



# Installation Manual

## Steel braided brake lines



[probrake.de](http://probrake.de)

### Safety Information



Installing stainless steel braided brake and clutch line(s) requires technical understanding and mechanical skill. These are safety-relevant vehicle parts. Improper installation or use can lead to loss of vehicle control and serious accidents, personal injury, and damage to the vehicle. We therefore recommend that any required installation work be carried out only by a workshop with qualified and trained personnel. This general installation guide serves only as a guideline and is not created for a specific motorcycle type. For vehicle-specific instructions, bleeding procedures, and directions, always follow the vehicle's service manual. Also be sure to observe the following safety notes:

#### Riding Behavior

Please note that a stainless steel braided line can change riding behavior. Start with a careful test ride at low speed and check braking and clutch performance.

#### Installation

Make sure all parts from the packing list are present and undamaged. Ensure the vehicle is parked securely. Switch off the engine and remove the ignition key. Wear the required protective Equipment (e.g., gloves, safety glasses) and use suitable tools only.

Read the installation guide carefully before you start. If you are unsure, please contact our support or a workshop with qualified and appropriately trained personnel.

After installation, regularly check that all screws are tight and that components show no damage. Replace them at the first sign of damage.

#### Approval

Please observe the conditions in the ABE (General Operating Permit), the TTG (Component Type Approval), and the TG (Parts Certificate or Technical Report), and comply with the regional regulations of the country where the vehicle is registered.

#### Liability

probrake GmbH assumes no liability or warranty for any damage resulting from combinations with other accessories not tested by probrake, from improper installation, or from insufficient maintenance.



#### ABE – General Operating Permit (Germany)

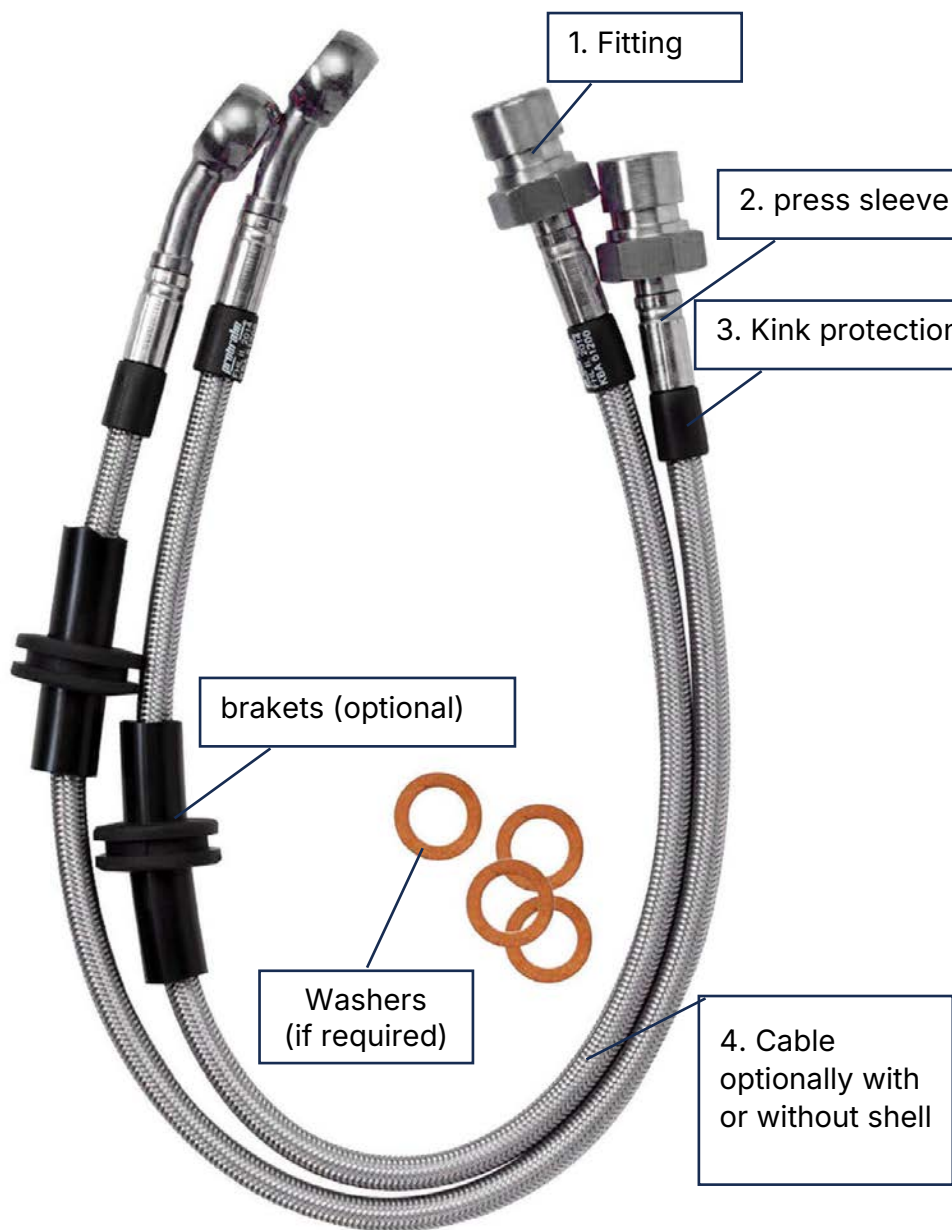
- The ABE (General Operating Permit) must always be carried with the vehicle in Germany.
- Observe all notes, information, and stipulations in the ABE.
- The ABE is valid only for the listed models and only if all stipulations are observed.
- For vehicles not listed, an entry in the registration documents is required.
- Outside Germany, different legal regulations may apply.

### Scope of Delivery

Refer to the delivery note for your shipment. Deliveries of stainless steel braided lines generally consist of the following components:

1. Stainless steel braided brake line (single- or multi-section)
2. Mounting hardware (depending on version)
3. ABE (General Operating Permit) or Technical Report

### Example illustration



#### Optional accessories:

Banjo bolts



Washers



Sealing Lense



Brake-light switch



Quick couplers



Brackets



Bleeders



Manifolds



Adapters



### Installation



#### Removal

Drain the brake fluid. Remove the OEM line(s).

**Tip:** Replace hoses one at a time and in sequence. This avoids mix-ups.

#### Installation

Check that the probrake stainless steel braided line matches the OEM line in length (exceptions: custom builds and alternative routings).

The fittings (connectors) may have to be rotated to achieve proper routing. This allows twist-free, optimal routing of the lines.



Rotating the fittings: Clamp the line gently at the stainless press sleeve with pliers, and using a suitable tool (e.g., a mandrel of identical diameter) rotate the ring fitting until the desired position is reached. Exception: Install 90° ring fittings first with a banjo bolt, then rotate while holding at the press sleeve. In general, do not rotate fittings more than 180°. Never bend fittings forward or back again!

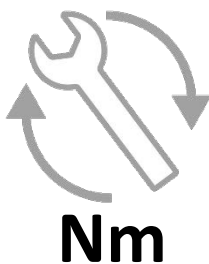
Route the lines so they do not chafe on other vehicle parts and, even with the fork fully compressed or extended (swingarm, shock, steering stop), are not kinked, twisted, tensioned, or pinched. At no wheel position may the minimum bend radius of 38 mm be undercut. Aluminum fittings may only be installed with the included aluminum washers; stainless fittings with the included copper washers.






Install all lines as described and hand-tighten the banjo bolts. OEM banjo bolts may only be reused if their length is correct. After all lines are installed, check the routing again and then tighten the banjo bolts.

#### Banjo bolt torque

- Aluminum fittings: 17–21 Nm
- Stainless fittings: 17–25 Nm

The vehicle manufacturer's specifications take precedence!



	<p><b>Bleeding</b></p> <p>Follow the vehicle manufacturer's specifications! Always use new fluid of the specified type according to the service manual.</p> <p> <b>Tip:</b> The specification of the brake fluid is usually also printed on the reservoir cap(s).</p> <p>Pressurize the system by operating the brake lever and check all connections for leaks. If fluid appears at a connection, loosen that connection and retighten with the maximum permissible torque. Repeat the bleeding process and leak check. For ABS models, we recommend visiting a workshop with qualified and appropriately trained personnel.</p> <p> <b>Tip:</b> If a stainless steel braided line with aluminum washers does not seal, it is usually because the washers were crushed by excessive torque (not visually apparent). In this case use new washers and repeat installation using the correct torque.</p> <p><b>Before Your First Ride</b></p> <p>After completing all work, check that all brake and clutch components, including all screws, are tightened to spec and function correctly.</p> <p><b>Certification</b></p> <p>A report is included with stainless steel braided brake lines (exception: clutch hoses). Examples: ABE (General Operating Permit), TTG (Component Type Approval), TG (Parts Certificate or Technical Report).</p> <p> <b>Tip:</b> Clutch components are generally registration-free!</p> <p>ABE &amp; TTG: If an ABE or TTG is provided and your vehicle is listed, an entry/inspection is generally not required. Carry the ABE on every ride! Please observe the conditions &amp; notes in the documents; in some individual cases an inspection may still be required.</p> <p> <b>Tip:</b> If a Technical Report or Parts Certificate (TG) is provided, an inspection of the stainless steel braided line by an officially recognized expert/inspector is always required. Note: The information above is intended for customers with vehicle registration in Germany. For vehicles registered in other countries, different regulations may apply. Please observe the conditions &amp; notes of the included report and comply with the regional regulations of the country where the vehicle is registered.</p> <p><b>Safety Information</b></p> <p>Damage resulting from failure to follow this installation guide will immediately void the warranty. No liability is assumed for consequential, property, or financial damage arising from non-compliance with our safety and installation instructions. For safety and approval reasons, any modification of our stainless steel braided lines is prohibited. When installing your probrake stainless steel braided line kit, please observe the general information in your vehicle owner's manual, your service/maintenance book, and the guidelines of your vehicle manufacturer.</p>
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## STEEL BRAIDED KITS CARS



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