



LIBERTY21[®]

uPVC Doors + Windows

A Complete Life

Made by
**EXPERTISE &
EXCELLENCE**

uPVC Door & Window Systems

ENCRAFT EXPERTISE



The MOST UP TO DATE solution for your fenestration needs

Genesis

With its inception in 1961, the DC Jain group stands tall with a variety of brands that are supplying to several MNCs. In terms of the whitegoods division we supply to LG, Panasonic, Voltas, Godrej, Electrolux and several others. In terms of the automobile division, we supply to Maruti, Honda, Hyundai, Toyota and GM. Hence, our group has a tradition to manufacture international quality products which are tropicalised for Indian conditions. Furthermore, we have innovated and introduced various Thermoplastic engineering products in India during this time span. In addition, the DC Jain group is also the largest manufacturer of a wide range of custom-made extruded specialty profiles for various sectors.



LIBERTY21®
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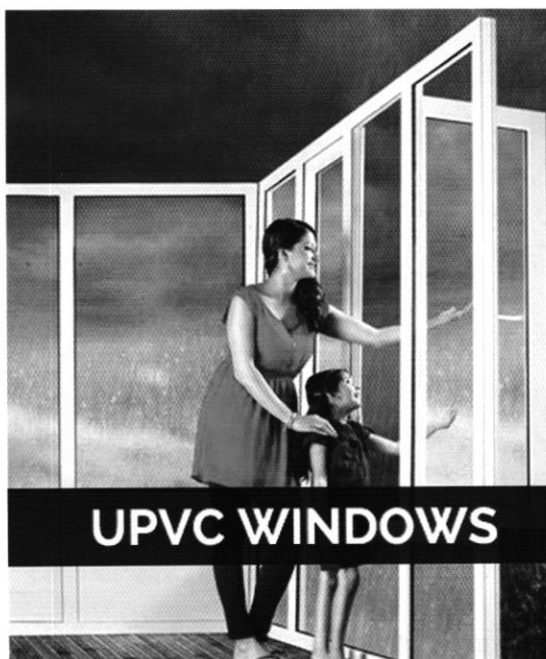
Ingenuity

Liberty21 Ventures Private Limited are manufacturers of high-quality uPVC Door and Window systems and is founded by Sri Sandeep Jain. He is a strong believer of our Honorable Prime Minister Sri Narendra Modi's "Housing for all" mission and believes that quality is not a choice, it's a responsibility. His global way of thinking has enabled the organization to have the widest range in the Indian uPVC industry making it a one stop shop with a solution to almost everything. Some of the key products offered include the Twin sash Windows, Fold and Slide Doors, Lift and Slide Doors, Tilt and Turn Windows, and several others. Furthermore, his technical expertise has facilitated the organization to introduce a high-quality project series under the brand name "Green Windor".

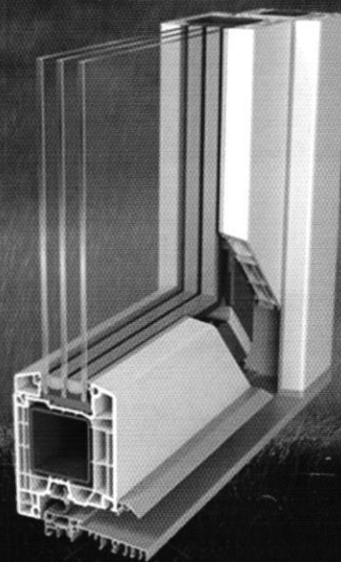
With a moto for excellence and perfection, we are determined to revolutionize the uPVC industry by offering internationally recognized products with localized features to ensure that the Indian population can embrace it.

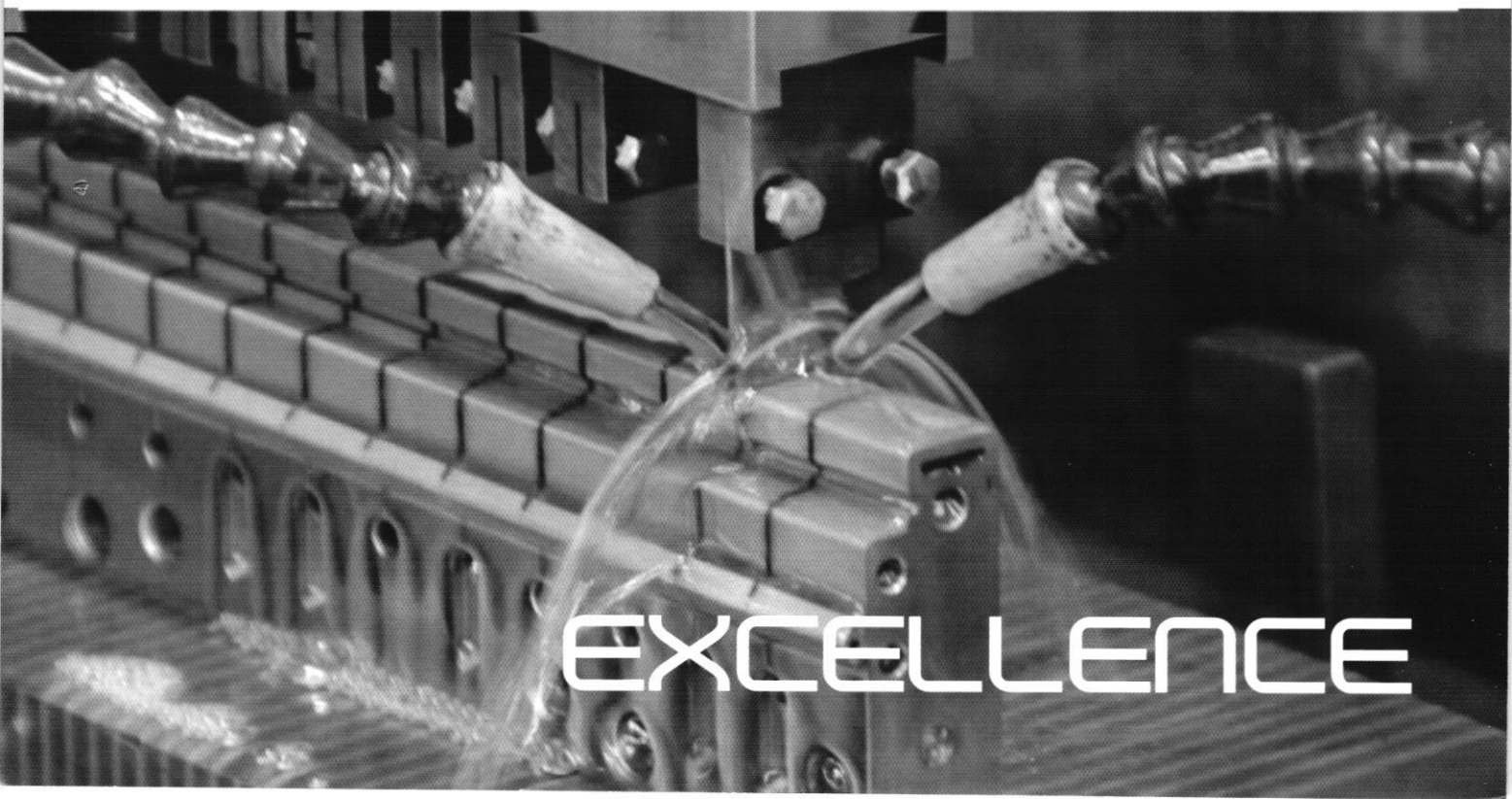
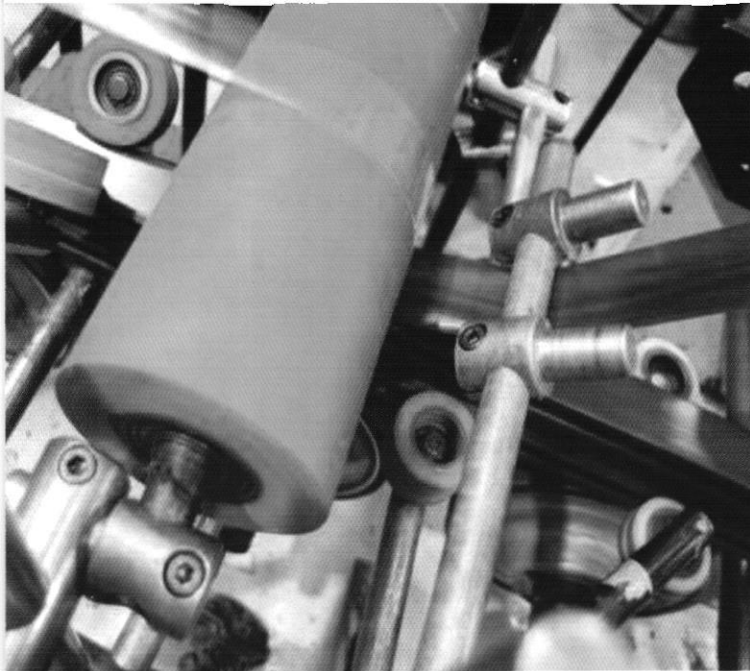
Behind the scenes

Liberty21 Doors and Window systems are engineered with precision and are masterpieces of art using the Encraft profile. Encraft is under the leadership of Robert Hoellrigl, an Austrian engineer with more than 40 years of experience in uPVC tooling and extrusion. All products conform to British and European National standards and are made of the most exclusive raw materials, which enables Liberty21 to deliver window systems that are free from fading, de-colorization, warpage and cracking for a very long period.



UPVC WINDOWS



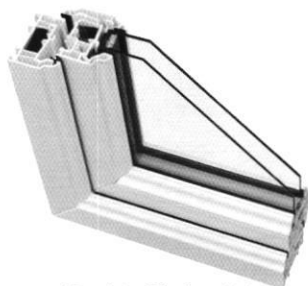




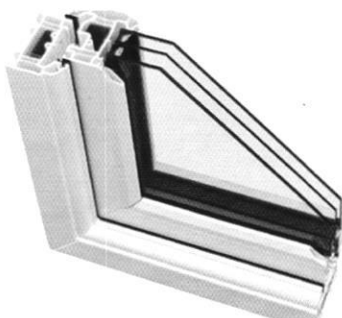
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Long Life

- 100% Lead (Pb) Free with ROHS stamping (Restriction of Hazardous Substances).
- Approved by IGBC (Indian Green Building Council).
- Tropicalised for Indian conditions.
- Glass sizes varying from 4mm to 36mm.
- Double glazing, Triple glazing and security glass options, leading to optimum levels of sound proofing, thermal and energy efficiency.
- In terms of cost, strength, beauty, precision, and ecology it can be inferred that Liberty21 window systems are a superior substitute for conventional wooden and aluminum frames.
- Does not allow Heat, Cold, Rain Water, Sound and Dust to enter your home.



(Double Glazing Unit)



(Triple Glazing Unit)





- 10 YEARS WARRANTY
- 100% LEAD FREE
- WEATHER RESISTANT
- STRONG AND SECURE
- SOUND PROOF
- WITHSTAND HIGH WIND PRESSURE
- CUTS ELECTRICITY BILLS
- ZERO MAINTENANCE
- UV RESISTANT
- FIRE RETARDANT
- SENSIBLY GREEN



GERMAN TECHNOLOGY uPVC DOORS & WINDOWS SYSTEM



GREEN WINDOR

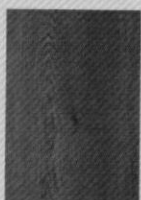
uPVC DOOR & WINDOW SYSTEM



NATURAL WOOD FINISHES



DARK OAK



GOLDEN OAK



WALNUT



TOP HUNG WINDOW



SLIDING WINDOW



SLIDING WINDOW WITH MESH



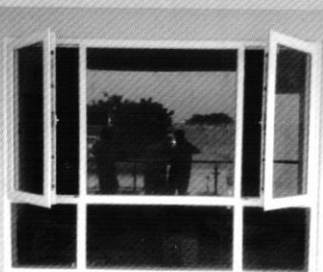
SLIDING WINDOW WITH TINTED GLASS



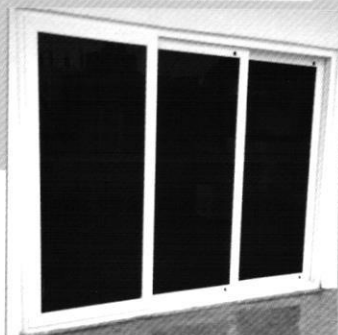
SLIDING WINDOW WITH MESH & GRILL



CASEMENT WINDOW



CASEMENT WINDOW



SLIDING DOOR



CASEMENT DOOR



CASEMENT DOOR

LIBERTY21[®]

uPVC Doors + Windows

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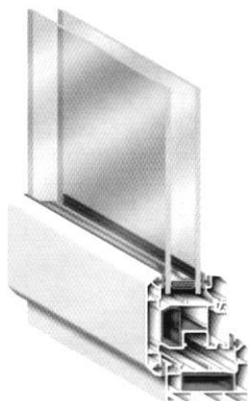
Ph : +91-40-27811032 / 27814347 / 27814365

Factory: Nacharam Industrial Area, Nacharam, Hyderabad - 500076.

E-mail : sales@liberty21.in Website : www.liberty21.in

LIBERTY21 VENTURES PVT. LTD.[™]

Regd. Office & Show Room : 1st Floor, Plot No.19, Above Heritage Fresh, Sanjeeva Co-operative Housing Society Ltd., Akbar Road, Diamond Point, Sikh Village, Secunderabad - 500 009, Telangana, India.



Benefits :



Weather Resistant

Our products provide the perfect barrier against elements such as Rotting, Spilling, Warping or Corroding due to the fact that they are engineered with precision and are installed in accordance with guidelines such as BS8213-4. The ingenious built-in drainage system ensures that any potential water ingress is efficiently eliminated. We take great care to ensure that the heaviest exposure to monsoons or floods leave your frames unaffected.



Energy Efficient

In today's date, we all know that air conditioning is vital. However, are we looking at how efficient it is? Statistics indicate that India consumes four times the energy consumed by similar structures in developed countries, which may be due to energy loss due to air leakage. It can be inferred that in any building, windows are huge 'energy holes' accounting for maximum cooling and heating losses. Solution:

Energy Savings for a Room with a 25 m² glazed unit

Aluminium Window		LIBERTY21 PRESTIGE DESIGN
U-Value of a single glazed window		U-Value of a double glazed window
Glass		1.10 W/(m ² K)
Frame		1.70 W/(m ² K)
total window	5.15 W/(m ² K)	1.41 W/(m ² K)
Savings on cooling energy:		2590 kWh/(m ² a)
Savings on cooling energy:		upto 27%
Costs for 1 kWh:		₹ 7
Savings per year:		₹ 18,900

Calculated with figures from Delhi, India



Sound Insulation

Liberty21 utilizes a multi chambered profile design of Encraft with double seal technology in order to ensure optimum sound proofing. Let us look at some figures :

SOUND INSULATION

Sound insulation class	Traffic volume	Building distance to middle of the street	Recommended sound insulation value* of the window	Reachable with all LIBERTY21 systems
1	Street 1500 vehicles/day	30 - 12 mtrs	28 - 29 dB	✓
2	Road 1500 vehicles/day	12 - 5 mtrs	30 - 34 dB	✓
3	Highway 30,000 vehicles/day	150 - 80 mtrs	35 - 39 dB	✓
4	Highway 30,000 vehicles/day	80 - 30 mtrs	40 - 54 dB	✓

Less noise and more comfortable feeling



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UV Resistant

Liberty21 aspires to protect you from high UV index. This can be achieved as our entire process from raw material selection to advanced extruding to further processing is formulated to obtain the highest quality of profiles that are capable to resist UV radiations, which are generally high in India



Wind Load

Liberty21 ensures that your products can withstand storms with wind speeds of over 245km/hr or 3000 pascals, which has been appreciated in earthquake proof tower blocks exceeding 10 story's or more.



Strong & Secure

Liberty21 engineering enables secure fitting of hinges, locking devices and handles in order to ensure safety and peace of mind. Liberty21 systems are **naturally flame retardant** and decrease the fire load of a building, which may be due to the fact that they are non-combusting along with being self-extinguishing, which means it will not cause, support or inflame a fire

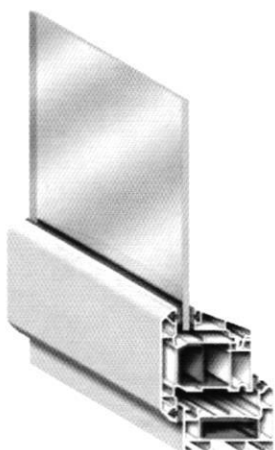
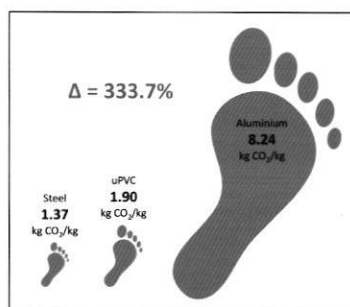


Sensibly Green

Liberty21 Doors and Windows are a viable and superior option to wood and aluminium. Positive insulation reduces the carbon footprint of the building. It is 100% recyclable. In addition, they help in increasing environmental sustainability and are free from health and environmental hazards.

Carbon Foot Print

Aluminium profiles versus uPVC profiles





Dark Oak

Steel Grey

Golden Oak

Mahogany

Walnut

Rustic Oak

A treat to behold

Liberty21 Door and Window systems come in a variety of wood finishes that suit a range of interiors and exteriors. All our laminated profiles use a **German PVDF coated film**.

Some of the colors include : Dark Oak, Golden Oak, Walnut, Steel Grey, Mahogany, Rustic Oak.



LIBERTY21 Casement Door & Window Features

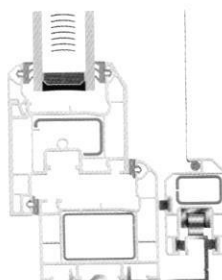
Exclusively designed to add charm and character to your home, these doors keep your home warm and quiet. Not only that, you will find that our doors are virtually maintenance free and help in keeping you extra safe by providing both a basic and an extra high security standard, with security features such as multipoint locking, extremely solid hinges and toughened/laminated safety glasses.

Designed to provide optimum flexibility with a system based on a 42mm or 62mm profile depth. The suite allows for the production of top hung and side hung casement doors and windows to accept a full range of hardware in-line with the latest European standards along with meeting the latest product testing criteria.

- Contemporary modern soft line profile appearance.
- Design compatibility with EN sliding range.
- 10mm sash overlap for enhanced performance.
- Internal glazing options from 4 mm single to 36mm triple.
- Latest state of the art, grey concealed glazing and weather seals.
- Identically sized and interchangeable casement sashes.
- Choice of single or multi-point locking devices.
- Secure hardware fitting into steel reinforcements as standard.

Liberty21 Casement Window with Fly-Screen

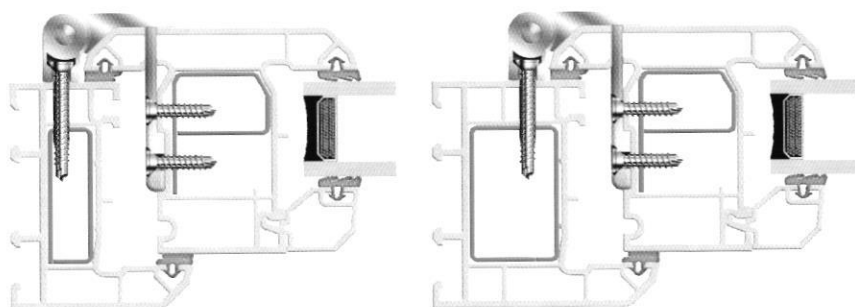
1st time in the world
integrated sliding external
Fly Screen option for
Casement Window



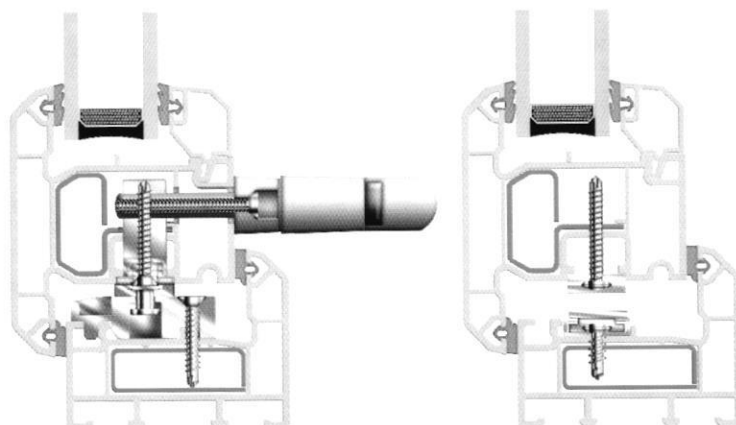
- Easy maintenance.



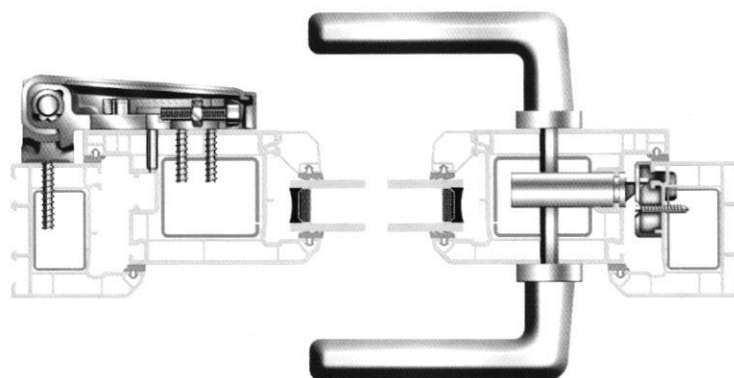
STRONG & SECURE CASEMENT SYSTEMS (42mm & 62mm)



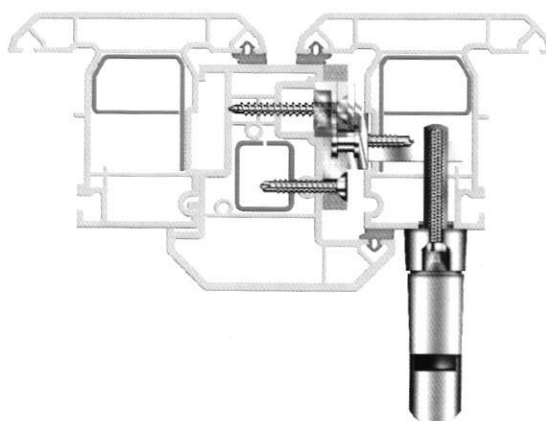
Casement Door



Casement Window



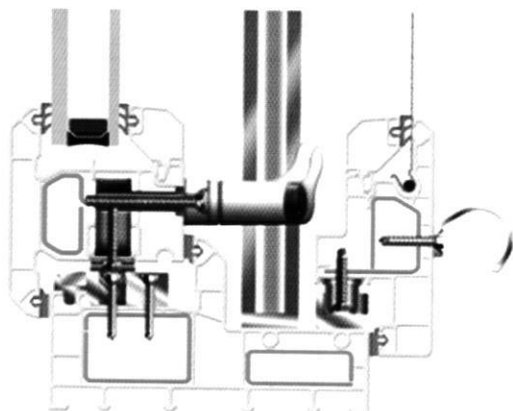
Casement Window with Butt Hinges



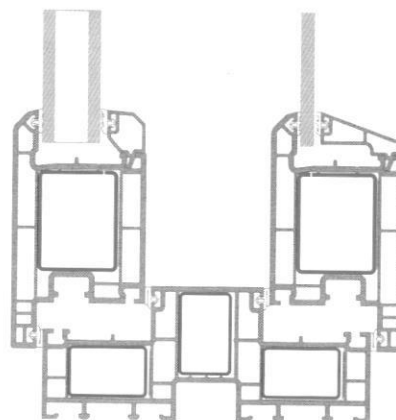
French Window



Liberty21 Twinsash Series



(112mm)



(152mm)

Designed to provide ultimate flexibility by combining the conventional casement window with conventional inward opening fly screen option with a provision for a security grill or blinds of upto 18mm thickness for security or privacy. The Liberty21 Twinsash series allows for the production of top hung and side hung casements that open in and out, allows to accept a full range of hardware in-line with latest European standards.

112mm TwinSash window

- Contemporary modern soft line profile appearance
- Design compatibility with EN casement and sliding range
- 10 mm sash overlap for enhanced performance
- Integrated solution for security grill upto **18mm thickness**
- Latest state of the art, grey concealed glazing and weather seals made of FPVC
- Identically sized and interchangeable casement sashes
- Choice of single or multi-point locking devices
- Secure hardware fitting into steel reinforcements as standard



152mm TwinSash door

- Opening IN and OUT
- Option1 - glass/mesh
Option2 - mesh/glass
Option3 - glass/glass
- Threshold less or low threshold
- Low U-value rating; high dB sound reduction
- 152 mm frame depth
- Maximum single door size 4' X 8'
- Concealed (80 kg) or face mounted (100 kg) hinges
- 4 to 36 mm glazing



Liberty21 Vertical Sliding Window

These windows are designed to provide you optimum flexibility, which is available as part of our premium range as they are engineered with attention to detail using high quality elements from various parts of the world.

- Ideal windows for narrow and tall apertures as it has a sash split of 50/50
- Optional fixed fly screen
- There is a fixed light on top and the bottom sash is sliding
- Maximum size of 4'x6'
- Maximum sash weight of 13.5kgs
- Sliding Sash can stop at any position.



Liberty21 Parallel Window

These windows are designed to provide you maximum ventilation and child safety, which is available as part of our premium range as they are engineered with attention to detail using high quality elements from various parts of the world.

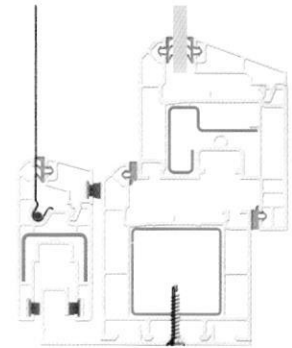
- Ideal for staircases, landings, offices, schools and several other locations
- These windows can be operated with two handles and also have perimeter locking ensuring higher levels of safety
- Available in white and a wide range of wood finishes
- Maximum size of 4'x8'



Liberty21 Tilt and Turn Window

Designed to provide a European standard window option, which is available as part of the EN62 range and was designed to give the discerning end user a state of the art inward opening fenestration solution. In addition, large opening sizes can also be achieved and suits any building type in the Indian construction industry

- Contemporary modern soft line profile appearance
- Design compatibility with EN casement, box window and sliding range
- 9 mm sash overlap for enhanced performance
- Internal glazing options from 4 mm single to 36 mm triple
- Latest state of the art, grey concealed glazing and weather seals made of FPVC
- Concealed heavy duty hinges to enable continuous weather seals
- Multi point perimeter locking device as standard, build in hardware location facility
- External sliding fly screen system
- Secure hardware fitting into steel reinforcements as standard



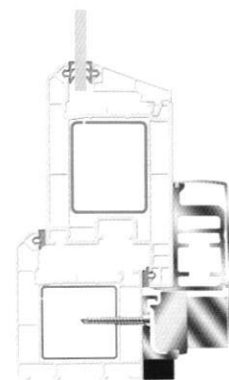
(62mm)



Liberty21 Tilt and Slide Doors

Designed to offer the ultimate protection for your home. The European concept of tilting and sliding allows the provision of a dual compression seal and provides the maximum ventilation and glass area. The dual compression seal gives excellent insulation from sound and dust. They keep your living space secure and give you privacy.

- Contemporary modern soft line profile appearance
- Design compatibility with EN casement and sliding range
- 9 mm sash overlap for enhanced performance
- Internal glazing options from 4 mm single to 36 mm triple
- Latest state of the art, grey concealed glazing and weather seals made of FPVC
- Utilization of dedicated large outer frame
- Multi-point perimeter locking devices as standard, providing high security
- Heavy duty tandem rollers for smooth operation
- Secure hardware fitting into steel reinforcements as standard



(62mm)

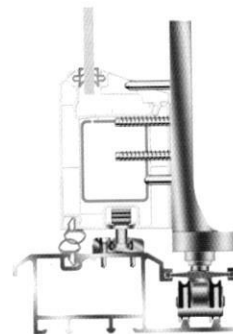


Liberty21 Fold and Slide Doors & Windows

These doors offer you contemporary style, effective design and excellent reliability by providing superior operating performance and smooth integration into architectural styles and spaces. These doors are engineered using high quality elements with superior hinge and locking systems that are reliable and secure.

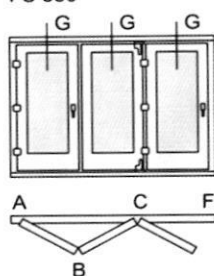
Pick from three to six operating panels with various configurations that are available in a range of colors such as ivory white in addition to the wood finishes and laminates.

The windows have an option of opening in and out. You also have the option of 2 to 6 panes with a low aluminium threshold. These windows offer you 100% opening and have a maximum height of 8'.

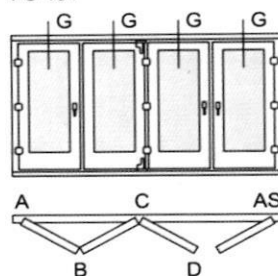


FOLD & SLIDE PATIO DOOR STYLES

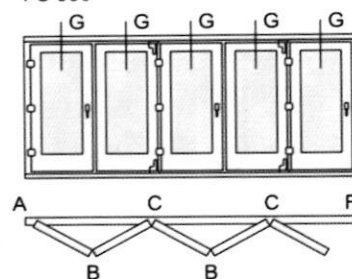
FS 330



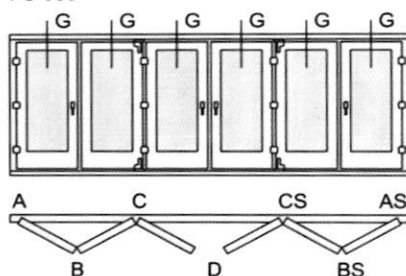
FS 431



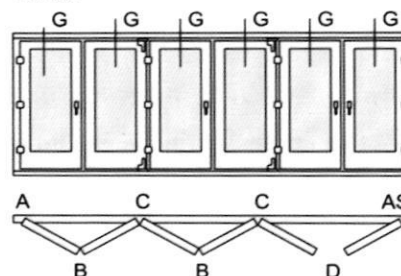
FS 550



FS 633

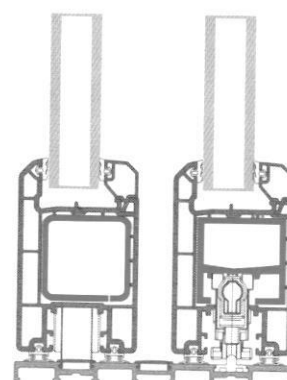


FS 651

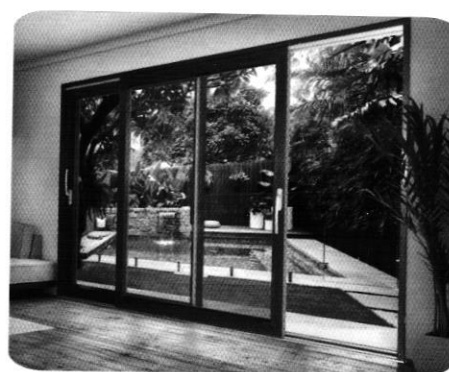


Liberty21 Lift and Slide

- Sliding in-line
- **Low threshold**
- Internal panel sliding, external add-on mesh
- ~50% clear opening with external flush handle
- Very smooth operation
- Benefit : large glass areas with slim frame sight line
- 142 mm frame depth
- Max. frame height 10'
- Max. frame width 19'1"
- Max. sash size 9'8" x 10'
- Max. sash weight 300 kg
- 4 to 36 mm glazing



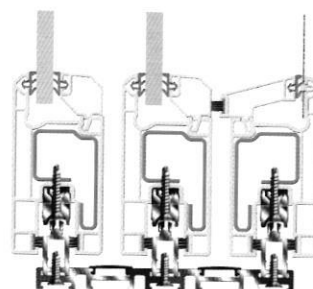
(142mm)



Liberty21 Sliding Doors

Designed to provide you optimum flexibility ranging from single sliding to multiple sliding openers, clip on or integrated sections for fly screen and a range of section sizes covering various openings. You also have the option of a low threshold, which makes the transition from outside to inside easier without the need to step over the door frame.

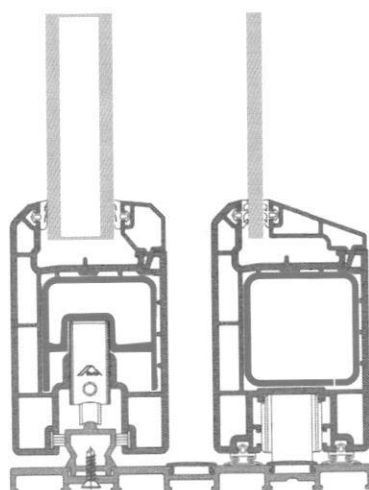
- One, two and three track sliding, Patio door and fly screen options
- Multi-chamber profile design, frame depth from 62mm to 162mm
- Design compatibility with EN 62 casements
- 10 mm sash overlap for enhanced performance
- Internal glazing options from 4 mm single to 22 mm double
- Latest state of the art, grey concealed glazing seals made of FPVC
- Choice of single or multi-point locking devices
- Hardware components fastened into steel or 3 walls or uPVC
- Durable Aluminum low threshold or aluminium track and anti-lift devices as standard
- High security Aluminum Patio door interlock



(112mm)



NEW
1st Time
in India



(142mm)

- Sliding in-line
- **Low threshold**
- External panel sliding, internal add-on mesh
- Benefit: large glass areas with slim frame sightline
- Very smooth operation
- 142 mm frame depth
- **Max. frame height 10'**
- Max. frame width 19'1"
- **Max. sash size 9'8" x 10'**
- Max. sash weight 180 kg
- 4 to 36 mm glazing

Liberty21 Large Patio door



Liberty21 Balcony Door

- Opening IN / OUT
- Slim sightline door with **low threshold**
- 62 mm frame depth
- Maximum single door size 4' x 8'
- Concealed (80 kg) or face mounted (100 kg) hinges
- Locking device operated by internal handle
- External locking with pull handle + sash catch
- 4 to 36 mm glazing



(62mm)





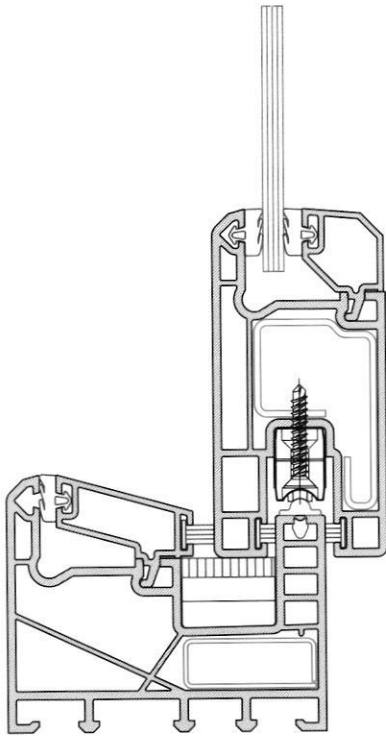
LIBERTY21®
uPVC Doors + Windows
A Complete Life

Liberty21 Sliding Range

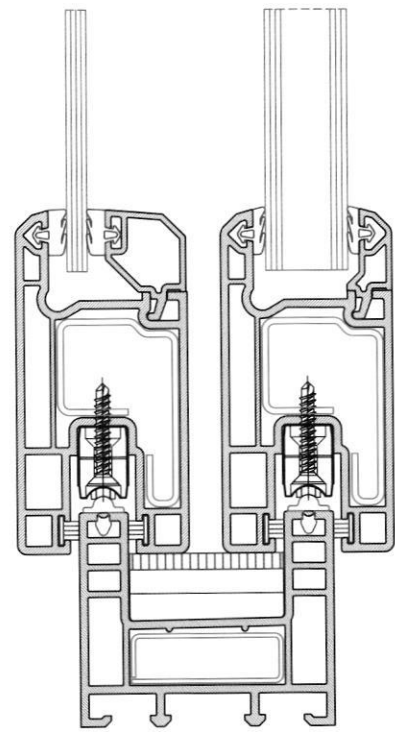
Liberty21 aspires to provide the maximum flexibility based on a range of sections. It offers full flexibility that ranges from single sliding to multiple sliding openers, clip on or integrated sections for fly screen and a range of section sizes covering various openings. The range makes it a popular option for a window replacement programme or building type in the Indian construction industry.

1. One, two, two & half, three and four track sliding, Patio door and fly screen options.
2. Multi-chamber profile design, frame depth from 62mm to 162 mm.
3. Design compatibility with LIBERTY21 casements.
4. 10 mm sash overlap for enhanced performance.
5. Internal glazing options from 4 mm single to 22 mm double.
6. Latest state of the art, grey concealed glazing seals.
7. Choice of single or multi-point locking devices.
8. Hardware components fastened into steel or 3 walls or uPVC.
9. Durable Aluminum track and anti-lift devices as standard.
10. High security Aluminum Patio door interlock.

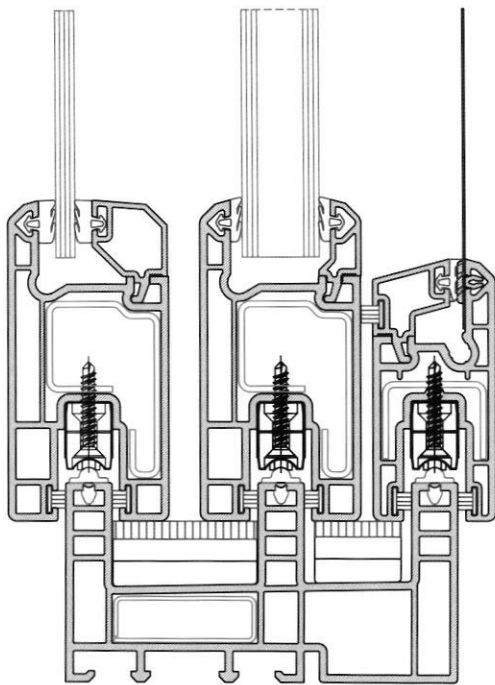
INNOVATIVE SLIDING SYSTEMS



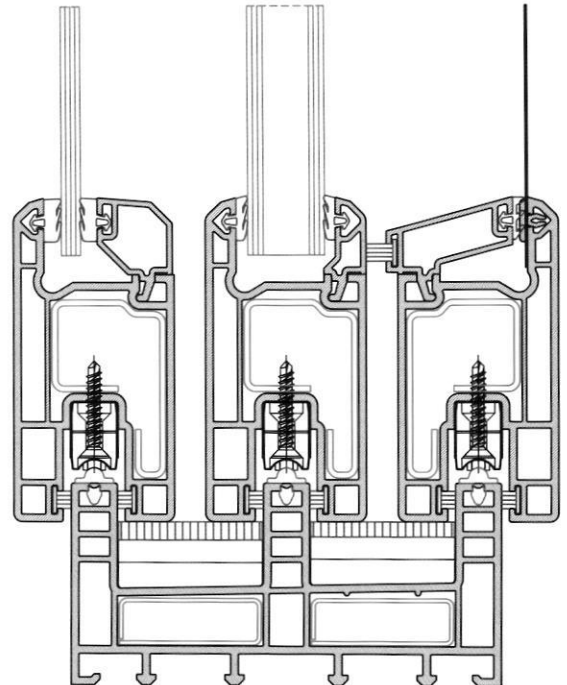
FIXED WITH SINGLE TRACK - "Fix en Slide"
(77 mm)



2 TRACK
(62 mm)



2½ TRACK
(102 mm)

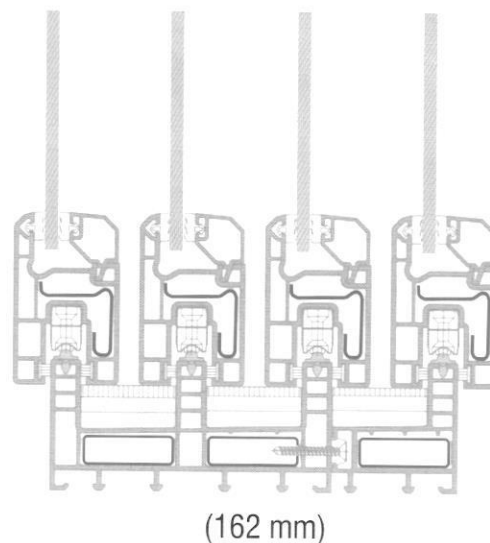


3 TRACK
(112 mm)

Liberty21 4 Track Sliding Window

4-track sliding window with add-on 4-track extension

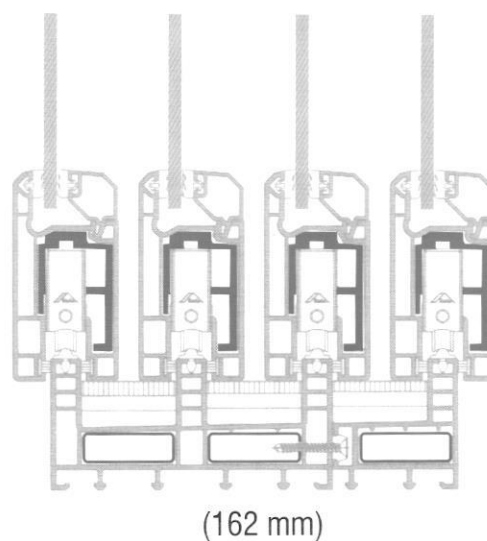
- Sliding in-line
- Option: 4 glazed sashes with ~75% clear opening
- Aluminium track
- Alu interlock to increase meeting rail rigidity
- 162 mm frame depth
- Max. frame height 6'
- Max. frame width 10' (Sizes for 4 pane @ 2500 Pa)
- Max. sash weight 50 kg
- 4 to 22 mm glazing



Liberty21 4 Track Patio Door

The LIBERTY21 4-track Patio door with add-on 4-track extension

- Sliding in-line
- Option: 4 glazed sashes with ~75% clear opening
- Aluminium track
- Alu interlock to increase meeting rail rigidity
- 162 mm frame depth
- Max. frame height 8'4"
- Max. frame width 12' (Sizes for 4 pane @ 2500 Pa)
- Max. sash weight 100 kg
- 4 to 22 mm glazing



GREEN WINDOR

uPVC DOOR & WINDOW SYSTEM

NATURAL WOOD FINISHES



DARK OAK



GOLDEN OAK



WALNUT



SLIDING WINDOW WITH MESH



SLIDING WINDOW WITH TINTED GLASS



SLIDING WINDOW WITH MESH & GRILL



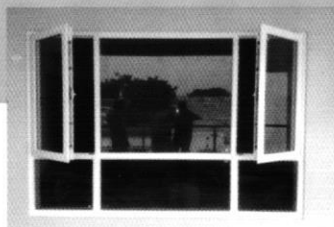
TOP HUNG WINDOW



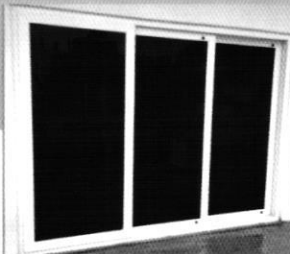
SLIDING WINDOW



CASEMENT WINDOW



CASEMENT WINDOW



SLIDING DOOR



CASEMENT DOOR



- 10 Years Warranty
- 100% Lead Free
- Weather Resistant
- Strong and Secure
- Sound Proof

- Cuts Electricity Bills
- Zero Maintenance
- UV Resistant
- Fire Retardant
- Sensibly Green
- Withstand High Wind Pressure

Liberty21 Bugzee

Add on Fly Screen Mesh



"Bugzee"
Add on fly screen mesh



If you are looking for a solution for mosquitoes and insects with your Doors and Windows open, Bugzee is here as they ensure a clean and peaceful environment for you whilst maintaining ventilation and sunlight levels. Some of the types of mesh are:

Pulldown Mesh:

- Hydraulic vertical movement
- German spring-loaded mechanism
- Fibre glass mesh from USA
- 3.3'x7'



Pleated Mesh:

- Horizontal movement
- 20'x10'
- Single or double shutter



Barrier Free Mesh:

- Ideal for internal use
- Less than 3mm thick bottom strip



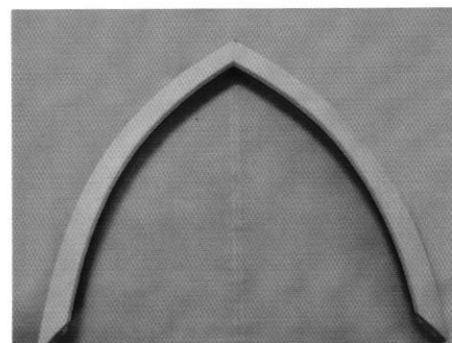
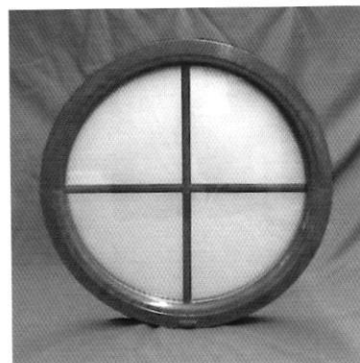
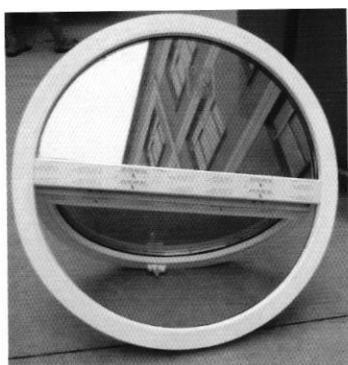
Partition system:

- Has a honeycomb fabric



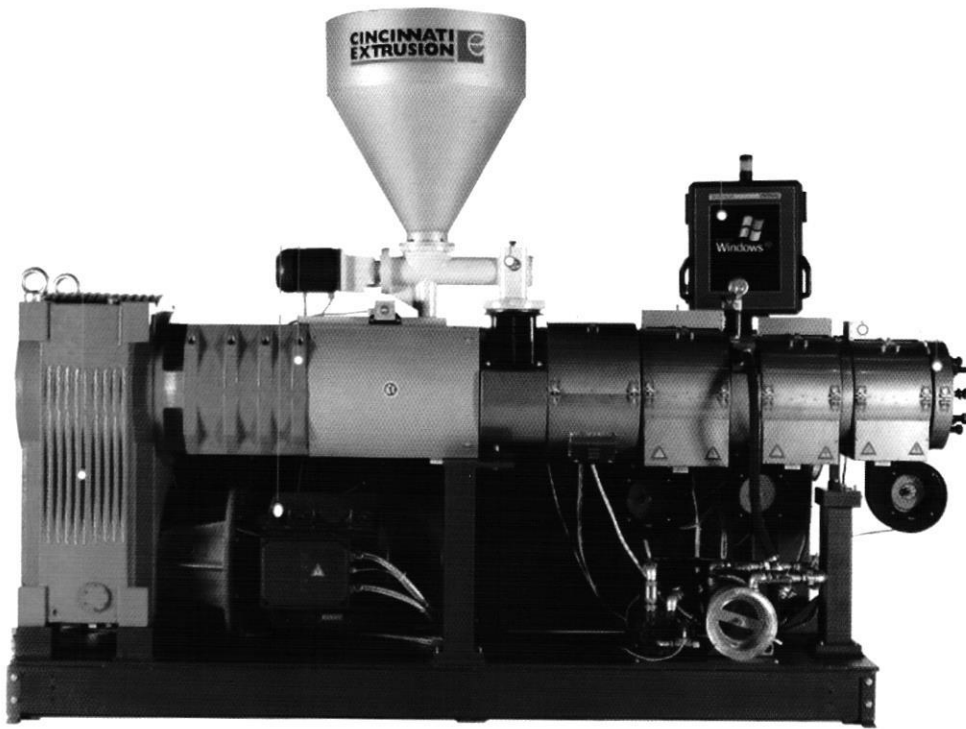
Interestingly, these systems come in a range of colors such as white, chocolate brown, and a variety of teak wood finishes.

Liberty21 Special Windows



Technology + Craftsmanship

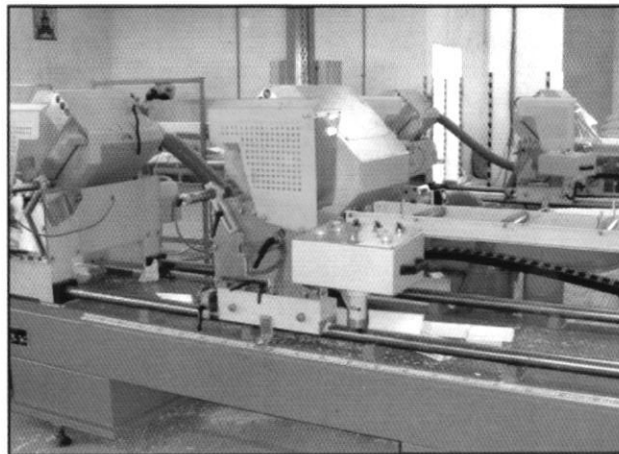
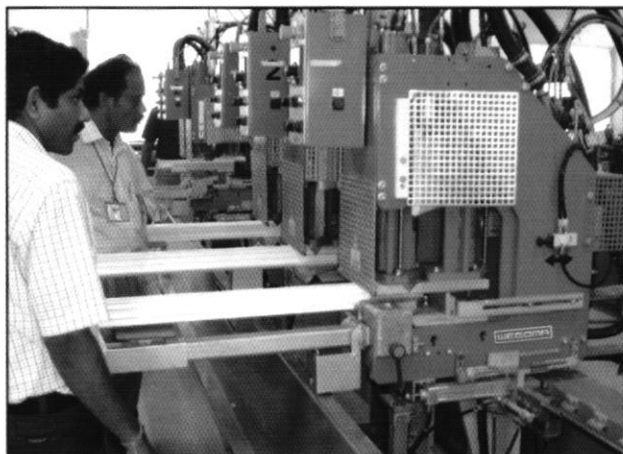
Twin Head Extruder



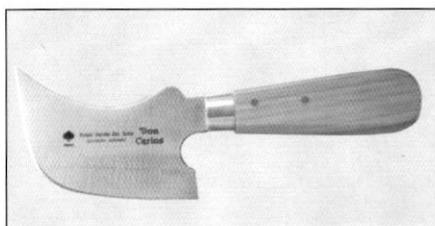
We at Liberty21 would like to believe that innovation is vital, which is why state of the art is the only phrase that can be used to describe the extrusion unit. Be it the latest in 'Green technologies, meticulous attention to details in design templates, or stringent quality control, excellence is what defines your products at Liberty21.



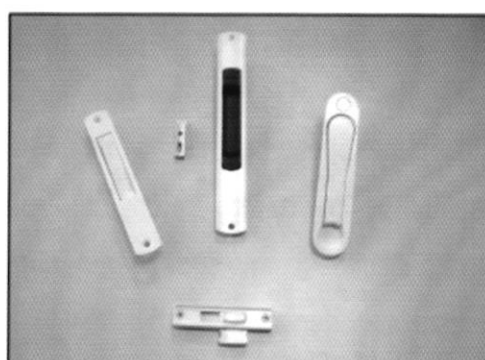
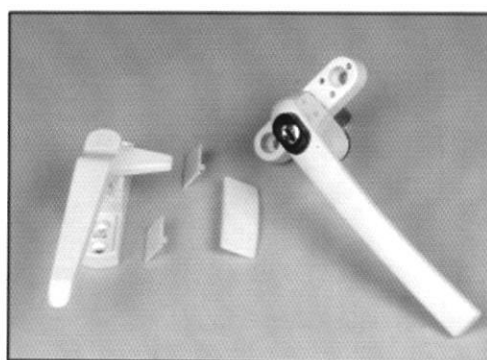
Extrusion line



Top Left and Right : Fabrication using German Machines.



High Quality Tools made in Germany & UK.



Top left : Powder coated handles with locks and cockspur handles. **Top right** : Flush locks
Bottom right : Chromium plated handles with locks. **Bottom left** : Standard friction stay

Our relationship

with you ...



Being in the plastic extrusion industry for decades now, we believe in establishing long term relations. A relationship based on trust and absolute confidence in the quality of our product.

Your journey towards "A Complete Life"

- ☛ Pick up that phone next to you and **call Liberty21.**
- ☛ Get your windows measured by our experts
- ☛ Have a discussion and choose from our wide range of Doors and Windows
- ☛ Visit our experience center to have a look the various designs and styles
- ☛ Get your quote
- ☛ You decide
- ☛ We make
- ☛ We deliver
- ☛ We install
- ☛ Your complete satisfaction is "A Complete Life"

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SGS		TESTING		DATE: 19042909	
Report No.: GR-GL-927010482		Report Order No.: 927010474			
JUL 16 2009		SAMPLE NOT OBTAIN BY LABORATORY			
		ANALYSIS REQUESTED BY CUSTOMER AS: PVC COMPOUND			
SAMPLE SUBMITTED AND IDENTIFIED BY: EN CRAFT		SAMPLE NO.: 165, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 9			

DATE : 19/04/2023

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Page 1 of 3

TEST CERTIFICATE

TEST REPORT NO. 001

Page 1 of 3

Test Value

1. Tensile Strength ASTM D 638 41.50

2. Elongation at break ASTM D 638 160.5

3. Tensile Modulus ASTM D 638 26.0

4. Stress at Break ASTM D 638 26.0

5. Elongation at Break ASTM D 638 160.5

6. Charpy Impact Strength (10 J) (ASTM D 256) 0.00

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