Care of timber based Door Blanks

Check suitability for the intended end use before ordering

Ensure blanks are suitable for all end use requirements (fire, mechanical, acoustic, thermal etc.) before ordering and/or before proceeding with any joinery works, the majority of test evidence is available from **www.falconpp.co.uk** or is available on request.
Blanks returned in original condition due to customer error will be subject to a re-stocking charge but blanks unpacked and re-worked will not be accepted back for credit.

Receipt of Goods

Please ensure goods are checked upon delivery and confirm that they are as ordered. Please endorse any damage on the delivery notes. If damaged please remember that blanks are made for reducing in size and the damaged section will likely be removed and discarded.

Moisture content should be checked upon delivery, door blanks should be in the range of 10 to 16% moisture content dependant on the ambient humidity.

Storage

Blanks should be stored in a dry, ventilated warehousing facility suitable for the storage of joinery products. **Never store goods outside even if under protective cover.** Blanks should be stored flat on a level surface on the pallets/supports supplied.

We would recommend the removal of all strapping/banding as soon as possible after delivery to allow the blanks to acclimatise and settle, whilst maintaining the covering/packaging to protect the blanks from dirt and damage. Often the blanks will have been packaged in the country of origin some 3-4 months before arrival at your site and will have been constrained by strapping/banding to secure the goods. This doesn't allow for the movement that naturally occurs in timber products as they adjust to the ambient conditions. Blanks may initially move once released from their strapping/banding but will generally flatten after a few days conditioning. It is essential that this conditioning is adhered to for any unwrapped blanks before any works are carried out, as this distortion may occur a short while after unpacking and after the blanks have been cut.

Blanks should always be pre-conditioned to the moisture content of the site where they will be fitted (see sections on external & internal use and Hygrothermal Bow for more details). Ideally this conditioning should take place before re-working the blank but conditioning must happen before fitting.

Handling

Blanks can be damaged by careless handling. Do not drag blanks across each other as scratching/denting will occur. If blanks are removed from the pallet of delivery they must be stored flat on a minimum of 4 equally spaced, equal sized timber bearers. Never store blanks on their edge or end.

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Blanks for external use

All of our timber core blanks are suitable for internal use, and many of the plywood faced can be used externally, subject to the following recommendations:

1. Door cores intended for external use should be pre conditioned to provide for the moisture contents recommended by reference to BS EN 942: 2007. Moisture content is one of the most important aspects of the specification of joinery and BS EN 942: 2007 states that it is the responsibility of the joinery manufacturer to supply the component to the first purchaser at the correct moisture content for the site and that this moisture content is maintained on site. If the moisture conditions on site haven't stabilised and are liable to change then the site is not ready for timber joinery.
2. Door leaves should be hardwood lipped on all edges using a hardwood selected by reference to BS EN 942 as 'suitable for external use without preservative treatment'. Lippings should be bonded to the door edges using an exterior quality adhesive that conforms to the test evidence for fire.
3. All apertures cut into the door blank for vision panels, louvres, letter plates etc. should be lined with minimum 6mm thickness hardwood with specifications as described for lippings. The linings may be bonded into position using exterior quality adhesives or, a non setting mastic seal can be applied to the aperture before fitting the linings with zinc coated pins or screws.
4. After reworking to the size and specification required the finished door should be sealed or primed on all faces and edges. All parts of the door that become inaccessible after installation should have the full finishing system applied before fitting externally. The full finishing system should be applied to the rest of the finished door immediately after fitting. Fitting should only be attempted on a dry day.
5. Choice of colour is extremely important, especially for South and South West facing doors, in the hotter months the use of dark coloured finishing systems will cause a build-up of heat on the external face, causing an imbalance leading to distortion, cracking and the possibility of resin exuding from the face of the door.
6. External door-sets should be set well back from the outer face of the wall and protected from the accumulation of standing water with an overhead canopy and the use of drip bars. Water collecting on top or underneath a door will cause moisture ingress and probable distortion even with the full finishing system applied.

Blanks for internal use

1. Once the finished door has been produced it must be conditioned on site for sufficient time for the door to equalise to the ambient moisture.

   Where large temperature and or moisture differences are expected between the faces of the finished door then this must be planned for and designed into the doorset. Ideally a vapour barrier needs to be incorporated close to the faces of the door to stop the ingress and egress of moisture, if this is not possible we suggest using a high density timber core with a multi-layer construction to lessen (but not guarantee the removal of) the movement. The doors must be conditioned to site conditions and the full finishing system must be applied before fitting.

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2 Paint colour & type must be taken into account based on the location and lighting of the door. Dark gloss & semi-gloss paints can show small areas of the core construction through the facing material (telegraphing) in conjunction with strong overhead lighting. This is normal, not a fault of the door, to minimise specify blanks with thicker facings or with uniform construction throughout.

Blanks for additional bonded faces

Blanks to be faced with any material, for instance timber veneers or laminate, must be calibrated before bonding to eradicate any high/low points on the face and ensure flatness. This will maximise the likelihood of a secure bond. Do not proceed with bonding if in any doubt of the blanks suitability or if unable to calibrate.

Hygrothermal Bow

Wood is a natural material which can be expected to behave according to its innate characteristics. Wood is naturally hygroscopic and kiln dried timber or timber based sheet materials will readily absorb moisture, particularly through end grain. The absorption or loss of moisture in the timber's cell walls will give rise to swelling or shrinkage according to local environmental conditions and this absorption or loss of moisture can result in swelling or shrinkage of timber by as much as 1% across the grain for each 4% variation in moisture content. These variations in moisture content, temperature and environmental conditions can in certain applications cause 'Hygrothermal Bow' in any solid timber core doorblank. Hygrothermal bow can develop when the moisture content and temperature vary from the internal face of the door-set through to the external face. For example, the internal face of a door-set installed in a property with high temperatures and a nearby heat source may contract and shrink whilst the external face of the same door-set which may be subjected to higher moisture and colder and/or inclement weather may expand or swell.
This influence and the effect of the differences between internal and external environmental conditions can lead to differential movement, the result being Hygrothermal bow in doors or doorblanks and swelling in casement windows.

The extent and parameters of Hygrothermal Bow will depend on the differences in the internal and external environmental conditions, the elevation, direction and exposure of the external door set and how the door has been stored or handled and what decorative and protective finishing system has been applied.
Evidence of Hygrothermal Bow can appear in any door leaf and is not restricted to any one particular product or brand. Hygrothermal bow is usually at its greatest or more likely to occur when new door sets have been installed in the autumn or winter months when the differences between internal and external conditions, moisture contents and temperatures are at their greatest. Please note that doors which show signs of Hygrothermal bow during these winter/wet months commonly 'equalize' and return to their original state when the milder, warmer weather returns and when ambient temperatures and internal and external conditions are similar. Hygrothermal Bow is usually greatest during the first winter/wet season followed by a period of equalization during the first summer season, any evidence of Hygrothermal Bow during the second winter/wet season is minimal.

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We trust this provides some background into why any timber joinery product may be subject to movement when subject to differing temperature and/or moisture from face to face or at different times of the year, with most movement being experienced within the first 9 to 12 months as the timber product stabilises, seasons and conditions to its environment. An important point to remember is that most of these joinery products 'equalise' and return to their original form as the conditions between the interior and exterior draw closer in the spring/summer months and the product 'seasons'.

Summary

1. Check suitability of blanks for the required project before purchasing.
2. Endorse any damage on delivery tickets.
3. Store in a dry, ventilated facility on the supplied pallet/bearers, undo bands and condition to your workshop for several days before work commences.
4. Handle with care to avoid damage and always store all blanks flat on at least 4 equal size bearers on a flat surface.
5. Further produce blanks in accordance with test evidence (fire/mechanical/acoustic etc.) and in accordance with our recommendations for external/internal use. Timber blanks must be conditioned to site and protected with the full finishing system prior or immediately after fitting.
6. Always calibrate blanks that are to be faced with any material.
7. Hygrothermal bow affects all timber products and must be taken into account at the planning stage. Ideally a door with a vapour barrier to block the movement of moisture through the blank should be specified, however, if this is not possible then always specify a blank with a high density, multi-layer core to minimise movement.

Contact your nearest Falcon Panel Products Depot

For standard, decorative or specialist panel products plus a reliable, quick turnaround service.

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