

# PLEIGER

## SQUEEGEES





## Plei-Tech Squeegees

A critical aspect of screen printing is how well the squeegee can resist durometer loss when exposed to aggressive inks, and harsh solvents, while maintaining a sharp print edge. **Plei-Tech squeegees** are available in a variety of polyurethane compounds individually formulated to perform in the diverse world of screen printing.

**Plei-Tech 15 squeegees** are recommended because of their chemical resistance and exceptional abrasion resistance when exposed to high solvent/monomer content inks, while maintaining durometer. UV, epoxy, enamel, vinyl, and other solvent based inks are extremely harsh on squeegee blades. Inferior squeegees tend to degrade at an accelerated rate due to their inability to resist harsh solvents.

**Plei-Tech 22 squeegees** are recommended for less demanding applications. Plei-Tech 22 performs well when using Platisol, water base, and less aggressive UV and solvent based inks that have a lesser effect on squeegees. For printers using these inks, Plei-Tech 22 offers the option of color coding for easy hardness identification by the printer.

Pleiger's squeegees are available in a multitude of squeegee profiles designed to meet the exacting demands of your screen printing application.

*All Pleiger polyurethanes are marketed under the registered tradename Plei-Tech®*





## Squeegee Applications

**Graphics** - The Graphics market is a very diverse segment of the screenprinting industry. Like this market, Pleiger Plastics is also very diverse. We can combine any of our profiles along with a Plei-Tech polyurethane compound formulated to work with any ink or substrate combination. We offer our solvent/monomer and abrasion resistant squeegees in both our single durometer and multi-durometer configurations for the simple spot color to the complex four-color process or half-tone jobs.

**CD/DVD** - Compact Disc printing requires a close tolerance, solvent-resistant squeegee. Pleiger Plastics' polyurethane squeegees are ideal for these precise demands. Our squeegees offer printers close tolerances, sharp edges, and squeegees that are free of surface defects for maximum repeatability and print detail.

**Textile** - The textile market varies from the hand printer to the high speed automatic machine, from spot colors to intricate 4-color process designs as well as specialty inks to obscure substrates. Pleiger makes squeegees in all dimensions, profiles and durometer combinations to assist the textile printer in achieving the desired effect to maximize productivity.

**Container** - Bottle printing often requires a sharp edge for high definition on a wide variety of substrates. Pleiger Plastics offers many bevel profiles to meet the demands of any bottle printer. Whether printing with Plastisol, Conventional, UV, or Hot Melt inks, Pleiger can provide a squeegee to meet your most challenging demands. Our bevel profiles provide the printer with a sharper edge for exceptional ink deposit and maximum definition.

**PCB** - The Printed Circuit Board industry requires a squeegee with close tolerances that can perform in a high speed environment. Our highly solvent and abrasion resistant formulations of Plei-Tech 15 outperform other squeegees in this application. These squeegees are formulated to exhibit minimum swelling, durometer loss, and high abrasion resistance, which makes them ideal for this type of printing.



CD/DVD



TEXTILE



PCB



## Selection Guide

		GRAPHICS	CD/DVD	TEXTILE	CONTAINER/ BOTTLE	PCB
<b>SE-M</b> Single Edge-Molded						
<b>SB-D</b> Single Bevel-Dual Durometer						
<b>DB-T</b> Double Bevel-Triple Durometer						
<b>DSBO-S</b> Double Single Bevel Opposite-Single Durometer						
<b>DSBP-S</b> Double Single Bevel Parallel-Single Durometer						
<b>DDB-S</b> Double Double Bevel-Single Durometer						
<b>DBB-S</b> Double Bevel Blunt-Single Durometer						
<b>SBB-S</b> Single Bevel Blunt-Single Durometer						
<b>DB-S</b> Double Bevel-Single Durometer						
<b>SB-S</b> Single Bevel-Single Durometer						
<b>SE-S</b> Square Edge-Single Durometer						
<b>PE-S</b> Precision Edge-Single Durometer						
<b>SE-T</b> Square Edge-Triple Durometer						
<b>SE-D</b> Square Edge-Dual Durometer						
<b>SE-C</b> Square Edge-Composite						
<b>DB-C</b> Double Bevel-Composite						
<b>BN-C</b> Bull Nose-Composite						
<b>BN-S</b> Bull Nose-Single Durometer						



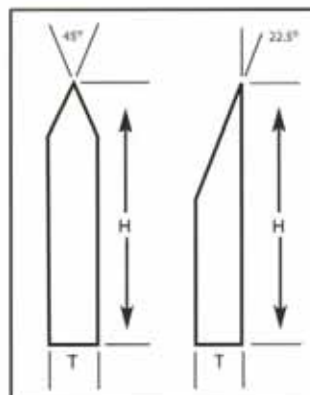


## Beveled Squeegee Technical Sheet

### 22.5 Degree Single Bevel 45.0 Degree Double Bevel

This blade has minimal dimensional stability due to the thin printing tip. It is best suited for printing with less aggressive inks and solvents with lower squeegee pressures on irregular substrates.

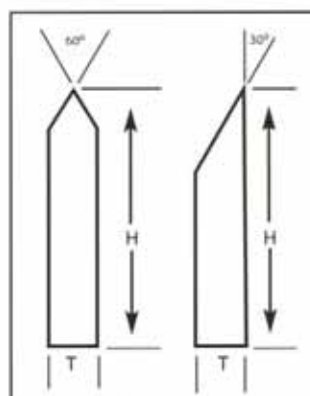
(T Available 0.10" - 0.50" H Available 0.75" x 5.00")



### 30.0 Degree Single Bevel 60.0 Degree Double Bevel

This blade has good dimensional stability and is a very stable player. This angle will be more resistant to inks and solvents due to the thickness of the printing tip. (This is our standard angle since May 1, 1992.)

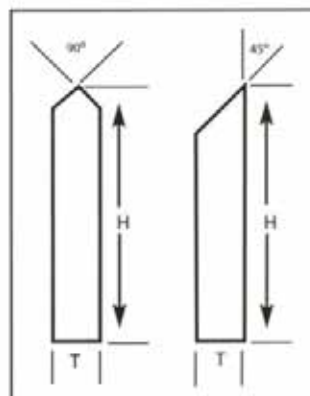
(T Available 0.10" - 0.50" H Available 0.75" x 5.00")



### 45.0 Degree Single Bevel 90.0 Degree Double Bevel

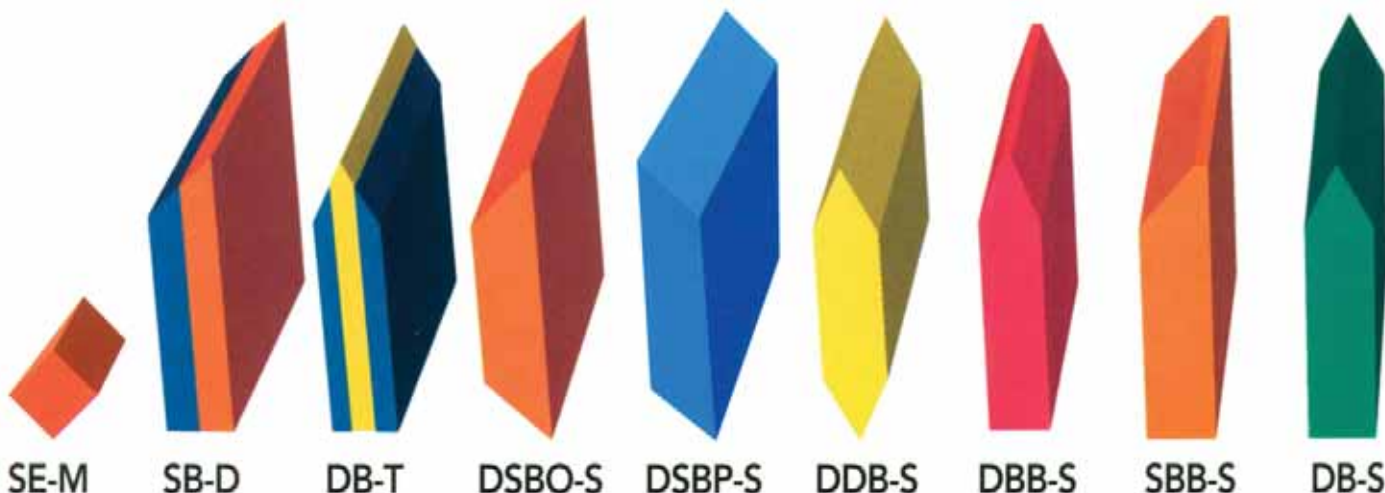
This blade exhibits the best dimensional stability and has good resistance to inks and solvents due to the heavier thickness of the printing tip.

(T Available 0.10" - 0.50" H Available 0.75" x 5.00")



### Things to Remember:

Just as a squeegee durometer affects the ink deposit, so does the angle of the bevel.



## SE-M Square Edge-Molded

Sometimes referred to as a Diamond Profile. Designed to fit specific holders having very tight tolerances. Molded for dimensional accuracy and consistent print edge. Primarily used in the Printed Circuit Board Industry. Available in PT22 and PT15.

Available in 65A, 70A, 75A, 85A and 90A hardnesses.

## SB-D Single Bevel-Dual Durometer

Excels in container printing using high mesh counts with high screen tension. The 90 durometer backing supports the softer print edge, which allows increased squeegee pressure for maximum control.

Available in PT22 and PT15.

Available in 60/90A, 65/90A, 70/90A, and 75/90A hardnesses.

Standard angles are 22.5, 30, and 45 degrees.

## DB-T Double Bevel-Triple Durometer

This fully supported bevel provides maximum control under maximum pressure in cylindrical printing.

Available in PT22 and PT15.

Available in 60/90/60A, 65/90/65A, 70/90/70A and 75/90/75A hardnesses.

Standard angles are 45, 60, and 90 degrees.

## DSBO-S Double Single Bevel Opposite-Single Durometer

Provides the printer with two print edges for container printing.

Available in PT22 and PT15.

Available in 65A, 70A, 75A, 80A, 85A, and 90A hardnesses.

Standard angles are 22.5, 30, and 45 degrees.

## DSBP-S Double Single Bevel Parallel-Single Durometer

Provides the printer with two print edges for container printing. Opposite sides of the squeegee are used to lessen the effect of repeated printing motion and ink attack.

Available in PT22 and PT15.

Available in 65A, 70A, 75A, 80A, 85A, and 90A hardnesses.

## DDB-S Double Double Bevel-Single Durometer

The two print edges provide maximum control for printing on a wide variety of cylindrical substrates.

Available in PT22 and PT15.

Available in 65A, 70A, 75A, 80A, 85A, and 90A hardnesses.

Standard angles are 45, 60, and 90 degrees.

## DBB-S Double Bevel Blunt-Single Durometer

Allows for increased squeegee angle while maintaining the sharp edge for maximum ink shear on multiple substrates.

Available in PT22 and PT15.

Available in 65A, 70A, 75A, 80A, 85A, and 90A hardnesses.

Standard angles are 45, 60, and 90 degrees.

The blunt edge is 0.5 mm to 3 mm per customer specification.

## SBB-S Single Bevel Blunt-Single Durometer

Allows for increased squeegee angle while maintaining the sharp edge for maximum ink shear of cylindrical substrates. Works well with higher viscosity inks.

Available in PT22 and PT15.

Available in 65A, 70A, 75A, 80A, 85A and 90A hardnesses.

Standard angles are 22.5, 30, and 45 degrees.

The blunt edge is 0.5 mm to 3 mm per customer specification.

## DB-S Double Bevel-Single Durometer

The sharp edge provides excellent control on printing a wide variety of cylindrical substrates.

Available in PT22 and PT15.

Available in 65A, 70A, 75A, 80A, 85A and 90A hardnesses.

Standard angles are 45, 60, and 90 degrees.

## SB-S Single Bevel-Single Durometer

Conforms easily to irregular surfaces while maintaining excellent ink deposit. Widely used in container printing and with high viscosity inks.

Available in PT22 and PT15.

Available in 65A, 70A, 75A, 80A, 85A, and 90A hardnesses.

Standard angles are 22.5, 30, and 45 degrees.

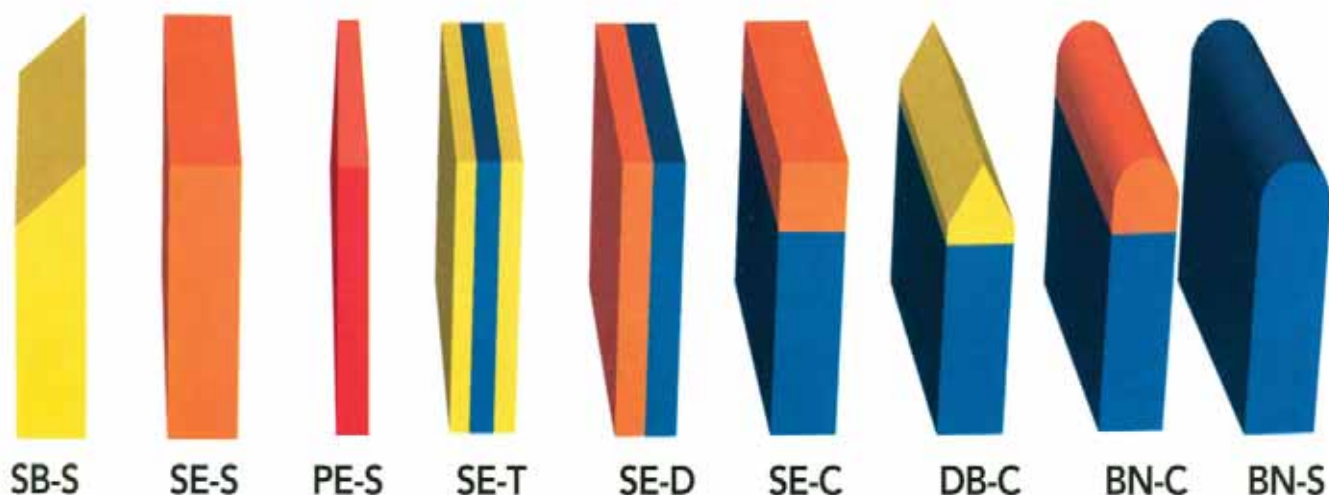
## SE-S Square Edge-Single Durometer

Our most common squeegee profile, used in a wide variety of printing applications on many different substrates. Generally, for more porous substrates, softer durometers should be used. Smoother substrates require harder durometers.

Available in PT22 and PT15.

Available in 55A, 60A, 65A, 70A, 75A, 80A, 85A and 90A hardnesses.





## PE-S Precision Edge-Single Durometer

Designed and developed for transparent UV and the optical disk (CD/DVD) printing industry. Extremely tight dimension and durometer tolerance. Flawless, sharp print edges for clean crisp images without streaking.

Available in PT22 and PT15.

Available in 65A, 70A, 75A, 80A, 85A, and 90A hardnesses.

## SE-T Square Edge-Triple Durometer

The 90A durometer center provides maximum support for the two softer print edges. This is an exceptional tool for printing on high mesh counts with elevated screen tensions. This profile excels in printing four-color process work or half-tone jobs on automatic presses.

Available in PT22 and PT15.

Available in 60/90/60A, 65/90/65A, 70/90/70A and 75/90/75A hardnesses.

## SE-D Square Edge-Dual Durometer

The 90A durometer backing provides a fully supported squeegee that does not flex or roll over with excellent ink shear. The softer print edge allows for good ink deposit.

Available in PT22 and PT15.

Available in 60/90A, 65/90A, 70/90A and 75/90A hardnesses.

## SE-C Square Edge-Composite

A soft print tip is bonded to a 90A durometer shaft. This eliminates blade rollover and squeegee vibration on high speed automatic presses.

Available in 90/50A, 90/60A, and 90/70A hardnesses.

Not available in all compounds.

## DB-C Double Bevel-Composite

A soft, sharp print tip is bonded to a 90A durometer shaft. Ideal for printing on cylindrical substrates in high speed printing presses.

Available in 90/50A, 90/60A, and 90/70A hardnesses.

Not available in all compounds.

## BN-C Bull Nose-Composite

A soft, round tip bonded to a 90A durometer shaft provides a partially supported squeegee with a rounded tip that does not shear the ink off the screen. An exceptional tool for printing puff ink or any job that require a heavy ink deposit on automatic printing presses.

Available in 90/50A, 90/60A, and 90/70A hardnesses.

Not available in all compounds.

## BN-S Bull Nose-Single Durometer

The rounded tip is exceptional for heavy ink deposits required for printing white inks on dark substrates, or puff inks. This profile is designed to work on manual applications.

Available in 50A, 60A, 70A, and 90A hardnesses.

Not available in all compounds.

## Material Selection

**Plei-Tech 22** performs well with most ink systems. It will darken in color when exposed to UV and fluorescent light at a slow rate. This change in color does not affect the physical properties or the ink/solvent resistance of the polyurethane. Available in 60A, 65A, 70A, 75A, 80A, 85A and 90A hardnesses. The standard colors are: 55A Green, 65A Orange, 70A Yellow, 75A Green, 80A Blue, 85A Red, and 90A Natural.

**Plei-Tech 15** (Vulkollan) is typically used with more aggressive solvent based ink systems or UV inks. Plei-Tech 15 will darken in color while stored. A change in color may be seen in as little as 24 hours when exposed to UV and fluorescent light. This color change enhances the physical properties and ink/solvent resistance of the polyurethane. Plei-Tech 15 is Amber. Available in 60A, 70A, 75A, 80A, 85A, and 90A hardnesses.

Plei-Tech® is a registered trademark of Pleiger Plastics Company.

Vulkollan® is a registered trademark of Bayer AG.



## ASSORTED PROFILE PIT-STOP PACK



### CONTENTS:

10 ready to install .375" x 2" x 16" squeegees; Radii on the ends  
1pc BNS 70A; 1pc SET 70/90/70; 4 pcs SES 75A;  
2 pcs SES 70A and 2 pcs SES 60A

## SINGLE DUROMETER PIT-STOP PACK



### CONTENTS:

10 ready to install .375" x 2" x 16" squeegees; Radii on the ends  
10 pieces of any ONE durometer (60A-90A)

**PLEIGER PLASTICS** is introducing the squeegee Pit-Stop Pack to the textile screen printing market. This squeegee pack is a time saving solution to preping and cutting squeegees for the press.

*Pleiger's Squeegee Pit-Stop Pack* includes 10 ready to install squeegees, cut to 16" lengths with radii on the ends.

The assorted profile pack includes 10 squeegees (3 different profiles and 4 durometers) which will retrofit an entire automatic printing press in minutes. This variety will give printers the deposit control needed for printing any color.

The single durometer pack includes 10 squeegees of any one durometer in the SES profile (ex: 10 pcs of SES 70A). This is perfect for the printer who has a preferred squeegee blade.

### Why buy the Squeegee Pit-Stop Pack?

1. **FAST CHANGE:** Reduces downtime by eliminating the need to cut and prep squeegees. Radii are on the ends for immediate installation.
2. **MANUFACTURER'S EDGE**
3. **PROFILE & DUROMETER SELECTION**
4. **HIGH PERFORMANCE POLYURETHANE SQUEEGEES**
5. **MINIMAL SWELLING, SHARP EDGE RETENTION, ABRASION & SOLVENT RESISTANT**





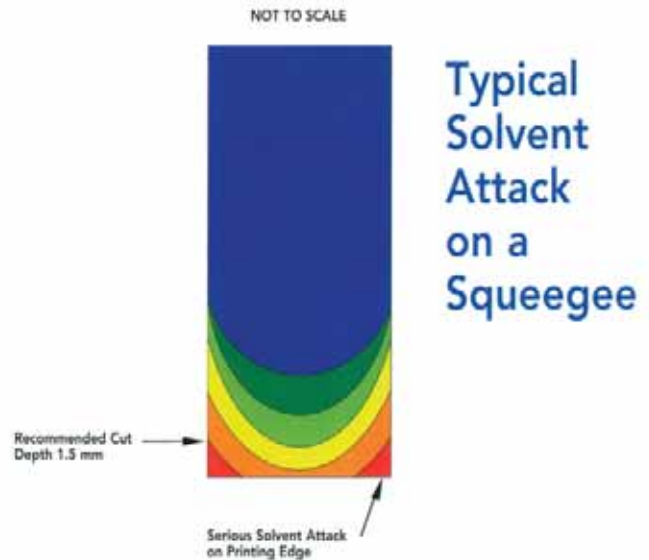
Achieving the best screen printing performance and productivity is greatly dependent on the selection of the correct Pleiger Plei-Tech® squeegee for the application and proper squeegee maintenance. When printing, monitor production time and rotate squeegees frequently. (The necessary rotation frequency is dependent on the ink/solvent system involved in the application.) When printing with aggressive UV and solvent based inks, it may be necessary to change your squeegee more often. By doing so, you will achieve a more uniform print quality and increase the life of your squeegees. A squeegee should always be wiped clean and stored in a dry environment at room temperatures following removal from the press. The blade should be allowed to recover from the ink and solvent attack and rest for a period of 24 hours. It can then be placed back into production or if necessary, re-sharpened and placed back into production.

Polyurethane Squeegees should always be stored flat in a dry (50% Relative Humidity) environment at room temperature (approximately 65-75 degrees F). Storage at temperatures below 60 degrees F may show an increase in durometer. This increase has no influence on the physical properties or the performance of the squeegee. Under these storage conditions, the shelf life of the squeegee is approximately one year. Older squeegees often show increased printing performance.

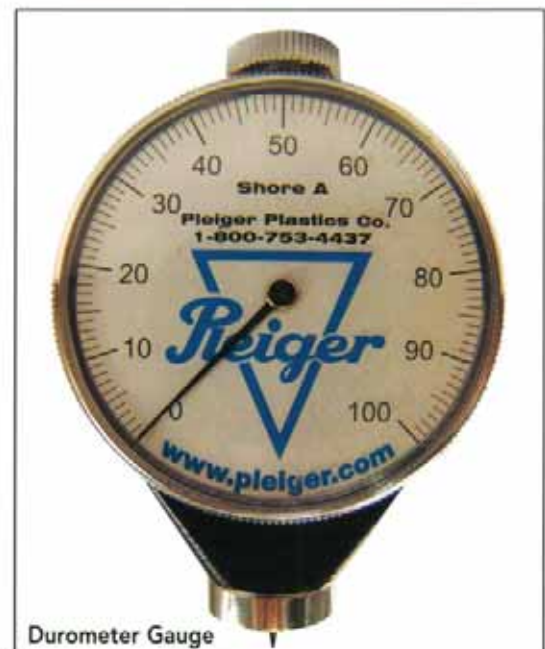
Durometer is one of the most critical aspects of a printing squeegee. Squeegee durometer can be directly linked to excess ink (smearing), streaking, or premature solvent attack. For this reason we recommend a squeegee durometer gauge be included in any quality control program.

During normal use, a squeegee will lose hardness as a result of monomer attack from the ink carrier. Shifting the durometer will have significant effects on print quality and reproducibility. In addition to durometer loss, solvent attack will reduce your squeegee's service life.

## Maintenance & Storage



## Quality Control





## Custom Molding

In addition to producing high performance squeegees, Pleiger also manufactures custom molded polyurethane components. Because of the ability to adapt and offer a vast array of custom parts for any industry, Pleiger is continually recognized as a leader and innovator of polyurethane products.

**Pleiger Plastics** offers a large spectrum of polyurethane compounds. From the simplest to the most severe applications, a **Plei-Tech** compound can be selected to meet any polyurethane application. **Pleiger** offers engineering services to design or re-design molded parts to optimize performance and moldability. Once designs are finalized, low cost prototypes are produced for field testing and selection of the best compound. Parts are then cast to size, die-cut, or machine finished.

All products are manufactured in **Pleiger's** 55,000 sq. ft. facility in Washington, PA using the latest technology to assure consistent quality and reliability from product to product. **Pleiger's** manufacturing process ensures durometer accuracy as well as dimensional stability and control.

Some of the many products manufactured by Pleiger include: damping bumpers, impact beds, precision plastic balls, hydrocyclones, rollers, cutting bars, conveyor belt scrapers, load wheels, vibration isolators, and pump parts.







Founded in 1986, Pleiger Plastics Company was one of the first molders in the United States to process Vulkollan, Europe's highest performance polyurethane. With a total of twelve locations worldwide, the group of Pleiger companies are known for engineered solutions in a variety of industries. Pleiger Plastics' business philosophy is to design high performance, high quality polyurethanes tailored to a customer's needs.

Realizing that every application has unique performance requirements, Pleiger's selection of high performance polyurethanes continually evolve. Pleiger Plastics Company selects from MDI, TDI, NDI, and PPDI hard segments and polyether, polyester, polycaprilactone and polycarbonate soft segments to design a polyurethane system for the most demanding applications. This vast array of materials allows Pleiger Plastics to offer value added engineered solutions that optimize performance and cost requirements.

Pleiger Plastics strives to build long term business relationships with its customers by offering engineering services, prototyping, cost competitiveness, high quality, and timely deliveries. These deep rooted business principles allow us to provide our customers with **The Pleiger Solution.**

## Contact Pleiger Plastics



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# Pleiger Group of Companies

## Worldwide Network



**Paul Pleiger Maschinenfabrik**  
Witten, GERMANY  
[www.pleiger.de](http://www.pleiger.de)



**Pleiger Kunststoff GmbH & Co. KG**  
Buchholz, GERMANY  
[www.pleiger-kunststoff.de](http://www.pleiger-kunststoff.de)



**Pleiger Thermoplast GmbH & Co. KG**  
Ralsdorf, GERMANY  
[www.pleiger-thermoplast.de](http://www.pleiger-thermoplast.de)



**Pleiger Far East Co. Ltd.**  
Pusan, KOREA  
[www.pleiger.co.kr](http://www.pleiger.co.kr)



**Pleiger Electro-Hydraulic Technology (Shanghai) Co. Ltd.**  
Shanghai, CHINA  
[www.pleiger.de/pm](http://www.pleiger.de/pm)

**PLEIGER**  
Paul Pleiger Maschinenfabrik / Witten Germany

**PLEIGER**  
Pleiger Plastics Company / Washington, PA USA

**PLEIGER**  
Pleiger Far East / Pusan Korea

**PLEIGER**  
Pleiger Electronic Control Systems / Shanghai China

**PLEIGER**  
Pleiger Electro-Hydraulic Technology / Shanghai China

**PLEIGER**  
Pleiger Representative Office / Shanghai China

**PLEIGER**  
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Pleiger Elektronik / Witten Germany

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**PLEIGER**  
Pleiger Kunststoff / Buchholz (Hamburg) Germany

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