



BREAKING THE  
ENGINEERING  
**BARRIER**



# MANUFACTURED TO ENGINEERING PERFECTION

Being true to our motto and vision statement of **'Breaking The Engineering Barrier'** is what sets us apart from the rest in the industry. By further leveraging on our marketing insights and knowledge, we have consistently delivered top-notch products and services for a wide range of clients from entrepreneurs to multinational conglomerate around the globe.

そしてお客様には、高品質な製品をより早く、リーズナブルな価格で提供させて頂き、長くお付き合いをさせて頂きながら、お客様と共に進歩させて頂く事。これらの事を常に考え、弊社LTバイメタリックは各種成形機のスクリュー、バレルの。

**IMPECCABLE**  
QUALITY PRODUCTS



Our company are certified according to the European Pressure Equipment Directive and the Construction Products Regulations.



## A LEADING NAME IN DESIGN & MANUFACTURING OF SCREW, SHAFTS & BARRELS

LT Bimetallic Engineering Sdn Bhd, one of the leading names in design and manufacturing of screws and barrels for injection moulding and plastic extrusion, is committed to provide all our clients the best of both worlds in product innovation and service excellence.

Our remarkable range of impeccable quality products from screw shafts, barrels and accessories for injection moulding and plastic extrusion, precision engineering works, heat treatment and hard chroming, are manufactured to perfection by a stringent quality control regimen, backed by an effective and efficient pre and after-sale service.

This very dedication to perfection and customer satisfaction remains the cornerstone of our success, and will further consolidate our position at the forefront of our chosen fields for years to come.

“エンジニアリングの壁を破る”これが弊社のモットーでありビジョンです。常に改良、改善を行い進歩していく事。

設計及び製造を致しております。弊社はLTクロームのセールス及びマーケティングの会社として2001年に設立致しました。

弊社は各種成形機のスクリュー、バレルのスペシャリストとしてだけではなく、各種金属加工、熱処理(窒化処理機を2008年導入)、硬質クロームメッキなどを行っております。

For years we have been providing top quality screws and front end components for virtually every type of injection moulding and plastic extrusion machines in the world. Backed by our extensive experience, quick turn-around time, flexibility, technical capability and know-how, we have been able to reduce lead time and increase the production and delivery speed; the result impeccable quality products at shortest possible time.

State-of-the-art manufacturing facility combined with stringent quality control regimen also ensures that all the products that leave our facility are of the highest quality and are designed to provide trouble free performance. Furthermore, LT Bimetallic screw shafts & front-end components are renowned for their superior toughness and are both corrosion and wear resistant.

弊社は射出成形機や押出成形機など、あらゆる成型機のスクリーを製造しております。高品質なスクリーを短納期、低価格にてお客様に提供いたします。弊社はお客様のダウンタイム短縮並びに不良率軽減に貢献出来る事を目標に日々技術革新、品質向上に努力しております。又、既存スクリーの製造販売だけでなく、お客様の抱えておられる諸問題(ブラックドット、シルバーライン、サイクルタイムの改善)を解決する為の技術提案を致します。

スクリーの修理、特殊設計のスクリー製造など、お客様からのご意見を参考に技術的な提案をさせていただきます。ご遠慮なくセールスにお尋ねください。使用されるプラスチック材料に応じ、各種のスクリー素材および表面処理をご用意しております。

# SCREW SHAFTS

## ねじ軸



## TAILOR-MADE SCREW SHAFTS & RECONDITIONED SCREW SHAFTS TO MEET YOUR REQUIREMENTS

In addition to providing a wide selection of screw shafts to meet various process requirement. We at LT Bimetallic also provide technical advice & **tailor-made designs** to meet a variety of thermoplastic application.

スクリーアの長寿命、サイクルタイム短縮、不良率軽減の為に開発される弊社設計によるスクリーアも是非お試しください。(LTB オリジナルスクリーア)


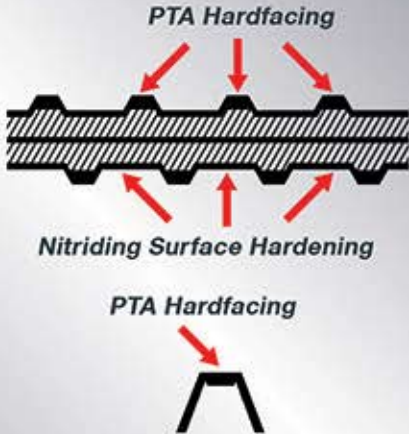
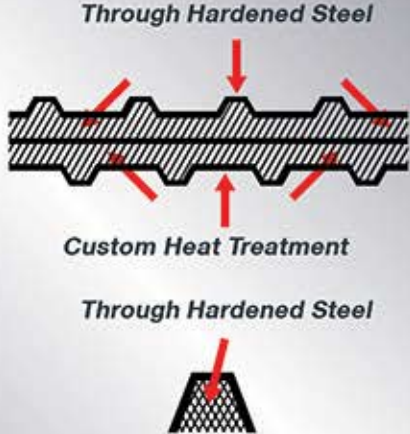
| PART NO.   | GRADE           | HARDNESS (HRC) | PROCESS                               | WEAR PERFORMANCE    |                      | APPLICATION                         |
|--|-----------------|----------------|---------------------------------------|---------------------|----------------------|-------------------------------------|
|  |                 |                |                                       | ABRASION RESISTANCE | CORROSION RESISTANCE |                                     |
| <b>ABRASION RESISTANT SERIES</b>                 |                 |                |                                       |                     |                      |                                     |
| LTSS-N   | Standard        | 65 (+/- 2)     | Nitriding                             | Standard            | Standard             | For Material Below 10% GF           |
| LTSS-B   | Anti-Wear       | 56 (+/- 2)     | PTA - Bimetallic                      | Good                | Good                 | For Material Below 30% GF           |
| LTSS-I   | Anti-Wear       | 58 (+/- 2)     | Heat Treatment                        | Good                | Good                 | For Material Below 30% GF           |
| LTSS-43  | Anti-Wear       | 58 (+/- 2)     | Heat Treatment                        | Good                | Good                 | For Material Below 30% GF           |
| LTSS-43R   | Super Anti-Wear | 58 (+/- 2)     | Heat Treatment/<br>Enhance            | Very Good           | Good                 | For Material Above 30% GF           |
| LTSS-41  | Super Anti-Wear | 58 (+/- 2)     | Heat Treatment                        | Very Good           | Good                 | For Material Below 50% GF           |
| LTSS-41R   | Super Anti-Wear | 58 (+/- 2)     | Heat Treatment/<br>Enhance            | Excellent           | Excellent            | For Material Above 50% GF           |
| <b>ABRASION &amp; CORROSION RESISTANT SERIES</b> |                 |                |                                       |                     |                      |                                     |
| LTSS-72  | Super Anti-Wear | 58 (+/- 2)     | Heat Treatment                        | Excellent           | Excellent            | For Corrosive and Abrasive Material |
| LTSS-72R   | Super Anti-Wear | 58 (+/- 2)     | Heat Treatment/<br>Enhance            | Excellent           | Excellent            | For Corrosive and Abrasive Material |
| LTSS-73  | Super Anti-Wear | 58 (+/- 2)     | Heat Treatment                        | Excellent           | Excellent            | For Corrosive and Abrasive Material |
| LTSS-73R   | Super Anti-Wear | 58 (+/- 2)     | Heat Treatment/<br>Enhance            | Excellent           | Excellent            | Custom Material                     |
| LTSS-FB  | Super Anti-Wear | 58 (+/- 2)     | Heat Treatment/<br>Bimetallic Coating | Excellent           | Excellent            | Custom Material                     |

Average










Good

Excellent

# SCREWS FOR PLASTIC INJECTION (AND EXTRUSION)

|                         |   |  |  |
|-------------------------|---|--|--|
| <b>MICROSTRUCTURE</b>   |  <p>Nitriding Surface Hardening<br/>Nitriding Thickness 0.6mm</p> |  <p>PTA Hardfacing<br/>Nitriding Surface Hardening<br/>PTA Hardfacing</p> |  <p>Through Hardened Steel<br/>Custom Heat Treatment<br/>Through Hardened Steel</p> |
| <b>PART NO.</b>         | LTSS - N  | LTSS - B   | LTSS - 43  |
| <b>GRADE</b>            | Standard  | Anti-Wear  | Anti-Wear  |
| <b>HARDNESS (HRC)</b>   | 65 (+/- 2)  | 56 (+/- 2)   | 58 (+/- 2)   |
| <b>PROCESS</b>          | Nitriding   | PTA Hardfacing   | Customised Heat Treatment  |
| <b>WEAR PERFORMANCE</b> | Standard  | Good   | Good   |
| <b>APPLICATION</b>      | For material below 10% glass fibre  | For material below 30% glass fibre   | For material below 30% glass fibre   |

# PRODUCT COMPARISON: QUALITY THAT SPEAKS FOR ITSELF

| TYPE OF SCREW SHAFTS                           | Surface Finishing                | Finishing (Appearance)  | Hardness, HRC Surface                     | Base Metal                        | Accuracy | Heat Treatment | Wear Performance   | Tensile Strength  |
|--|----------------------------------|---|---|-----------------------------------|----------|----------------|--|---|
| <b>NITRITE SCREW SHAFT (NITRIDING PROCESS)</b> | Sand Papered Buffed & Polished   | <p>Yellow &amp; Grey</p>   | 65 +/- 2 (0.6mm Depth of Nitrite Coating) | 32 +/- 2 (SACM 645)               | 0.1 mm   | Nitriding      | <p>Exponential Wear</p>   | <p>Low Stress Resistance<br/>(Cracks easily when stress/load is applied)</p>   |
| <b>PTA HARDFACING SCREW SHAFT</b>              | Sand Papered Buffed & Polished   | <p>Yellow &amp; Grey</p>  | 56 +/- 2 (1.5mm Depth of PTA Hardfacing)  | 32 +/- 2 (SACM 645)               | 0.1 mm   | Nitriding      | <p>Exponential Wear</p>  | <p>Low Stress Resistance<br/>(Cracks easily when stress/load is applied)</p>  |
| <b>THROUGH HARDENED SCREW SHAFT</b>            | Ground Finish (Grinding Process) | <p>Mirror Shine</p>      | 58 +/- 2 (Through Hardened Steel)         | 58 +/- 2 (Through Hardened Steel) | 0.005 mm | Vacum Hardened | <p>Uniformed Wear</p>   | <p>High Stress Resistance<br/>(Able to withstand stress)</p>                 |



## BARRELS バレル

In line with the rapid changes in engineering plastics and the demands for injection moulding and plastic extrusion, LT Bimetallic has developed a wide range of Bimetallic barrels. These barrels come with a wide range of metallurgical properties to provide our customers with products that meet their exact needs.

スクリー同様、射出成形機や押出成形機など、あらゆる成型機のバレルを製造しております。高品質なバレルを短納期、低価格にてお客様に提供いたします。弊社はお客様のダウンタイム短縮並びに不良率軽減に貢献出来る事を目標に日々技術革新、品質向上に努力しております。又、既存バレルの製造販売だけでなく、バレルの修理、特殊設計のバレル製造など、お客様からのご意見を参考に技術的な提案をさせていただきます。ご遠慮なくセールスにお尋ねください。



## LTCB ALLOY CHARACTERISTICS & APPLICATION

使用されるプラスチック材料に応じ、各種のバレル素材および表面処理をご用意しております。

LT Bimetallic barrels are designed to assist our customers in achieving higher production efficiency and to minimize rejects & downtime. In addition, we at LT Bimetallic are able to recondition and republish barrels to meet our customers' needs & requirements.

| PART NO.   | GRADE                                 | HARDNESS (HRC) | WEAR PERFORMANCE      |                      | APPLICATION                                    |
|--|---------------------------------------|----------------|-----------------------|----------------------|--|
|  |                                       |                | ABBRASSION RESISTANCE | CORROSION RESISTANCE |  |
| <b>ABBRASSION RESISTANT SERIES</b>                 |                                       |                |                       |                      |  |
| LTB-N  | Standard                              | 65 (+/- 2)     | Standard              | Standard             | For Material Below 10% GF                      |
| LTB-10   | Anti-Wear                             | 54 (+/- 2)     | Good                  | Good                 | For Material Below 30% GF                      |
| LTB-12   | Anti-Wear                             | 62 (+/- 2)     | Good                  | Good                 | For Material Below 30% GF                      |
| LTB-20   | Super Anti-Wear                       | 64 (+/- 2)     | Very Good             | Good                 | For Material Below 50% GF                      |
| LTB-20N  | Super Anti-Wear                       | 66 (+/- 2)     | Excellent             | Excellent            | For Material Below 50% GF & Corrosive Material |
| LTB-90   | Super Anti-Wear                       | 62 (+/- 2)     | Excellent             | Very Good            | For Material Below 60% GF                      |
| <b>ABBRASSION &amp; CORROSION RESISTANT SERIES</b> |                                       |                |                       |                      |  |
| LTB-60   | Super Anti-Wear & Corrosion Resistant | 50 (+/- 2)     | Excellent             | Excellent            | For Corrosive Material                         |

Good

Very Good

Excellent

## BARRELS FOR PLASTIC INJECTION (AND EXTRUSION)

|                         |  |   |   |   |
|-------------------------|--|---|---|---|
| <b>MICROSTRUCTURE</b>   |  |  |  |  |
| <b>PART NO.</b>         | LTB - N  | LTB - 10  | LTB - 12  | LTB - 20  |
| <b>GRADE</b>            | Standard   | Anti-Wear   | Anti-Wear   | Super Anti-Wear   |
| <b>HARDNESS (HRC)</b>   | 65 (+/- 2)   | 54 (+/- 2)  | 62 (+/- 2)  | 64 (+/- 2)  |
| <b>PROCESS</b>          | Nitriding  | Bimetallitic Alloy  | Bimetallitic Alloy  | Bimetallitic Alloy  |
| <b>WEAR PERFORMANCE</b> | Standard   | Good  | Good  | Very Good   |
| <b>APPLICATION</b>      | For material below 10% glass fibre   | For material below 30% glass fibre  | For material below 30% glass fibre  | For material below 50% glass fibre  |

# ACCESSORIES

各種アクセサリ



| PART NO.   | GRADE                                 | PROCESS                             | HARDNESS (HRC) | APPLICATION               |
|--|---------------------------------------|-------------------------------------|----------------|---------------------------|
| <b>ABRASION RESISTANT SERIES</b>                 |                                       |                                     |                |                           |
| LTSA-GP  | Standard                              | Vacuum Hardening                    | 48 (+/- 2)     | For Material With 0% GF   |
| LTSA-N   | Anti-Wear                             | Nitriding                           | 56 (+/- 2)     | For Material Below 10% GF |
| LTSA-41  | Super Anti-Wear                       | Heat Treatment                      | 58 (+/- 2)     | For Material Below 50% GF |
| <b>ABRASION &amp; CORROSION RESISTANT SERIES</b> |                                       |                                     |                |                           |
| LTSA-72  | Super Anti-Wear & Corrosion Resistant | Heat Treatment                      | 58 (+/- 2)     | For Corrosive Material    |
| LTSA-73  | Super Anti-Wear & Corrosion Resistant | Heat Treatment                      | 58 (+/- 2)     | For Corrosive Material    |
| LTSA-FB  | Super Anti-Wear & Corrosion Resistant | Heat Treatment & Bimetallic Coating | 64 (+/- 2)     | Custom Application        |

SCREW SHAFT

LTSS-N LTSS-43 LTSS-41R LTSS-73  
 LTSS-B LTSS-43R LTSS-72 LTSS-73R  
 LTSS-I LTSS-41 LTSS-72R LTSS-FB

LTB-N LTB-12 LTB-20N LTB-90  
 LTB-10 LTB-20 LTB-60

BARREL/CYLINDER



ACCESSORIES  
 ( BARREL/CYLINDER )

LTSA-GP LTSA-72  
 LTSA-N LTSA-73  
 LTSA-41 LTSA-FB

LTSA-GP LTSA-72  
 LTSA-N LTSA-73  
 LTSA-41 LTSA-FB

ACCESSORIES  
 ( SCREW SHAFT )

| APPLICATION  | SCREW SHAFT                 | BARREL/CYLINDER  | ACCESSORIES       |
|--|-----------------------------|------------------|-------------------|
| <b>COMBINATION FOR ABRASION RESISTANT APPLICATION</b>  |                             |                  |                   |
| For Material Below 10% GF                              | LTSS-N                      | LTB-N            | LTSA-GP           |
| For Material Below 30% GF                              | LTSS-I / LTSS-B / LTSS-43   | LTB-10 / LTB-12  | LTSA-GP / LTSA-N  |
| For Material Below 50% GF                              | LTSS-41 / LTSS-41R          | LTB-20 / LTB-20N | LTSA-41           |
| For Material Below 60% GF                              | LTSS-72 / LTSS-73 / LTSS-FB | LTB-20N / LTB-90 | LTSA-FB           |
| <b>COMBINATION FOR CORROSIVE RESISTANT APPLICATION</b> |                             |                  |                   |
| For Corrosive and Halogen Free Material                | LTSS-73R / LTSS-FB          | LTB-60 / LTB-20N | LTSA-73 / LTSA-FB |

# OTHER SERVICES

## その他のサービス

### 01. Tailor-made Screw Shafts テーラーメードスクリュー(スクリュー設計)

In addition to a wide selection of screw shafts made to OEM specifications, we at LT Bimetallic provide technical advice & tailor-made screw shafts to meet a variety of thermoplastic applications & requirements.

OEMのスクリュー製造について、スクリューの幅広い選択肢の中から技術的なアドバイスをさせていただきます。

### 02. Up-sizing or Down sizing アップ又はダウンサイジング

Due to constantly changing market demands and requirements in the type and specifications of parts, it sometimes becomes necessary for the screw shafts and barrels to be up-sized or down-sized. In such circumstances, we thoroughly analyse the situation, the type of resin used and the parameter settings required, and advise the customers on the most suitable size (whether to up-size or down-size) to ensure optimum performance and productivity.

多様に変化する市場の要求に対し、都度設備を投入する事は困難です。それらに対応する為に既存のスクリュー、バレルのサイズを変える事が必要となります。その場合弊社ではアップ及びダウンサイジングを提案させていただきます。樹脂の種類、製品重量等を分析しスクリュー(バレル)径を計算します。最も適正なサイズを選択しお客様の生産性の向上の為にご提案を致します。

### 03. Reconditioning & Repairing スクリュー、バレルの修理及び再調整

Sometimes it becomes necessary for screws and shafts to be reconditioned. Though we do not recommend reconditioning, we do understand that it may be inevitable, given the limitation of budget and the urgency to keep production going to meet specific targets. In such events, we thoroughly analyse the situation, and recommend the most suitable solution to meet our client's needs, clearly highlighting the pros and cons of such actions. So our clients are always well informed and are kept abreast of their current and future requirements.

常に新規設備を購入する事が良いとは限りません。既存の設備を再調整、修理する事が必要な場合も御座います。弊社としては再調整、修理はお勧めできませんがお客様の状況(緊急性、ご予算)に応じて対応させていただきます。その時々状況、お客様のニーズにお応えする為の最善の方法をご提案いたします。

### 04. On Site Inspection / Measurement 現行品の測定及び検査

Though we strongly recommend part assessment to be done at our premises, as our place is well equipped to carry out thorough analyses and inspections, we do, when needs arise, carry out general inspections at the clients' premises. Our well trained a technical personnel are ever ready to pay a visit to your place, to do on-site measurements and assessment (on key and critical areas) of screws and barrels. Visual inspection will also be carried out to detect traces and signs of defects, such as chipping, breakage, as well as for severe wears and tears. The general conditions of the parts will be explained, followed by a details report on our recommendations and suggestions. We charge a very modest fee for this service, however, we will be more than happy to waive this fee completely if there is a confirmation of a new order at the time the service is rendered.

弊社が御提供するサービスの中にスクリュー、バレルの測定及び検査が御座います。弊社技術者が御社へお伺いし既存のスクリュー、バレルを検査いたします。目視検査による欠け、割れ、傷。実測による摩耗状況の判断。これ等の検査結果から、現行スクリュー、バレルの交換が必要かどうかを報告させていただきます。

この検査は低料金でお受けいたします。ご遠慮なくお申し付けください。尚、この検査に伴い新規部品の御注文を頂いた場合は、検査料は無料とさせていただきます。

# BUSINESS NETWORK

OUR BUSINESS NETWORKS ARE COMMITTED TO PROVIDING YOU WITH THE EXCEPTIONAL CLIENT SERVICE AND PARTNERSHIP

## **JB OFFICE & FACTORY (HQ)**

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A LEADING NAME IN DESIGN & MANUFACTURING OF SCREW, SHAFTS & BARRELS



[WWW.LTBIMETALLIC.COM](http://WWW.LTBIMETALLIC.COM)