

OPERATION AND MAINTENANCE INFORMATION

Acoustic Doors

Care and Maintenance Manual

How to use, clean, inspect and maintain acoustic doorsets supplied by Restruct Commercial Doors.

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RCD CARE AND MAINTENANCE MANUALS

 Fire and Smoke Control Doors	 Acoustic Doors	 X-Ray Doors
 Safety and Security Doors	 Anti-Ligature Doors	 General Purpose Hinged Doors
 Sliding and Folding Doors	 Pivot and Bidirectional Doors	 Steel Windows

PROJECT	
Project	
Main contractor	
RCD job number	
Date issued	

1 | About this manual

This manual covers the acoustic doorsets (door leaf, frame, seals and vision panels) made by Restruct Commercial Doors Ltd (RCD). An acoustic door gets its performance from its weight and, above all, from its seals: a small gap lets most of the sound through. This manual tells you how to use the doors, how to clean them, what to check and how often, and what to do when something is wrong. The type and the hardware for each door are shown on its shop drawing. Keep this manual with the building's operation and maintenance records.

A door that is also fire rated carries fire tags and is a fire door first: the RCD Fire and Smoke Control Doors Care and Maintenance Manual applies to it as well, and that manual's inspection intervals apply wherever they are shorter.

1 Do not alter a door or frame.
No cutting, drilling, planing or added fittings without written approval from RCD. Cutting, planing or drilling cancels the acoustic rating.

2 Do not paint the seals. A painted seal cannot compress, and the door stops sealing.

3 Keep it closed. An acoustic door gives no sound reduction when it is open, and very little when it is not latched.

Who does what

Who	What they look after
People using and cleaning the building	Use the doors as intended, clean them as set out in section 4, and report damage or a door that does not close.
Building owner or facilities manager	Arranges the checks in section 7, keeps the inspection record (section 9), and gets defects fixed.
Hardware supplier or installer	Adjusts and services closers, locks, electric locking and access control. Where door hardware was supplied or fitted by another contractor, that contractor's instructions apply to it.
Restruct Commercial Doors	Supplies replacement leaves, frames and seals, and advises on any repair or change to a door we made.

Where to look on a door

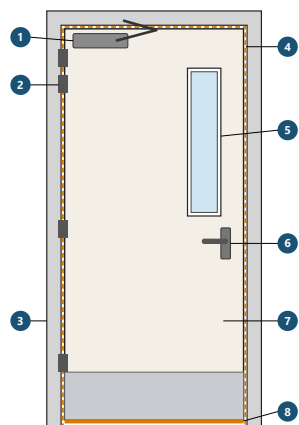


Fig.1 Inspection points on a hinged doorset

- 1 Door closer.** Closes and latches the door from any position, without slamming. No oil on the body or arm.
- 2 Hinges or pivots.** All screws present and tight. Leaf has not dropped and does not rub the frame.
- 3 Frame and wall junction.** Frame firm, sealant and architraves intact, no gaps or cracks.
- 4 Perimeter seals.** Continuous around the head and both sides, not torn, flattened or painted.
- 5 Vision panel.** Glass sound, beads tight, glazing seal in place.
- 6 Lockset and handles.** Latch engages the strike fully, levers return, fixings tight.
- 7 Leaf faces and edges.** No impact damage, lifting laminate or bowing. Finish intact, edges sealed.
- 8 Bottom seal and floor gap.** Seal meets the floor or threshold across the full width. Leaf does not drag.

2 | Using the doors

- **Close it fully.** The door only performs when it is latched and its seals are compressed. A door left ajar does nothing.
- **Automatic bottom seals.** These drop as the door closes and lift as it opens. They only seal when the door is fully closed and latched.
- **Let the closer do the closing.** Do not push a door shut against its closer or pull it faster than the closer allows. Forcing a closer damages it and makes it leak.
- **Nothing on the door.** Do not hang bags, coats or signs from the leaf, the handles or the closer arm. Extra weight makes the leaf drop on its hinges.
- **Pairs of doors.** Close the fixed (inactive) leaf first and engage its bolts, then close the active leaf. Where a door sequencer is fitted it does this in the right order by itself; never tie it back.
- **Trolleys and beds.** Most door damage is impact damage. Open the door fully before moving equipment through.
- **Keep doors dry.** RCD doors are for interior use unless the shop drawing says otherwise. Wipe up water at the foot of a door straight away and never hose down or flood the floor against a leaf.

3 | The first weeks after handover

New paint	Paint applied on site needs time to harden fully. Follow the paint manufacturer; waterborne paints generally need about four weeks before they are washed or knocked. Until then, dust with a dry soft cloth only.
Builders' marks	Remove paint spots, plaster, cement and sealant smears straight away, before they harden, using the methods in section 5. Hardened paint or cement on glass usually cannot be removed without damage.
Protective film and tape	Remove protective film from laminate, stainless steel, powder coat and glass as soon as the work around it is finished. Film left on for months bakes on and leaves adhesive behind.
Sealed edges	The top and bottom edges of every timber leaf must be primed or sealed within 24 hours of delivery, and stay sealed. Check that they are, including any cut-outs made on site for hardware. An unsealed edge takes up moisture and the leaf swells or bows.
Closers	Closers are set when the door is installed. Check them again once the building is occupied and the air conditioning is running, because air pressure between rooms changes how a door closes. See section 6.
Thresholds and bottom seals	Clean construction dust and grit off threshold plates and check that every bottom seal meets the floor or threshold across the full width.
Sealant joints	Check that the sealant between frame and wall is complete all the way round, with no gaps or smears left on the frame or glass.

For every surface

- Try any cleaner on a small hidden area first.
- Use soft, clean, non-scratching cloths. Rinse off the cleaner with clean water and wipe dry.
- No abrasive cleaners, scouring pads, steel wool, scrapers or blades.
- Keep cleaners and water off seals and the bottom edge of the leaf.

Surface	How to clean	Do not use
Painted leaf or frame	Soft cloth, warm water and a little mild detergent, or the cleaner the paint manufacturer recommends. Wring the cloth out well. Wipe, rinse, dry.	Abrasive or strong cleaners and hard scrubbing: they polish the paint and leave shiny patches.
High pressure laminate	Clean water and mild detergent. Rinse with a clean damp cloth and dry with a microfibre cloth. A glass cleaner afterwards removes streaks on dark or gloss colours.	Scourers and abrasive cleaners. Furniture polish (leaves a silicone film). Acid based cleaners, oven cleaner and limescale remover (permanent staining). Water left sitting on joins and edges.
Timber veneer, clear finished	Dust, then wipe with a soft damp cloth and dry. Repair any break in the clear finish promptly so moisture cannot get into the veneer.	Wet cloths, solvents, wax or silicone polishes unless the coating manufacturer recommends them.
Powder coated steel or aluminium	Soft cloth or soft brush with warm water and a mild, neutral detergent. Rinse with clean water. Clean when the surface is cool, below 25 degrees. At least once a year; every six months near the coast or in industrial areas.	Turpentine, thinners and other strong solvents. Abrasive cleaners. Never use any solvent on a surface that is warm from the sun.
Stainless steel (cladding, kick plates, hardware)	Warm water and detergent, rinse well, dry. Wipe along the grain of the brushed finish.	Steel wool or wire brushes (they leave rust marks). Bleach and cleaners containing chlorides.
Aluminium edge strips and caps	Warm water and detergent, rinse well.	Abrasive pads. Strong alkaline or acid cleaners.
Glass in vision panels	Warm water with mild detergent, or a proprietary glass cleaner, on a soft cloth. Rinse and dry with a clean, grit-free cloth or squeegee. Every three to six months, or as needed.	Scrapers and razor blades: toughened glass scratches when a blade drags surface grit across it. Solvents near the edge of the glass, the glazing seals or the beads.
Acoustic glass	As for other glass, with a soft cloth and mild detergent only.	Anything abrasive. Anything that soaks the glazing seal. Report chips, cracks or clouding rather than trying to polish them out.
Seals and gaskets	Damp cloth with dishwashing detergent in warm water.	Solvent based cleaners. Paint: a painted seal has to be replaced.
Handles, locks, closers and hinges	Wipe with a damp cloth and dry. Follow the hardware manufacturer for anything more.	Spraying cleaner or lubricant into locks, closers or electric hardware.

Other facings (vinyl, printed panels, polycarbonate, steel mesh): clean as the facing manufacturer instructs. Ask RCD if you are unsure what a door is faced with; it is recorded on the shop drawing.

5 | Removing paint, overspray and other site marks

These are the marks most often left behind when a building is finished. Deal with them early: nearly all of them come off easily when fresh and with difficulty, or not at all, once hardened. If another trade caused the marks, ask the main contractor to have that trade remove them.

Problem	What to do	Do not
Wet paint on laminate, powder coat or stainless steel	Wipe off straight away with a clean damp cloth, then wash with warm water and mild detergent, rinse and dry.	Leave it to dry.
Dried paint spots on high pressure laminate	Soften the spot with a little methylated spirits on a clean cloth and lift it with a fingernail or a plastic scraper. Work on the spot only. Rinse with clean water and dry. Test on a hidden area first.	Metal scrapers, blades or scouring pads. Solvent on the joins, edges or edge strips: it can break down the adhesive. Paint stripper.
Paint splashes or overspray on glass	Wash down at once with clean water and mild detergent while the paint is still fresh. If paint has hardened on the glass, contact the painter or the main contractor before anyone attempts to remove it.	Scrapers or razor blades. Hardened paint removed by scraping generally leaves the glass scratched and the pane then has to be replaced.
Cement, plaster or stopping compound on glass	Wash down at once with clean water and mild detergent. Do not let it harden.	Solvents, scrapers, or rubbing dry grit across the glass.
Oil, grease, fingerprints or suction lifter marks on glass	Non-abrasive glass cleaner or mild detergent. For marks that stay, a little methylated spirits or isopropyl alcohol on a clean cloth, applied to the glass only, then wash, rinse and dry.	Solvent on the glazing seals, the beads or the painted face around the glass. Abrasive creams.
Silicone or sealant smears on glass	A small amount of mineral turpentine on a lint free cloth to thin and lift the smear, then wash the glass straight away with clean water and mild detergent.	Scrapers or razor blades. Turpentine on powder coated frames or painted faces: keep it on the glass.
Oily marks or fingerprints on powder coat or stainless steel	Methylated spirits or isopropyl alcohol on a soft cloth, then warm water and detergent, and rinse well.	Other solvents. Any solvent on warm metal.
Pen and marker on laminate	Methylated spirits on a clean cloth, then rinse and dry.	Abrasives.
Tape or sticker residue	Peel slowly. Remove what is left with a little methylated spirits on a cloth, testing on a hidden area of paintwork first.	Turpentine or oil based cleaners on a surface a seal has to stick to.
Paint on seals	Painted seals must be replaced. Contact RCD for the correct replacement seal.	Scraping or using solvent on the seal.
Scuffs and chips in a painted leaf or frame	Touch up with the same paint system once the damage is cleaned and dry, following the paint manufacturer. Reseal any exposed timber or board edge the same day.	Painting over seals, hinges or hardware while touching up.

Solvents

Methylated spirits, isopropyl alcohol, acetone and turpentine are flammable. Use small amounts on a cloth, with ventilation, away from flames and sparks, and never on seals or gaskets.

The hardware fitted to each door is listed on its shop drawing and on the project's hardware schedule. On many projects the hardware is supplied and fitted by a separate contractor. In every case the hardware manufacturer's own instructions for the model fitted are the authority; this section tells you what correct operation looks like and when to call someone.

Door closers

A correctly adjusted closer brings the door fully closed and latched from any open position, at a controlled speed, without slamming.

- **What can be adjusted.** Most closers have two speed valves: closing speed (most of the swing) and latching speed (the last part of the swing, where the door has to overcome the latch and the seals). Many also have backcheck, which cushions a door that is thrown open, and some have delayed closing.
- **Before adjusting, look for a cause.** A door that stops short of latching usually has something in the way: a seal out of place, a dropped hinge, a latch that no longer lines up with the strike, or air pressure between two rooms. Fix that first.
- **Adjust in small steps.** Turn a valve no more than a quarter turn at a time and test the door after each change. On most closers clockwise slows the door and anticlockwise speeds it up; confirm against the instructions for the model.
- **Never unscrew a valve all the way.** The valve comes out, the oil is lost and the closer has to be replaced.
- **Oil means replace.** Oil on the closer body, the arm or the door face means the closer has failed. It cannot be topped up.
- **Closing force** (spring strength) is chosen to suit the size of the door and its seals. Change it only as the manufacturer's instructions describe.
- **Fixings.** Check that the body, arm and bracket screws are tight at every inspection.

Adjustment is a job for the hardware installer, a locksmith or a maintenance person who has the manufacturer's instructions for that closer. Concealed closers, transom closers, floor springs and pivot closers are serviced by trained people only.

On an acoustic door the closer has to shut the door firmly enough to compress every seal. If the door stops short, check the seals before adjusting the closer.

Hinges, pivots and floor springs

- All screws present and tight. Replace a missing screw with the same size and type.
- The gap between leaf and frame should be even down both sides and across the head. A leaf that rubs, or a gap that has opened at the top of the closing edge, means a hinge or pivot has moved.
- Lubricate only where, and with what, the hinge or pivot manufacturer says to. Many commercial hinges are sealed and need none.
- Keep floor pivot plates and floor spring cover plates clean and free of grit and water.

Locks, latches and bolts

- The latch should engage fully in the strike when the door closes under the closer alone. Levers should return to level when released.
- Tighten loose handle and plate fixings before they wear the door face.
- Flush bolts and floor bolts on the fixed leaf of a pair must engage fully. Keep floor sockets clear of dirt.
- Lubricate lock cylinders and latches only as the lock manufacturer directs.

Seals

Perimeter seals (frame head and sides)	With the door closed the seal should touch evenly all the way round. It does not need to be tight: a seal that just holds a sheet of paper firmly is doing its job. Seals that are torn, flattened, hardened, loose or painted must be replaced with the same profile.
Automatic bottom seals	The seal should drop to meet the floor or threshold plate across the full width when the door is closed, and lift clear as it opens. A tight seal is not needed and makes the gasket drag and wear. Adjust the seal's travel only as its fitting instructions describe; the seal model is given on the shop drawing.
Fixed bottom seals and threshold plates	Seal makes contact along its length without dragging. Threshold plate fixed down, clean and undamaged.

Vision panels

The glass, the beads and the glazing seal are part of the acoustic rating. Report cracked, chipped or loose glass and loose beads to RCD. Never reglaze an acoustic door with ordinary glass.

If the door is also fire rated, its closer, its intumescent and smoke seals and its glass are part of the fire door: follow the RCD Fire and Smoke Control Doors Care and Maintenance Manual for them.

7 | Inspection schedule

The intervals are minimums for normal commercial use. Inspect more often where the door is heavily used, where the hardware manufacturer or the project specification asks for it, or where the facility's own risk assessment requires it.

Check	How often	What is required
Door closes and latches	Monthly	From any open position, with all seals compressed.
Gaps around the closed door	Monthly	No light visible around the perimeter.
Perimeter seals	Six-monthly	Intact and continuous. Not flattened, torn or coming away.
Automatic bottom seal	Six-monthly	Drops fully and meets the threshold across the full width.
Door closer	Six-monthly	Closing force enough to compress all seals. Adjust closing and latching speed as needed.
Hardware	Six-monthly	All hardware firmly fixed, hinges tight.
Sealant between frame and wall	Annually	No gaps. Reseal with acoustic sealant if needed.
Clearances between leaf and frame	Annually	Within the tolerances on the shop drawing.
Full inspection	Annually	Condition and any remedial work recorded.

Seal life. Perimeter and bottom seals typically last five to ten years depending on traffic. Replace them with the same profile.

Watch for doors wedged open, seals that are worn, flattened or painted, a bottom seal that does not reach the threshold, a closer too weak to compress the seals, gaps between frame and wall, and a leaf that has been cut, planed or drilled.

When something is wrong

Act immediately	A door that fails any check in section 7 is no longer giving its rated performance. Do not rely on it until it is fixed.
Act promptly	Worn, flattened or painted seals, a bottom seal that does not reach the threshold, a closer that does not latch the door, loose hardware, a leaf that rubs or drags, lifting facings, exposed or unsealed edges.
Who to call	Hardware faults: the hardware supplier or installer. Anything to do with the leaf, frame, seals or glazing: RCD. During the defects period, raise it through the main contractor.
What to tell us	The project name and RCD job number, the door number from the shop drawing, what is wrong, and photographs of the whole door and of the fault.

Repairs

- Replace seals, glass and hardware like for like. Seals must be the same profile.
- Repairs to the leaf or frame need RCD's written approval first. The acoustic rating belongs to the complete doorset.
- Never fix panels, signs, hooks, kick plates or other items to the door after installation unless RCD has confirmed in writing that it is allowed.
- Record every repair in the inspection record.

Care our warranty expects

Project warranties exclude damage caused by a lack of maintenance or by not following the manufacturer's instructions. Following this manual, and keeping the inspection record up to date, shows the doors have been looked after. The following are not manufacturing defects:

- Doors cut, drilled or otherwise modified after delivery.
- Top and bottom edges not primed or sealed within 24 hours of delivery.
- Damage during or after installation, and installation that does not follow RCD's installation guides.
- Doors exposed to water, or used in an environment they were not made for.
- Exposure to excessive heat.
- Fading or discolouration from sunlight.
- Mould, mildew or fungal growth.
- Physical abuse, misuse and impact damage.
- Movement of the building or of the wall the door is fixed in.
- Scratches to glass, and glass fitted by others.
- Finishes applied by others, and painted doors finished in dark colours, which absorb heat and can bow.
- Fair wear and tear.

This list is a guide. The warranty document issued for the project sets out the terms that apply.

Manufacturers' instructions

Item	Follow
Door seals	Raven, Product Care and Maintenance, and the fitting instructions for the seal model shown on the shop drawing (raven.com.au).
High pressure laminate	Prime Panels, Prime Laminate Technical Data Sheet, section 8 Care and Maintenance (primepanels.co.nz). Laminex New Zealand, Laminate Care and Maintenance guide (laminex.co.nz).
Glass	The glass manufacturer's care instructions. RCD can confirm the glass type and supplier.
Paint and clear finishes	The manufacturer of the paint system applied on site.
Powder coat	The powder coat manufacturer's care and maintenance guide.
Closers, locks, hinges, pivots, electric hardware	The manufacturer named on the project's hardware schedule, for the model fitted.

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On our website

Installation guides: restructcommercialdoors.co.nz/installation-guides
Information sheets: restructcommercialdoors.co.nz/information-sheets
Technical queries:
restructcommercialdoors.co.nz/technical-queries-evidence-requests

9 | Inspection record

Copy this page as needed. Record every inspection, defect and repair.

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