

Guidance Note: Incompatibility of DIN 477-6 Flange with EN 144-1 O-ring grooves – 03/09. Amendment 02 – 10/11.

A compatibility issue has arisen relating to the flange face on some Scuba cylinder valves imported into the UK.

For all cylinders manufactured to BS EN or ISO Standards, **The correct flange is flat faced, in accordance with EN 144-1**, regardless of whether the cylinder O-ring groove is “square” (95°) or 45° tapered.

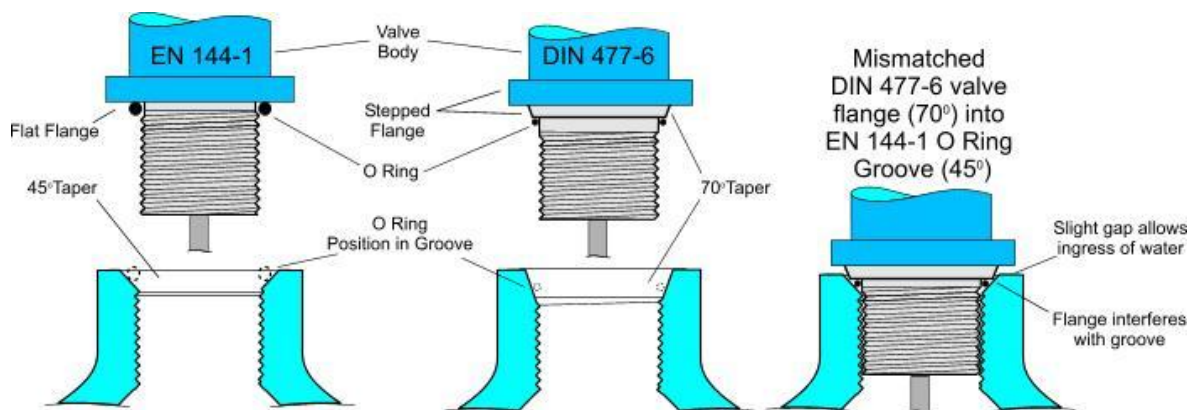
However, valves manufactured, for the German market, to DIN 477-6, have been imported, in error, into the UK.

Superficially, both types are similar and have 25 x 2mm stem threads. However, close inspection of the flanges will reveal that the DIN 477-6 flange is “stepped”, whereas the correct EN 144-1 flange is flat.

The DIN 477-6 flange is intended to be used only with cylinders manufactured to German Standards that utilise an O-ring groove having an angle of 70°.

The incompatibility of the DIN 477-6 flange, with both EN 144-1 O-ring grooves, causes ingress of water and corrosion at the top of the grooves which may lead to leakage later in the cylinder’s life.

It is recommended that, if such a combination is discovered, the incorrect valve should be removed and destroyed and replaced with a valve having the correct flange arrangement. The following diagram illustrates the problem. HSE DVIS 10 also refers to this issue.



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This guidance is offered in good faith and is believed to be correct to the best of our knowledge. Nothing contained herein shall be deemed to override good practice, manufacturers’ policies, the relevant Standards and the Law.

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