Who we are and what we do:
Abakus was founded in 1991 by Dr. Ken Pollitt who has over 25 years experience in lens design and the production of high quality optical systems for both the TV/cine and the nuclear industries. He is recognised as a world leader in the field. Abakus has won several international awards for their products, beating companies whose names are better known simply because they are in the mass market. Abakus take real pride in using only the best materials and designs to excite and stimulate customer needs. Through direct contact with both component manufacturers and the users of optical equipment, Abakus bridge the gap for the benefit of both industries. Everything is made and tested in the UK. This guarantees supplies.
The company is well placed to meet the challenges associated with the design and production of first quality lenses using radiation tolerant glass types. Challenges are the greatest stimulus that the creative minds at Abakus can have. Abakus are never complacent and continue to have an obsessive approach to quality. We are able to translate customer wants and needs into product solutions. This is why we can say with confidence: Abakus lenses and optical systems really are the best in the world.

Abakus
Radiation Tolerant
Fixed Focal Length Lenses

<table>
<thead>
<tr>
<th>Focal length in mm</th>
<th>4.5</th>
<th>6</th>
<th>9</th>
<th>15</th>
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<tbody>
<tr>
<td>Picture diagonal</td>
<td>120°</td>
<td>100°</td>
<td>68°</td>
<td>40°</td>
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<tr>
<td>Picture height</td>
<td>80°</td>
<td>62°</td>
<td>42°</td>
<td>25°</td>
<td>15°</td>
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<tr>
<td>Picture width</td>
<td>102°</td>
<td>82°</td>
<td>54°</td>
<td>33°</td>
<td>20°</td>
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<td>f/2</td>
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<tr>
<td>min relative aperture</td>
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<td>22.8 mm</td>
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<td>length to D-mount</td>
<td>53mm</td>
<td>32 mm</td>
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</table>

The above data is for when the lenses are used with 2/3” cameras. C-mount adapters available to convert to c-mount.

Many of our products are held in stock, please ‘phone for availability. We are also happy to design and manufacture products to your specification.

Radiation Tolerant Viewing Systems
Short Systems - for thin walls

Long Systems - for thick walls

Mini borescopes - for narrow holes

For further information contact:
Abakus Ltd., Grange Farm, Bourne Road, Carlby, Stamford, PE9 4LU, UK
Tel: +44(0) 1778 590 117
Fax: +44(0) 1778 590 118
e-mail: sales@abakus.co.uk
www.abakus.co.uk
**Abakus Ultra-wide Radiation Tolerant Viewing System**

See everything! Up, down and sideways from a single safe view port position
Record the whole or part of any enclosed area
Options to meet a variety of needs
Reliable and easy to use

Full Colour Images

### Ultra-wide Lens
Use: to interface with radioactive zones

- Angle of vision = 180°
- Static front element
- Fits standard 6” viewing ports
- No moving mechanical or electronic parts
- All radiation tolerant materials

### Relay Options
Use: to transfer images through walls

- Long systems for thick walls
- Short systems for thin walls
- All radiation tolerant materials
- Inbuilt radiation shielding

**90° relay module**
Avoids direct line of sight radiation
Interfaces with rear end viewing options
Fits rear of ultra-wide front directly or
Fits onto rear of straight relays

### Viewing Options
Use: to see what you need from safety

- Situated outside contaminated area
- View, record and save quality images
- All moving parts confined to cool zone
- All electronic parts confined to cool zone
- Instant images in real time
- Extended life for all cameras

**Simple Surveillance System**
Views everything from single fixed position
Huge passive 180° angle of view

**Pan and Scan System**
Enhance view anywhere in the 180° arc of vision. Three-directional movement
Up/down/sideways vision
Scan close-up in detail
Zoom in to look closer for even more detail
View, collect and archive images.

**Quality Optics = Quality Viewing**
View up/down/ sidewards from a single position.
Static front element projects only 15mm into radioactive zone. Therefore there is no opportunity for mechanical or electronic breakdown in radiation contaminated hot zone.

**Straight relay modules**
Available in connecting units
Unit length 664mm
Systems available for any wall thickness
Inbuilt radiation shielding.