



PRESSURE SOLUTIONS

P201: Pressure Gauge Range

We now have an extremely wide range of pressure gauges to sell. These notes should provide some guidance.

Brands:

Blanes:

We started using the Blanes logo on process pressure gauges when we started working with Stewart Buchanan. We had a bad experience with gauges Bourdon, and resolved to stop promoting other brands and promote our own. At least if a relationship goes sour, we change supplier, not the brand.

We have taken to using the Blanes brand on some of our utility pressure gauges, mainly when we have to bear the cost of dial design. Why pay for dials which can be used by others?

US Gauge:

When we started with Amekai, they agreed to start us with a basic set of dials in kPa, bearing the US Gauge brand. We were happy enough with this, as US Gauge is a well established brand, no.2 world wide after Wika.

Stronga:

For some contractual reason, we cannot buy the AK612 design with the US Gauge logo. We specifically do not want to use the Blanes brand on these, as we need to differentiate the lower cost range from the full-featured Blanes range. The AK612 series is thus sold under the Stronga logo.

Budenberg:

Budenberg are as old as Bourdon, both companies being founded almost simultaneously in the middle of the nineteenth century. The Budenberg name is well respected, but no longer competitive in general purpose gauges. It does remain competitive in the more specialized low-volume gauges. The Budenberg name originated in Germany, but the British branch eventually took over.

China & U.K.:

Very broadly, China is a very low cost manufacturer which has concentrated on making volume products. Airfreight rates from China are very high, and the price:bulk ratio is much lower than the British products. Transport is thus a much greater fraction of ex works cost than is the case with UK supplied. This means that we are restricted to placing bulk orders on China, and effectively we have a 50 kg minimum limit. Lead time is usually 6 weeks. The Amekai products are thus standard stock items, or special items which can be ordered in significant quantities on extended lead time.

U.K. is a much more flexible provider, and our suppliers limit themselves to process/industrial quality gauges. Airfreight rates are low, service is regular, and our suppliers can supply in 1 off quantities when required, sometimes with very short lead times. We also have a very good freight consolidator, so small consignments can be lumped together to form a more economical aggregate. The U.K. thus becomes the country of choice where non-standard products are required in small quantities.

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Products for Pressure Professionals

Blanes Products:

Blanes has an agreement with Stewart-Buchanan of Scotland, one of the major European manufacturers, which concentrates on process gauges. When pressure gauges attracted duty, Blanes did a complete local assembly, including manufacturing the tube and block assembly.

Today, import is often cheaper, but we retain the assembly option for non-standard products where we remain price competitive and can also respond very quickly. The range is very modular, and a limited set of components can be put together in many different ways

Blanes gauges carry the Blanes name, some dials may also carry the S-B logo.

Snubbage:

At the top of the tree is the Snubbage. The Snubbage has a piston type snubber built in to the process connection. This is designed for heavy pulsating loads, large amplitude, low frequency, on clean fluids, and sells at about 3 times the standard price.

[Aside: this puts it into the same price bracket as the direct drive gauges. The idea of the direct drive gauge is good, eliminate the movement by providing a tube with enough displacement to drive the pointer directly. This is done by using a multi-turn helical coil as the pressure element. My experience is that these gauges sometimes do not hold calibration, and as there is no adjustment, they are then expensive scrap.]

Vibrage:

The Vibrage® is our premium product. It is designed to resist high frequency low amplitude vibration/pulsation. A variety of build features are used, including, but not limited to, movement damping on input and output shafts, and inlet restriction.

Glycerine filling is the traditional way to counter vibration. It damps the movement of the tube, and lubricates the movement. There are areas where glycerine is not suitable, normally applications on strong oxidizers such as chlorine, oxygen, peroxide and nitric acid.

Another problem with glycerine is the hassle in recalibrating filled gauges. They have to be drained, rinsed and dried before being worked on.

Having said that, our Vibrage remains glycerine fillable, and the combination of Vibrage build and glycerine filling is we believe the toughest available protection.

Pointer fluctuation is the killer of pressure gauges, through wear on the movement teeth and bushes. In all cases, steps should be taken to eliminate pointer flutter, through Vibrage design, glycerine filling, or both.

Vibrage customers fall into two categories. There are those like Sasol who buy the bulk of their gauges on contract at the lowest price, and then use Vibrage as a cost saver in areas where the standard gauge fails rapidly. Then there are those like Zincor, who use smaller quantities in a fairly difficult environment, and standardise on Vibrage.

The costs of gauge replacement go far beyond the cost of the gauge. There is procurement cost, storage cost, labour cost and administration cost to consider.

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Plastic Cases:

The 100mm bottom entry polycarbonate case is a local design. The colour range follows the NOSA coding as far as possible. Note the case design incorporates lugs for surface mounting if required. The original design had a flat back with countersunk screws, but this did weaken the case in rough applications. The Mark 2 design, currently available in blue and green, eliminates the countersink, and adds spacers to the surface mounting holes.

The window is moulded polycarbonate. We have a special spanner available for users. The domed design provides exceptional strength. You can hit it with a hammer!

Polycarbonate is complementary to steel when it comes to corrosion resistance. Items that attack stainless generally have no effect on polycarbonate, and vice versa.

Currently available is a US style 4½" black turret design.

Standard Blanes Gauge:

Similar to Vibragauge, but no damping on movement, simpler tube end-piece and no restrictor. The standard gauge range is available with internals in brass, stainless steel, or Monel.

This gauge is at least as good as any other gauge on the local market. You will note that the movement is of robust design. The default pointer is fixed. We can supply adjustable pointers as an option, but they can shift, either on their own or through trouble-seeking fingers.

What you cannot see without X-ray is that the bourdon tube is recessed into the stem for added strength. This of course is a Shell requirement, and S-B is approved by Shell International.

Stronga AK612:

This is a low cost product from US Gauge's Amekai plant. Not as nicely made as the Blanes gauge, but still has a pretty robust movement. This remains a repairable gauge and is also glycerine fillable. The stem is welded to the case, eliminating the problems of sealing other than the window. (The Blanes fillable case is sealed in three areas: the window gasket, the stem gasket, and the case screw washers. The welded case eliminates two of the three sealing areas. It means that the case is not replaceable, but in a low cost gauge this doesn't matter so much.

US Gauge AK410:

Amekai make an incredible range of small pressure gauges, aimed to find a product to suit everybody's taste. In OEM quantities, typically a carton lot at a minimum, we can do virtually anything at almost any cost. For a stock product, we have selected the AK410 series, which is a far better buy for the end user. The AK410 series has a 304 stainless steel case, corrosion resistant AND tough. This case is glycerine fillable as standard, not so much for vibration but more to keep corrosive atmospheres away from the internal mechanism. The window is polycarbonate, which as you know is incredibly tough.

US Gauge AK213:

Like most OEM products, these are built to the lowest possible cost, using plastic cases, acrylic snap-in windows etc.

US Gauge AK121:

This is a contractor quality gauge, not fillable. It had a glass window with friction bezel. We stock a few common sizes in 63mm.

US Gauge AK130:

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This is a heavy duty utility gauge with push fit bezel, which we stock in 100mm size for the fire and similar industries.

Pricing on these products is always negotiable if there is sufficient quantity.

From these gauges, 95% of applications can be met.

There remain many other applications requiring different solutions, these are listed in the Amekai CD.