



hales[®]
Suppliers to the Tooling & Plastic Industry

GENERAL



CUMSA
INNOVATIVE SOLUTIONS
FOR YOUR MOLDS



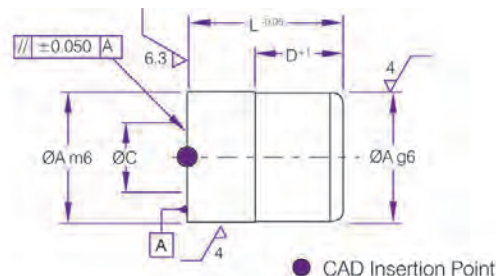
Mat.: INOX. 1.4034

Hardness: 51 ± 3 HRC.

Max. working temp 150°C

Patented System

Inner insert is always at the same level as the body of the date stamp. Wide range of diameters. Only a H7 pocket required for assembly. No downtime when changing inserts. Internal mechanism guarantees secure replacement of inserts.



| 12 Months | 12 Month + Year | Year | Blank | A | C | D | E | L | N |
|------------|-----------------|---------------|-----------|----|------|----|-----|----|----|
| CFA.0422SF | FA.042212-... | FA.042204-... | FA.042200 | 4 | 2.2 | 6 | 3.5 | 12 | 4 |
| CFA.0530SF | FA.053012-... | FA.053004-... | FA.053000 | 5 | 3 | 6 | 3.5 | 12 | 4 |
| CFA.0632SF | FA.063212-... | FA.063205-... | FA.063200 | 6 | 3.2 | 12 | 4 | 20 | 5 |
| CFA.0847SF | FA.084712-... | FA.084705-... | FA.084700 | 8 | 4.7 | 12 | 6 | 20 | 5 |
| CFA.1057SF | FA.105712-... | FA.105706-... | FA.105700 | 10 | 5.7 | 12 | 8 | 20 | 6 |
| CFA.1267SF | FA.126712-... | FA.126708-... | FA.126700 | 12 | 6.7 | 12 | 10 | 20 | 8 |
| CFA.1687SF | FA.168712-... | FA.168710-... | FA.168700 | 16 | 8.7 | 12 | 12 | 20 | 10 |
| CFA.2007SF | FA.200712-... | FA.200710-... | FA.200700 | 20 | 10.7 | 12 | 14 | 20 | 10 |

Important: Indicate the desired year after the reference. Special engraving available on request.



Arrow Only

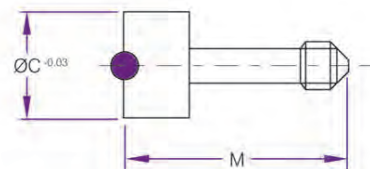


Year + Arrow

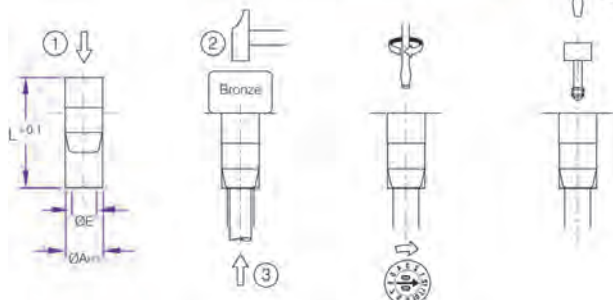


Mat.: INOX. 1.4034

Hardened 51 ± 3HRC



IMPORTANT
When replacing the insert, be sure to tighten until hearing the engagement "click".



| Arrow only | Year | C | M |
|------------|-----------|------|-----|
| CIA.2275SF | IA.2275.. | 2.2 | 7.5 |
| CIA.3075SF | IA.3075.. | 3 | 7.5 |
| CIA.3217SF | IA.3217.. | 3.2 | 17 |
| CIA.4717SF | IA.4717.. | 4.7 | 17 |
| CIA.5717SF | IA.5717.. | 5.7 | 17 |
| CIA.6717SF | IA.6717.. | 6.7 | 17 |
| CIA.8717SF | IA.8717.. | 8.7 | 17 |
| CIA.1007SF | IA.1007.. | 10.7 | 17 |

Moulding Date Inserts



Materials: Stainless Steel

Hardness: 50-55 HRC.

Outer Insert



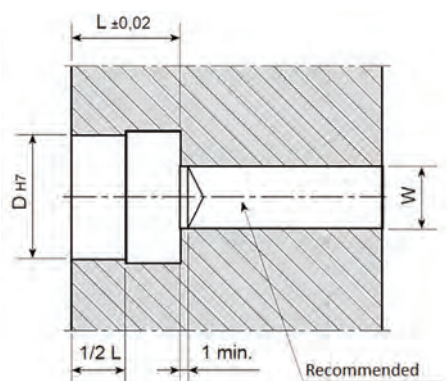
Inner Insert



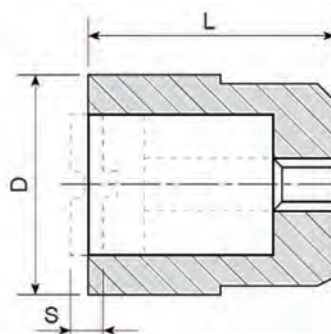
| ØD | Month | Year | Day | Blank |
|----|-------|-----------|--------|-------|
| 4 | CCM04 | CCA0420AA | CCG04* | CCN04 |
| 5 | CCM05 | CCA0520AA | CCG05* | CCN05 |
| 6 | CCM06 | CCA0620AA | CCG06 | CCN06 |
| 8 | CCM08 | CCA0820AA | CCG08 | CCN08 |
| 10 | CCM10 | CCA1020AA | CCG10 | CCN10 |
| 12 | CCM12 | CCA1220AA | CCG12 | CCN12 |
| 16 | CCM16 | CCA1620AA | CCG16 | CCN16 |
| 20 | CCM20 | CCA2020AA | CCG20 | CCN20 |

| ØD | Year + Arrow | Arrow |
|----|--------------|---------|
| 4 | ICA0420AA | ICN04 |
| 5 | ICA0620AA** | ICN06** |
| 6 | ICA0620AA | ICN06 |
| 8 | ICA0820AA | ICN08 |
| 10 | ICA1020AA | ICN10 |
| 12 | ICA1220AA | ICN12 |
| 16 | ICA1620AA | ICN16 |
| 20 | ICA2020AA | ICN20 |

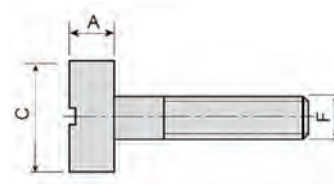
Installation



Outer Insert



Inner Insert



| ØD | L | S | ØW | A | ØC | F |
|----|------|------|-----|-----|-----|-----------|
| 4 | 8*** | 0.25 | 1.4 | 2 | 2.2 | M1X0.25 |
| 5 | 8 | 0.20 | 2 | 2 | 3.1 | M1.6X0.2 |
| 6 | 8 | 0.20 | 2 | 2 | 3.1 | M1.6X0.2 |
| 8 | 10 | 0.25 | 3 | 2.5 | 4.4 | M2.3X0.25 |
| 10 | 12 | 0.35 | 3 | 3 | 5.2 | M2.5X0.35 |
| 12 | 14 | 0.35 | 4 | 3 | 6.2 | M3X0.35 |
| 16 | 14 | 0.35 | 5 | 3.5 | 8.2 | M4X0.35 |
| 20 | 16 | 0.35 | 5 | 4.5 | 11 | M4X0.35 |

* CCG04 & CCG05 have numbers only.

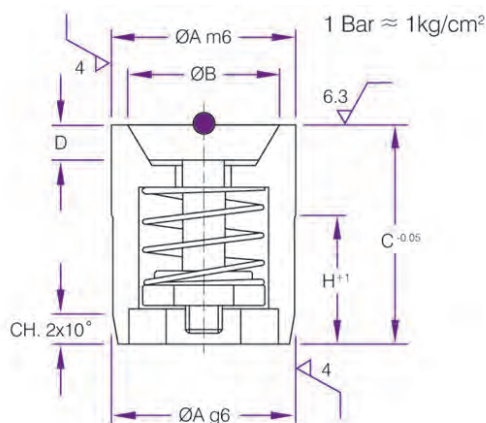
** Inner insert dia.6 valid also for outer insert dia. 5.

*** Special date stamps with D=4mm and L=5mm and inner insert with C=2.1 available on request.

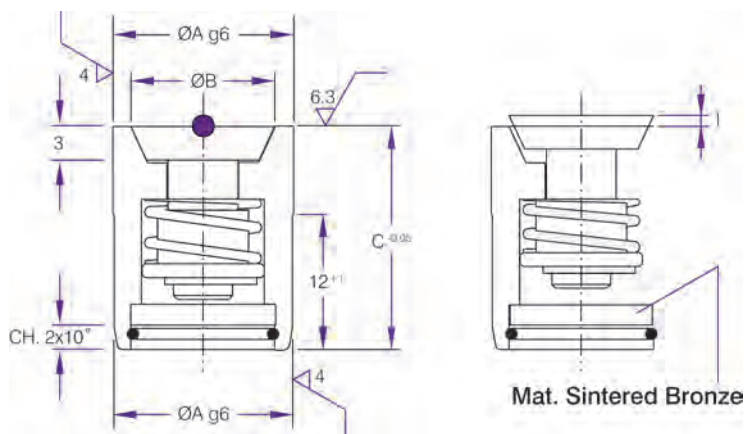
CUMSA
INNOVATIVE SOLUTIONS
FOR YOUR MOLDS



VA



FV



Mat.: INOX. 1.4034
Hardened 51 ± 3 HRC.
Working pressure 1.5-6 BARS.

Helps part ejection with air. FV has a filter incorporated. VD Allows venting. Wide range of diameters. Offers a standard solution to the moulder.

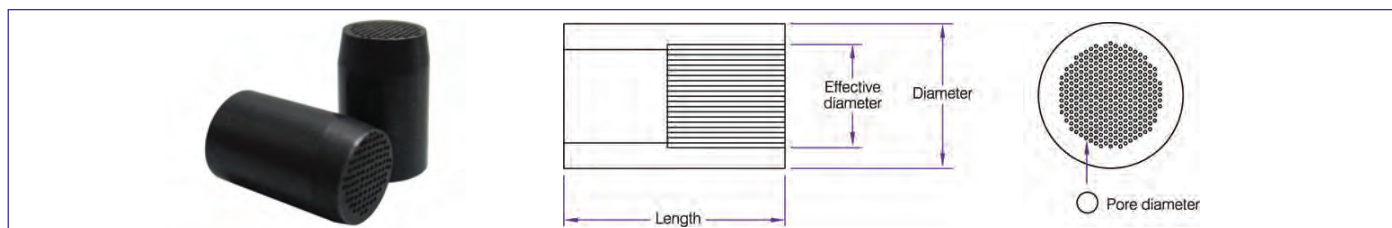
Standard Air Poppets

| Ref. | A | B | C | D | E | H |
|-----------|----|-----|----|-----|----|----|
| VA.050412 | 5 | 3 | 12 | 1.5 | 4 | 7 |
| VA.065212 | 6 | 5.2 | 12 | 1.5 | 4 | 7 |
| VA.086512 | 8 | 6.5 | 12 | 1.5 | 4 | 7 |
| VA.100812 | 10 | 8 | 12 | 2 | 8 | 7 |
| VA.121012 | 12 | 10 | 12 | 2.5 | 10 | 7 |
| VA.161320 | 16 | 13 | 20 | 3 | 12 | 12 |
| VA.201720 | 20 | 17 | 20 | 3.5 | 16 | 12 |

Filter Valve

| Product Code | A | B | C | E |
|--------------|----|----|----|----|
| FV.161320 | 16 | 13 | 20 | 14 |
| FV.201720 | 20 | 17 | 20 | 18 |

Sintered Vents



Used for Plastic Injection Moulding
Pore Diameter: 0.03 ~ 0.10mm

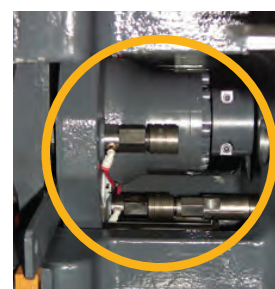
| Product Code | SV030410 | SV030610 | SV030810 | SV031010 | SV050610 | SV050810 | SV051010 | SV100810 | SV101010 |
|--------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Outer Diameter | 4 | 6 | 8 | 10 | 6 | 8 | 10 | 8 | 10 |
| Effective Diameter | 2.5 | 2.5 | 2.5 | 2.5 | 3.5 | 3.5 | 3.5 | 5.5 | 5.5 |
| No. of Pores | 606 | 606 | 606 | 606 | 804 | 804 | 804 | 780 | 780 |
| Length | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |

FasTie™ Ejector Fast Connectors



Automatically lock your ejector to tooling with fast pneumatic release

- Flexible modular system
- Hardened steel components
- Super Fast mould changes
- No mould or ejector modifications required
- Ejector force 2.5 tonnes (1") 7.5 tonnes (2")
- Space saving connectors only 1" or 2" diameter

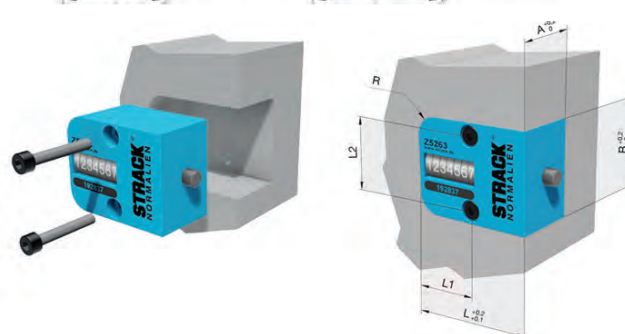
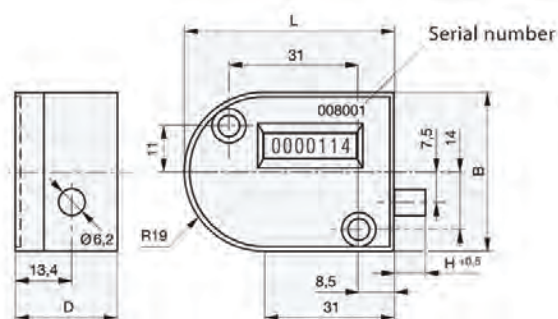


STRACK®
 NORMALIEN


Cycle counters positively monitor mold activity, validate process monitoring data and assist mold maintenance procedures

| Product Code | L | B | D | H |
|--------------|----|----|------|-----|
| Z5260 | 50 | 38 | 24.5 | 7.5 |

| Product Code | B | A | L | L1 | L2 | R | S |
|--------------|----|----|----|----|----|---|---------|
| Z5263 | 38 | 26 | 48 | 24 | 28 | 8 | Min 3.5 |



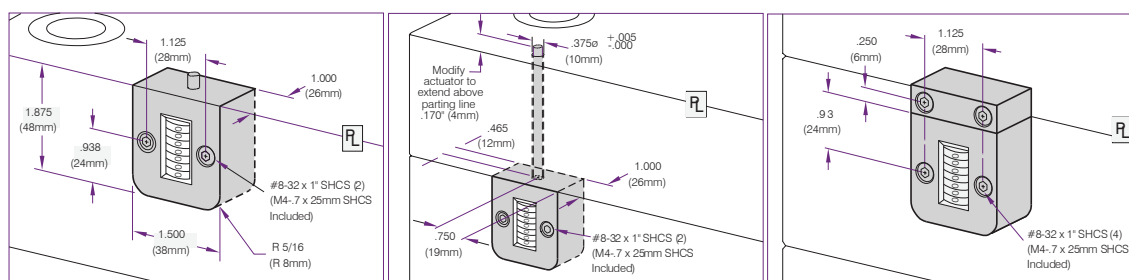
GENERAL

CV Monitor



Movable Half / B Side

Stationary Half / A Side



The CounterView positively monitors mold activity, validates process monitoring data, and assists mold maintenance procedures

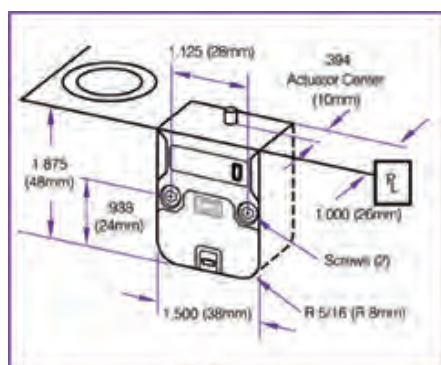
- Maximum operating temperatures: -250 °F (120 °C) Standard CounterView
- Counter: Non-resettable mechanical, 7-digit
- Available for installation on the movable or stationary halves and with extensions
- Heat protection insulators available on request
- Cover Plates for protection are sold separately.

| Product Code | Description | Product Code | Description |
|--------------|---|--------------|------------------------------|
| CVPL-B | Standard: Parting Line | CVPL-A | Standard: Parting Line |
| CVIN-B | Standard: Internal Extension | CVIN-A | Standard: Internal Extension |
| CVE-EXT | External Mounting Block including #8-32 x 1" (2) and M4 x 25mm screws (2) | | |
| CVID | ID Plate for CounterView | | |

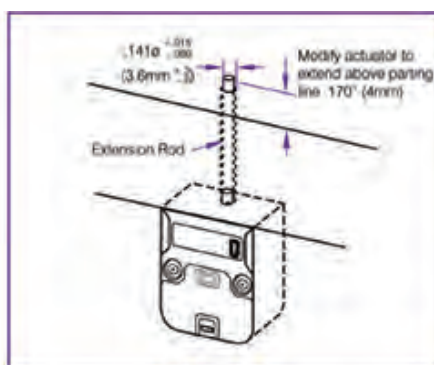


Expanding the line of mould monitoring solutions, new CvE Monitor v2 tracks mould activity, allowing users to view the data on the display or from comprehensive reports using OnDemand or the new CvE Live System.

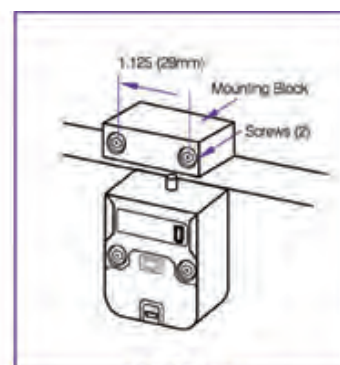
- 7-digit LCD display with a push button to move through the display modes
- 4GB Flash drive for file storage and 4+ year battery within monitor
- Water resistant with an ingress protection rating of IP52
- Maximum temperature: 190° F (90° C)
- Dimensional compatibility with Progressive's mechanical CounterViews
- Mini USB connectivity for data retrieval with cables sold separately



CvE



CvE-INT



CvE-EXT

**Cycle Count**

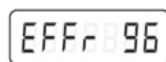
Total cycles for the life of the mould is presented on the main screen of the CvE Monitor

**Efficiency Percentage**

The percentage of time that the mould has been actively cycling vs being idle

**Cycle Time**

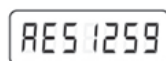
Since the first production cycle, the cycle time is shown in seconds for the life of the mould.

**Efficiency Percentage-Recent**

The percentage of time the mould has been active in the past 25,000 cycles.

**Cycle Time-Recent**

Cycle time for the past 25,000 cycles

**Cycle Count Rest**

A separate counter that can be reset to 0 for interim monitoring of cycles when pressed and held

**Embedded Flash Drive**

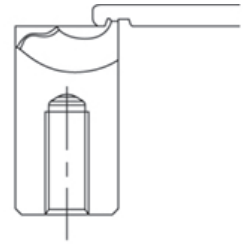
Users can utilize the 4GB flash drive on the CvE Monitor by connecting the device to a PC using an industry-standard mini USB cable, sold on the next page. Users press the button to get to the flash drive mode and then the storage area is represented on the PC by a new drive letter

| Product Code | Description |
|--------------|---|
| CvE | CvE Monitor v2 mould Maker/moulder version including #8-32 x 1" SHCS (2) and M4 x 25mm SHCS (2) |
| CvE-INT | Internal Extension Rod (8"/200mm) including a hex key for CvE Monitor set screw removal. |
| CvE-EXT | External Mounting Block including #8-32 x 1" SHCS (2) and M4 x 25mm SHCS (2) |



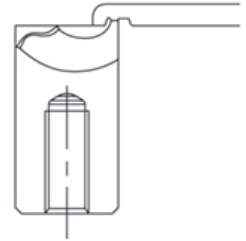
Standard Tunnel Gate Inserts Version S1 - With Machining Allowance

- With machining allowance on upper surface
- Available in round (TGR) and square versions (TGS)
- Available in 2 degrees of hardness (40 HRC/ 60 HRC)
- Highly wear-resistant hot worked steel M2 (1.3343)



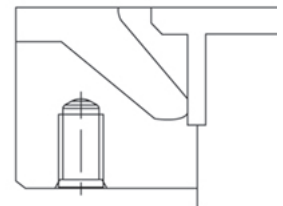
Standard Tunnel Gate Inserts Version S2 - With Vestige

- For flat parting surfaces, including vestige with integrated cutting edge
- Available in round (TGR) and square (TGS) versions
- Available in 2 degrees of hardness (40HRC/ 60 HRC)
- Highly wear-resistant hot worked steel M2 (1.3343)



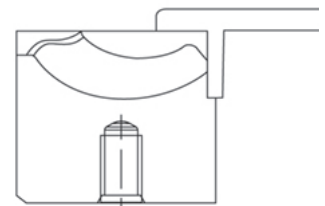
Straight Standard Sub-Gate Inserts Version TPS - For Side Gating

- Straight standard sub-gate for side gating
- Integrated dead-end recess reduces loss of pressure and shear stress
- Highly wear resistant hot working steel M2 (1.3343) - 54+2 HRC



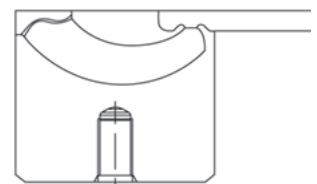
Contourable Tunnel Gate Inserts Version SGC - For Side Gating

- Curved tunnel permits gating deep inside the part
- Integrated dead-end recess reduces loss of pressure and shear stress.
- Highly wear-resistant hot worked steel M2 (1.3343) -54+2HRC

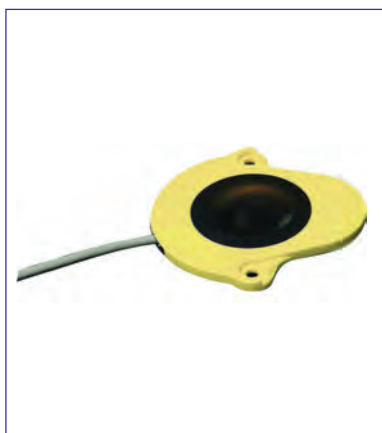


Contourable Tunnel Gate Inserts Version TGC - With Machining Allowance

- With machining allowance on upper surface
- Available in round (TGR) and square versions (TGS)
- Available in 2 degrees of hardness (40 HRC/ 60 HRC)
- Highly wear-resistant hot worked steel M2 (1.3343)



Smartflow® Mould Protective Limit Switches are designed and built by engineers with expert mould-building experience. Thinswitch®, SmartLock® and Versaswitch™ are the benchmark switches in the injection moulding industry. Moulders rely on them to provide dependable position indication and protection for valuable injection moulds.



Thinswitch® Global Limit Switch

Liquid-Resistant Limit Switch - 3mm/4mm Height

Smartflow® Global Thinswitch® Limit Switch helps prevent accidental mould close in injection moulds by verifying ejector plate return in injection moulds with 3mm or 4mm rest buttons, and where occasional water or oil spray is present. A polyurethane dome covers the actuator spring, protecting internal gold switch contacts from environmental contamination.

- Adjustable actuation between 3.2mm and 4mm from the switch base (excludes spacer)
- Over 14 million cycle life
- 176F (80C) standard temperature rating

Product Code

TW-222-LR



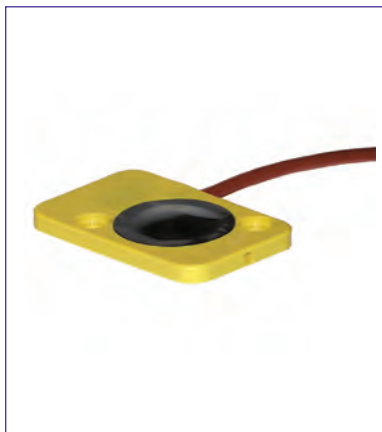
Thinswitch® Limit Switch

Verify ejector plate return before closing the mould. Mount inside ejector housing and wire to machine controls. Use for core slides or any place where space is limited.

- Prevents costly mould damage
- Small size - 2.15" L x 1.5" W x 0.18" thick
- Fits behind ejector plate
- 10 million cycle mechanical life
- Adjustable operating point
- Electrical capacity at 250V AC 5 Amps Resistive, 4 Amps Inductive
- Optional high temperature model

Product Code

T-222



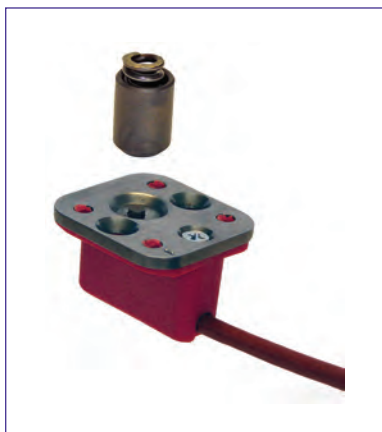
Thinswitch® Liquid Resistant Limit Switch

Designed to verify ejector plate return in areas where occasional water or oil spray is present. The Thinswitch helps prevent accidental mould close in injection moulding applications by providing a position switch that is tied to the injection moulding machine control. The liquid resistant switch uses the same mounting hole locations as the original Thinswitch.

- Over 10 million cycle life
- 175F (79.4C) standard temperature rating
- 250F (121C) high temperature unit for higher temperature needs
- Mounting screws and wire clips included

Product Code

HT-291-LR



Smartlock® Core Slide Retainer and Limit Switch

The slide retainer and limit switch is designed for injection moulders to provide switching plus slide retaining in one unique package. The SMARTLOCK® locking function prevents premature slide movement during moulded part ejection while the SPDT switch is simultaneously actuated.

- New capture screw prevents plunger loss.
- Over 10 million cycle life provides long dependable service.
- 27 pounds holding force: adjustable for optimum operation.
- Stripped and tinned 6 ft. wire leads make the switch ready to install without modification.

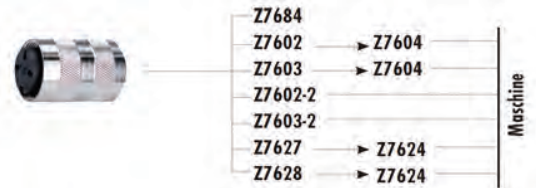
Product Code

SL-222



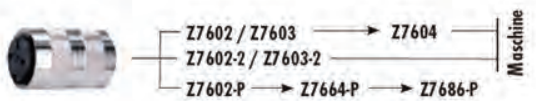
Z7600 Limit switch, vertical with plug, up to 120°C

- Splash-proof to IP 66.
- Adjustment via Z7684 test light



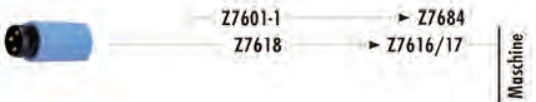
Z7600-4 Limit switch LED, inductive with plug, up to 100°C

- Splash-proof to IP 66.
- Work-switching gap 2 mm.



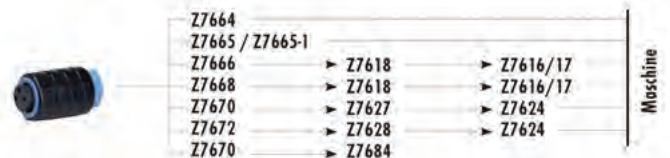
Z7615 Limit switch, internal, with cable, up to 90°C

- Splash-proof to IP 66.
- Adjustment via Z7684 test light and adapter Z7601-1.



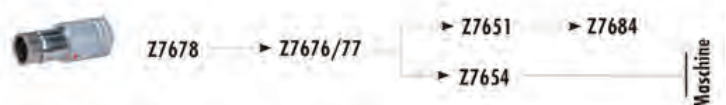
Z7662 Limit switch, vertical with plug, up to 90°C

- Splash-proof to IP 66.
- Adjustment via Z7684 test light.



Z7675 Limit switch, internal, up to 200°C

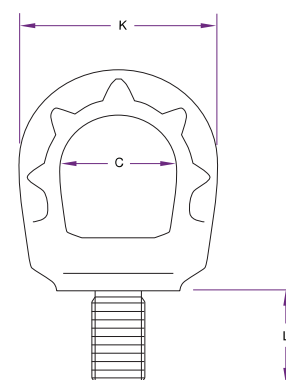
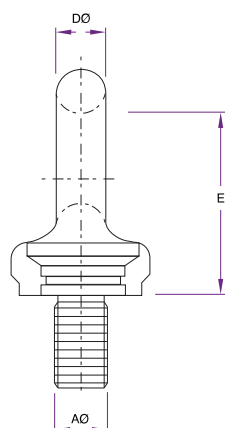
- Splash-proof to IP 44.
- Adjustment via Z7684 test light and adapter Z7651.



Swivel Eyebolt



- Forged from high tensile alloy steel, tempered
- Electromagnetic crack detection to AS1171
- Hi-visibility powder coating to AS4506
- F2 WLL - indicates safe use for non-axial lifts.
- Each eyebolt is clearly stamped with the permitted F2 WLL.
- F1 WLL - indicates loads which are in line with the axis of the threaded end of the eyebolt.
- F1 WLL allows up to four (4) times higher lifting capacity whilst maintaining a 6:1 design factor of safety
- More sizes available on request



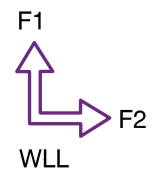
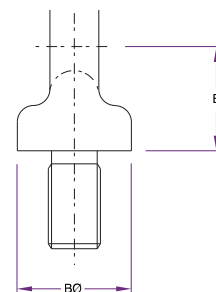
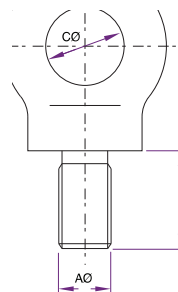
| METRIC | | | | | | | | | | |
|--------------|-----|-----------------------|-----------------------|----|----|----|----|----|----------------|-----------------------|
| Product Code | AØ | SF 5:1 WLL F1 t | SF 4:1 WLL F2 t | C | D | E | K | L | Torque (Nm) | Net Weight (kg) |
| EYE10-G10 | M10 | 1t | 0.4t | 30 | 11 | 43 | 55 | 15 | 14 | 0.23 |
| EYE12-G10 | M12 | 2t | 0.75t | 30 | 11 | 43 | 55 | 18 | 22 | 0.23 |
| EYE16-G10 | M16 | 4t | 1.5t | 34 | 14 | 49 | 64 | 24 | 60 | 0.38 |
| EYE20-G10 | M20 | 6t | 2.3t | 39 | 16 | 56 | 69 | 30 | 105 | 0.60 |
| EYE24-G10 | M24 | 8t | 3.2t | 50 | 19 | 71 | 86 | 36 | 182 | 1.10 |



Manufactured using only heat certified Australian Steel
WLL (Working Load Limit)



- Each eyebolt is clearly stamped with the permitted F2 WLL.
- F2 WLL - indicates safe use for non-axial lifts.
- F1 WLL - indicates loads which are in line with the axis of the threaded end of the eyebolt.
- F1 WLL allows up to four (4) times higher lifting capacity whilst maintaining a 6:1 design factor of safety



| METRIC | | | | | | | | | |
|--------------|------|-------------|-------------|-----|----|----|----|----|--------------------|
| Product Code | AØ | WLL F1 t | WLL F2 t | BØ | CØ | DØ | E | F | Net Weight (kg) |
| EYE10 | M10 | 0.25t | 0.06t | 21 | 14 | 9 | 19 | 17 | 0.06 |
| EYE12 | M12 | 0.4t | 0.1t | 28 | 18 | 11 | 24 | 21 | 0.15 |
| EYE16 | M16 | 0.8t | 0.2t | 35 | 23 | 14 | 31 | 27 | 0.28 |
| EYE20 | M20 | 1.6t | 0.4t | 42 | 30 | 16 | 35 | 38 | 0.46 |
| EYE24 | M24 | 2.5t | 0.62t | 57 | 38 | 22 | 48 | 42 | 1.10 |
| EYE30 | M30 | 4t | 1t | 71 | 49 | 27 | 65 | 52 | 2.10 |
| EYE36 | M36 | 6.3t | 1.57t | 87 | 53 | 35 | 73 | 64 | 3.70 |
| EYE42 | M42 | 8t | 2t | 102 | 66 | 40 | 90 | 76 | 6.30 |
| IMPERIAL | | | | | | | | | |
| Product Code | AØ | WLL F1 t | WLL F2 t | BØ | CØ | DØ | E | F | Net Weight (kg) |
| EYEI24 | 3/8" | 0.25 | 0.06 | 21 | 14 | 9 | 19 | 17 | 0.06 |
| EYEI32 | 1/2" | 0.4 | 0.1 | 28 | 18 | 11 | 24 | 21 | 0.15 |
| EYEI40 | 5/8" | 0.8 | 0.2 | 35 | 23 | 14 | 31 | 27 | 0.28 |
| EYEI48 | 3/4" | 1.6 | 0.4 | 42 | 30 | 16 | 35 | 38 | 0.46 |
| EYEI56 | 7/8" | 2 | 0.5 | 50 | 32 | 20 | 41 | 41 | 0.85 |
| EYEI64 | 1" | 2.5 | 0.62 | 57 | 38 | 22 | 48 | 42 | 1.10 |