# Plumbing Fittings Explained

Category: Equipment
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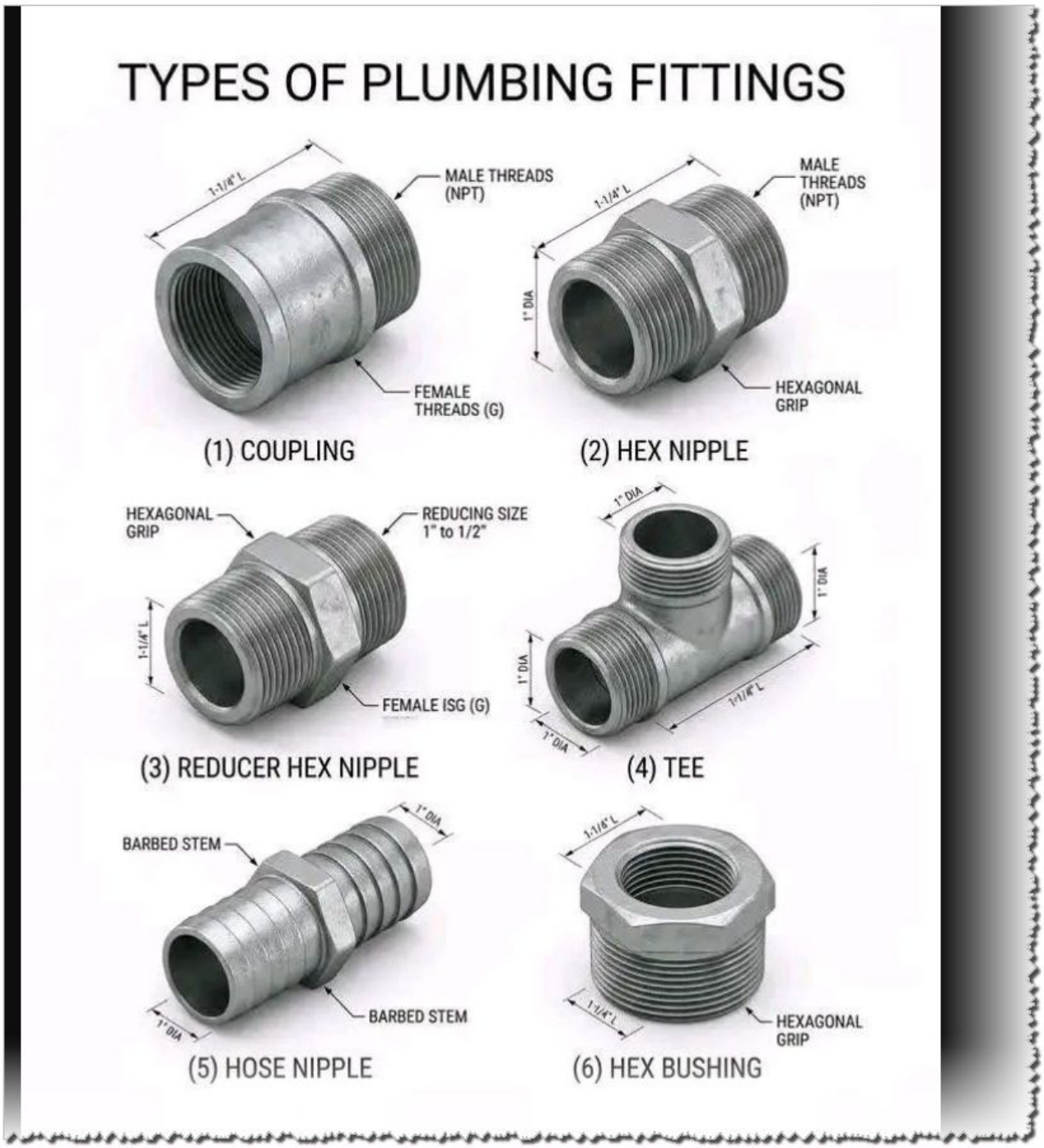


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# 1. Coupling

A coupling is used to connect two pipes of the **same diameter**. It features internal (female) threads on both ends. This is the go-to fitting for extending a straight run of pipe.

# 2. Hex Nipple

A hex nipple has external (male) threads on both ends. The “hex” refers to the hexagonal section in the middle, which allows a wrench to grip the fitting securely during installation. It is used to connect two female-threaded fittings or valves.

# 3. Reducer Hex Nipple

Similar to a standard hex nipple, but the two threaded ends are **different sizes** (e.g., transitioning from a 1″ pipe to a 1/2″ pipe). This allows you to join components of unequal diameters.

# 4. Tee

A T-shaped fitting with three openings. It is used to split a single line into two separate branches or to combine two lines into one. In the image, this specific tee features male threads on all three ends.

# 5. Hose Nipple (Barb Fitting)

This fitting is designed to connect a flexible hose to a threaded pipe system.

- **Barbed Stems:** These slide into the hose, and the ridges grip the interior to prevent it from slipping off.
- **Hex Grip:** Used to tighten the fitting into a threaded port.

# 6. Hex Bushing

A bushing is used to **reduce the size** of a female threaded opening. It has male threads on the outside and female threads on the inside. You would screw this into a larger port so that a smaller pipe or fitting can be attached to it.

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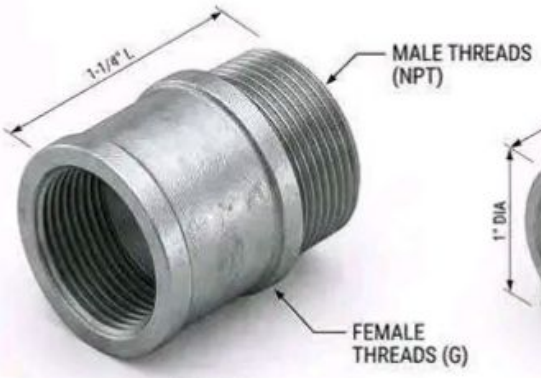
# Key Technical Note: Thread Types

The image mentions two common thread standards:

- **NPT (National Pipe Tapered):** Common in North America; the threads are tapered to create a liquid-tight seal.
- **G (BSP – British Standard Pipe):** Common in Europe and internationally; these are parallel threads that usually require a washer or O-ring to seal.

# TYPES OF PLUMBING FITTINGS




(1) COUPLING

(2) HEX NIPPLE

(3) REDUCER HEX NIPPLE

(4) TEE

(5) HOSE NIPPLE

(6) HEX BUSHING

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