**Line2Line Coatings** is a thick, self-fitting, graphite coating that safely minimizes piston-to-wall clearance and finds the perfect operational fit to stabilize pistons and reduce piston assembly friction and wear. A stable piston improves ring seal and reduces wear modes within the piston-ring-bore assembly. Power cylinders are more efficient and last longer. Engines benefit with a cleaner burn for better tuning, less blow-by, higher crankcase (pan) vacuum, less noise, better oil control, and longer life.

**HOW IT WORKS:** Start with normal or increased metal-to-metal Piston to Wall Clearance (PWC). Order coating to custom thickness, leaving only 25% of the Recommended PWC (RPWC). During a brief break-in period, the pistons expand, causing the Line2Line abradable powder coating to lap in and find the optimum fit within each bore, under load and at temperature. As the perfect skirt shape is approached, the oil film develops uniform loading across an enlarged contact area, and becomes nearly impenetrable. The wear rate drops (asymptotically) to zero, and the perfect fit is locked in for the life of the engine.

**HOW TO SELECT THICKNESS:** (all coating thicknesses are figured on the diameter, relative to PWC) Line2Line Coatings ‘Standard Thickness’ targets 75% of the Recommended PWC (RPWC).

**NOTE:** Because the pistons are installed with reduced clearance, and the coated pistons need to lap in, the assembled engine will require a short series of gradually increasing engine load cycles to increase piston temperature and size, with pauses (idle or off) between cycles. If you have not used Line2Line on this specific engine configuration before, allow more time for a more gradual break-in. Visit [www.line2linecoatings.com](http://www.line2linecoatings.com) for break-in guideline videos.

**COATING THICKNESS CALCULATION WORKSHEET**

<table>
<thead>
<tr>
<th>DIMENSIONS REQUIRED TO START:</th>
<th>EXAMPLE</th>
<th>ACTUAL</th>
<th>ENGINE I.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished Bore Size (FBS) =</td>
<td>4.1320</td>
<td>FBS</td>
<td></td>
</tr>
<tr>
<td>Recommended Metal PWC (RPWC) =</td>
<td>0.0060</td>
<td>RPWC</td>
<td></td>
</tr>
<tr>
<td>Uncoated Piston Size (UPS) =</td>
<td>4.1240</td>
<td>UPS</td>
<td></td>
</tr>
</tbody>
</table>

**HOW TO CALCULATE TARGET PISTON SIZE (TPS):**

 Multiply the **RPWC** by .25 (25%) then subtract that amount from the **FBS** to get the **TPS**. See example:

**EXAMPLE:** TPS = FBS – (RPWC X 0.25) = TPS

**ACTUAL:** TPS = FBS – (RPWC X 0.25) = TPS

**HOW TO CALCULATE TARGET COATING THICKNESS (TCT):**

**EXAMPLE:**

TCT = TPS – UPS

**ACTUAL:**

TCT = TPS – UPS

*Round up to go tighter. Round down for looser build.*

**ABRADABLE POWDER COATINGS™**

**BEFORE** | **AFTER**

**BREAK-IN**
# PISTON COATING ORDER FORM

DO NOT SEND ring sets, wrist pins, or circlips – please remove prior to shipping

<table>
<thead>
<tr>
<th>Ship To Address:</th>
<th>Bill To Address (if different):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company:</td>
<td>Company:</td>
</tr>
<tr>
<td>Name:</td>
<td>Name:</td>
</tr>
<tr>
<td>Address:</td>
<td>Address:</td>
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<tr>
<td>City:</td>
<td>City:</td>
</tr>
<tr>
<td>State:</td>
<td>State:</td>
</tr>
<tr>
<td>Zip:</td>
<td>Zip:</td>
</tr>
</tbody>
</table>

Date: _______________  Phone: _______________  Email: _______________

**Engine Displacement:** _______________  **HP Range:** _______________  **Engine Description:** _______________

- [ ] 2 Stroke  - [ ] 4 Stroke  - [ ] # of cylinders: ___________
- [ ] Nitrous  - [ ] Supercharged  - [ ] Turbo  - [ ] Diesel

**Block:**
- [ ] Water cooled  - [ ] Hard Blok  - [ ] Billet  - [ ] Engine use:
  - [ ] Street  - [ ] Race  - [ ] Other

Please complete **“Coating Thickness Calculation Worksheet” first**

**Finish Bore Size (FBS):** _______________  **Piston Mfg’s Recommended PWC (RPWC):** _______________

- [ ] Option 1: Target Coating Thickness (TCT) as calculated on “How To Order” Worksheet: _______________
- [ ] Option 2: Add _______________ (thousandths of an Inch) coating to the piston diameter

**APC™ Skirts – please check box and write in the number of pistons**
- [ ] 1-3 Pistons: $42 per piston X ___________
- [ ] 4-7 Pistons: $40 per piston X ___________
- [ ] 8+ Pistons: $37 per piston X ___________
- [ ] Individual piston sizing to a specific target dimension: add $3 per piston. The piston target size is ___________

There will be an Additional Charge for:

- [ ] Coating over .006” diametric thickness: add $2 per .001” per piston
- [ ] Pistons over 5” diameter: add $10 per piston
- [ ] Diesel pistons with crown cooling: add $15 per piston
- [ ] Bore measurement $5 per cylinder X ___________
- [ ] Degreasing fee for dirty or oily pistons: $30
- [ ] Ring/pin/clip removal if left in: $30*

**Crows:**
- [ ] ThermBar crowns only, no skirt coatings: $35 per piston
- [ ] ThermBar done with APC skirt coating: $30 per piston in addition to skirt coating price

* L2LW is not responsible for broken rings/clips

We coat turbos, oil pumps, compressors, superchargers, snowmobile carb slides and more. Email for info

**Coating Services Turn-Around Time** (in business days)
- [ ] Standard (10 days +/-)  - [ ] 5 days +30% of total  - [ ] 3-4 days +50% of total  - [ ] 1-2 days +100% of total

**Return Shipping Service** (Parts are shipped via UPS ground with no declared value unless otherwise specified)
- [ ] UPS Ground Service  - [ ] UPS 3 Day Select  - [ ] UPS 2nd Day Air  - [ ] UPS Next Day Air

**Payment Options:**
- [ ] Business or personal check. Parts will ship when check clears our account.
- [ ] Money order
- [ ] Visa/MasterCard/American Express /PayPal – a 3% convenience fee will be added to your total

Account Number: _______________  Expiration Date: _______________  Security Code: _______________

Signature: _______________  Credit Card Billing Zip Code: _______________

Credit cards are not billed until the coating work is complete and the parts are ready to ship. We do not ship COD

**PARTS WILL SHIP WHEN PAYMENT IN FULL IS RECEIVED**

**Shipping details:** Return shipping is by UPS; shipping cost is added to the invoice and is based on package size, weight and destination. Return shipping cost cannot be calculated until the order is complete, boxed up and ready to return. UPS expedited shipping and/or additional insurance coverage must be specifically requested prior to shipping; these additional shipping charges shall be added to the invoice price.