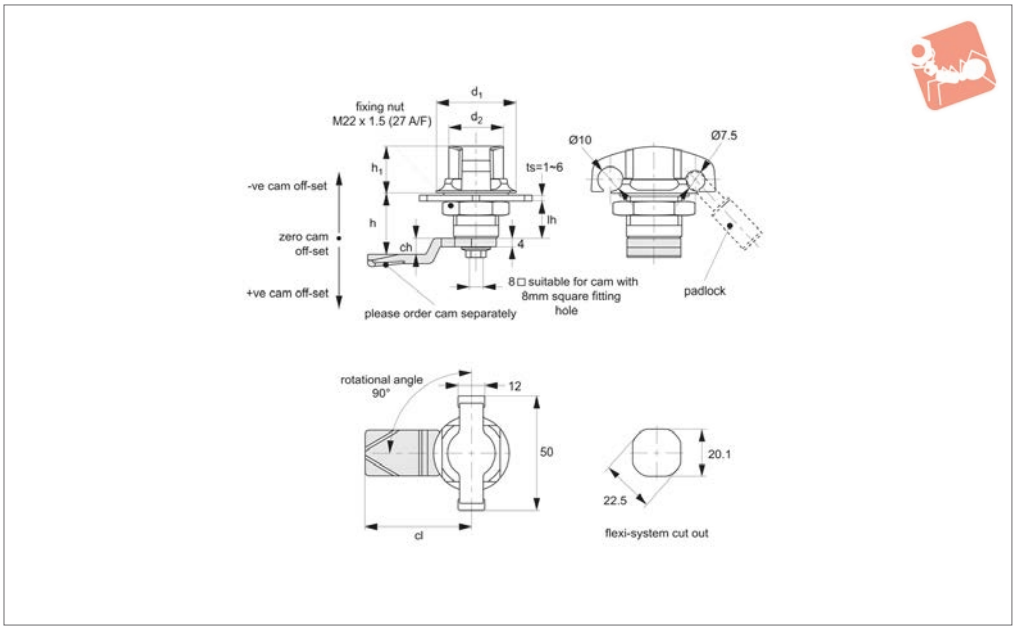
Cam Latches - Flexi-System

padlock wing handle - fixed grip - zinc



A1161

Material

Body & Handle: die cast zinc, pocked black powder or chrome plated.
Not supplied: CAM - order separately.

Technical Notes

Order cam separately.
Cams: see suitable cam A0203, A0224 and A0240. Select „without projection" cam type.
Dimensions ch and cl relate to cam. Use formula to calculate ch (required cam off-set), and refer to cam selection chart;
ch = h - lh where;
ch = required cam off-set/height.
h = grip length (distance between inside of latch face and front of cam).
lh = body length of cam latch/lock to be used (see product table below).
Rods & Guides: to achieve 3-point latching - A0303, A0321, A0325.

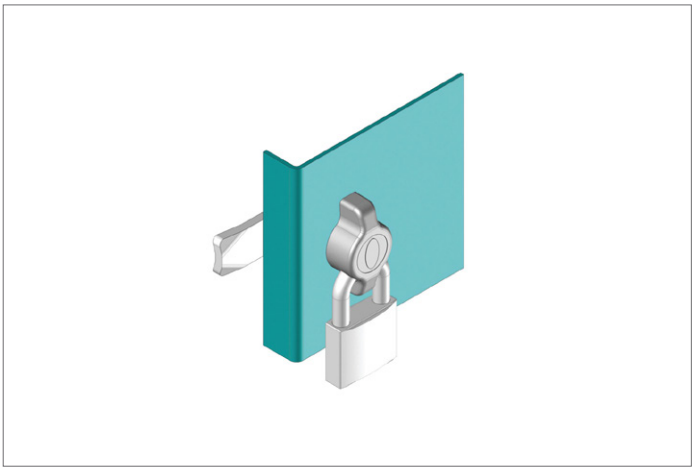
Tips

The wing knob can be locked by two sizes of padlock max. shackle dia. 7.5mm or 10mm. See technical diagram (padlock not supplied).
Panel thickness (ts) is 1 to 6mm max.

Important Notes

Sold subject to pack quantity.

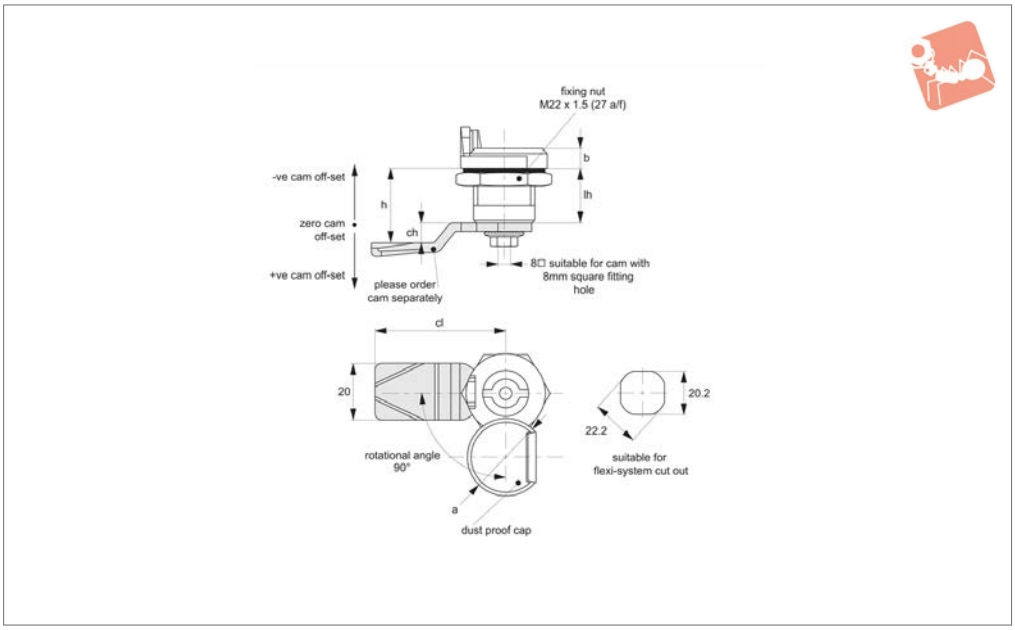
Order No.	Type	d_1	h_1	d_2	lh	Finish
A1161.AW0310	Black Coated	33	19	21	18	black coated



Cam Latches - Flexi-System

insert driver - fixed grip - zinc

A1168



Material

Body & Insert: die cast zinc, bright chrome plated. Insert fitted with O'ring to achieve IP54 rating.

Supplied with:

Cap: dust-proof.

Not supplied: CAM nor KEY - order separately.

Technical Notes

Order cam and key separately.

Cams: see suitable cam A0203, A0224 and A0240. Select „without projection" cam type.

Dimensions ch and cl relate to cam. Use formula to calculate ch (required cam off-set), and refer to cam selection chart;

ch = h - lh where;

ch = required cam off-set/height.

h = grip length (distance between inside of latch face and front of cam).

lh = body length of cam latch/lock to be used (see product table below).

Keys: see A0102.

Rods & Guides: to achieve 3-point latching - A0303, A0321, A0325.

Tips

Quater turn opening or closing.

Order No.	Insert driver	a	b	lh
A1168.AW0007	Square 7	29	6.5	18
A1168.AW0008	Square 8	29	6.5	18
A1168.AW0017	Triangle 7	29	6.5	18
A1168.AW0018	Triangle 8	29	6.5	18
A1168.AW0103	3mm Double Bit	29	6.5	18
A1168.AW0104	4mm Double Bit	29	6.5	18
A1168.AW0124	Slotted (2x4)	29	6.5	18

Selecting the Correct Cam Latch or Lock

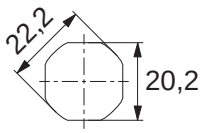
When selecting a Wixroyd Cam Latch for your application, you need to answer these questions:

1. Which installation cut out?
2. Which body style?
3. Which locking key?
4. Which accessories?
5. Which cam type and size?

Step 1: Which installation cut out?

Cut out

All our Flexi-System cam latches use a standard installation cut out 22,2 dia, 20,2 square, for maximum flexibility. We also provide a number of alternative cut out dimensions for legacy/historical installations.



flexi-system cut out

Step 2: Which body style?

Material and finish

Select from our variety of die cast zinc, polyamide plastic and stainless versions.

Die-cast zinc chrome plate

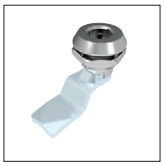
Die-cast zinc black coated

Polyamide black

Stainless steel

Actuation and locking method

Standard insert driver type, cylinder lock or wing handle type.



Insert driver

Cylinder lock

Wing handle

Number of latching points in application

Typically single point latching is required, but the Wixroyd Flexi-System also provides multi-point latching (typically 3 point - at lock point, top and bottom of cabinet).

Single point

Two point

Multi-point

Step 3: Which locking key?

Standard insert driver keys

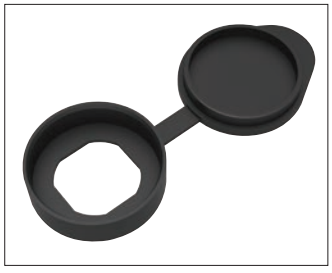
Our range of insert driver cam latches require a simple key to actuate. Refer to part A0102 and A0103 for correct keys.

Cylinder locking

Our cam locks with cylinder locks are supplied with two keys per lock. Available as keyed alike or keyed to differ locks.

Step 4: Which accessories?

- Multi-point latching: use our rod set A0303 to A0325 for suitable rods and rod guides.
- Finger pulls: easily installed with any of our flexi-system cam bodies, finger pull no. A0352 is a simple, cost effective handle for your cabinets.
- Dust Cap: to reduce material ingress.

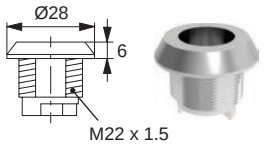


Wixroyd Cam Latches

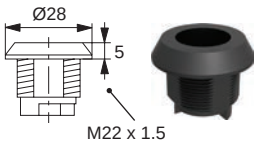
general information

Dimensions of our cam latch housings

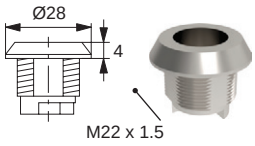
Dimensions apply to our standard range of flexi-system cam latches.



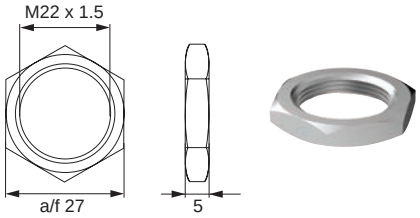
die cast zinc models (Chrome or black coated)

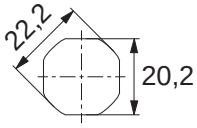


plastic/polyamide models



stainless steel models (AISI 304)





flexi-system cut out

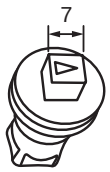
Available insert drivers for flexi-system latches

Available materials

Die Cast Zinc Models (Chrome or black coated)

Plastic/Polyamide Models

Stainless Steel Models (AISI 304)

3mm double bit	4mm double bit	6mm square	7mm square	8mm square
				
✓ ○ ● ●	✓ ○ ● ●	○	✓ ○ ●	✓ ○ ● ●

7mm triangle	8mm triangle	9mm triangle	Slotted	Square 8mm with slot
				
✓ ○ ● ●	✓ ○ ● ●	✘ ○	✓ ○ ●	✘ ○

10mm hex	8mm hex	8mm hex security pin	13mm eastern european	Tubular
				
✘ ○	✘ ○	✘ ○	✘ ○	✘ ○

✓ **Available as part of our standard range**

✘ **Available subject to a minimum order quantity**

Wixroyd AN ESSENTRA COMPANY

wixroyd.com

All our cam latches use a standard cut out dimension of 22,2 Ø and 20,2 square which accomodates many industry standards. Flexi-System parts are fully interchangeable, providing a completely flexible hardware system including two or three point latching systems.

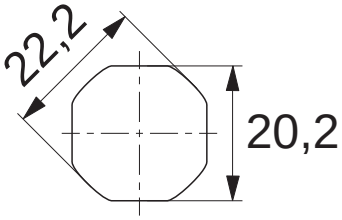
Flexi-system

insert driver cam latches

padlockable cam latches

wing handle cam latches

extended grip cam latches



flexi-system cut out

cam locks

t-handle locks

l-handle locks

compression latches

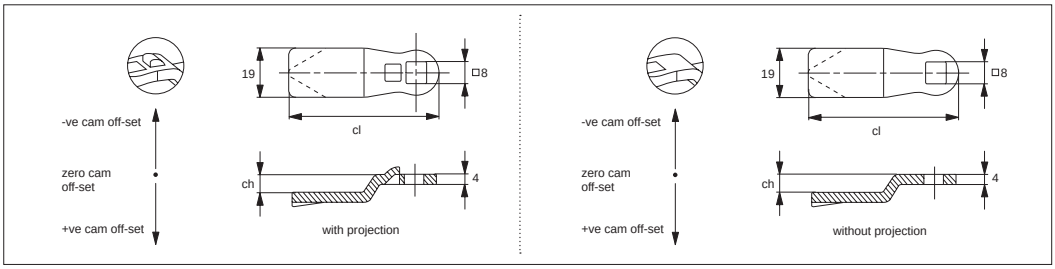
Selecting the Correct Cam Latch or Lock

With or without "Projection"

Different cam bodies require cams either with or without projection.

Step 5: Which cam type and size?

Wixroyd cams are available in a number of different materials; zinc plated steel, stainless steel (AISI 304) and black plastic.



With projection cams prevent turning of the cam over 45°, but is not suited to all cam bodies. For correct projection type please see individual cam body technical pages.

Number of Latching Points

Single point cams are suitable where just single point latching is required. Multi-point cams are for applications requiring 2 or 3 latching points.

Calculation of correct cam off-set

This is the most important aspect of the selection process.

Cam off-set (dimension ch)

To ensure your cam fully and correctly engages with the frame of your door the correct cam off-set must be selected. A cam off-set can be either negative (-ve) or positive (+ve).

Cam length (dimension cl)

This impacts the reach of the cam to door frame and hence impacts positioning of cam body for installation. Cam length is measured from the centre of the cam fixing hole to the cam's leading edge. Most typically cams are 45 mm in length.

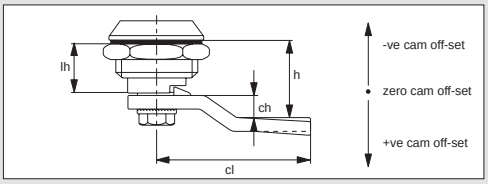
Use formula to calculate ch (required cam off-set), and refer to the cam selction chart.

ch = h - lh where;

ch = the required cam off-set/height

h = grip length (distance between inside of latch face and front of cam).

lh = body length of cam latch/lock to be used (see example below)



Example of calculation of correct cam off-set

Example one

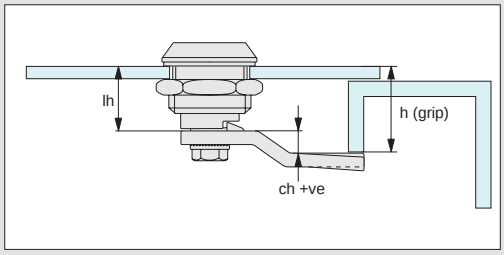
Cam body A1003.AW0010 has been selected for the application. If we refer to the data sheet for this part, suitable cams are parts A0203, A0210 or A0240 - "without projection".

Known application information: h = 26 lh = 18

Therefore; ch = 26 - 18 = +8

Cam off set of +8 is required

Using the data tables for cams A0203, A0210, and A0240 we can select the following cams without projection with an off set of + 8; A0203.AW5408 (steel), A0210.AW0428 (stainless) or A0240.AW0108 (three point cam).



Example two

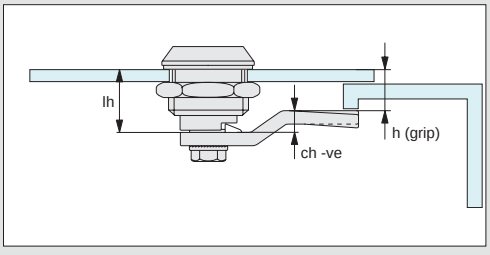
Cam body A1003.AW0010 has been selected for the application. If we refer to the data sheet for this part, suitable cams are parts A0203, A0210 or A0240 - "without projection".

Known application information: h = 14 lh = 18

Therefore; ch = 14 - 18 = - 4

The required cam off set is negative, - 4 as the application's door frame is effectively shorter/lower than the length of the cam body

Using the data tables for cams A0203, A0210 and A0240 we can select the following cam without projection with an off set of - 4; A0203. AW6404 (steel).



Suitable With Projection Cams

Compatible cam no.	A0261	A0203	A0210	A0240
Cam fitting hole	6 x 6 square 6☐	8 x 8 square 8☐	8 x 8 square 8☐	8 x 8 square 8☐
Cam latch / lock no.	A1261 / A1281 / A2390	A2503 / A2504 A2523 / A2528	A2503 / A2504 A2523 / A2528	A2503 / A2504 A2523 / A2528

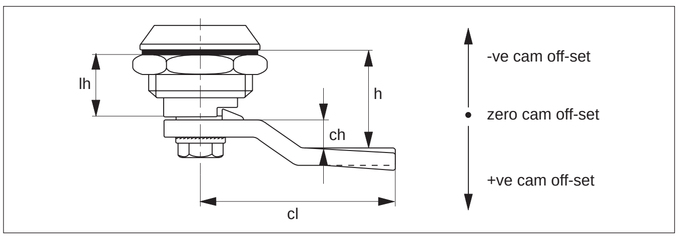
Suitable Without Projection Cams Table 1

Compatible cam no.	A0203	A0210	A0240	A0243
Cam fitting hole	8 x 8 square 8☐	8 x 8 square 8☐	8 x 8 square 8☐	8 x 8 square 8☐
Cam latch / lock no.	A1003 / A1021 / A1103 A1161 / A1168 / A1181 A1203 / A1210 / A1251 A1601 / A1620 / A1801 A2001 / A2203 / A2326 A2333 / A2392 / A2526 A4221 / A4241 / A4260 B1082 / B1086 / B1088 B1091 / B1092 / B1180 B1281 / B1285 / B1380 B1450 / B2091 / B2181	A1003 / A1021 / A1103 A1161 / A1168 / A1181 A1203 / A1210 / A1251 A1601 / A1620 / A1801 A2001 / A2203 / A2326 A2333 / A2392 / A2526 A4221 / A4241 / A4260 B1082 / B1086 / B1088 B1091 / B1092 / B1180 B1281 / B1285 / B1380 B1450 / B2091 / B2181	A1003 / A1021 / A1103 A1161 / A1168 / A1181 A1203 / A1210 / A1251 A1601 / A1620 / A1801 A2001 / A2203 / A2326 A2333 / A2392 / A2526 A4221 / A4241 / A4260 B1082 / B1086 / B1088 B1091 / B1092 / B1180 B1281 / B1285 / B1380 B1450 / B2091 / B2181	A1003 / A1021 / A1103 A1161 / A1168 / A1181 A1203 / A1210 / A1251 A1601 / A1620 / A1801 A2001 / A2203 / A2326 A2333 / A2392 / A2526 A4221 / A4241 / A4260 B1082 / B1086 / B1088 B1091 / B1092 / B1180 B1281 / B1285 / B1380 B1450 / B2091 / B2181

Suitable Without Projection Cams Table 2

Compatible cam no.	A0250	A0234	A0215	A0231	A0233
Cam fitting hole	5 x 5 square 5☐	6,3 dia. x 4,9 4,9 Ø6,3	7 x 7 square 7☐	8 x 10 dia. 8 Ø10	8 x 10 dia. 8 Ø10
Cam latch / lock no.	A4600 / A4620	A1661 / A1667	B2082 / B2084 / B2086 B2088 / B2285 / B2380	A1603 / A1611 A1630 / A1810	A1603 / A1611 A1630 / A1810

Calculation of correct cam off-set



Cam off-set

Use the formula to calculate your correct cam off-set:

ch = h - lh

ch = the required cam off-set.

h = distance between inside of lock face and front of cam (also referred to as "grip length").

lh = length of cam body to be used (refer to individual cam body data sheets).

Cam Off-Set (dimension ch)

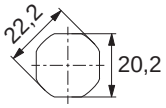
To ensure your cam fully and correctly engages with the frame of your door the correct cam off-set must be selected. A cam off-set can be either negative (-ve) or positive (+ve).

Cam Length (dimension cl)

Impacts reach of the cam to door frame and hence impacts positioning of cam body for installation. Cam length or reach is measured from the centre of the cam fixing hole to the cam's leading edge. Refer to individual cam body datasheets.

Wixroyd Cam and Compression Latches

flexi-system cut out product selection charts



flexi-system cut out

A1003 - Cam Latch - Fixed Grip

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
✓			18	✓			✓	✓			✓	54

Cams: A0203, A0224, A0240 - Keys: A0102

A1021 - Cam Latch - Fixed Grip

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
✓			18		✓			✓		✓		54

Cams: A0203, A0224, A0240 - Keys: A0102

A1041 - Cam Latch - Push-to-Close - Fixed Grip

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
✓			18	✓			✓					

Cams: Supplied - Keys: A0102

A1103 - Cam Latch - Fixed Grip

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
✓			18		✓			✓		✓		54

Cams: A0210 - Keys: A0102

A1161 - Cam Latch - Padlockable - Fixed Grip

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
	✓		18	✓			✓	✓			✓	

Cams: A0203, A0224, A0240 - Keys: Padlockable

A1168 - Cam Latch - Dust Proof Cap - Fixed Grip

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
✓			18	✓			✓				✓	54

Cams: A0203, A0224, A0240 - Keys: A0102

A1181 - Cam Latch - Wing Handle - Fixed Grip

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
	✓		18,5	✓	✓		✓	✓	✓		✓	

Cams: A0203, A0224, A0240 - Keys: N/A

A1203 - Cam Latch - Finger Handle - Fixed Grip

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
	✓		Various	✓				✓	✓		✓	

Cams: A0203, A0224, A0240 - Keys: N/A

A1210 - Cam Latch - Tamper Evident

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
	✓		20	✓			✓				✓	

Cams: A0203, A0224, A0240 - Keys: N/A

A1241 - Cam Latch - Stepped Grip

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
✓			Various	✓			✓					65

Cams: Supplied - Keys: A0102

A1251 - Cam Latch - Fixed Extended Body

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
✓			Various	✓			✓				✓	54

Cams: A0203, A0224, A0240 - Keys: A0102

A1580 - Compression Latch - Fixed Grip

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
✓			18	✓			✓					

Cams: N/A - Keys: A0102

A1601 - Compression Latch - Fixed Grip

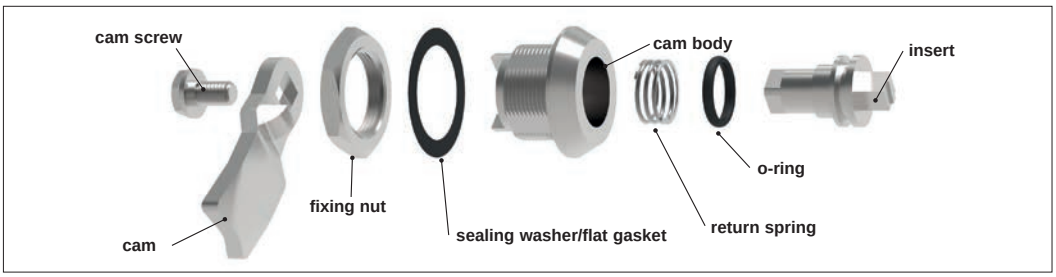
Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
✓			31	✓			✓	✓			✓	54

Cams: A0203, A0224 - Keys: A0102

A1603 - Compression Latch - Fixed Grip

Actuation Method			Body length (mm)	Body			Finishes			Cam Type		IP Rating
Insert Driver	Cylinder Lock	Manual/Grip		Die-Cast Zinc	Polyamide Plastic	Stainless Steel	Chrome Plated	Black Coated	Natural	With Projection	W/O Projection	
✓			38		✓			✓		✓		54

Cams: A0231, A0233 - Keys: A0102



Materials

Physical and chemical characteristics of polyamide	
Physical condition	solid (at 20°C)
Density	> 1,0 g/cm3
Yield Point	220°C
Smell	No particular smell
Dissolvability in water	Undissolvable
Segregation temperature	> 350°C
Fire Point	>390°C
Auto ignition temperature	> 400°C

RoHS Compliance

Our Cam Latches are RoHS Compliant.

RoHS COMPLIANT

Zinc

Zinc Alloy is the most fundamental material for the Wixroyd product range. Housings, inserts, handles, spacers, keys, hinges etc, are all die cast products. The zinc used is a zinc alloy with the following contents (except zinc): Al 4,03% Cu 0,83% as well as minor contents of Mg, Fe, Pb, Cd, Sn and Ni.

Plastic - Polyamide

Many of our products are made of injection moulded plastic, normally polyamide. When needed, we add fibreglass to the material, in order to optimise
qualities of the product. Examples of products made out of polyamide: handles, housings, rod guides etc.

Degrees of sealing protection

A product classified to an IP rating has either been tested in an independent laboratory, or due to the resemblance of its structure to a tested product, classified as IP.

Important note: We can only guarantee our products correspond to the indicated classification when assembled and used correctly.

IP ratings

IP65 RATED

IP 65: Dust Tight and Jetting Secure. Through the application of an o-ring and a flat gasket, this higher classification can be achieved.

IP54 RATED

IP 54: Dust and Splash Protected. This is the standard classification for our products. Equivalent to NEMA3.

Flat gaskets/ Sealing Washer

Character	Value	Standard
Density	1,35 g/cm3	DIN 53479
Hardness	65 Shore A	DIN 53505
Breaking Strain	5 N/mm2	DIN 53504
Expansion	200%	DIN 53504
Heat & cold resistance	max. 70°C, min. -35°C	

Through the application of a flat gasket between the lock and the door, class IP 65 or NEMA 4 is achieved.

Pressure deformation test			
Time/temp.	Type of test	Standard	Result
22h/100°C	DVR	DIN 53517 A	9%
70h/100°C	DVR	DIN 53517 A	12%

The flat gasket is made out of a mixture of NBR (Nitrile Rubber) and SBR (Styrolbutadiene Rubber). This gives the gasket a satisfactory chemical resistance and a good constancy to oil.

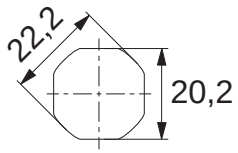
O Rings

For all O-rings, an NBR material with the following technical characteristics is used.

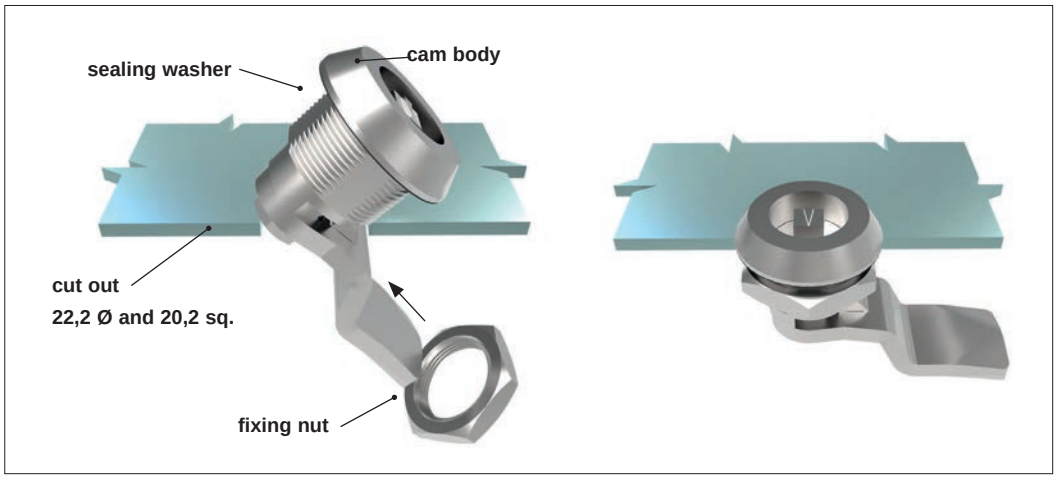
Character	Value	Standard
Density	1,240 g/cm3	DIN 53479
Hardness	71 Shore A	DIN 53505
Breaking strain	14 N/mm2	DIN 53504
Expansion	280%	DIN 53504
Recoil elasticity	32%	DIN 53512
Heat & cold resistance	max. 120°C, min. -40°C	

Flexi-system cut out

Our flexi-system is based on a standard installation cut out 22,2 Ø and 20,2 sq.



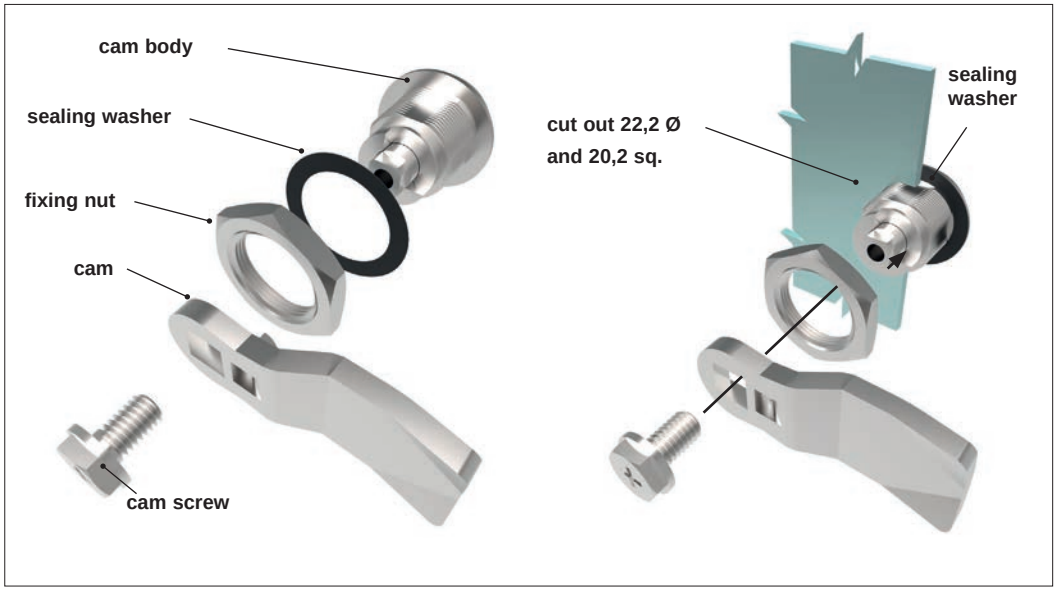
Option 1: Installation when fully assembled



When the cam latch grip (h) is 9mm or more this method is possible:-

1. With the cam body and cam fully assembled, attach the sealing washer to cam body.
2. Tilt the latch 45° and pass it, cam first, through the installation cut out in the panel.
3. When in place attach the fixing nut to the cam body to secure. Tighten to 10 Nm max.

Option 2: Installation unassembled



When the cam latch grip (h) is less than 9mm this method is suitable:-

1. Prior to commencing ensure that the cam body, cam, cam screw, fixing nut and sealing washer are completely unassembled.
2. Attach the sealing washer to the cam body and pass through installation cut out in panel.
3. Attach the fixing nut to the cam body to secure. Tighten to 10 Nm max.
4. Attach the cam to the cam body. Once you have ensured that the cam has the correct orientation toward the panel frame, secure the cam screw and tighten to 4 Nm.

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