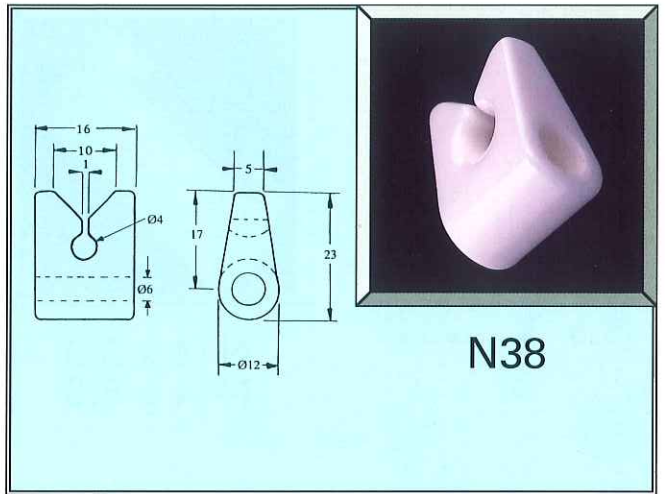
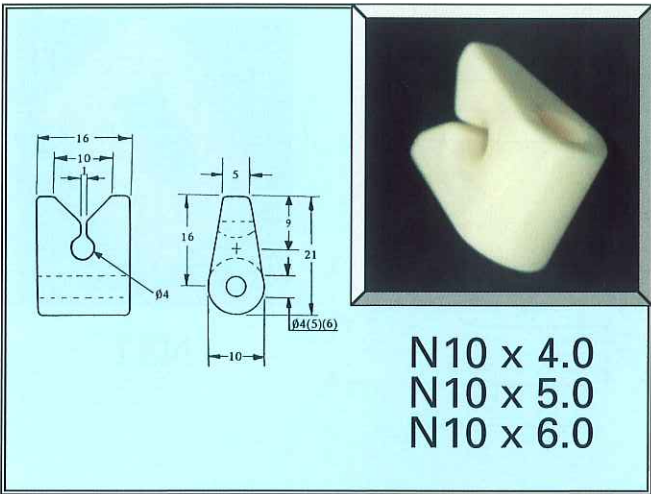
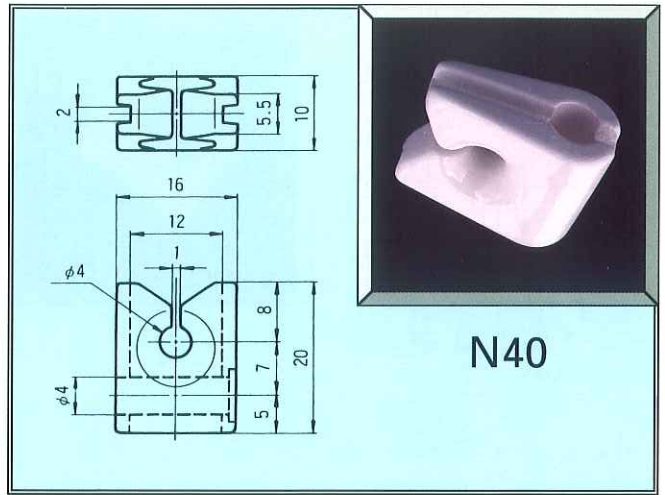
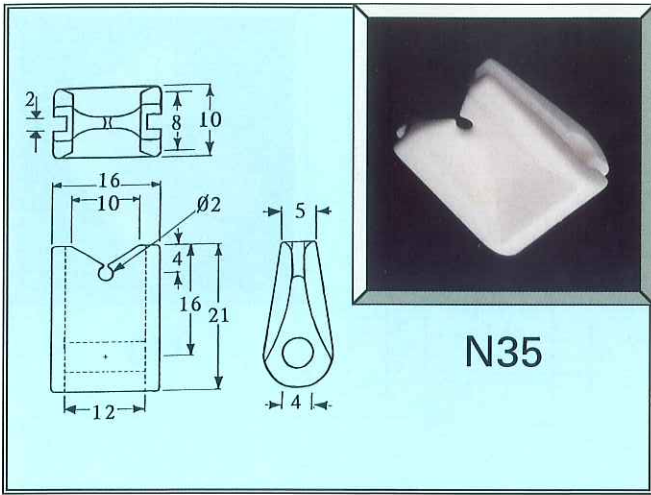


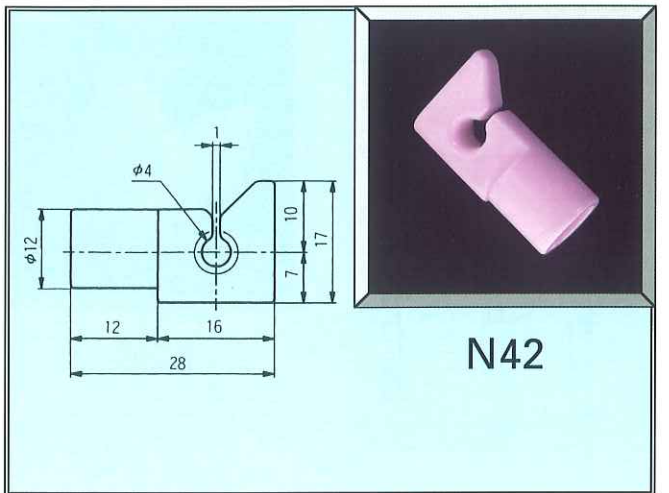
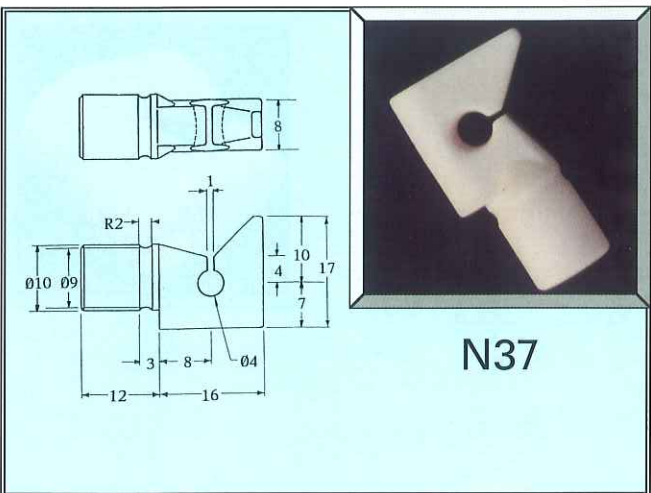
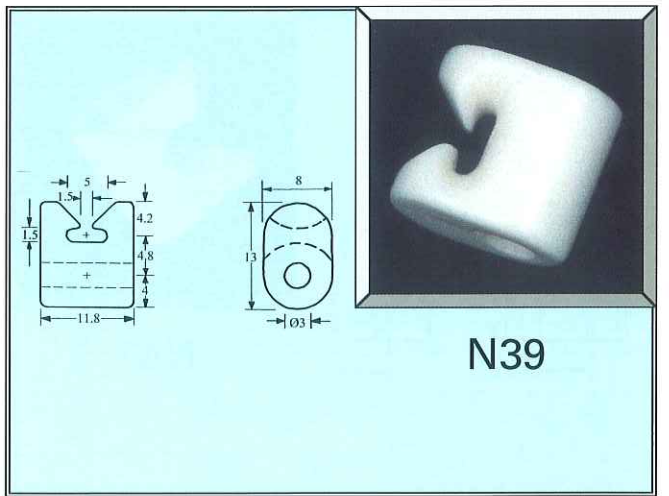
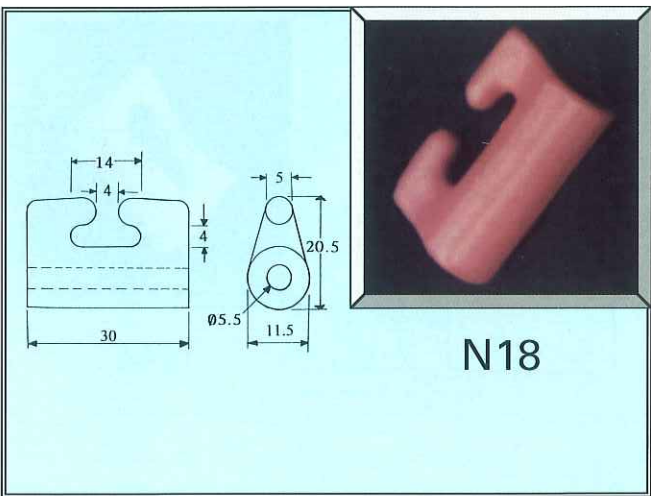
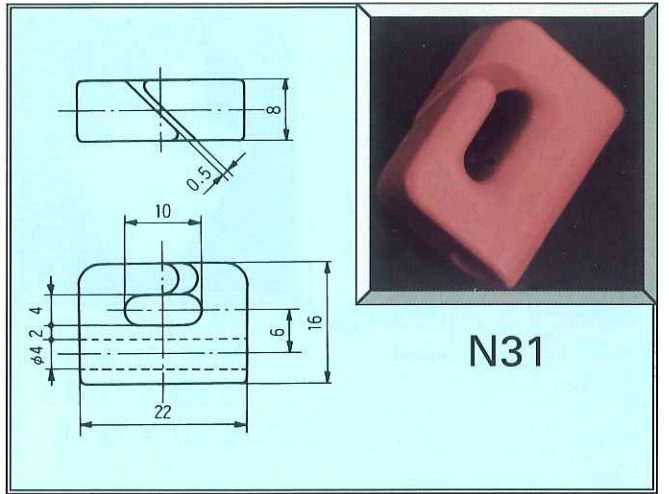
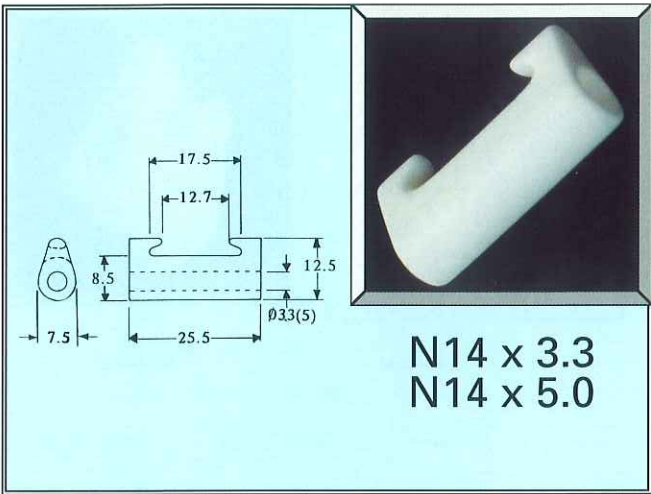
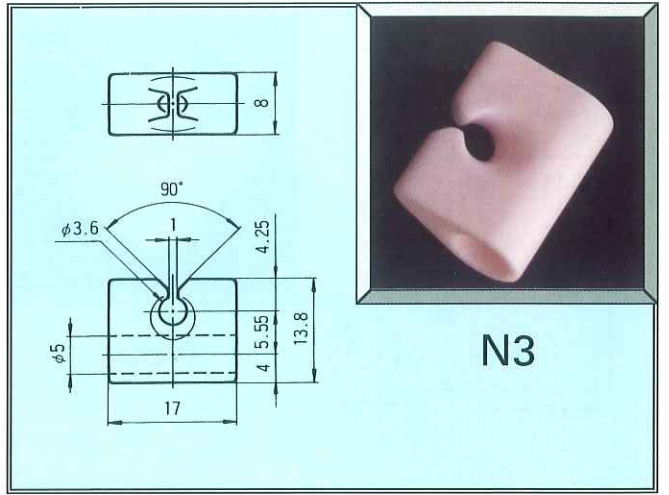
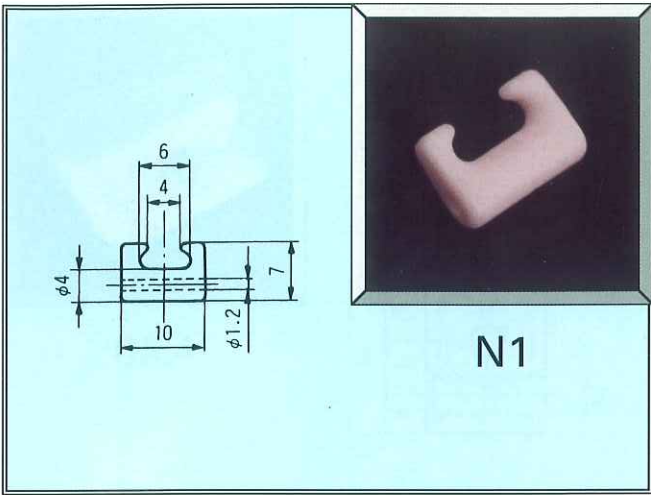
L31

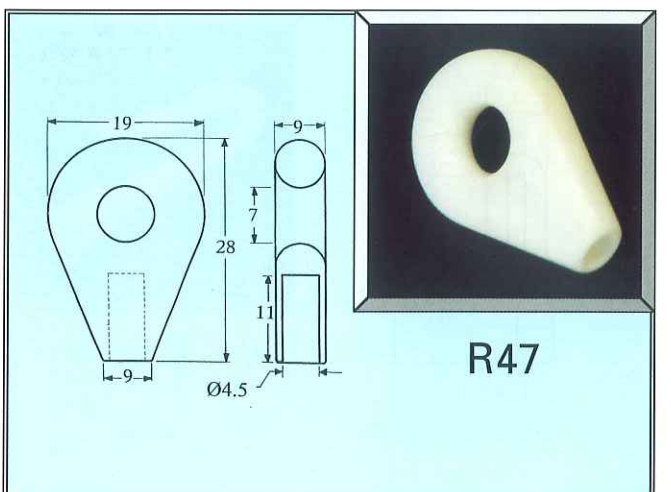
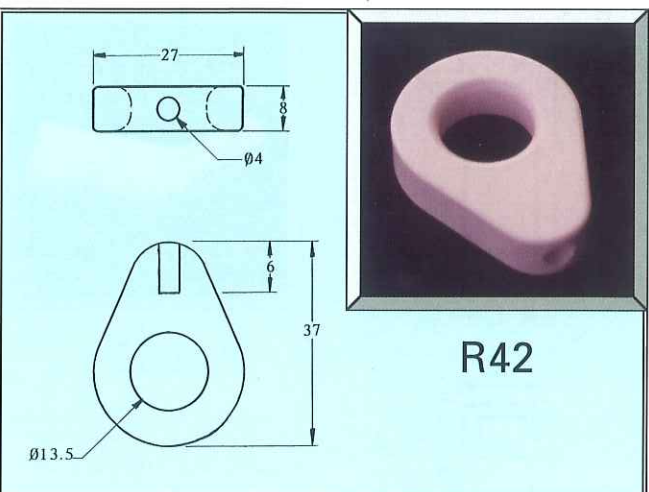
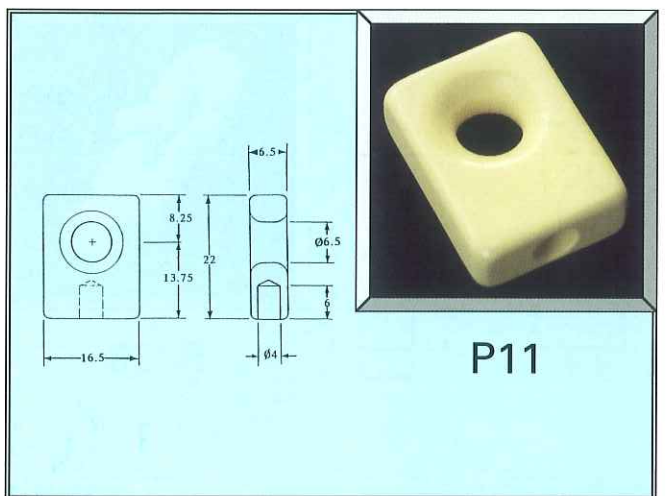
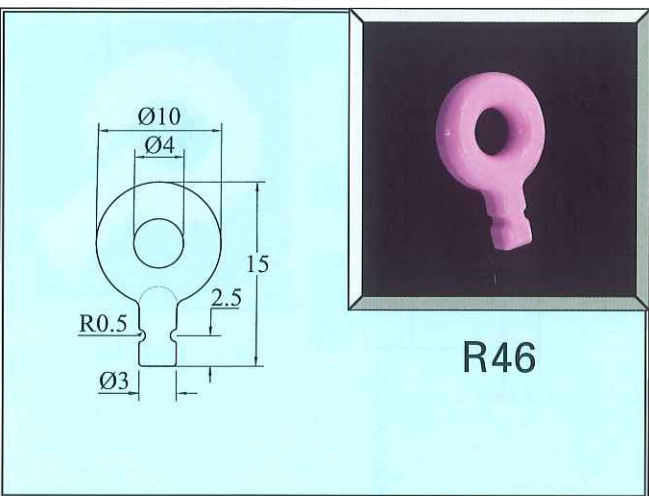
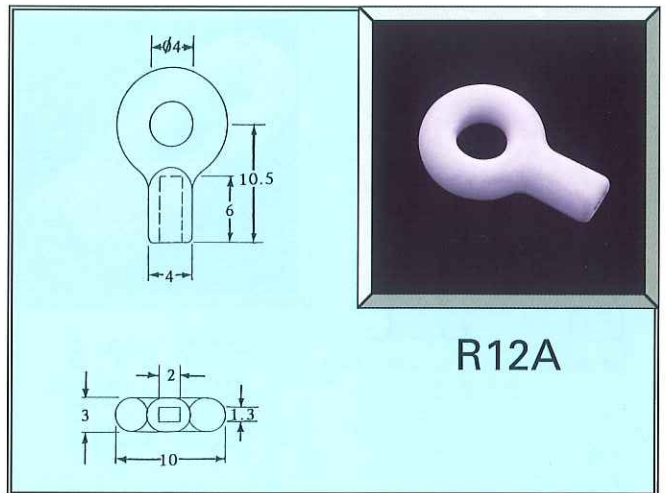
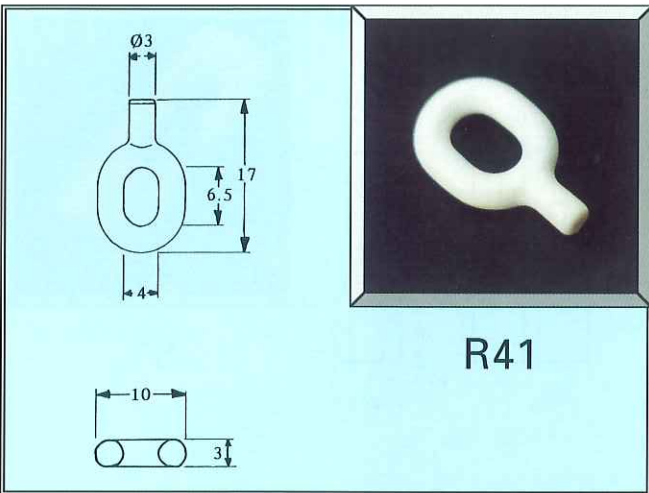
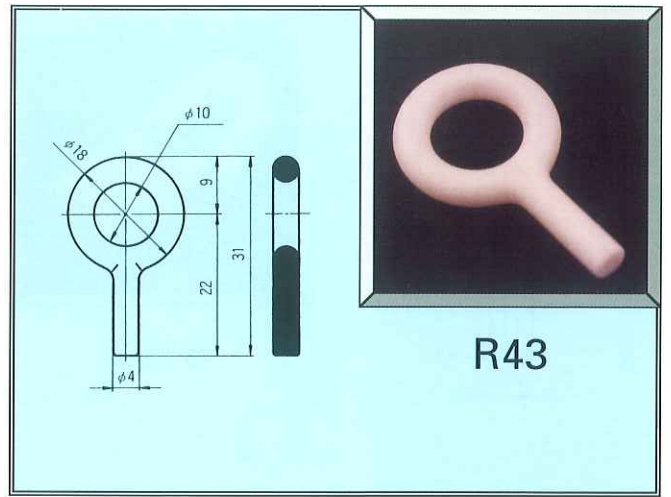
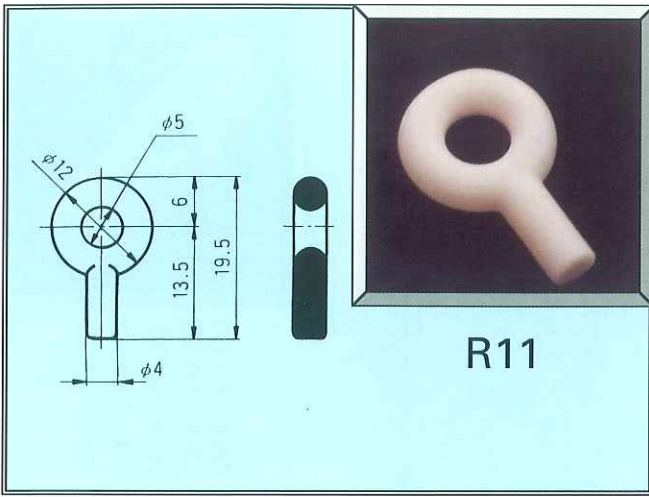


L32









S132

S5 x 2.0
S5 x 2.5
S5 x 3.0
S5 x 3.5

S37 x 2.5
S37 x 3.0
S37 x 3.5

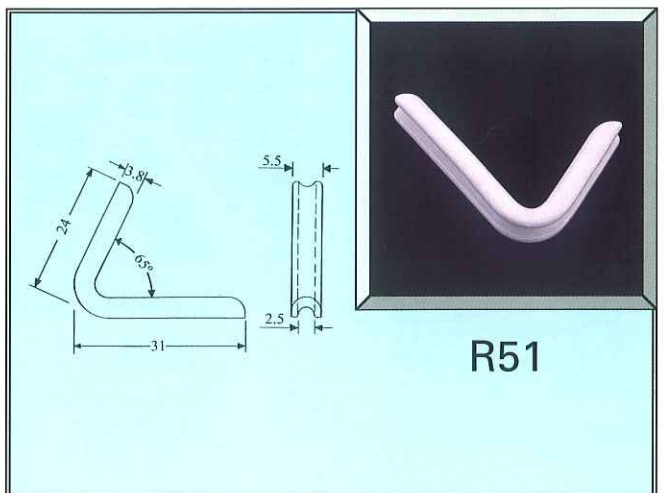
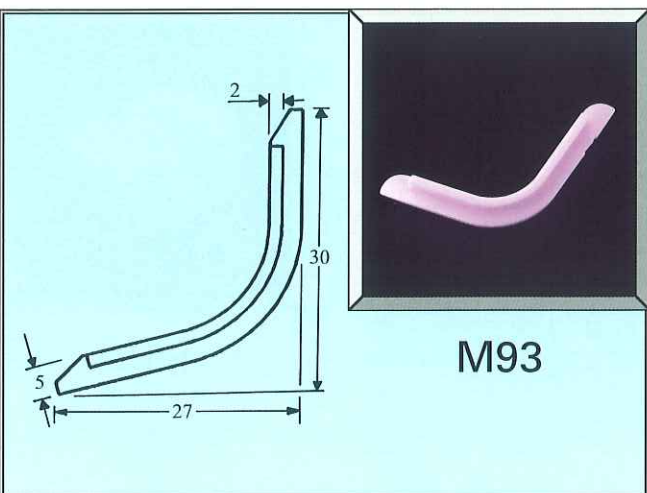
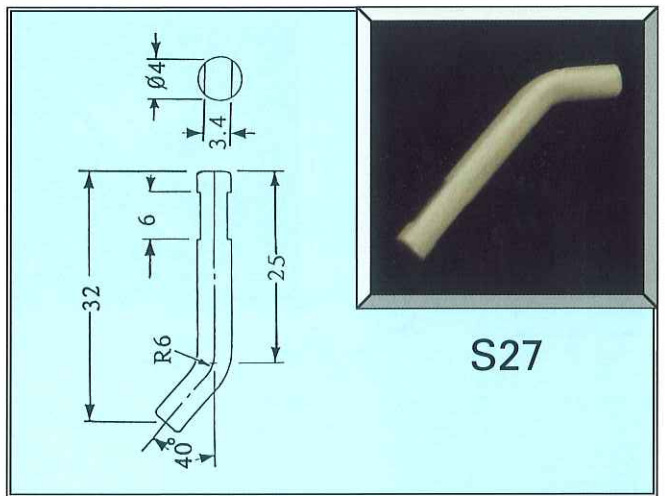
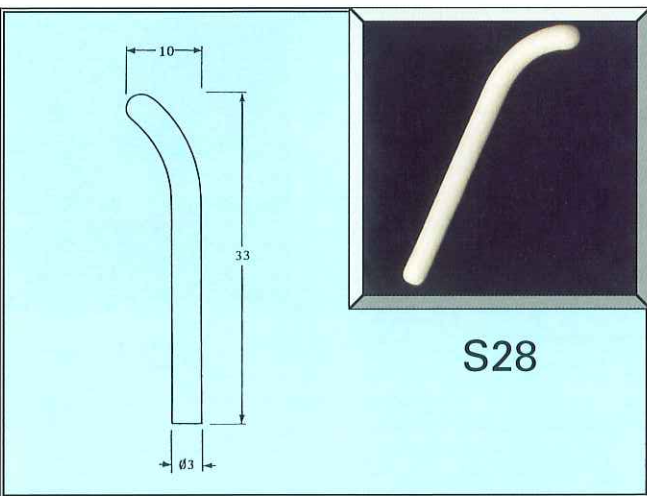
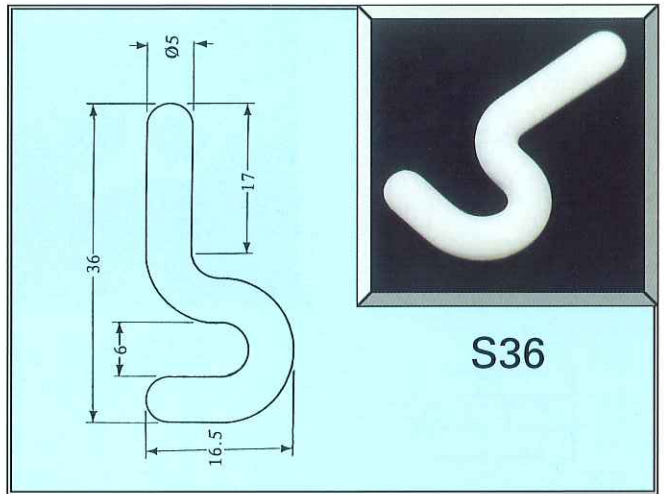
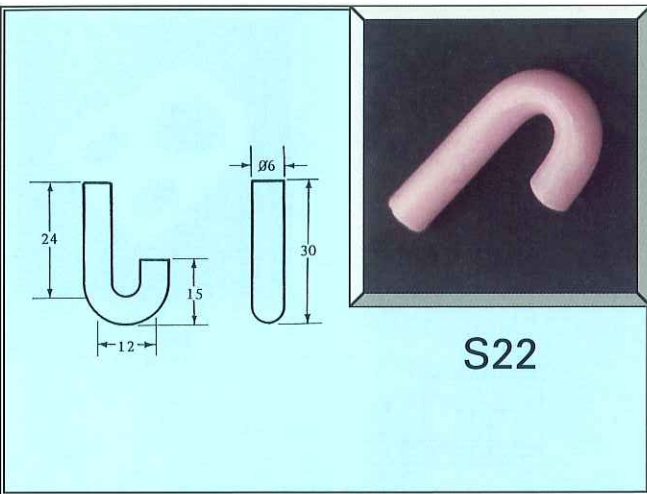
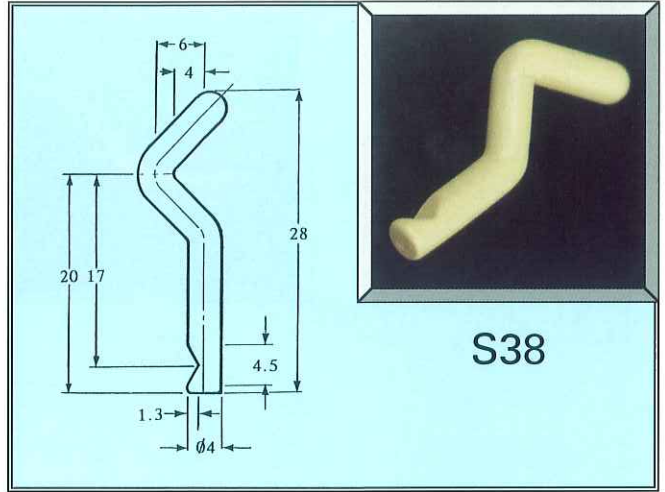
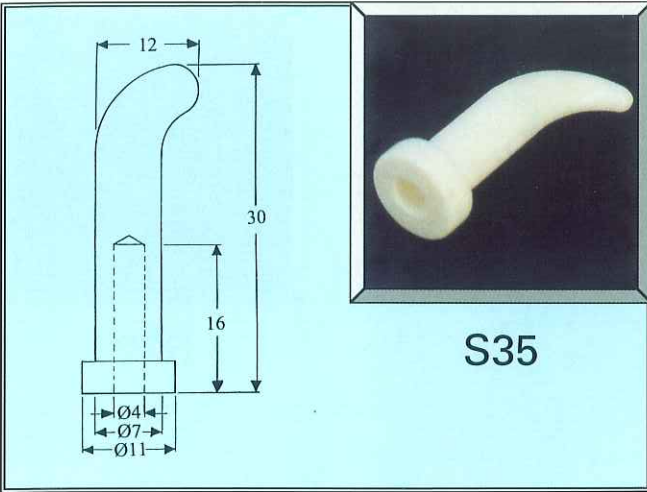
S1

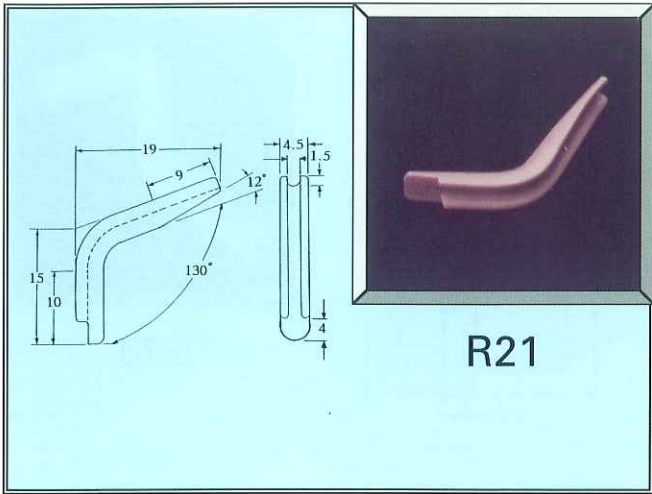
S133

R17

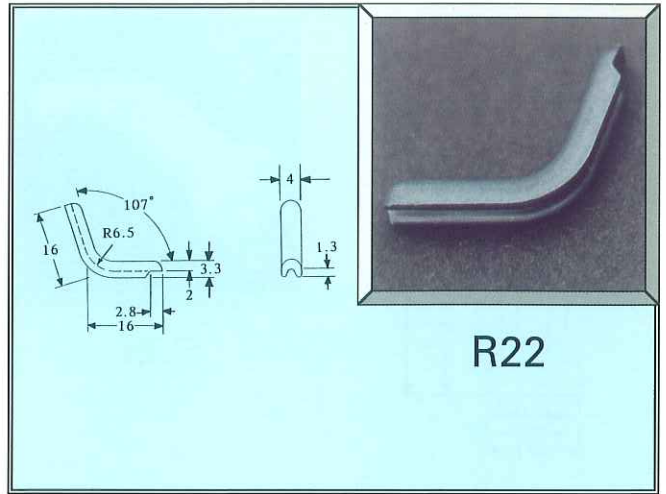
S18

L60
 also available in PCS

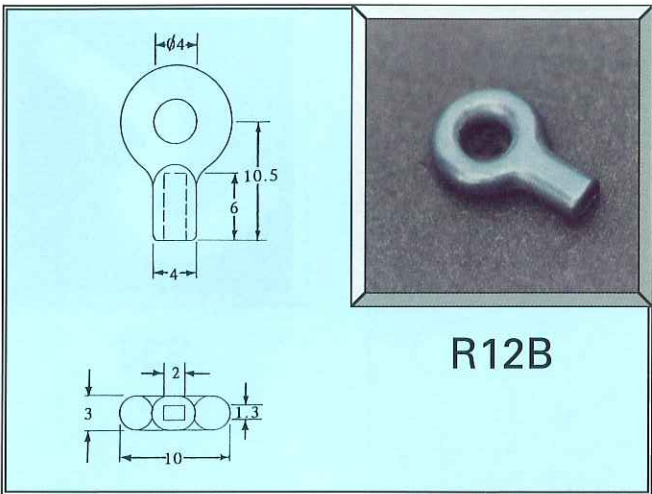




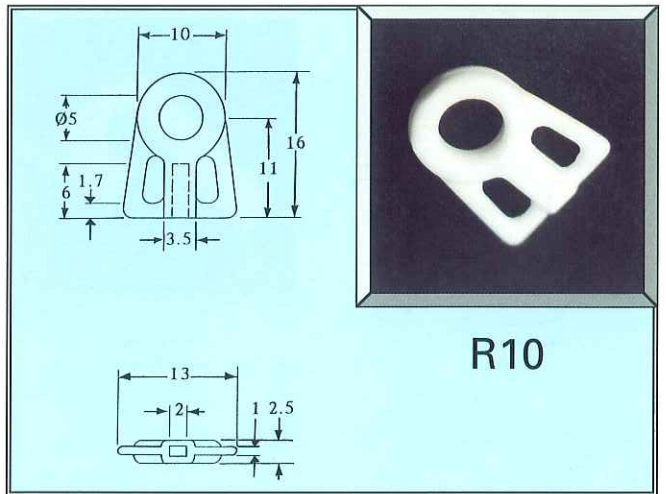
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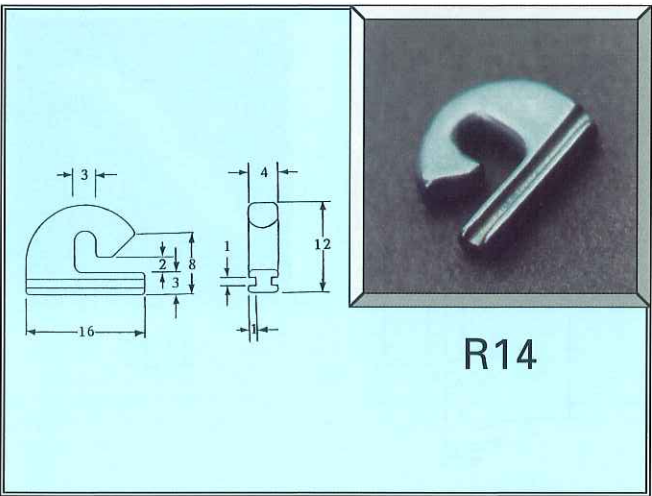
R22



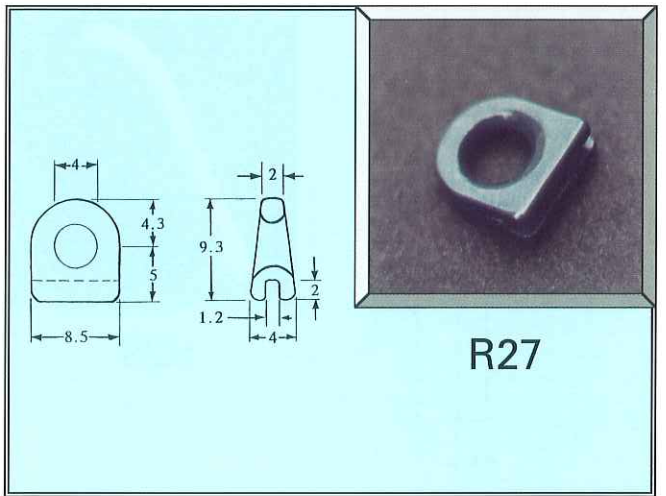
R12B



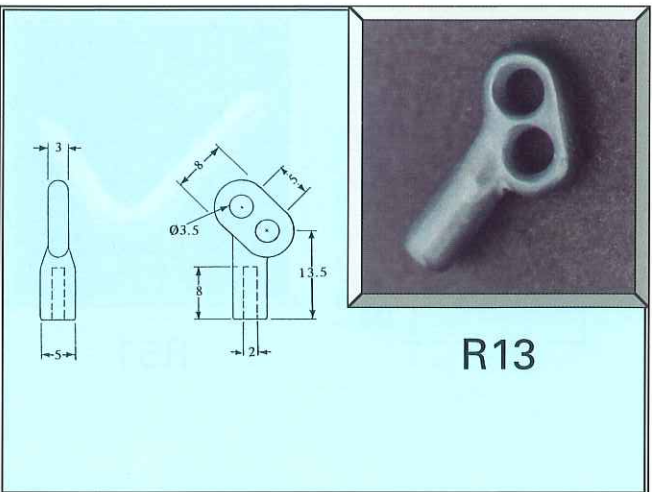
R10



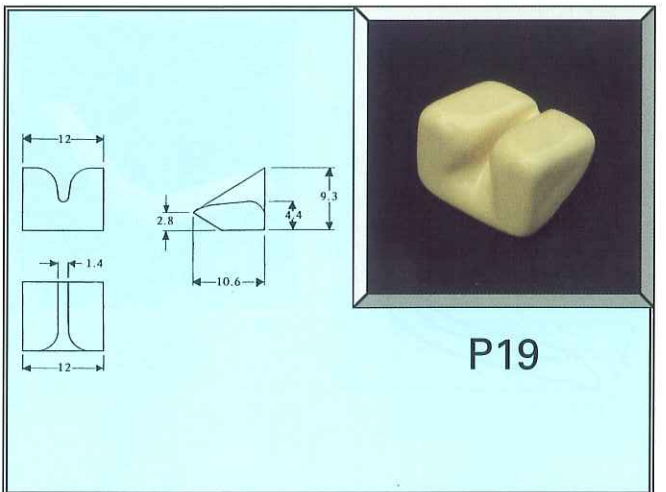
R14



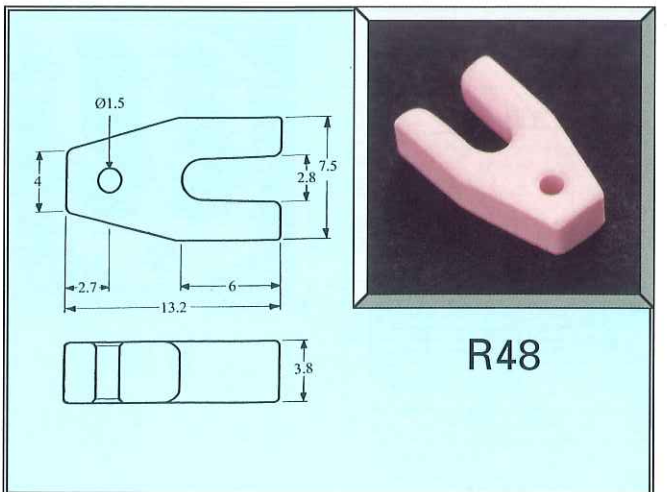
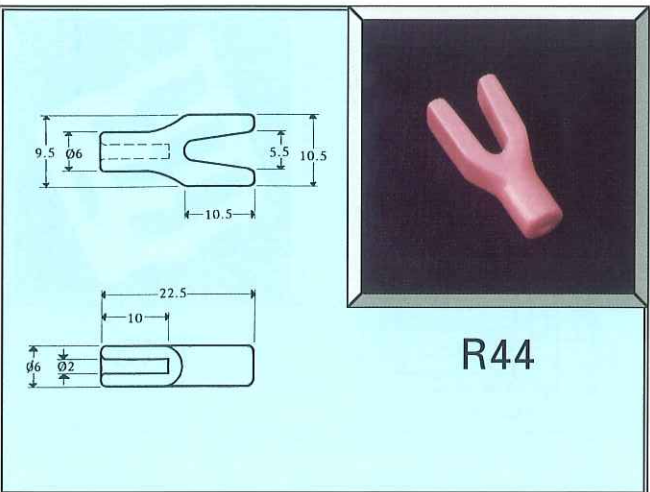
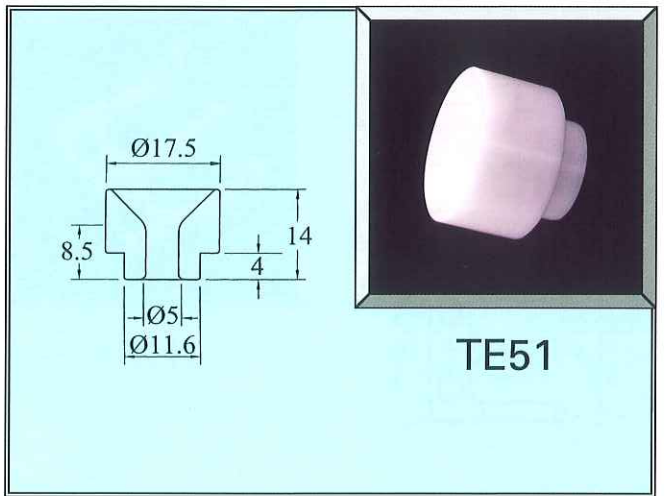
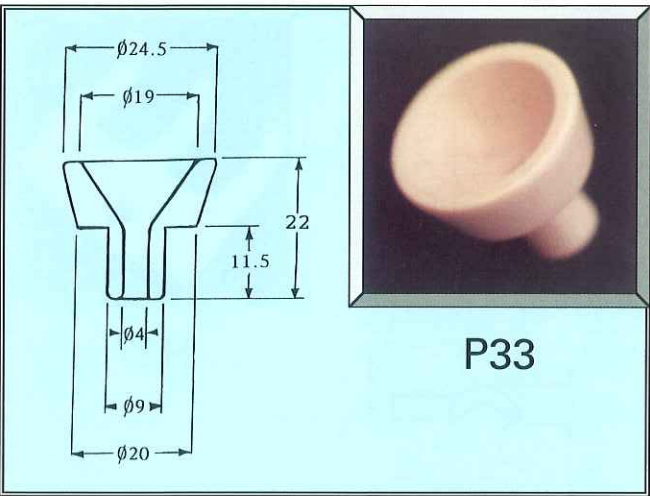
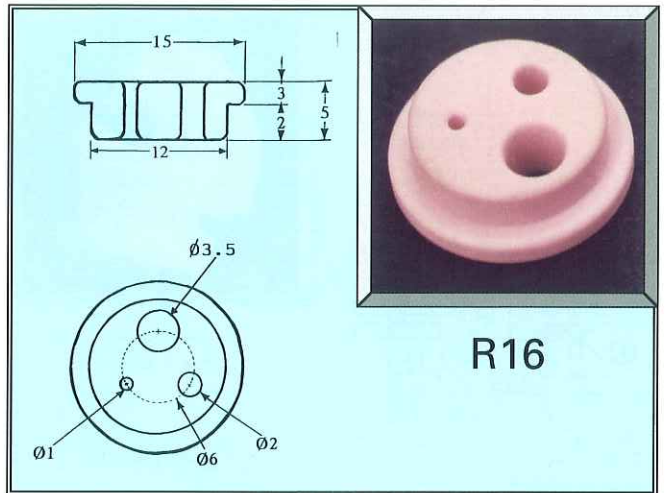
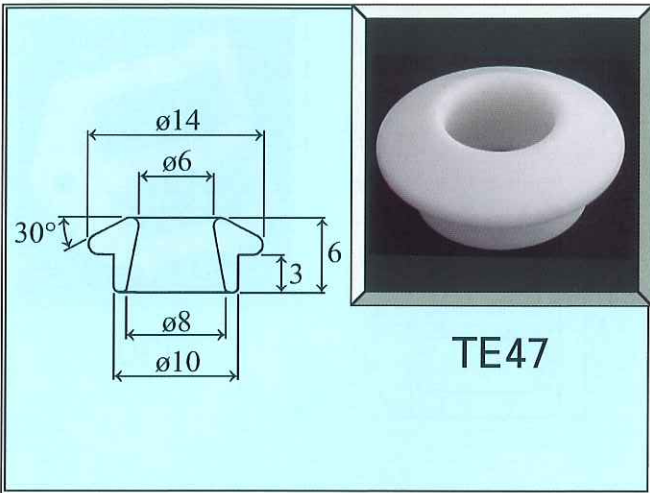
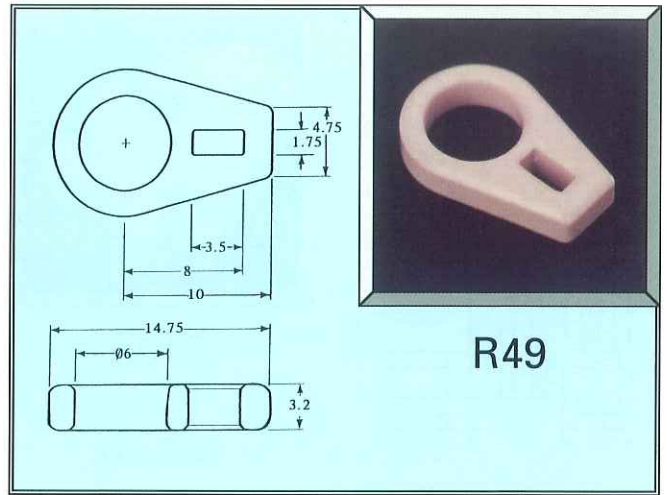
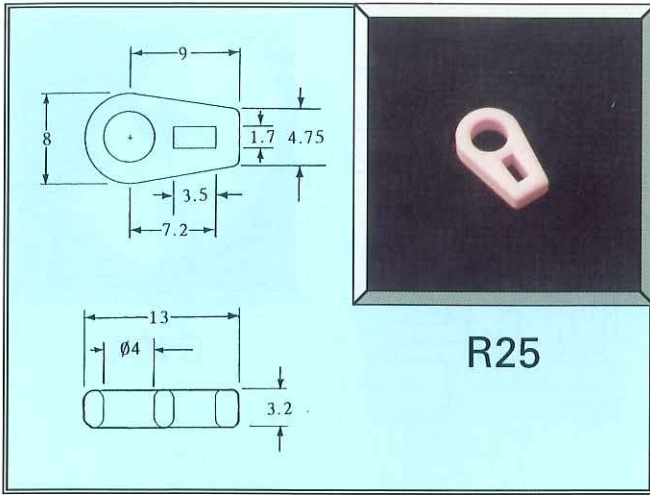
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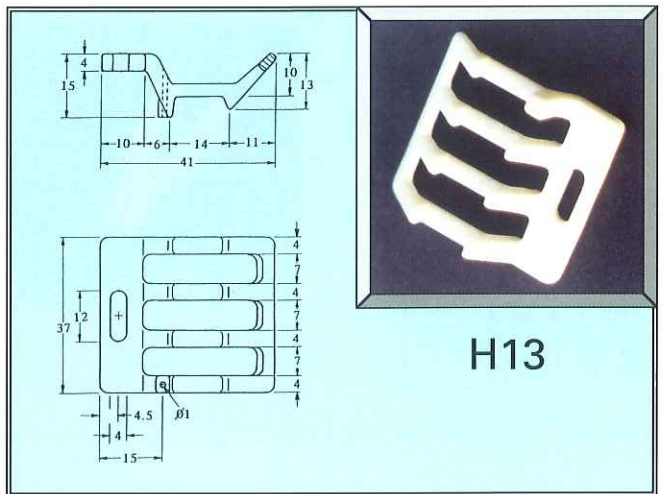
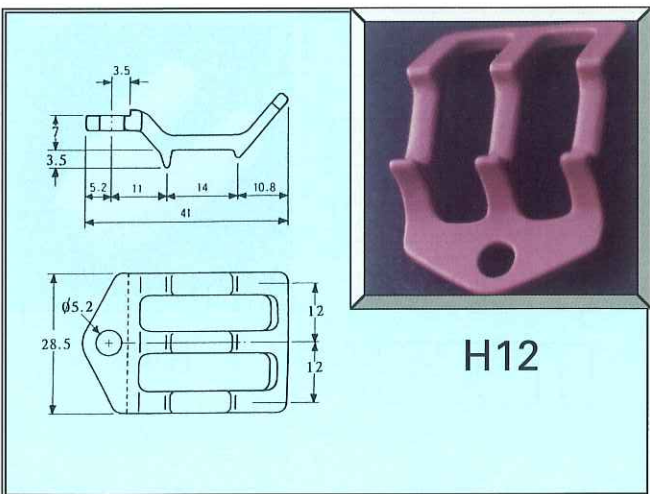
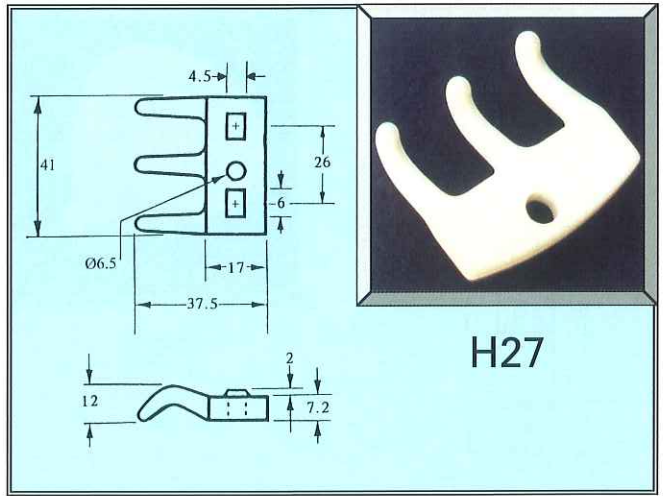
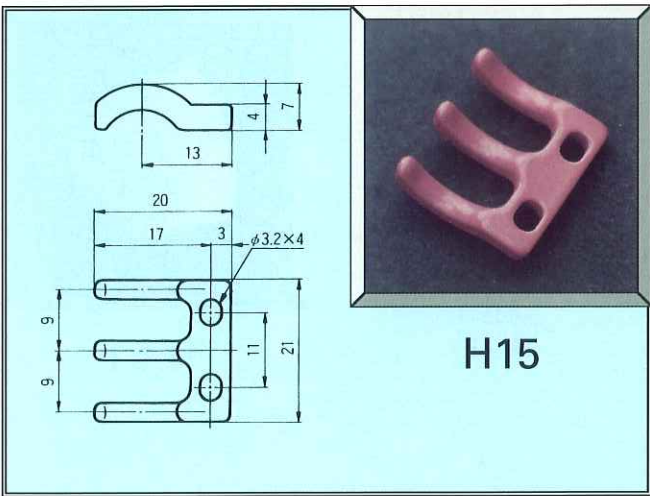
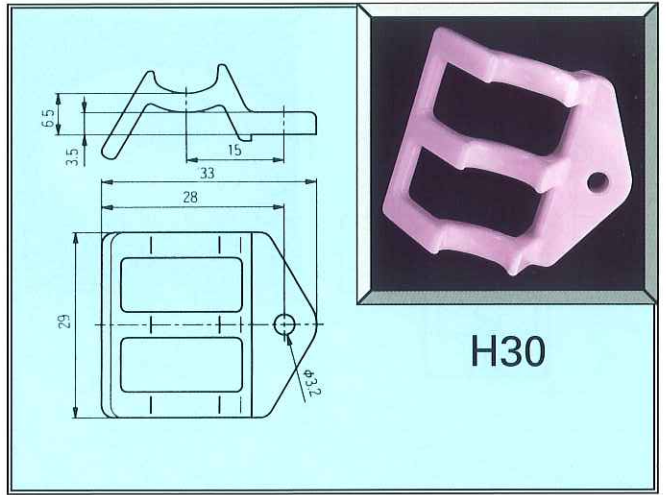
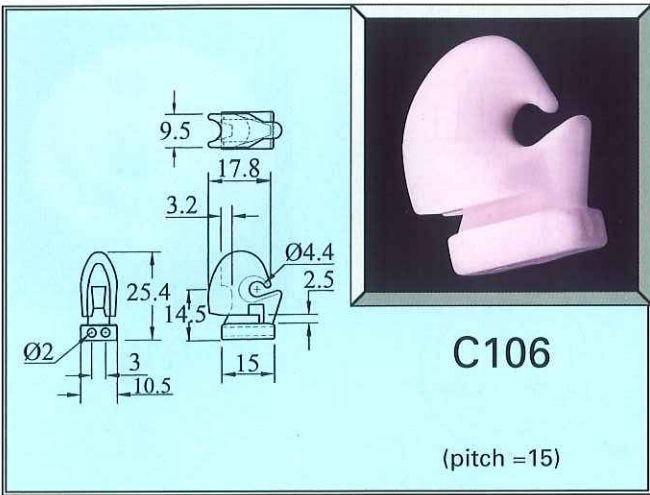
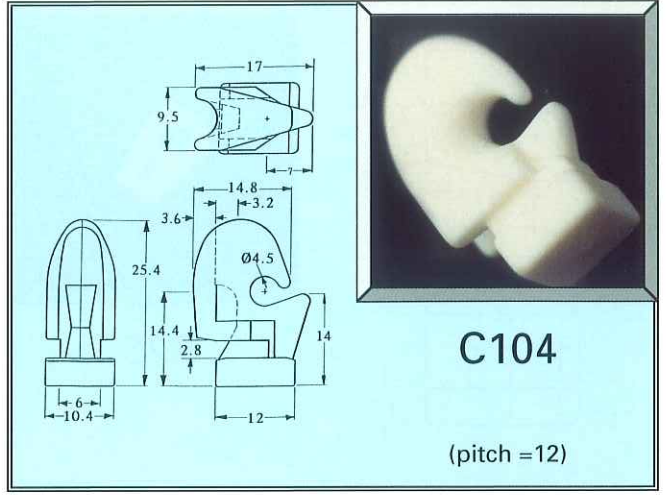
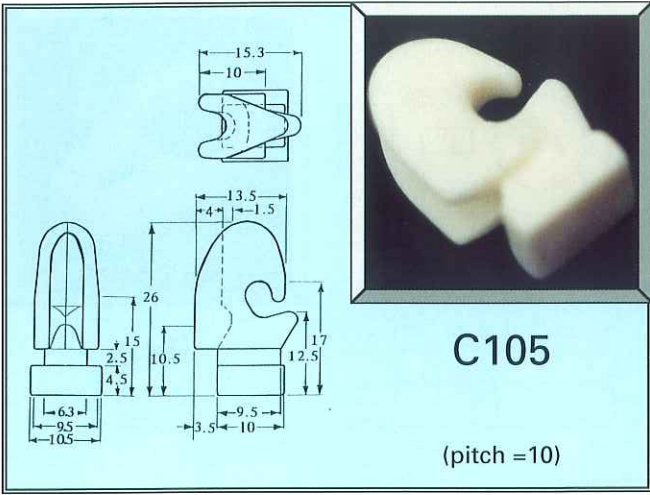


R13



P19





	Yarn Slot Width
AP30	1.0
AP31	1.3
AP32	2.0

AP37

Yarn Slot Width = 1.2

AP36

Yarn Slot Width = 1.5

AP35

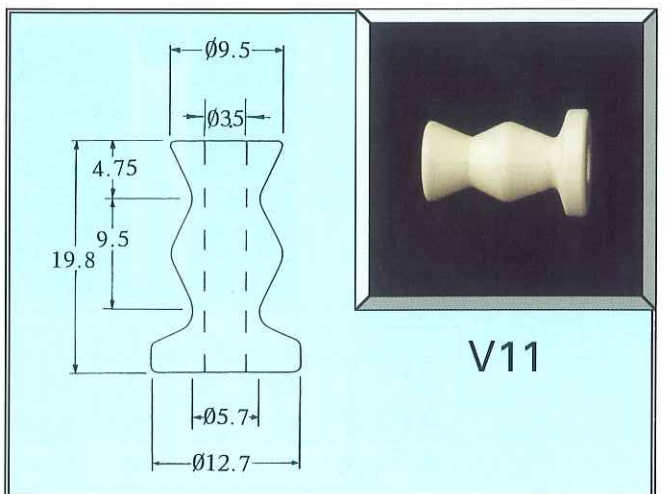
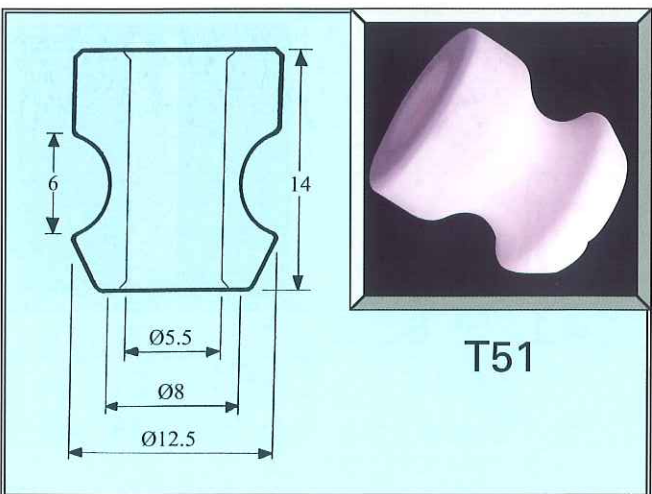
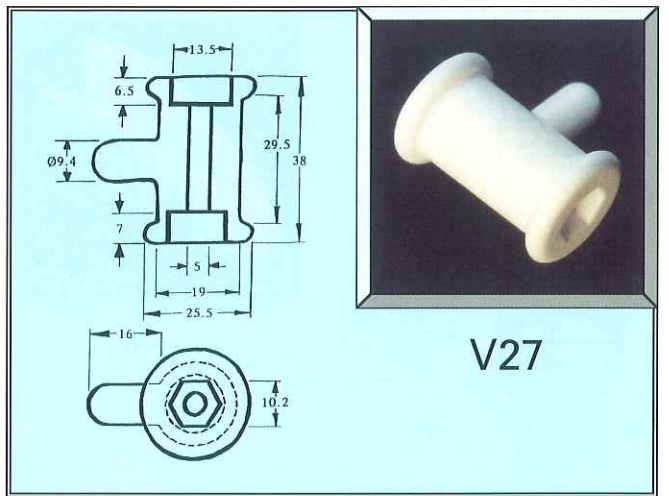
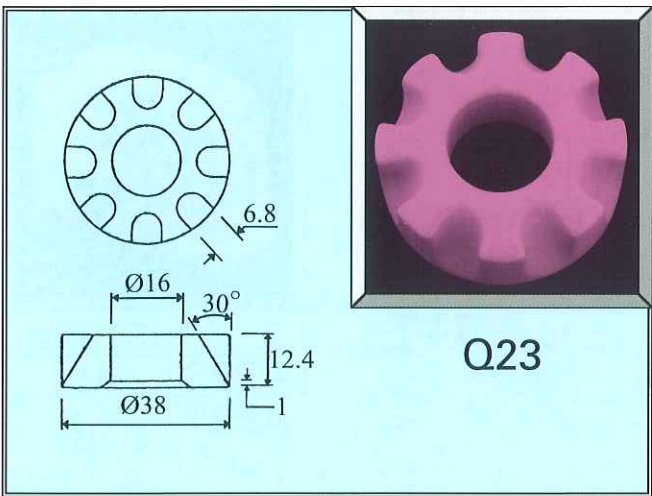
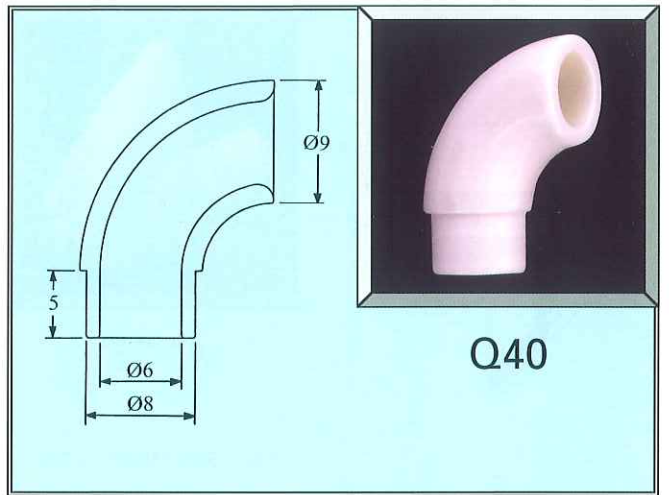
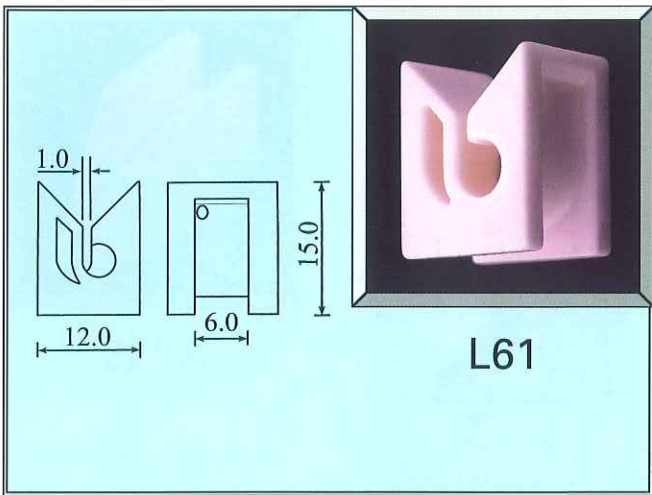
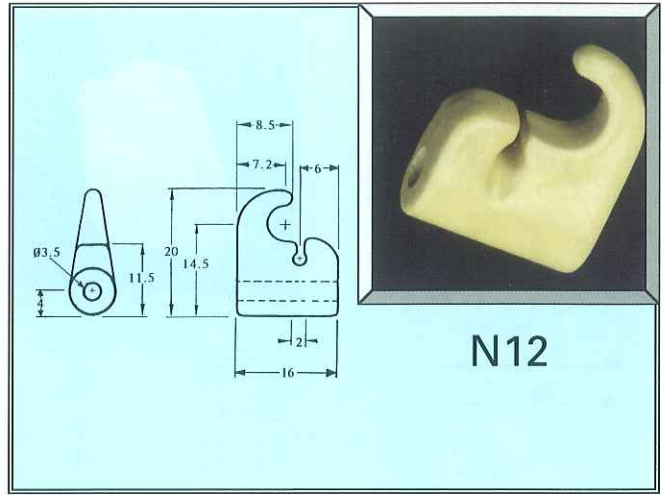
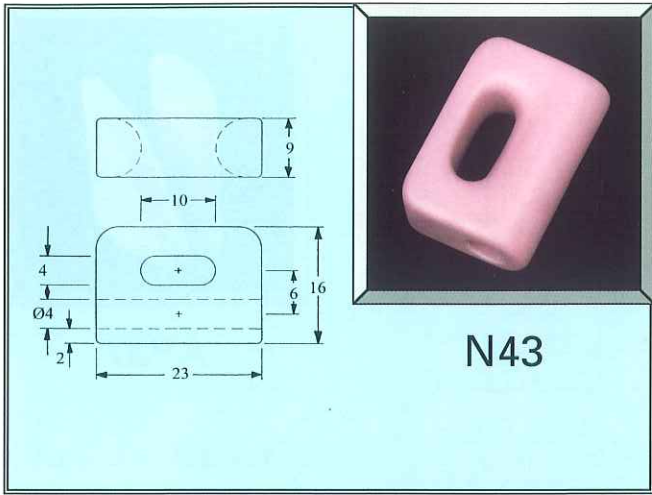
Yarn Slot Width = 1.0

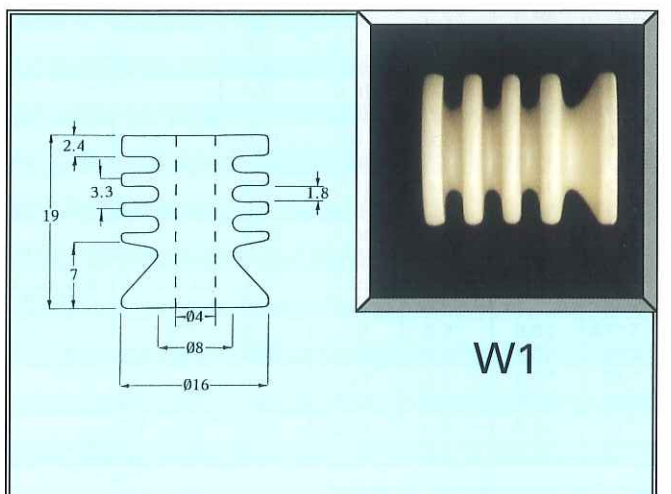
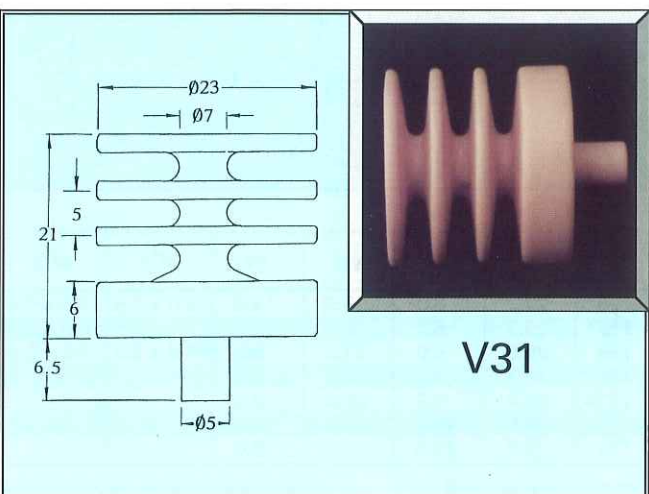
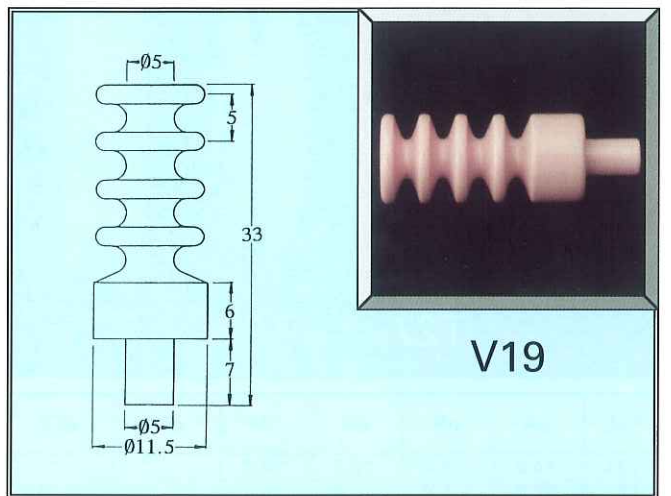
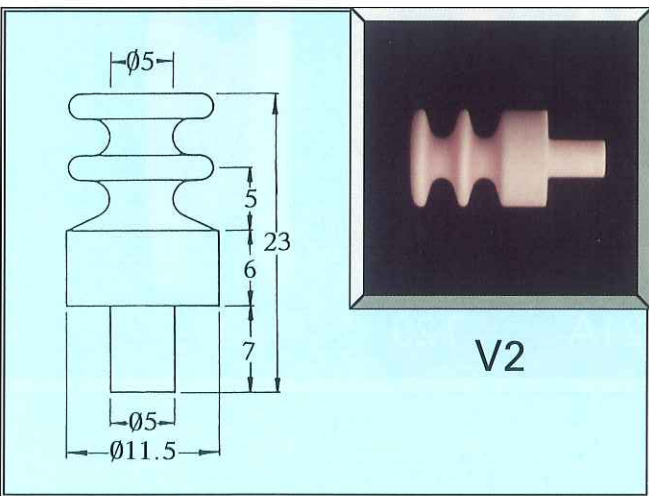
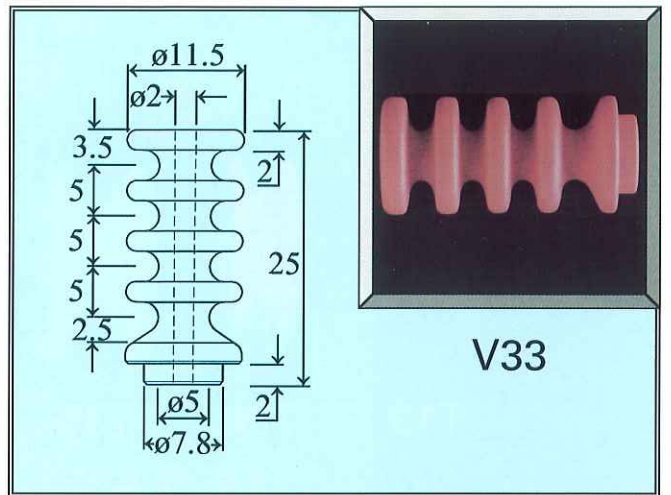
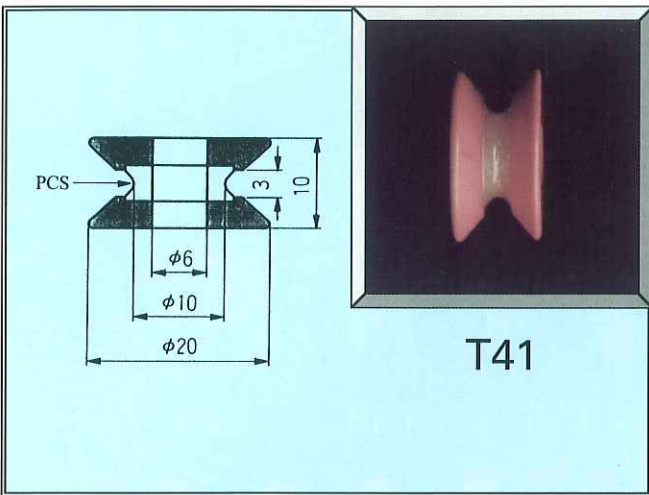
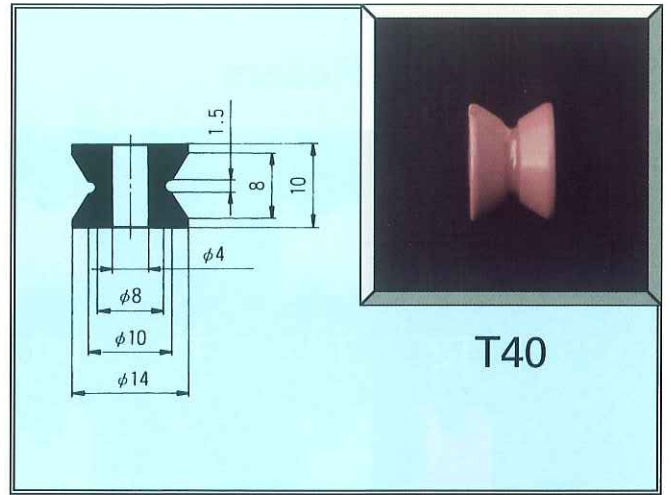
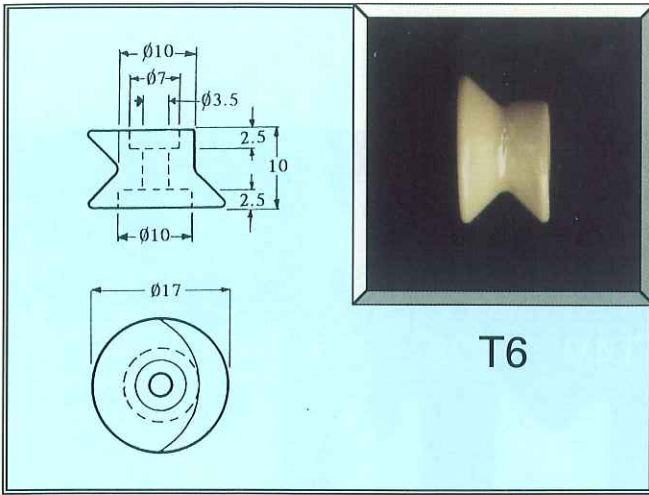
AP29

	Yarn Slot Width
AP23	0.5
AP21	4.0

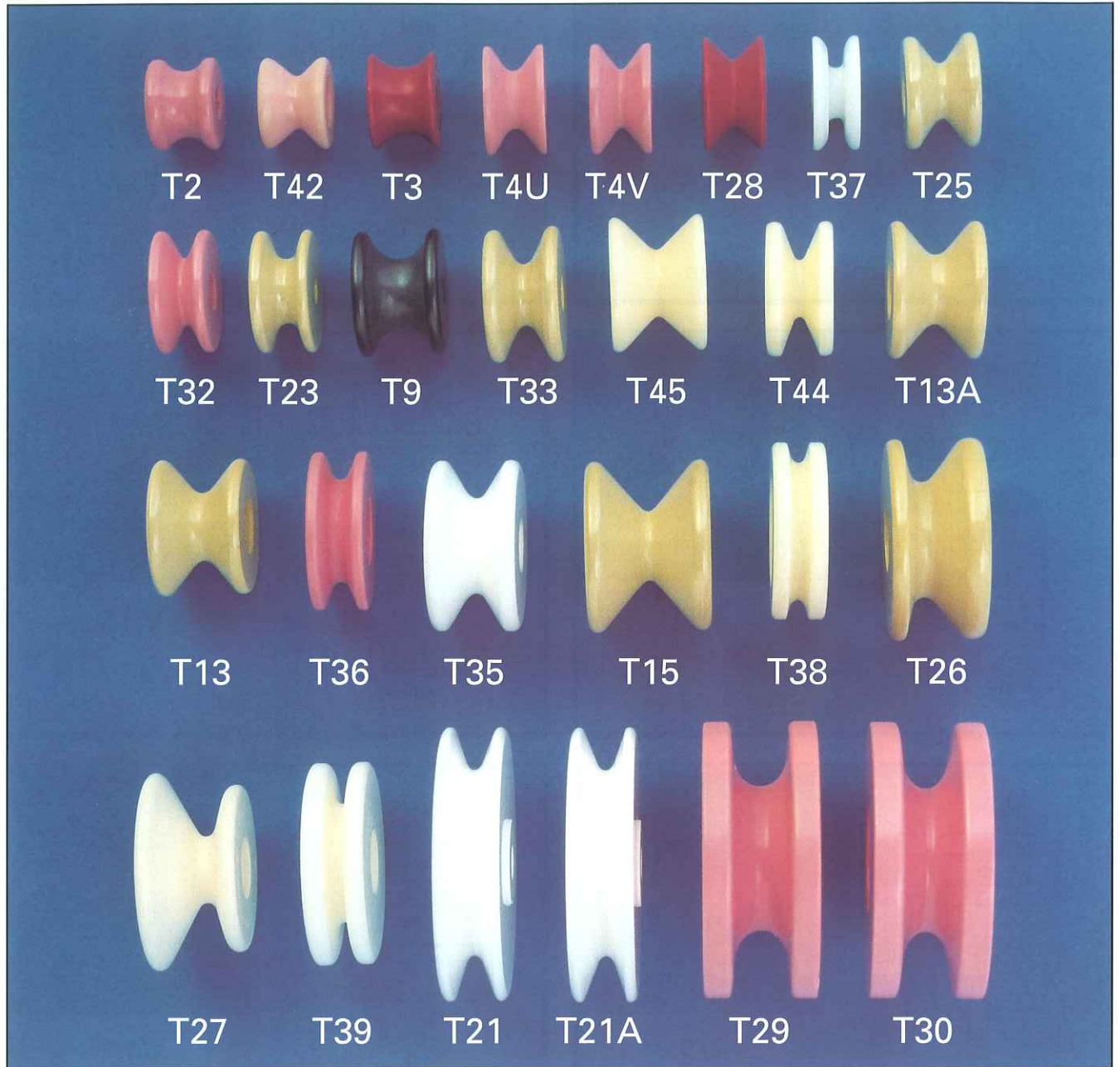
	L	X°	Y	Z
AP41	45	30	2	0.5
AP42	43	20	5	0.5
AP43	43	20	6	0.3

	A	B
AP44	31	24
AP45	34	25

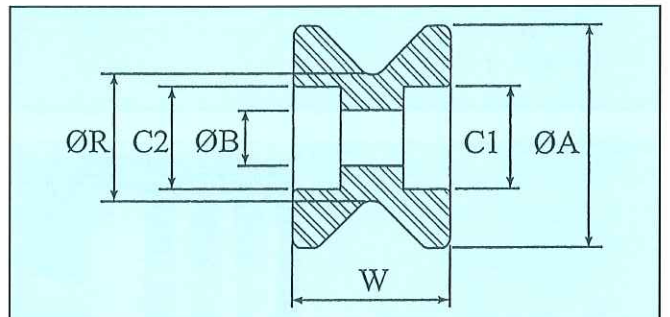




Single Groove Rollers



Ref.	ϕA	ϕB	ϕR	W	$\phi C1$	$\phi C2$
T34	14.0	3.2	10.0	8.0		
T2	14.0	4.3	10.0	10.0		
T42	14.0	3.5	8.0	10.0	6.5 x 3.0	
T3	16.0	4.0	10.0	9.0		
T4U	16.5	4.0	8.5	9.0		
T4V	16.5	4.0	8.5	9.0		
T28	17.0	4.0	10.0	9.0		
T37	17.0	5.0	8.0	7.0		
T25	17.0	6.0	8.0	11.0		
T47	17.0	3.3	10.0	9.5		
T32	18.0	5.0	10.0	8.0		
T23	18.2	3.3	9.5	9.0	8.0 x 0.5	
T9	19.0	3.2	10.2	12.8		
T33	20.0	4.3	9.5	11.0	10.0 x 2.0	
T45	20.0	4.3	10.0	14.1	14.4 x 2.0	14.4 x 2.0
T44	20.0	6.0	8.0	10.0		
T13A	20.5	5.0	10.0	13.5	CS	
T13	20.5	3.0	10.0	13.6	7.8 x 3.0	
T36	23.5	9.6	15.0	8.0		
T35	24.9	6.0	14.1	13.1	9.0 x 1.5	
T15	25.0	6.0	10.0	18.0	9.0 x 1.5	
T38	25.6	4.0	20.0	7.8	15.2 x 1.3	15.2 x 1.3



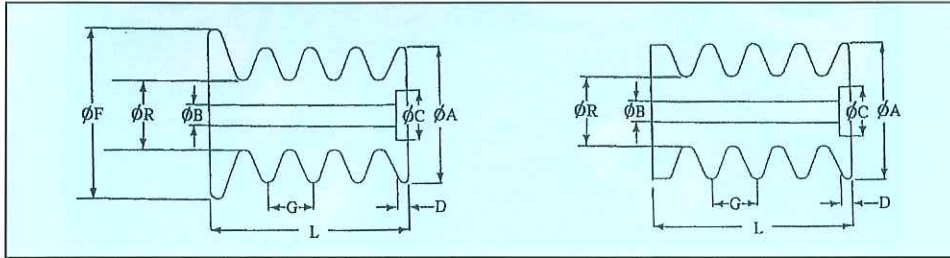
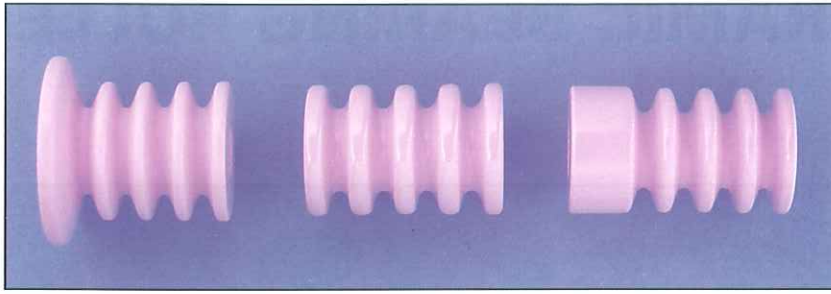
Ref.	ϕA	ϕB	ϕR	W	$\phi C1$	$\phi C2$
T26*	29.3	6.0	16.5	14.0	9.0 x 1.5	9.0 x 0.8
T27*	29.3	6.0	10.0	14.0	9.0 x 1.5	9.0 x 0.8
T39	29.8	6.0	17.2	9.0	9.0 x 2.0	9.0 x 0.8
T21	38.7	4.0	26.0	9.0		
T21A	38.7	6.3	26.0	9.0		
T29	39.0	10.0	21.0	16.0		
T30	39.0	15.0	21.0	16.0		

CS = countersunk bore for screw

*asymmetric groove

Drawings available upon request

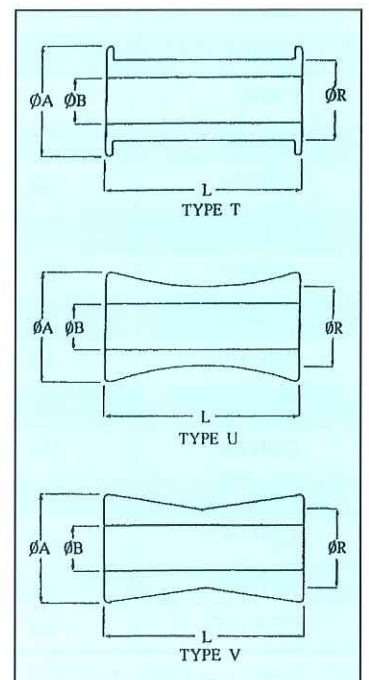
Multi Groove Rollers



Ref	ϕA	ϕB	ϕR	ϕF	L	G	No of grooves	ϕC	D
W28	13.50	5.00	9.00		34.00	7.00	5		
V32	13.70	3.30	10.00		15.60	4.80	2		
W25	14.00	3.50	9.00		20.00	4.00	3	9.00	4.00
W26	14.00	3.30	6.00		21.00	4.50	3		
W27	15.00	4.30	9.00		20.00	3.60	4		
W35	15.00	5.00	8.00		26.50	3.00	8		
W6	15.75	3.18	7.60		30.30	3.50	6		
W37	15.90	6.30	9.00	20.00	22.00	4.60	4		
V13	16.00	3.50	8.00		19.00	3.50	3		
W31	16.00	5.30	10.00	21.00	34.00	6.00	5		
W3	16.00	6.20	9.50		27.00	4.80	4		
W9	16.00	3.50	9.50		36.50	6.30	5		
V29	16.50	4.50	10.50		12.50	4.70	2		
V28	16.50	4.50	10.50		15.80	4.20	3		
W29	16.50	4.50	10.50		18.00	4.00	4		
V30	16.50	4.50	10.50		24.00	6.00	4		
V9	17.00	5.00	8.00		20.00	10.00	2		
V10	17.00	6.00	8.00		23.00	12.00	2		
W21	17.60	3.50	10.00	23.80	9.00	—	1	6.00	4.00
W22	17.60	3.50	10.00	23.80	14.00	6.00	2	6.00	4.00
W23	17.60	3.50	10.00	23.80	20.00	6.00	3	6.00	4.00
W24	17.60	3.50	11.00	23.80	22.00	5.00	4	6.00	4.00
W30	21.00	5.30	8.20		20.00	9.00	2		
W36	21.00	5.30	9.00		21.00	5.00	3		
W32	29.00	6.20	16.00		26.00	12.50	2	10.00	3.00

Drawings available upon request

Bobbins and Diabolos



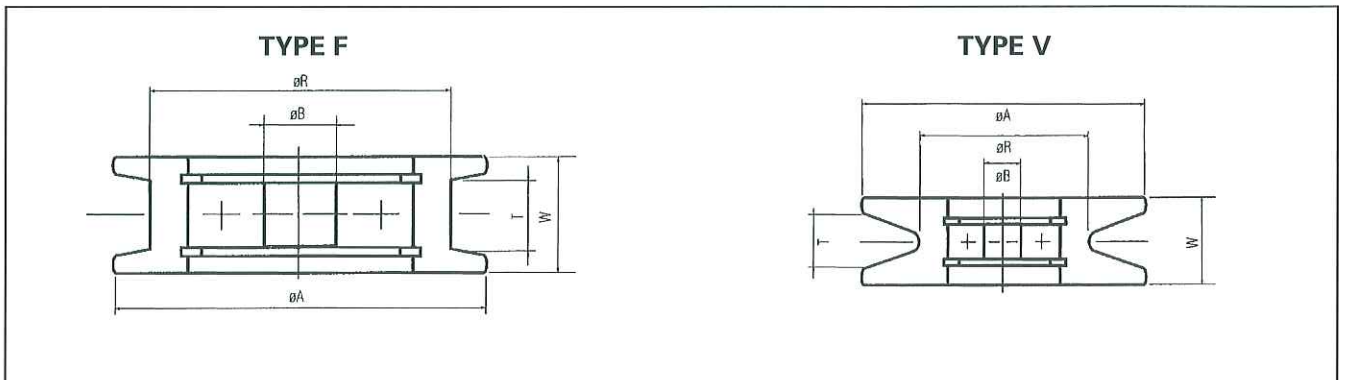
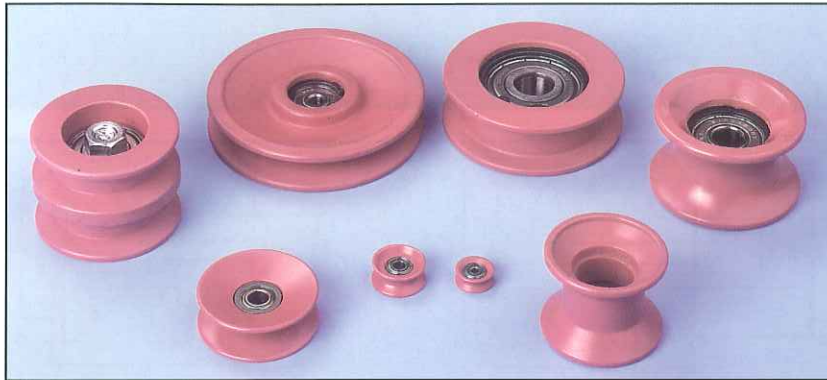
Ref.	ϕA	ϕB	ϕR	L	Type
U11	4.50	2.20	3.50	25.00	U
U18	6.00	2.00	3.50	10.50	U
U16	6.50	3.10	5.40	19.00	U
U42	8.00	3.00	5.00	10.00	U
U36	8.20	4.00	6.20	10.50	U
U37	10.80	3.20	6.80	20.00	T
U32	12.00	6.00	11.50	12.00	V
U33	12.00	6.00	10.40	20.00	U

Ref.	ϕA	ϕB	ϕR	L	Type
U34	15.00	7.50	10.40	20.00	U
U27	15.00	4.00	8.00	15.00	V
U29	15.20	4.00	9.00	21.00	T
U35*	20.00	6.30	10.00	20.00	V
U25	20.00	6.30	10.00	25.00	V
U25C*	20.00	6.30	10.00	25.00	V
U28	20.00	6.30	10.00	25.00	U
U26#	38.00	4.50	19.00	32.00	T

*countersunk bore #counter bore (14.5 x 6.0)

Drawings available upon request

CERAMIC BEARING ROLLERS

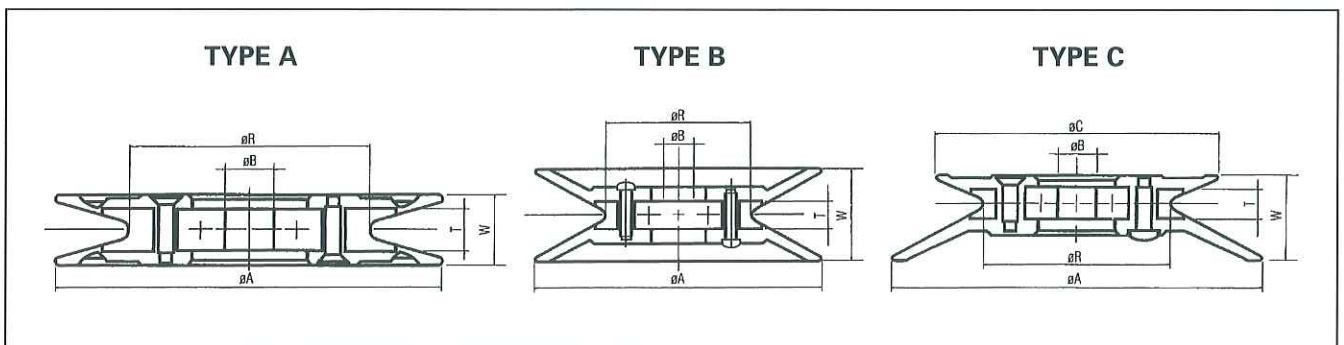


Part No	ϕA	ϕB	ϕR	W	T
CBR1V	8	1.5 or <u>2</u>	6	3	2.3
CBR2V	10	<u>2</u>	8	4	3
CBR3V	10.5	<u>2</u>	7	3.5	2.3
CBR4V	14	<u>3</u>	10	6	4
CBR5V	16.5	② or <u>4</u>	13.5	7	4
CBR6V	17	<u>3</u>	13	12	7
CBR7V	20	②, <u>4</u> , 5 or 7	14	10	7
CBR8V	23	<u>3</u>	15	8	5.5
CBR9V	27	4, <u>5</u> or 6	15	11	8
CBR10V	27	4, <u>5</u> or 6	18.5	9.5	5.5
CBR11F	30	4, <u>5</u> or 8	22	10	5
CBR12F	30	<u>5</u>	20	24	10
CBR13V	30	<u>5</u>	15	11	9
CBR14V	40	4, <u>5</u> or 8	24	12	8
CBR15V	40	<u>8</u> or 10	27	24	18
CBR16F	50	<u>10</u>	40	16	10
CBR17F	50	<u>10</u>	40	24	18

② = Special low torque bearing

Bearings (ϕB) underlined indicate standard sizes

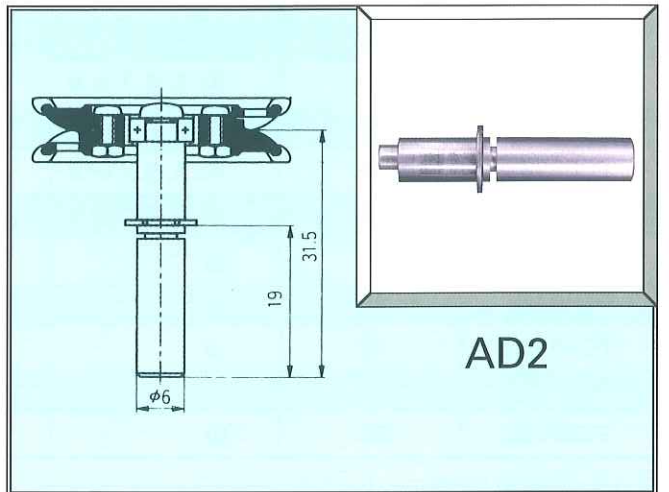
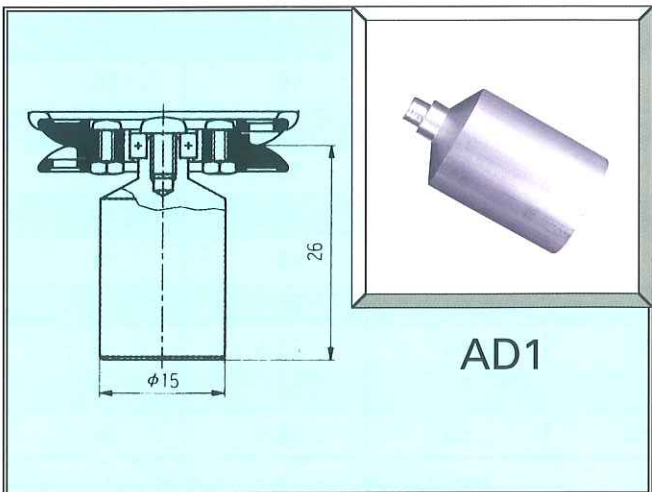
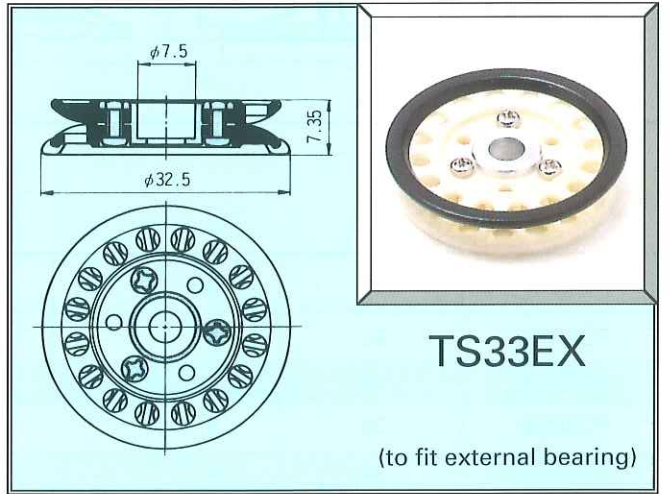
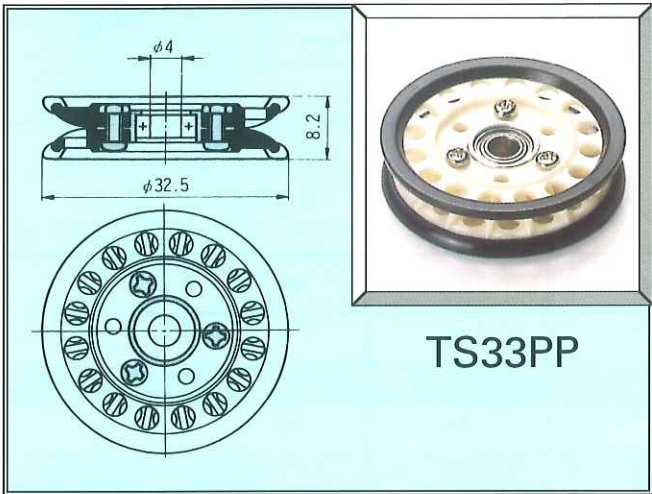
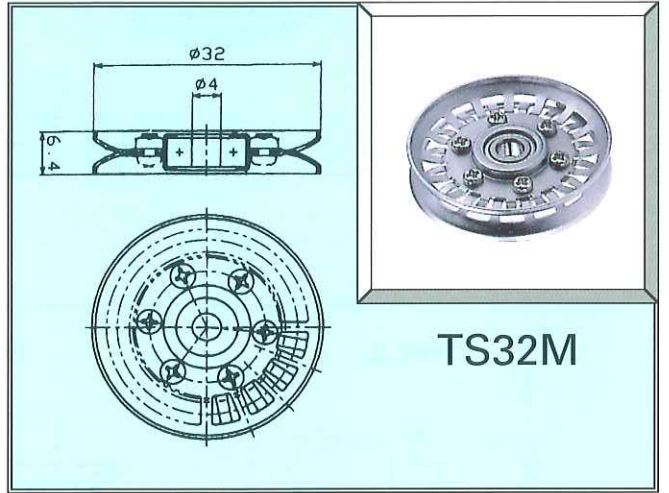
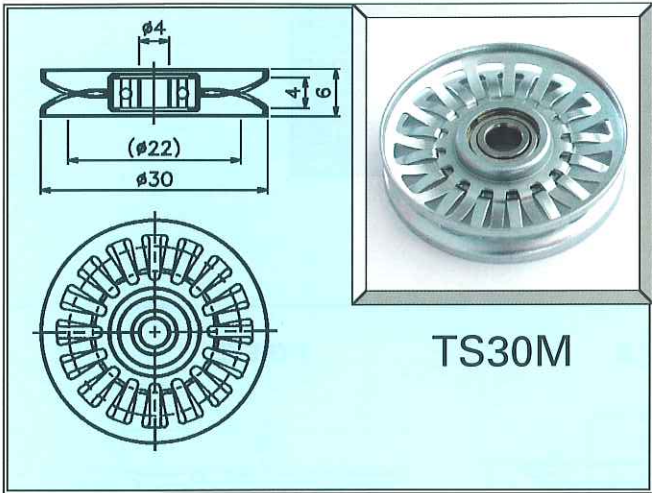
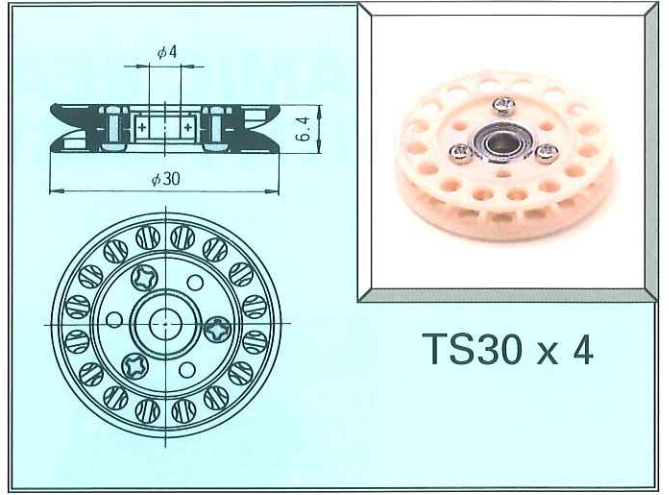
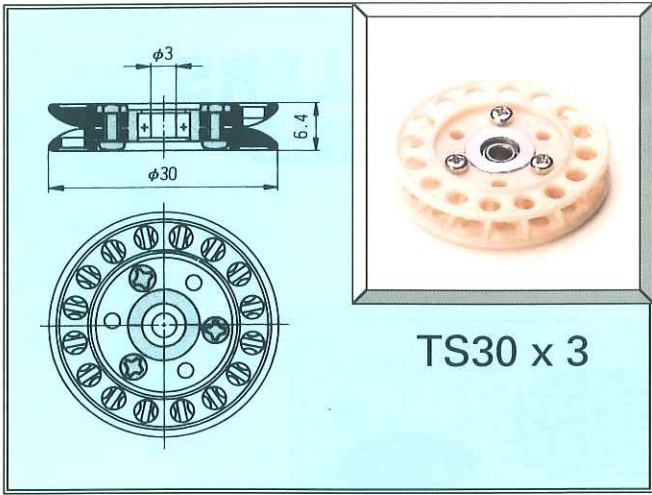
CERAMIC BEARING ROLLERS WITH PLASTIC FLANGES

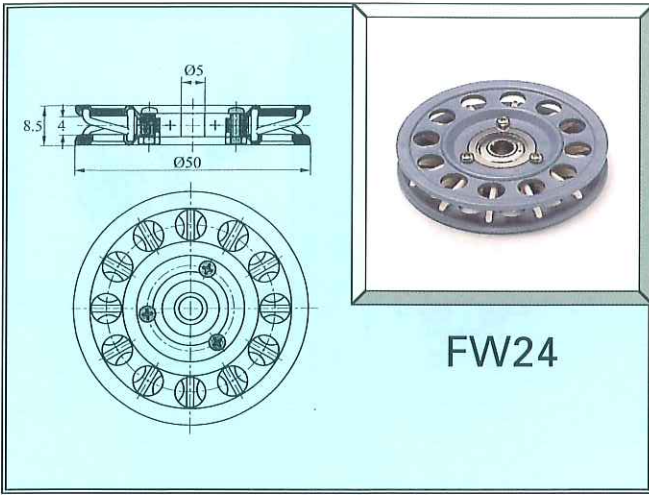


Part No	øA	øB	øC	øR	W	T
PCBR1A	20	<u>3</u>		15	4	3
PCBR2A	28.5	②, <u>4</u> or 5		20	6	4
PCBR3B	30	<u>3</u>		15	10	3
PCBR4C	30	<u>3</u>	20	15	7	3
PCBR5B	40	②, <u>4</u> or 5		20	15	4
PCBR6C	40	②, <u>4</u> or 5	28.5	20	10.5	4
PCBR7A	45	④, 5, <u>6</u> , 7 or 8		30	10	6
PCBR8A	60	7 or <u>8</u>		40	12	6
PCBR9B	60	④, 5, <u>6</u> , 7 or 8		30	20	6
PCBR10C	60	④, 5, <u>6</u> , 7 or 8	45	30	15	6
PCBR11A	80	<u>10</u>		50	15	9
PCBR12B	80	<u>8</u>		40	25	6
PCBR13C	80	<u>8</u>	60	40	18.5	6
PCBR14B	100	<u>10</u>		50	30	9
PCBR15C	100	<u>10</u>	80	50	22.5	9

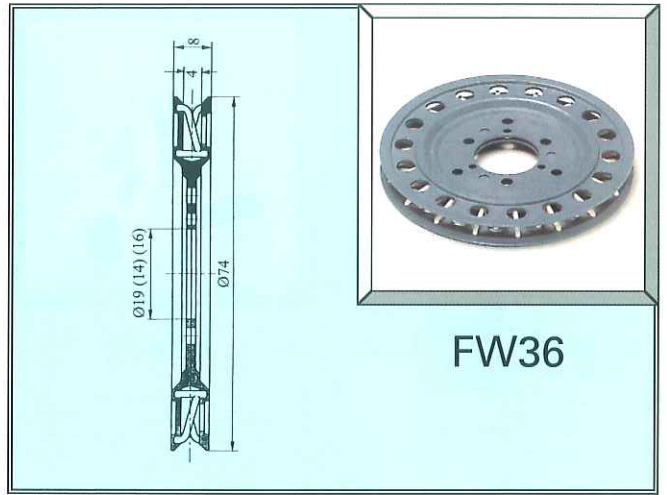
②, ④ = Special low torque bearing

Bearings (øB) underlined indicate standard sizes

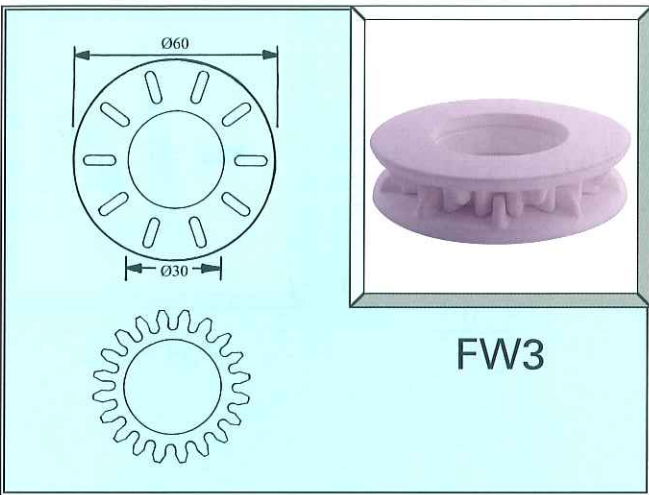




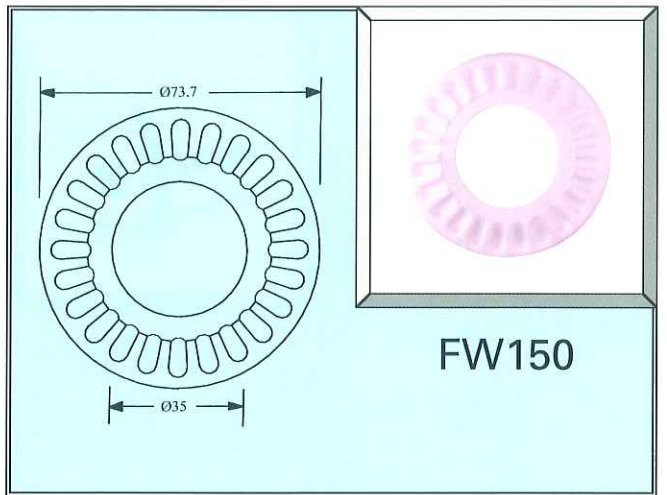
FW24



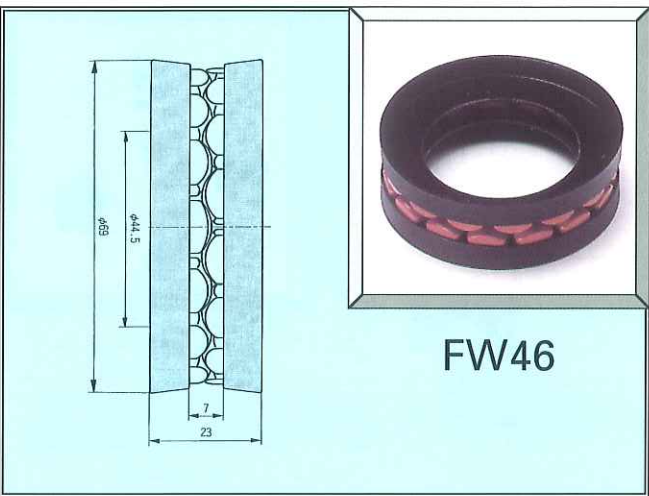
FW36



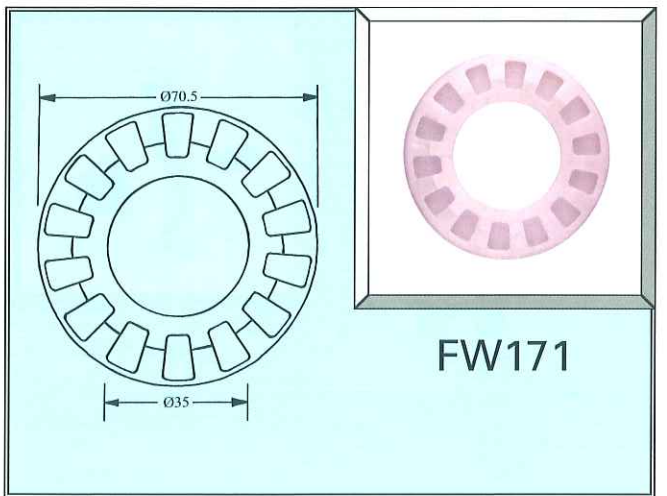
FW3



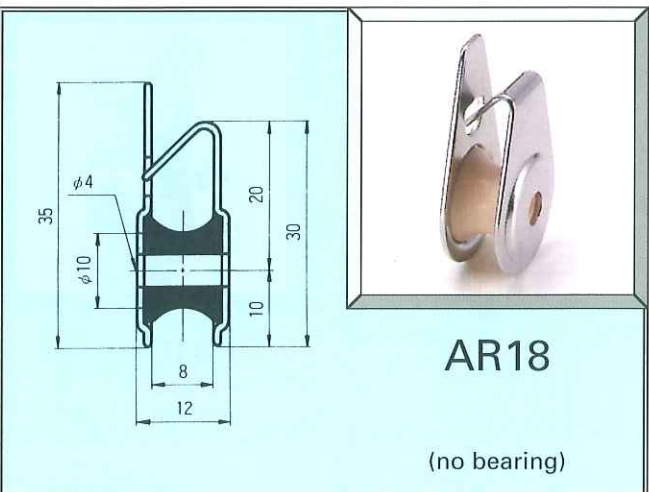
FW150



FW46

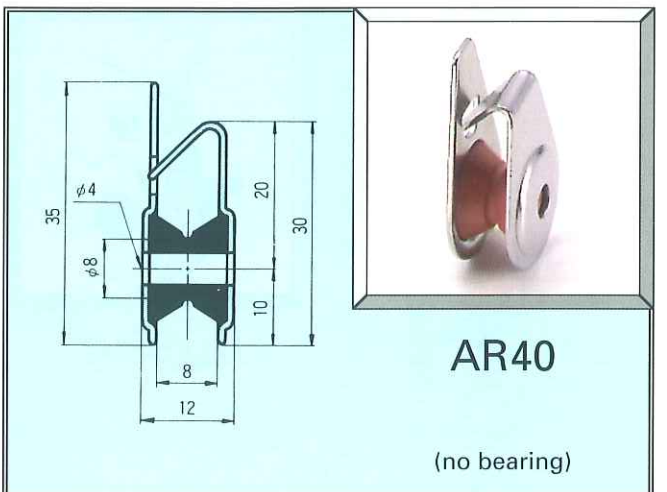


FW171



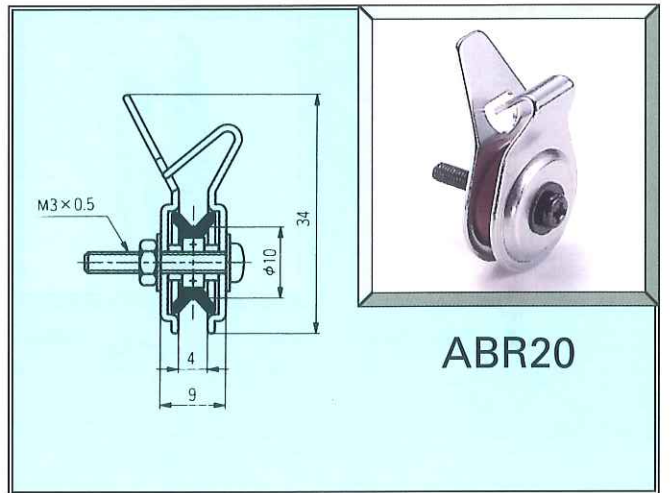
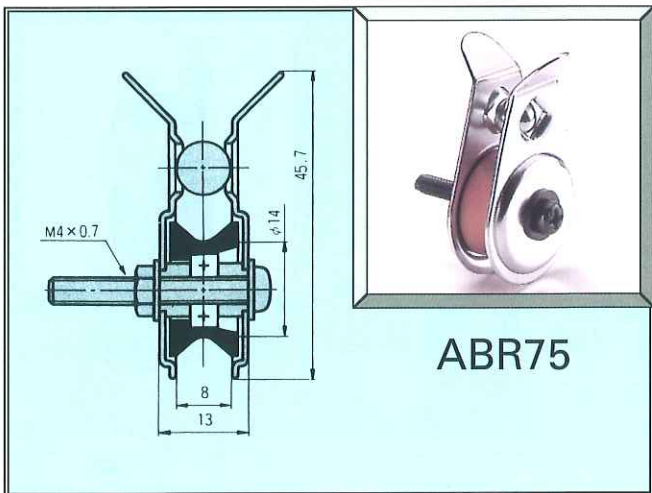
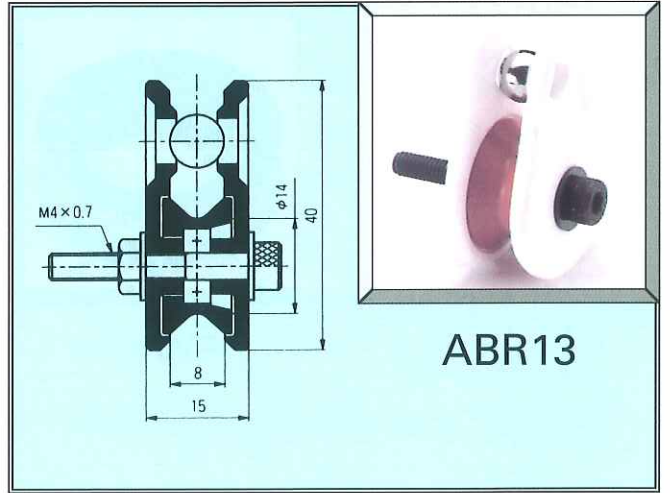
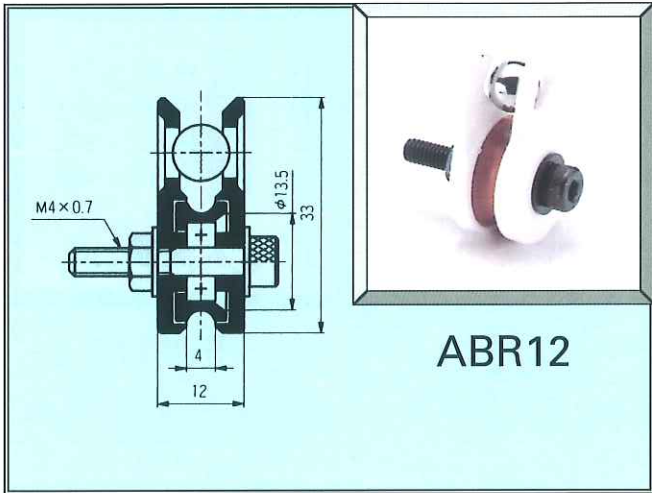
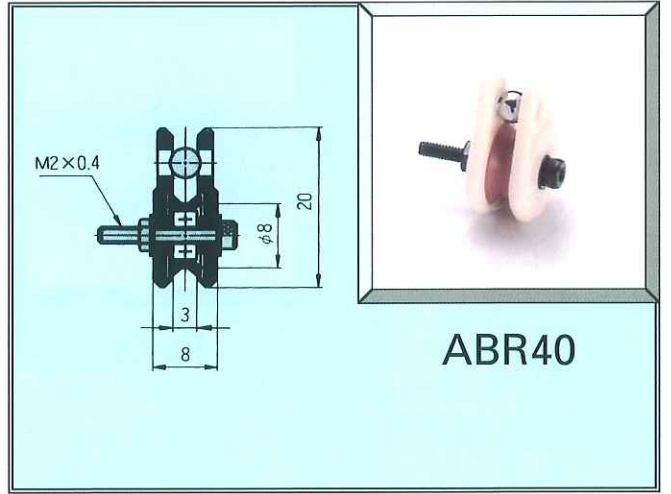
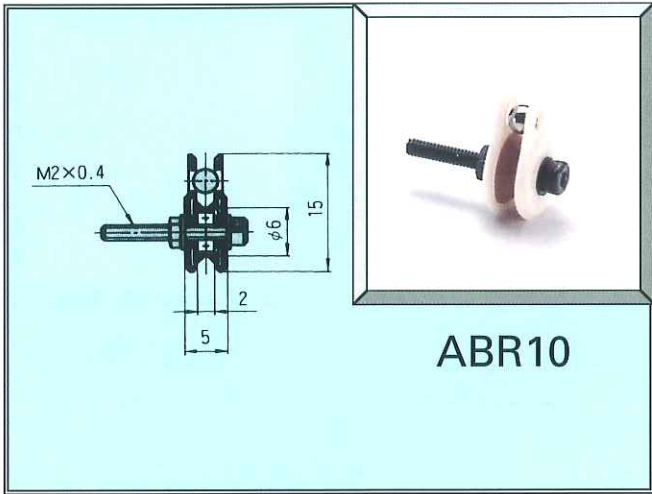
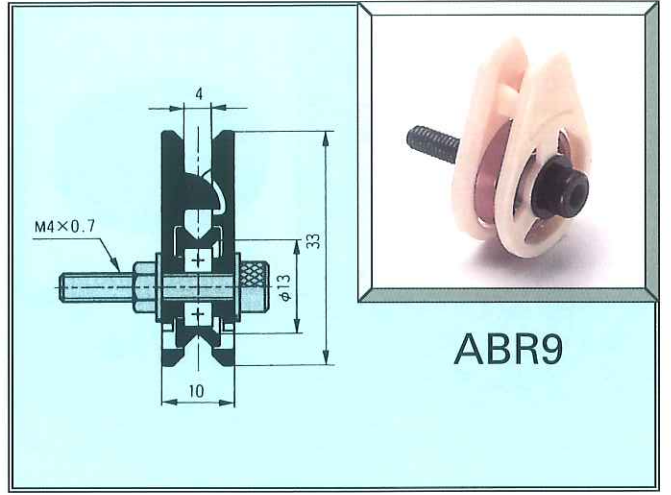
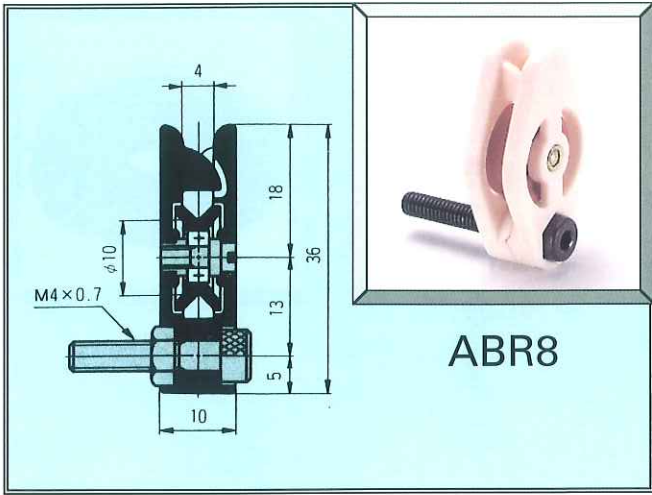
AR18

(no bearing)

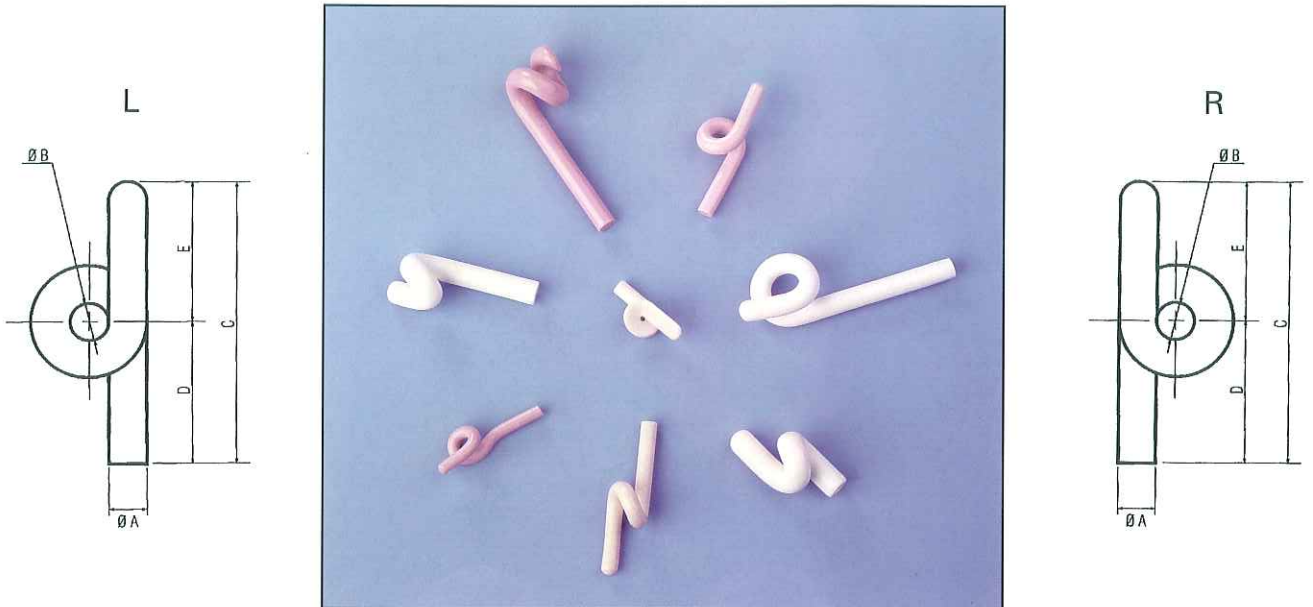


AR40

(no bearing)

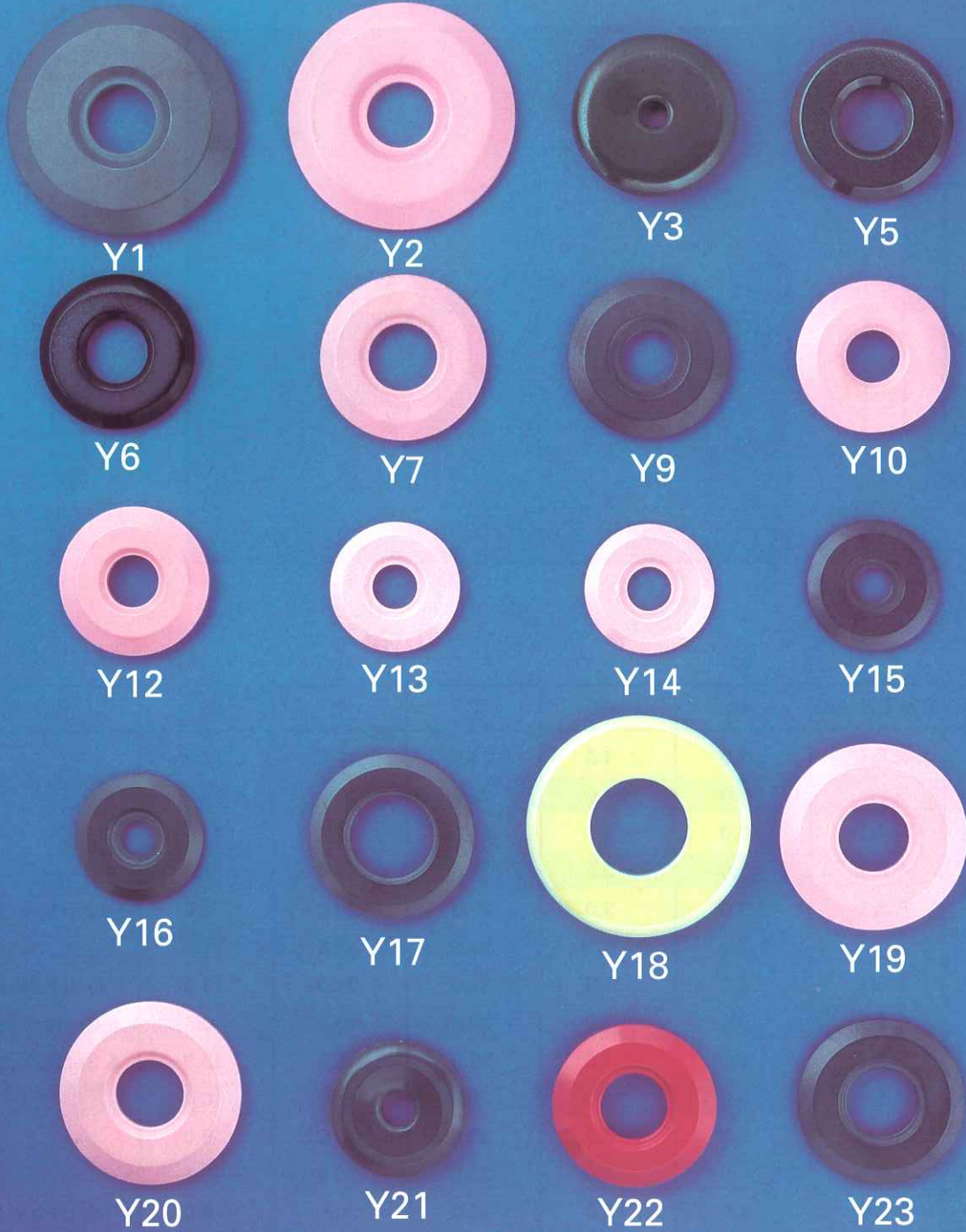


PIGTAILS

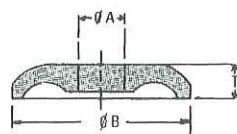


Ref.	R or L HAND	øA	øB	C	D	E	REMARKS
C50	R & L	3.0	1.0	21.5	15.0	6.5	
C52	R	3.0	2.0	22.0	17.0	5.0	
C30	R & L	3.0	3.0	25.0	14.0	11.0	
C9	R & L	3.0	2.0	27.0	20.0	7.0	
C10	R & L	3.0	3.0	27.0	20.0	7.0	Eye in line with shank
C32	R	3.2	5.5	36.0	25.0	11.0	
C36	R & L	3.2	4.0	32.0	21.0	11.0	Eye in line with shank
C2	R & L	4.0	1.0	20.0	10.0	10.0	▲ Section eye
C4	R & L	4.0	1.0	30.0	15.0	15.0	▲ Section eye
C31	R & L	4.0	4.0	25.0	15.0	10.0	
C13	R	4.0	3.0	28.0	20.0	8.0	
C20	R & L	4.0	4.0	35.0	20.0	15.0	
C14	R & L	4.0	3.0	28.0	20.0	8.0	Fixing hole 1.5
C15	L	4.0	4.5	33.0	22.0	11.0	
C22	R	4.0	6.0	53.0	37.0	16.0	
D8	R & L	5.0	5.0	42.0	30.0	12.0	
D16	L	5.0	5.0	50.0	38.0	-	Double coil
D11	R & L	5.0	5.0	60.0	45.0	13.0	
D12	R	5.5	5.0	46.0	31.0	15.0	
C17	R & L	6.0	1.5	25.0	10.0	15.0	Fixing hole 3.2
D17	L	6.0	3.0	25.0	15.0	10.0	Fixing hole 2.0
D15	R & L	6.0	1.5	31.0	25.0	6.0	
D18	R & L	6.0	10.0	60.0	45.0	15.0	

STANDARD TENSION DISCS

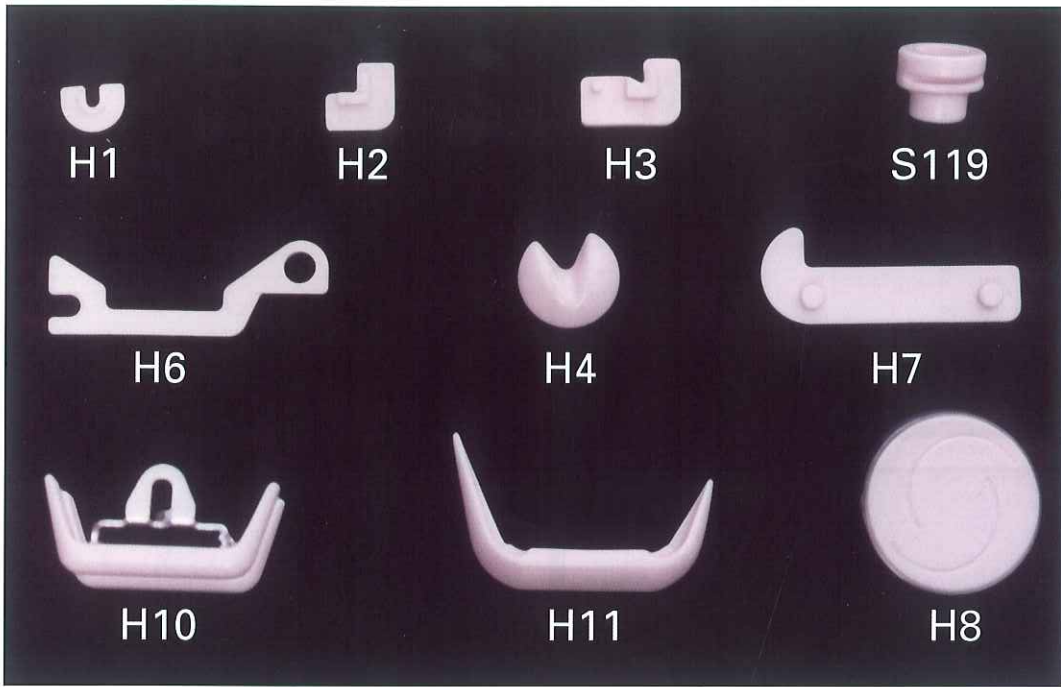


Ref.	A (to clear)	B	T	Approx. Weight (g)
Y1	10.0	37.0	4.8	11.5
Y2	10.0	36.4	3.5	7.5
Y3	4.0	25.4	4.0	7.0
Y5	10.0	25.6	4.8	6.5
Y6	10.0	25.0	3.0	2.1
Y7	10.0	24.7	3.0	3.0
Y9	8.5	26.0	2.8	3.5
Y10	8.0	24.2	3.0	3.2
Y12	8.1	24.0	3.1	3.3
Y13	6.5	20.5	2.8	2.0

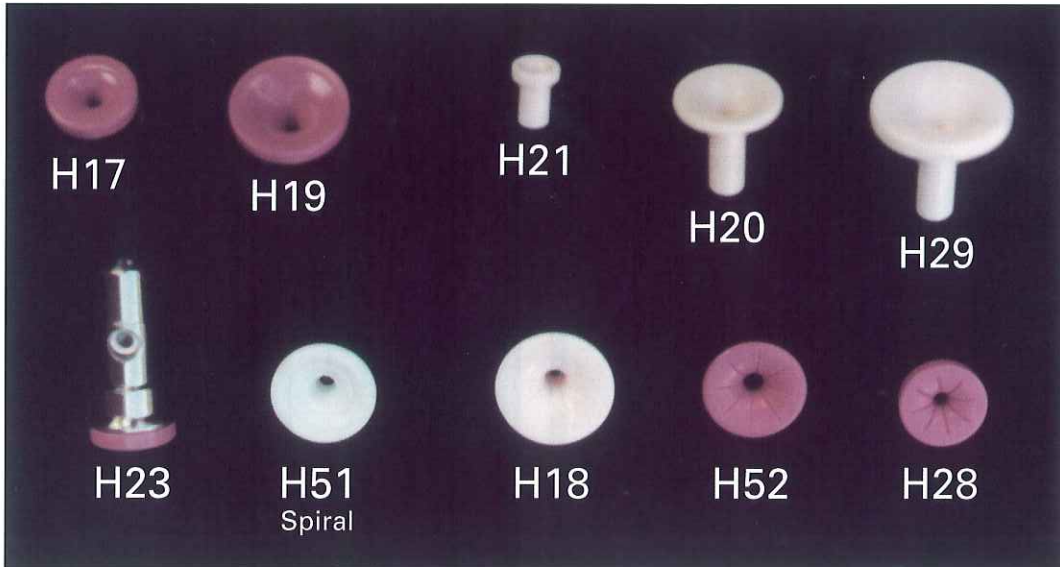


Ref.	A (to clear)	B	T	Approx. Weight (g)
Y14	6.5	20.5	2.3	1.0
Y15	5.0	20.5	2.8	2.0
Y16	5.0	20.5	2.2	1.0
Y17	12.5	26.5	2.8	3.3
Y18	15.0	35.2	3.8	11.3
Y19	10.5	29.5	4.0	5.0
Y20	10.5	29.5	3.0	3.6
Y21	5.0	22.0	3.5	3.0
Y22	10.5	26.0	4.0	5.0
Y23	10.5	26.4	2.8	3.5

Autoconer Guides



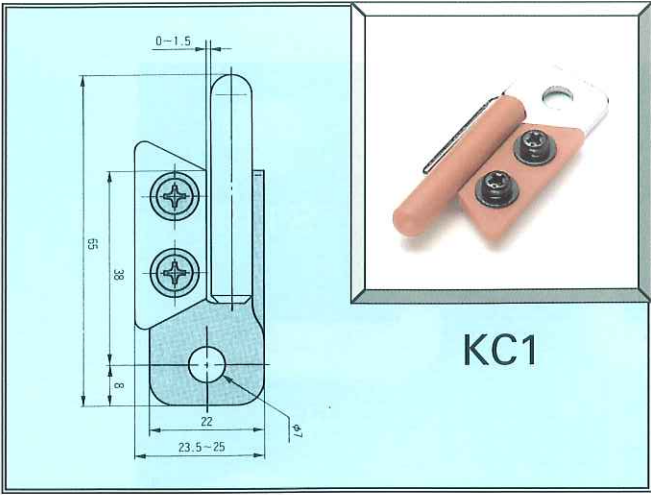
OE Guides



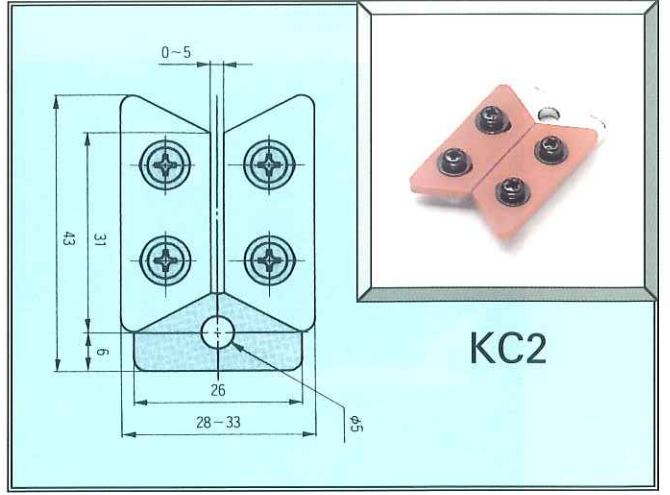
	No. of Yarn Grooves
H59	0
H60	4
H63	8

Hx x M
(standard)

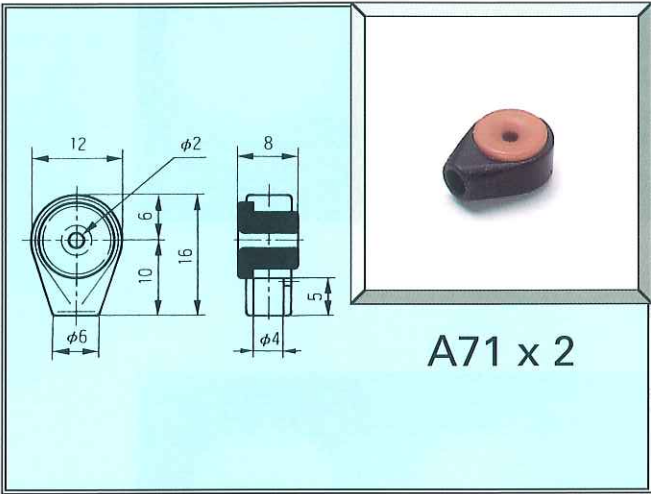
Hx x M1
(with tube eyelet)



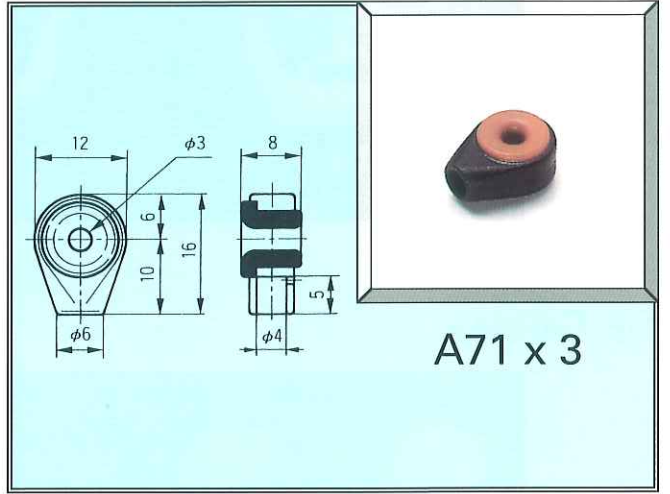
KC1



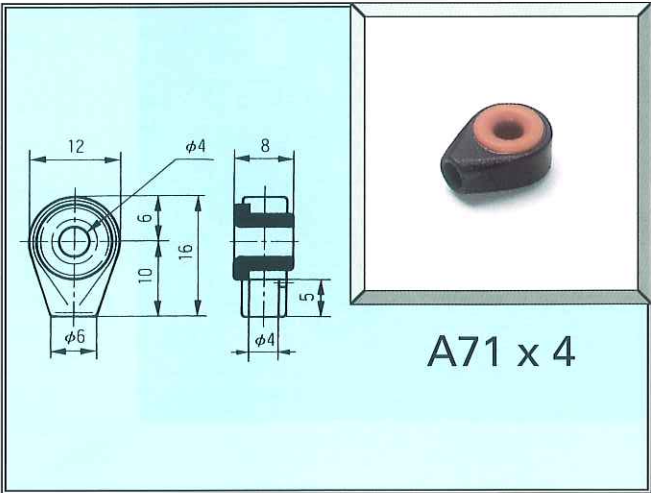
KC2



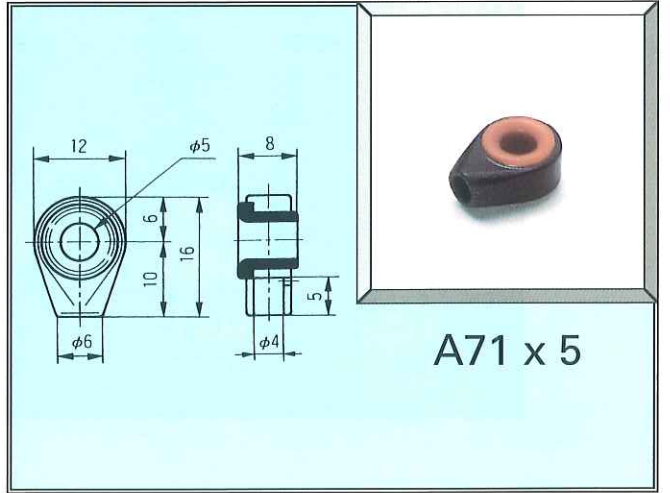
A71 x 2



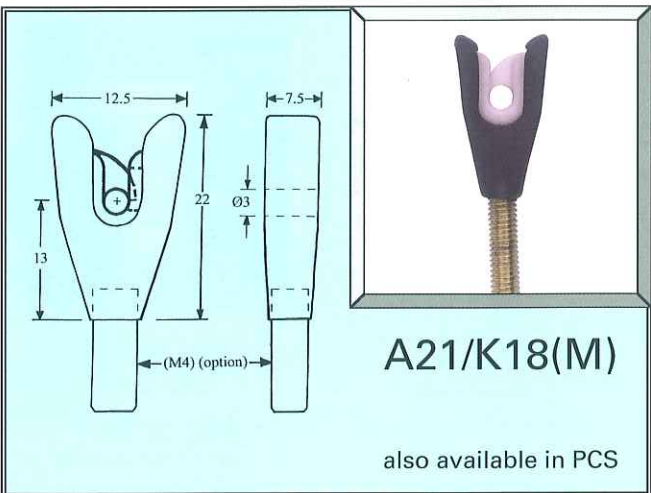
A71 x 3



A71 x 4

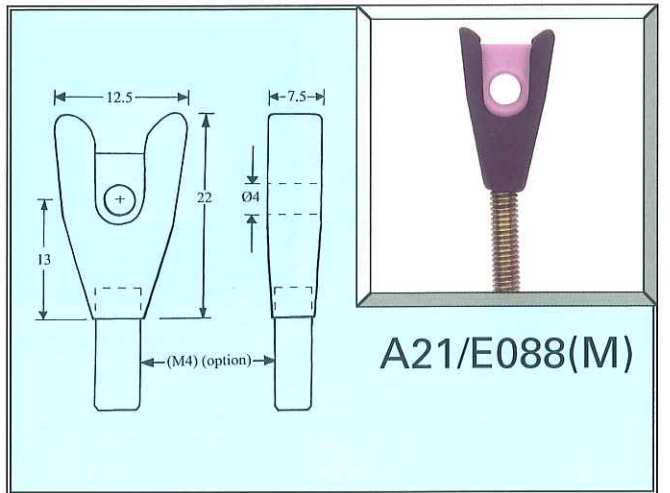


A71 x 5



A21/K18(M)

also available in PCS



A21/E088(M)

C13R/M4
(C13R/M5)
(C13R/M6)

C20R/M4
(C20R/M5)
(C20R/M6)

Left hand also available

D18LM

Right hand also available

D18L/M6

Right hand also available

R43/M4
(R43/M5)
(R43/M6)

R11/M4
(R11/M5)
(R11/M6)

S132/M4
(S132/M5)
(S132/M6)

(S132M = M3; no collar)

S35/M4
(S35/M5)
(S35/M6)

(S35M = M3; no collar)

A62/L2

also available in PCS

A62/L3

also available in PCS

A63/K18

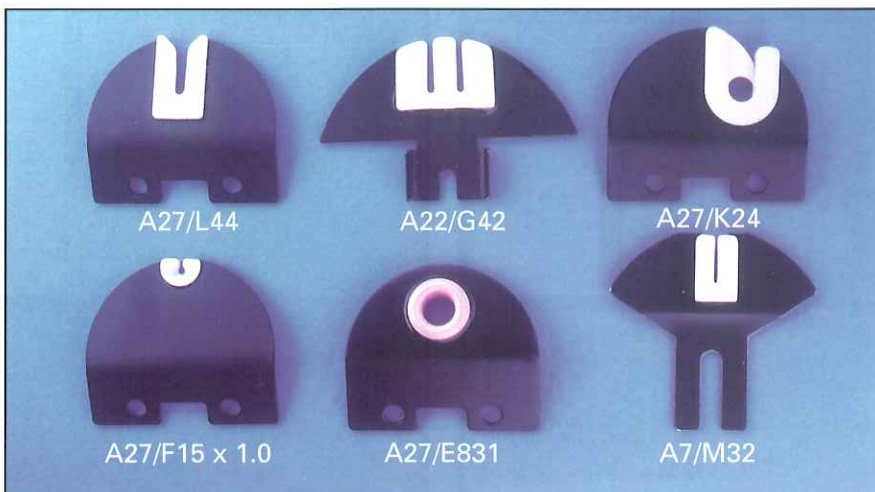
also available in PCS

A64/K18

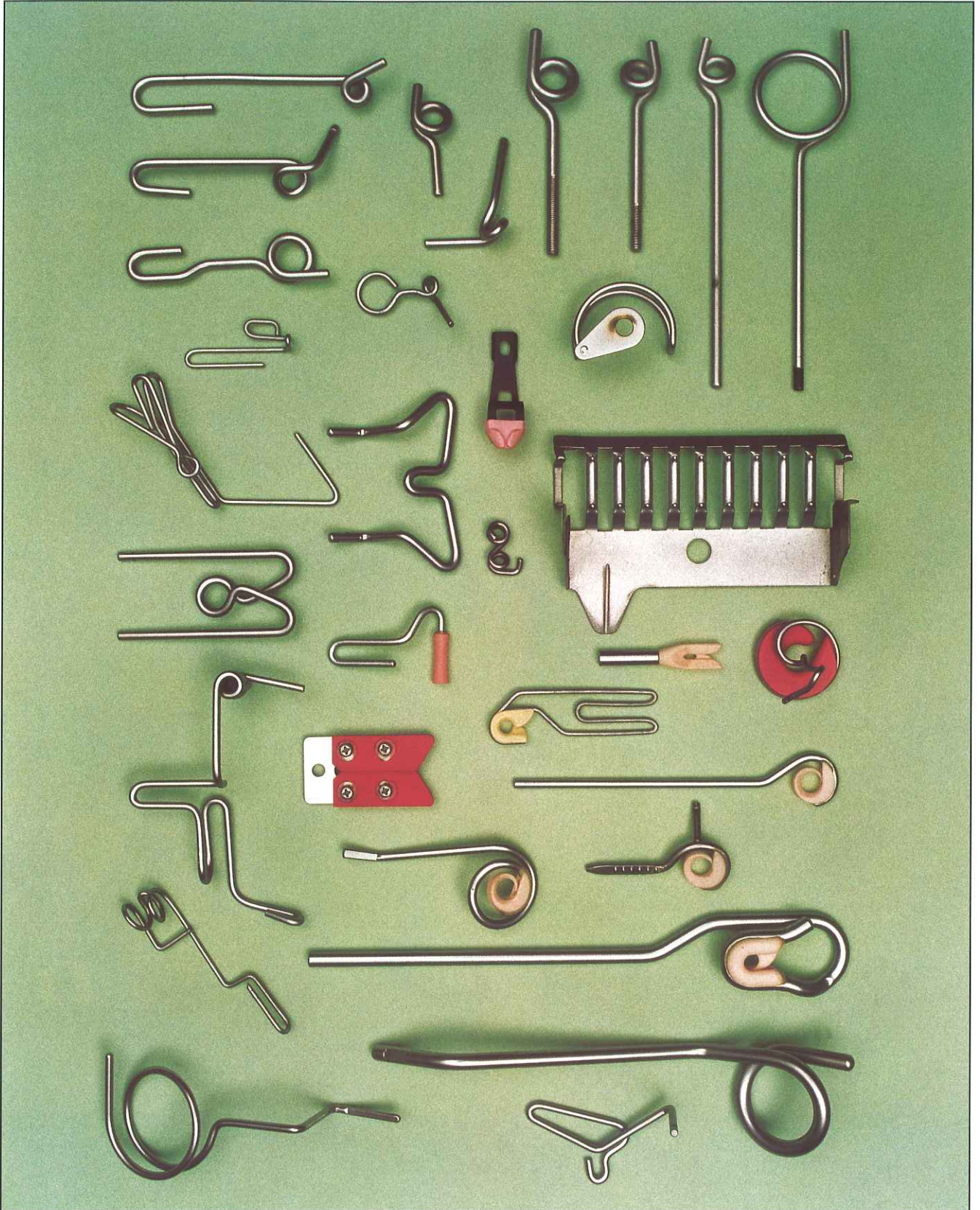
also available in PCS

X27

X28



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TENSIONERS



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