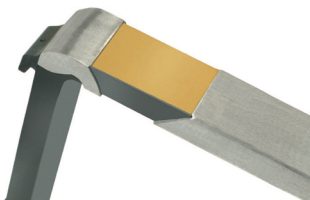




## EX-PROOF FORK WITH WEAR INDICATOR

### BENEFITS

- ATEX-certified
- High level of safety
- No need for daily measurements
- Time and cost-efficient
- Homogeneous surface



Duplex is a fork with a wear indicator, which is a great advantage regarding safety and comfort. By using double encapsulation in different colors and materials (brass and stainless steel), the wear is immediately and definitely visible.

According to EN 1755, forks in potentially explosive environments must be replaced as soon as the cladding thickness drops below 1 mm. As it was not previously possible to determine the wear via ocular inspection, regular or daily measurements were necessary. However, these surveys were time-consuming, and they required both special tools and expertise. Getting rid of this measurement process is the great advantage of the Duplex claddings.

The fork is clad with two different materials: 1 mm inner lining in brass on the underside of the fork + 4 mm outer lining throughout the complete fork blade. The cladding adds 12 mm to the cross-section of the base fork.

### OPTIONS

In a standard delivery, the surface layer of the forks is unprocessed. There are two alternative surfaces to choose from, the first is polished and the second is glass bead blasted. In ATEX environments, the latter is recommended due to its extremely smooth surface.

It is possible to have the cladding in reverse order, with an outer cladding of brass in combination with an inner cladding of stainless steel.



### APPLICATIONS



Chemical industry



Potentially explosive environments

	Stainless steel cladding	DuplEx cladding	Solid stainless steel fork (hygiene design)	Solid stainless steel fork (  - design)
<b>ATEX Certification</b>	Yes, however, DIN EN 1755 recommends: a special characteristic at the underside of the fork to allow wear measurement.	Yes	Not necessary	Yes
<b>Material</b>	Cladding: Stainless steel 1.4301	Cladding: stainless steel 1.4301 + brass 2.0321	VQ46	VQ46
 - design	Until the wear limit is reached, i.e. 1 mm remaining cladding thickness.	Until the wear limit of 1 mm remaining cladding thickness is reached (visual wear indicator).	Not used in ex-proof areas	Ex-proof is ALWAYS guaranteed
<b>Durability</b>	3 mm wear limit	4 mm wear limit	10 % of the fork cross-section (ISO 5057) + 8 mm additional OptimaForkHeel + 2 times higher resistance to wear by the use of high-tech steel = up to 6 times higher durability	
<b>Cross-section fork</b>	+ 10 mm	+ 12 mm	+ 0 mm	+ 0 mm
<b>Surface</b>	Untreated (optionally glass bead blasted, polished). For hygiene areas we recommend a polished surface.	Untreated (optionally glass bead blasted, polished). For ATEX areas we recommend a glass bead blasted surface.	Polished	Glass bead blasted
<b>Service expenditure wear measuring</b>	Daily measuring and recording of cladding thickness is mandatory to ensure safe application.	Daily visual control of the integrated wear indicator that offers ex-proof examination at a glance.	Regular measurement of wear limit (according to ISO 505)	
<b>Service expenditure fork exchange</b>	Exchange of forks as soon as the wear limit of the cladding is reached.	Exchange of forks as soon as the wear limit of the cladding is reached	Due to the higher total wear zone and the use of high-tech steel, forks need to be exchanged 6 times less.	
<b>Risk of corrosion</b>	Possible corrosion of un-cladded areas.	Possible corrosion of un-cladded areas.	Non-corrosive	
<b>Application hygiene: Cleaning</b>	Easy cleaning of cladding, however, danger of deposits in interspaces.	Easy cleaning of cladding, however, danger of deposits in interspaces.	Easy and hygienic cleaning (no interspaces).	
<b>Conclusion</b>	Stainless steel claddings are work-intensive in ex-proof areas (daily wear measurement). Hence, they are only partially advisable for this application. In hygiene areas they are an inexpensive, but not 100% hygienic alternative to stainless steel forks.	The VETTER standard in ex-proof areas: DuplEx claddings offer benefits in terms of high safety and low service expenditure.	Stainless steel forks (hygiene and ex-proof) are cost-performance winners. The purchase price is paid off immediately by significantly longer lifetime, higher safety and less service efforts.	