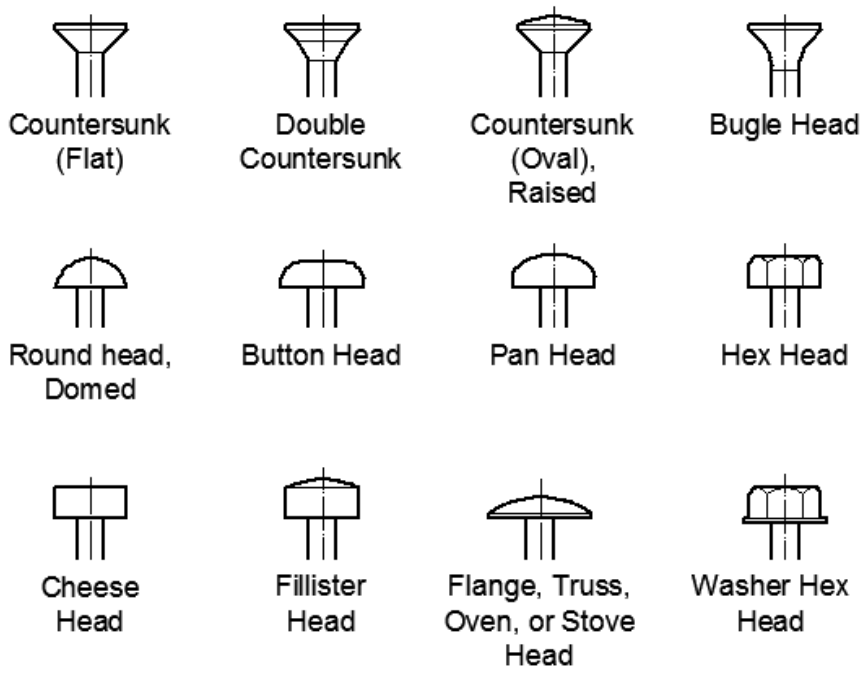
Unit 204: Common plumbing processes

Outcome 5
Fixings and components used in common plumbing processes

Fixings and components

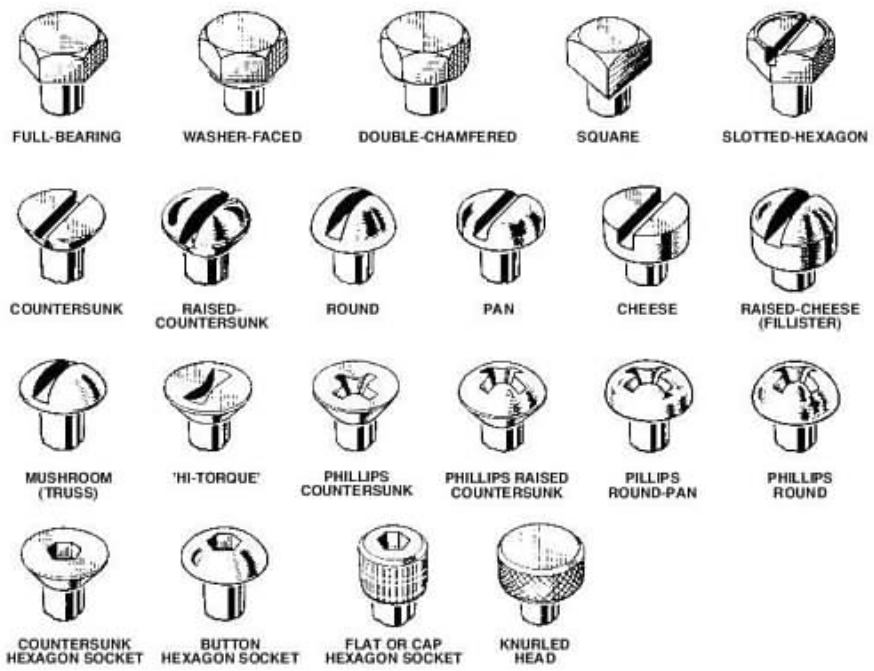
Screw styles

There are a wide range of screw styles available in the building trade, all with different applications. A plumber will need a range of tools to suit these fixings.



Fixings and components

Screw styles



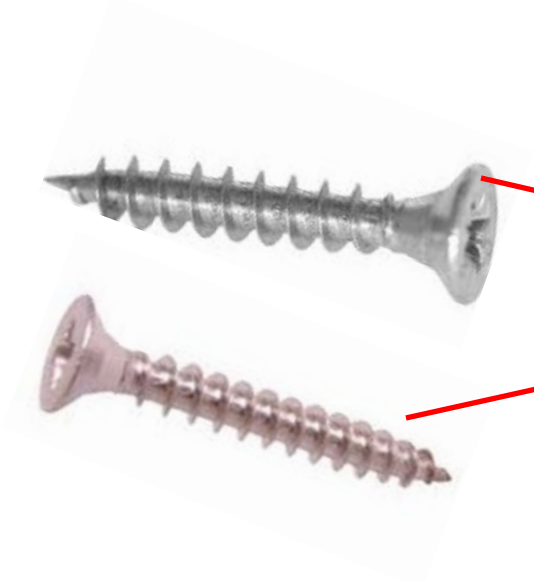
Fixings and components

Common head types

Flat blade For use with slotted screws. Care should be taken to ensure the correct blade size for the screw slot.	
Phillips head Originally designed in the 1930s to intentionally 'ride-out' of the screw head to prevent over-tightening.	
Pozidriv head Similar to the Phillips head but has an eight-pointed star shape for better grip. Not compatible with Phillips screws.	
Star head Not often used, except in specialist installations and appliances. Also known as Torx screwdrivers.	
Hexagon head (Allen key) Mainly used in the gas industry for appliance servicing and installation.	

Fixings and components

Fixing materials



Brass

Stainless steel

Steel

Chrome

Zinc

Sheradised

Fixings and components

Fixing materials

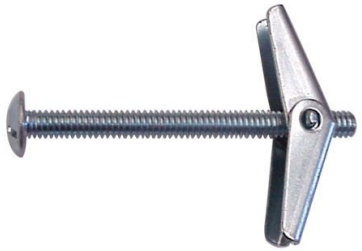
Brass: high moisture areas – corrosion resistant. In/outside use. Expensive, long lifespan. Concealed bathroom use.
Stainless steel: high moisture areas due to corrosion resistance. Inside or outside use. Expensive, long lifespan. Exposed bathroom (cleaning) and commercial applications.
Steel: general purpose inside use. Dry conditions. Cheap, good lifespan, general purpose concealed (floorboards).
Chrome: decorative finish. Expensive, long lifespan. exposed bathroom use (cleaning).
Zinc: general purpose inside/outside, corrosion resistant. Cheap, good lifespan.
Sheradised: limited outside use only.

Fixings and components

Plasterboard fixings

Expanding plastic wall plug

Expanding metal cavity fixing



Spring toggle fixing

Self-cutting fixing (self-tapping screw for metal)

Fixings and components

Masonry fixings

Rawl bolt

Self-tapping wall bolt

Fischer bolt basin set

Standard plastic wall plugs

Fixings and components

Size matches of screws, drills, plugs

Screw size (gauge)	Drill size (mm)	Plug colour
6-8	5	Yellow
8-10	6	Red
10-14	7-8	Brown
14-18	10	Blue

Fixings and components

Pipe clips

Nail clip

Single and double push-in clip

Single and double clip lock

Fixings and components

Pipe clips

Single copper saddle clip

Single cast brass schoolboard clip

Single stamped brass schoolboard clip

Single munsen ring clip (adjustable)

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Fixings and components

Size		Copper		LCS	
		Hor	Ver	Hor	Ver
15	1/2	1.2	1.8	1.8	2.4
22	3/4	1.8	2.4	2.4	3.0
28	1	1.8	2.4	2.4	3.0
35	1.1/4	2.4	3.0	2.7	3.0
42	1.1/2	2.4	3.0	3.0	3.6
54	2	2.7	3.0	3.0	3.6

Clipping distances: BS6700

Size		Plastic	
		Hor	Ver
15	1/2	0.6	1.2
22	3/4	0.7	1.4
28	1	0.8	1.5
35	1.1/4	0.8	1.7
42	1.1/2	0.9	1.8
54	2	1.0	2.1

Fixings and components

Clipping distances for soil and waste

	Soil	Waste
Horizontal	1m	0.75m
Vertical	2m	1.50m

Fixings and components

Reasons for clipping distances

- Pipe support
- Limit pipe sagging
- Plastic pipe sags when heated
- Smaller diameters are weaker
- Vertical force is different to horizontal force

Fixings and components

Surfaces: building fabric

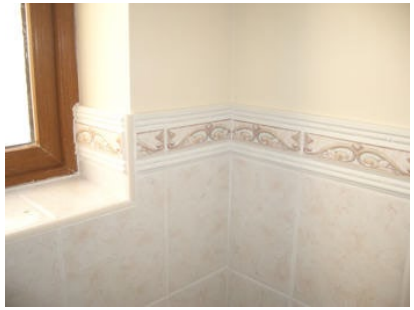
Brickwork
Usually outside finish, uneven and hard

Blockwork
Hidden internal fabric (first fix). Plastered or rendered.

Wood
Commonly floorboards or lining finish.

Studwork
Hidden after first fix by plasterboard

Plasterboard
Soft fabric finish requiring painting



Tiling
Hard decorative finish: bathrooms, WCs, kitchens and floors