

Bhoruka Extrusions Pvt Ltd.

"Our vision is to be the extruder of choice for iconic projects by delivering products and services that reduce our customers' total cost of ownership. We do this through innovative technology and a commitment to sustainability, customer satisfaction, and operational excellence"

Established in 1979

100% subsidiary of \$8 Billion YKK AP Inc. Japan

Extrusion capacity of 1200 MT / Month (6"/ 8"/ 9" - extrusion press)

In-house Anodizing capacity of 250 MT / Month (Italtechno, Italy)

In-house Powder coating capacity of 350 MT / Month (Nordson, U.S.)

In-house Machining Facility with new CNC Machining Centres from FOM Industries, Italy

Approved PE-F/D-1036 and PE-SDF/D-2525 Applicator

Award winning SAP implementation (ECC 6.0)

Approved extruder of systems – Airclos, Alu-K, Asahi, Dorma, EFP, IWIN-S, Lixil, Reynaers, Schueco

Online self-updating E-catalogue (www.bhorukaecatalogue.com)

Online order tracking through SAP (Bhoruka 360 CRM portal) and Planning (E-Planner)

Branches: Bangalore, Chennai, Coimbatore, Delhi, Hyderabad, Mumbai, Mysore, Pune

Dedicated Enquiry teams - enquiries@bhorukaextrusions.com



YKK Group Structure



YKK GROUP YKK AP Inc. YKK CORPORATION **Fastening Architectural Products Machinery Products Engineering** Research & **Development**

The YKK Group consists of YKK Corporation, the parent company, which produces fastening products, and YKK AP, which produces architectural products. At the center, we have the Machinery & Engineering Department, which supports research and development.

We build our own machinery to produce zippers, windows, and doors. These three business groups are the basis for global management.

YKK CORPORATION

■Founded : January 1, 1934 ■Capital : US\$121Million

YKK AP Inc.

■Founded: July 22, 1957 ■Capital: US\$101Million ■Number of Employees: 17,100

[As of Mar 2023]

YKK GROUP

■Description of Business

Fastening Products, Architectural Products, Manufacturing and Sales of Fastening and Architectural Machinery

■Number of affiliated Companies

72 countries/regions worldwide.
Japan: 18 Overseas: 90

Total : 108 companies ■Number of Employees

Japan : 17,891 Overseas : 26,636

Total (Worldwide): 44,527 (As of March 2023)

■Sales (Consolidated Basis) (Fiscal Year 2022)

Fastening: US\$2,725 Million Architectural Products: US\$3,642 Million

Total Sales (Worldwide) : US\$6,396Million

(US\$=139.64Yen)



[CYCLE OF GOODNESS]



Typeface: Tenshiyo / Pen name: 「Rituzann」
(It is named after the Tateyama mountain range that I looked up to forever)



Founding president Tadao Yoshida

"No one prospers unless they render benefit to others"

"If we keep creating **new values by innovative ideas** and **inventions** through our business activity, we can expand our business. That brings **prosperity to our customers** and business partners, and as a result, we can **make a contribution to society"**

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About YKK AP















Offices and centers in Japan

201

Manufacturing bases in Japan

24

Employees in Japan

12,800

Global HQ countries/regions

11

Overseas manufacturing bases

8

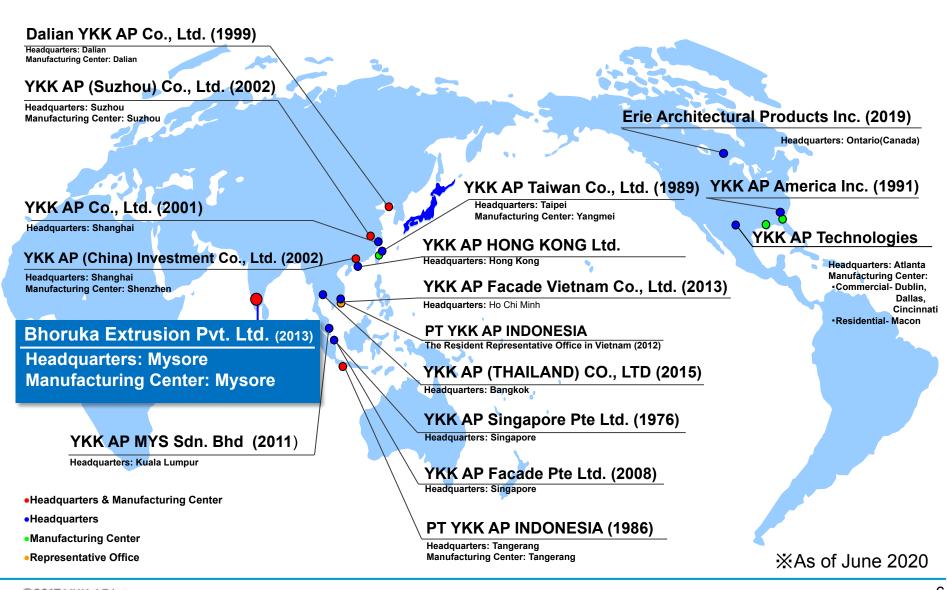
Employees overseas

4,300



Global Network (Architectural Products)

Advanced into Overseas Market since 1976 Building Local Business (10 Countries / Regions 15 Bases)



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Grand Concept

YKK AP presents operational excellence built up around the world combining research and development through detailed study of the climate and characteristics of each region, to conceptualize new ideas creating comfortable environment for the people residing.



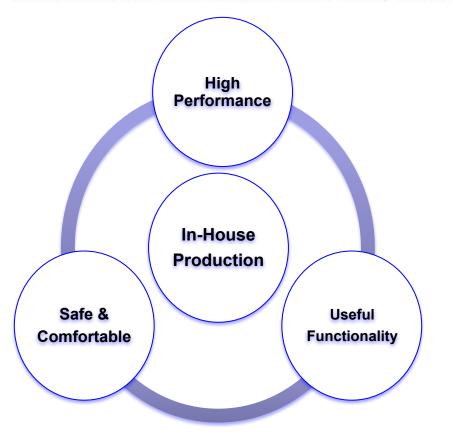


Product Characteristics



Quality with a Difference

Setting Standards of Residential Fenestration Quality in India

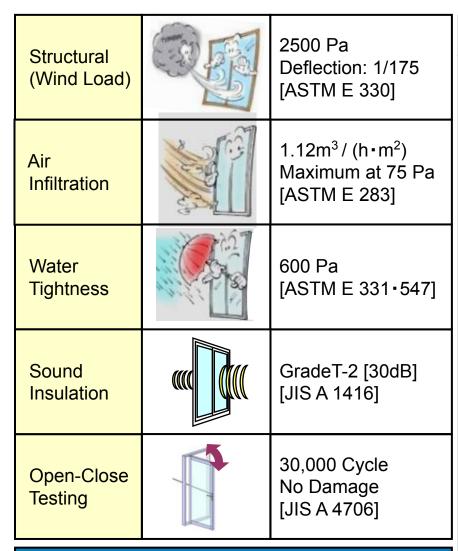


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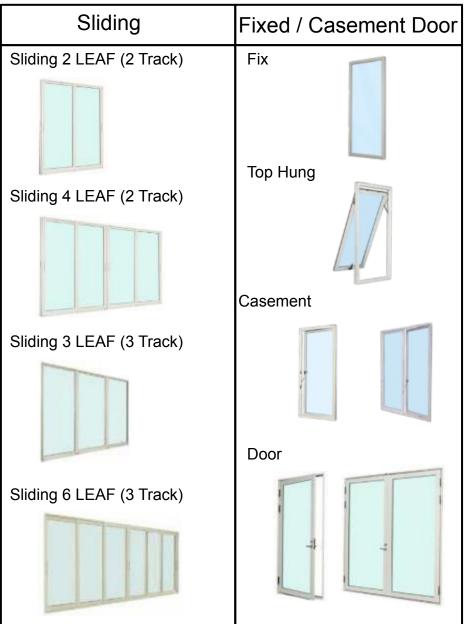
Win S Performance & Line Up

□ Performance



Tested System with Basic Performance Safety and operation measures are considered to create a comfortable living environment

□ Product Line Up



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Organization Chart



Mr. Rajat Agarwal Managing Director



Mr. Abhishek K Extrusion



Mr. Hamagishi Kodai Technical Director



Mr. Prashanth C Surface Coating



Mr. Kumagai Kaoru Executive Director



Mr. Mohan H C Quality



Mr. Prasanna Venkatesh Factory Manager



Mr. Praveen M H
Accounts and Finance



Ms. Suma S Planning



Mr. Pradeep Rajshekar HR



Plant & Equipment at BEPL

	TECHNICAL FACT SHEET				TOOL ROOM			
Billet Casting					Die types	Solid, Hollow, Semi-hollow		
Diffet Casting	Parameters	Press-1	Press-2	Press-3	Dia CCD	Solid – 254mm; Hollow-230mm		
	MAKE	Wean United	Year Chang	Cheng Hua	# of sections	>14,000		
D :		(USA)	(Taiwan)	(Taiwan)	Lead Time	Solid - 15 days; Hollow - 21 days		
Die Many fo atymin a	Strength of extrusion			2750	BHORUKA ANODISING			
Manufacturing	press (TONS)	1800	1100		Make	Italtecno, Italy		
					Microns	5 to 25		
	Diameter of billet	203 mm	152 mm	228mm &	Colors	Silver, Champagne, Bronze, Black		
Extrusion				203mm	Maximum	6400 mm		
	Diameter of container	210 mm	158 mm	236mm & 210mm	Length			
	Diameter of container				Finish	Matt, Brush		
	Diameter of main Cylinder - Inches	37	29.5	44.48		RUKA POWDER COATING		
Anodising						ent Chemetall, Germany		
	Diameter of small					ting Nordson , U.S.		
	Cylinder - Inches	9	7.087	9.09	Spray Syster	m Automatic		
	Maximum pressure of	210 DAD	210 D A D	220 DAD	Thickness Range	60 To 120 Microns		
Powder Coating	Press (BAR)	210 BAR	210 BAR	230 BAR	Colors	All RAL Shades		
				6063, 6060, 6101, 6005, 6351, 6061,	Туре	Metallic / Non Metallic		
	Mark of Billets				Gloss	High Glossy, Semi Glossy, Matt		
		6063, 6005,	6105, 6061		Finish	Plain, Texture, Structure		
Machining	(6063-6060)			6082	Max Length	7500 mm		
Macilling	Conveyor Length	36Mtrs. 36Mtrs.		50.90 Mts	MACHINING			
	Conveyor Length	3011113.	3014113.	30.30 1116	Machining	FMC 340, Blitz Alva-550 Double		
	Type of Billet Oven	Hot log shear	Induction		Centres	Head Cutting		
	(gas, diesel, induction)			Hot log shear	Make	FOM Industries, Italy		
Components						Milling, Drilling, Boring,		
	Type of Puller	Track type	Track type	Track type	Operations	Countersinking, Angle Cutting, Turning & Tapping		



Chemical & Mechanical Composition of the Alloy 6xxx Series

Chemical Composition as Per EN 573-3:2007									
Alloy	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Aluminium Min
6063	0.20-0.60	0.35	0.1	0.1	0.45-0.90	0.1	0.1	0.1	Remainder
6060	0.30-0.60	0.10-0.30	0.1	0.1	0.35-0.60	0.05	0.15	0.1	Remainder
6061	0.4-0.8	0.7	0.15-0.4	0.15	0.8-1.2	0.04-0.35	0.25	0.15	Remainder
6005	0.6-0.90	0.35	0.1	0.1	0.40-0.60	0.1	0.1	0.1	Remainder
6105	0.6-1.0	0.35	0.1	0.15	0.45-0.8	0.1	0.1	0.1	Remainder
6082	0.7-1.3	0.5	0.1	0.4-1.0	0.6-1.2	0.25	0.2	0.1	Remainder
6101	0.30-0.7	0.5	0.1	0.03	0.35-0.8	0.03	0.1	0	Remainder
6351	0.7-1.3	0.5	0.1	0.40-0.8	0.40-0.8	0	0.2	0.2	Remainder

Mechanical properties as per DIN 755-2/IS-1285

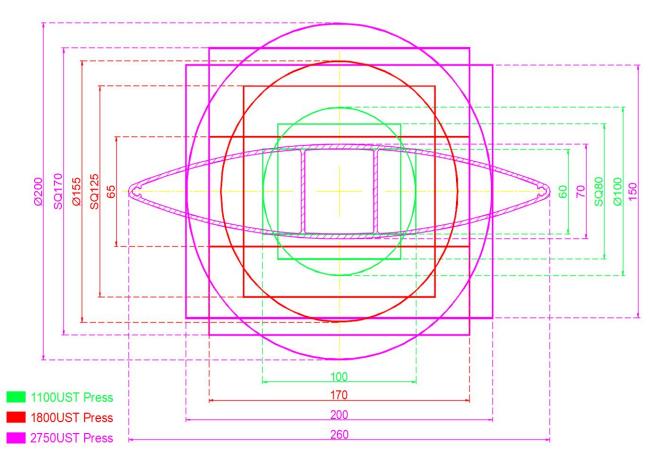
				· -
Alloy/T6	Tensile Strength, min MPa	Proof Stress min MPa	Elongation A50mm <i>min</i> in %	
6060	185	150	7	ľ
6101	200	170	8	
6063	185	150	7	
6005	255	200	15	8
6105	260	240	8	t
6061	290	235	7	
6351	295	255	7	1
6082	295	255	7	

Tempers:

- •T4-Solution heat treated & naturally aged
- •T5-Cooled from hot working and artificially aged (at elevated temperature)
- •T6-Solution heat-treated & naturally aged.



Extrusion Range Guidelines



2.72

- Unique Identification mark in all new profile developments (since 2015)
- This Identification mark will be prominent throughout the profile length (utilizing only 0.3mm thickness)
- It will be located at only non-functional and unexposed/hidden area of the profile.
- ID mark will be non-functional/ un-exposed area)

8"Press-1 (1800UST)					
Square	125x125mm				
Rectangle	170x65mm				
Circle	Ø155mm				

9"Press-3 (2750UST)					
Square	170x170mm				
Rectangle	200x100mm				
Circle	Ø200mm				
Elliptical	260x70mm				

6"Press-2 (1100UST)						
Square	80x80mm					
Rectangle	100x60mm					
Circle	Ø100mm					





Extrusion



Die Tooling



Powder Coating



Billet Casting



Anodizing



ating • Components





- Percentage on complaints is at all-time low!
 Well below industry norms
- Rework percentage was very low and achieved the lowest plant rejection rate of 3.5 % last year
- Customer rejection is less than 0.27%

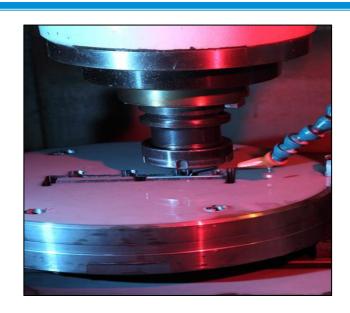
No QC teams are needed, every process has QC inbuilt

Mr. Mohan H C Quality control





>14,000 customizing choices



- With state of the art technology with latest machinery like CNC wire cutting, surface grinding etc, which helps improving die quality
- R&D is intrinsic to our process, we design exactly to your need
- We are consistently developing ~100 dies/month of which 75% are for new shapes





With our 3D-printing technology our customers can test the product for snap/slide fitment or gasket development prior to die manufacturing

- FFF printing technology with auto platform calibration.
- Print up a 60-micron resolution with a 0.25mm nozzle.



Servicing Industries Related to

Building and Construction

We are one of the **largest direct-sales suppliers** to **the building and construction sector** in India and offer various products ranging from Doors, Windows, Railings, Formwork, Shutters, Curtain Wall systems and more in a wide variety of shapes, sizes and finishes! Our value offerings can be broadly categorised as follows -

Catalogue

Our catalogue contains more than 10,000 sections that Bhoruka has developed by virtue of being in the industry for more than 40 years. It offer a wide variety of readily available designs from various industries and sectors for you to choose from

Made-to-order

Drawing from our vast experience, our Design and Engineering department excels at meeting specific customer requests as per the needs and demands of various projects and helps in turning your vision into reality

Systems

We have the unique distinction of being the only extruder in India associated with many globally reputed systems such as Airclos, AluK, Dorma, EFP, Schueco to name a few. We will be delighted to offer their range of products through authorised channels

E-Catalogue Online self-updating catalogue with unique set of features

- □ Get instant access to thousands of profiles listed by different categories/sub-categories
 □ View product images & description along with other details
 □ Download drawings in PDF format right on your computer
 □ Send us an enquiry with complete details directly from the software
 □ Search by 'section number'
 □ More than 50 designs automatically added every month right on your computer
- ☐ Choose from our on-line as well as off-line module for on-the-go work



Servicing Industries Related to

OEM

Since our inception, Bhoruka has been catering to the growing demand and utilization of aluminum in various sectors ranging from – Electronics, Transportation, Textiles, Renewable Energy, Defense, Aerospace etc. We also specialize in the development of custom-made profiles under our made-to-order offering. We have extensive experience in working with various industrial alloys such as 1060, 6063, 6005, 6082, 6061. Some of the key sectors served by us are –

Electrical & Electronics

One of the earliest uses of aluminum sections was in the Electrical & Electronics sector. Bhoruka has been supplying aluminium in this sector for over 30 years. Most of our sections are used for applications which require very good conduction, heat control, heat transfer etc. We manufacture a wide variety of sections using different alloys depending on the end-use of our customers

Transportation

We have got a wide range of sections which are used in the Transportation Sector. Some of our product range includes sections for Bus Body & Truck Body. Bhoruka also manufactures sections for carriers, footsteps and other light SUV requirements

Textile industry

We supply various sections for for the textile industry, which is an important part of the Indian economy. The quality & precision of these sections are of high importance & Bhoruka is committed in providing both the right quality & service to this sector

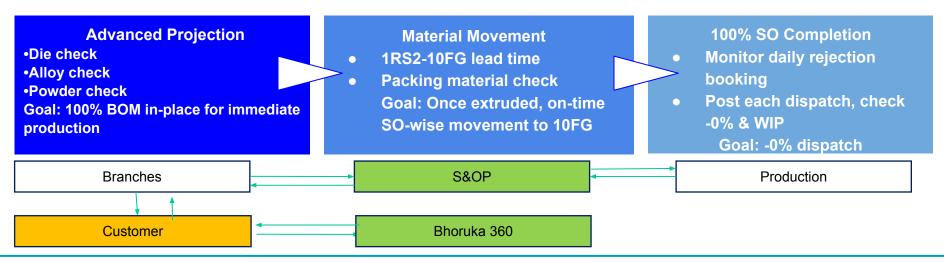
Renewable Energy

Bhoruka has been always committed to a safer and better environment. Keeping this in mind we have dedicated offerings for our solar panel and windmill customers. These sections are often supplied in natural anodizing which are all done at our own in-house facility.



Key Features of buying from Bhoruka

Factor	Bhoruka	Competitor	BEPL-Advantage
SO Release	Pieces	Kgs	Matches with FAB Cutting-list software
Weight Measurement	Drawing Mean Weight	Actual Weight	Matches with Tender weight, PO-Invoice consistency, ~3.5% savings on powder weight
Dispatch Tolerance	1-1000 pcs (-0%+5%)/ >1000 pcs (-0%+2%)	+/- 10% in Kgs	Reduced inventory and less total cost
Matching Section	@Aging and Invoice blocked	No check	Reduced inventory at customers
Order Status	Online	NA	Customer can track PO-Invoice online
Est Dt Dispatch	E-Planner (March 2019)	MS Excel	Customers can plan operations based on estimated date of dispatch



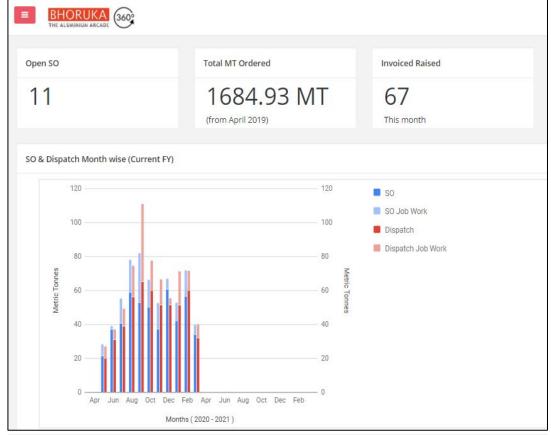


Feature Comparison Table

Segment	Door & Window				Curtain Wall			
Product → Features ↓	Catalogue , Existing dies	IWIN-S	IWIN- E	BXW	Catalogu e, Existing dies	Customize Extrusions-Ne w Dies	True facade System	
Tested Product	*	V	V	V	*	*	V	
System Design	*	V	V	V	V	*	V	
Product drawings	*	V	V	V	*	*	V	
Structural Calc	*	V	V	V	*	*	V	
Wind Load Test	*	2.5 Kpa	1.6 Kpa	1.6 Kpa	*	*	V	
Water Test	*	300-600Pa	100Pa	*	*	*	V	
Profile	V	V	V	V	V	V	V	
P&A	*	V	V	Euro Groove Compatible	*	*	*	
Coating: PC/ Anodizing	V	V	V	V	V	V	V	
FTS Support	*	V	V	V	*	*	*	
System Warranty	*	V	V	*	*	*	*	
Billing	KG Basis	Sqft. Basis	Sqft. Basis	Sqft. Basis	KG Basis	KG Basis	KG Basis	
Glass	*	*	*	*	*	*	*	



Leveraging on Technology – Bhoruka 360 & E-planner



Dated: 02 Mar 2021 **Uploaded Documents** INV #: 0094422632 🕒 Warranty certificate Transporter Name : OTHER PARTY Test certificate Transporter LR# PO Date : 19 Feb 2021 Vehicle # Photos Driver Phone # Packing List Project Name Deliver # Text

- Industry-first CRM Module Bhoruka 360 for customers (100% automated via SAP)
- Invoices, test certificate and packing list are readily available in the portal
- Live updates on your orders are made available
- Real-time order status and expected order completion dates
- PO Upload, PI Approval and Ticketing system to raise the Quality Complaints
- Financial Ledgers of Transactions executed
- with Bhoruka Extrusions are made
 Malableimensional operational

metrics gives me a 360° view



Mr. Mathew Shijoy



Ms. Suma S



Approved Application – Akzo & Jotun

Interpon D1000



InterponD2000



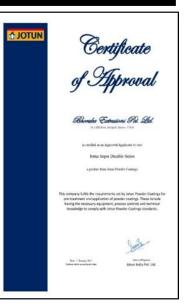
Interpon D3000



PE-F



PE-SDF





ISO 9001:2015



IGBC



GRIHA





New Machining Centres at Bhoruka Extrusions

FMC 340

- Make FOM Industries, Italy.
- Fully automated processing center
- 4 Interpolating axes for the machining of aluminium profiles with a cross section of 180×270 mm and tubes up to 3 mm thick.
- Can perform operations such as Milling,
 Drilling, Countersinking, Angle Cutting,
 Turning & Tapping.





BLITZ ALVA - 550

- Make FOM Industries, Italy.
- A high-performance Double Head Cutting machine that is specifically designed for cutting operations.
- Equipped with advanced technology and features that allows for high precision and accuracy in cutting
- Maximum Cutting Capacity between 2
 Heads- 6.6m



Bhoruka Fabcons – Machining Partner

Transport

- Metro coaches
- Gangway part

Automotive

- Foot Step
- Roof Rails

Textile

- Roving Tubes
- Bobbin Rail

Projects

- Radiant Baffle
- Cycle frames



Machining – Inhouse machines from Emmegi, and Hurco

<u>Project Management</u> - Developing the entire value chain and taking responsibility upto end delivery

<u>**Designing**</u> – Working with customer to simply their designs for efficiency and cost reduction

<u>Tools and Fixture Developments</u> – To improve storage and packaging specific to projects

<u>Special Purpose Machine (SPM)</u> - Developed bending , and turning machines inhouse

<u>Sub Assembly</u> – Steel, plastic, wooden and electronic sub assembly





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Government Clients

































Our Valued Customers





















































Our Valued Customers





























Tyco Electronics PHOENIX MECANO MOOG























BHORUKA A YKK AP COMPANY

When you think extrusion, think **Bhoruka**, Your partner of choice

Thank You