

The background of the entire page is a blue-tinted photograph of an industrial setting. In the upper half, there are large, complex metal castings, possibly parts of a boiler or grate assembly, with various pipes and structural elements. In the lower half, a worker wearing a full protective suit, including a helmet and a face shield, is using a tool to work on a large metal component. Sparks are visible, suggesting a welding or grinding process. The overall scene is industrial and technical.

RUSHAS
Engineering Co. Pvt. Ltd.

BOILER CASTINGS & GRATE ASSEMBLIES

About Us

RUSHAS ENGINEERING CO. PVT LTD. is an ISO 9001:2015 certified company and approved under IBR, founded in the year 1980 by Late Mr. D. V. Salvekar, he had played an important role in the promotion of the company and has established a strong value base.

We are aligned with the boiler Industry and we specialize in manufacturing Ferrous & Non-Ferrous boiler castings along with Steam Valves & Boiler Mountings (IBR), Grate Assemblies including Travelling Grate, Dumping Grate, Pulsating Grate and Mini Travelling Grate.

We are leading players in the market with large clientele base which includes Thermax, Thyssenkrupp, Forbes Marshall, ISGEC, Thermodyne, Samson Control, Neotech Systems, Maxitherm Boilers, Walchandnagar Industries, Super steam Boilers, and many more. Our basic advantage is that we have a foundry & well-equipped machine shop under one roof. We have been supplying castings to various customers pan India and we have also exported them to United Kingdom, Australia, South Africa, Mexico, Egypt, Dubai, Malaysia, Thailand and multiple places across the globe.

At RUSHAS, we have promoted a work culture tuned to Customer Requirements through good business practices.

Mission

“To provide best quality products and services to our clients across the globe.”



Objective

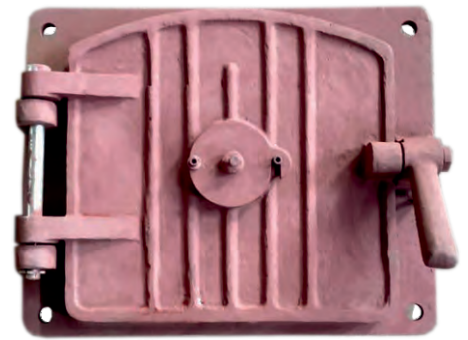
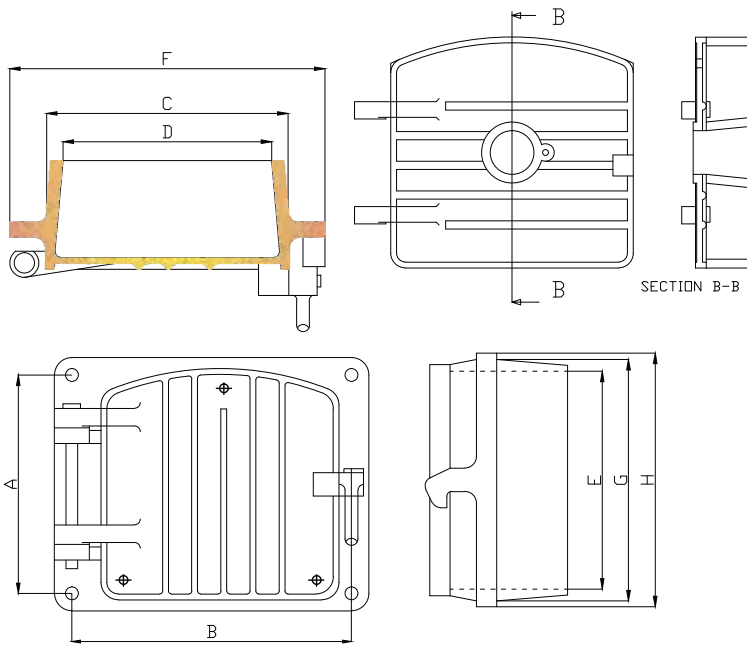
“To manufacture products with Global Standards and achieve the status of prime source to the industry by providing good quality, excellent services and quick response to the customers.”

Quality Assurance

Quality is our main priority and we ensure that our products meet all the international requirements. We submit our products to strict quality checks and inspections by well qualified engineers and supervisors who test them for various parameters like tolerance and dimensions and also the quality of the metal used.

The company has also installed quality system as per the requirements of the desired quality standard to ensure our products are flawless & can offer quality service without frequent maintenance problems.

Furnace Door 1



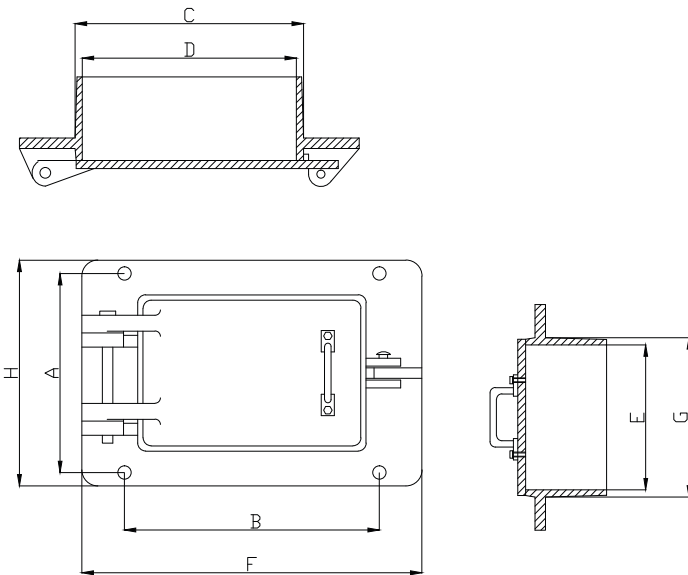
DIMENSIONS ARE IN MM									
SR. NO	A	B	C	D	E	F	G	H	REMARKS
D1	540	630	563	543	538	690	561	600	---
D2	375	480	416	393	373	540	396	435	---
D3	375	480	416	393	373	540	396	435	---
D4	540	480	416	393	538	540	561	600	---
D7	540	630	563	543	538	690	561	600	WITH PEEP HOLE
D8	375	480	416	393	373	540	396	435	WITH PEEP HOLE

MATERIAL - ALLOY CAST IRON

NOTE :

D3 IS ASH DOOR AND REST ARE FIRE DOORS
WE CAN ALSO PROVIDE DOORS WITH
EXTRA HEIGHT

Furnace Doors 2

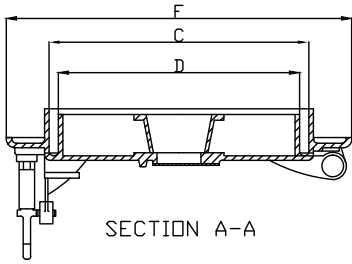


DIMENSIONS ARE IN MM									
SR. NO	A	B	C	D	E	F	G	H	REMARK
D5	540	480	540	507	402	640	435	610	FIRE DOOR
D6	375	480	430	403	273	640	300	425	ASH DOOR

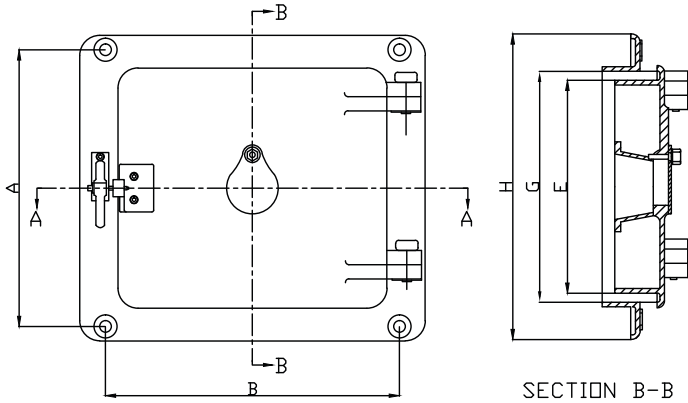
MATERIAL - ALLOY CAST IRON

NOTE - D6 IS ASH DOOR.

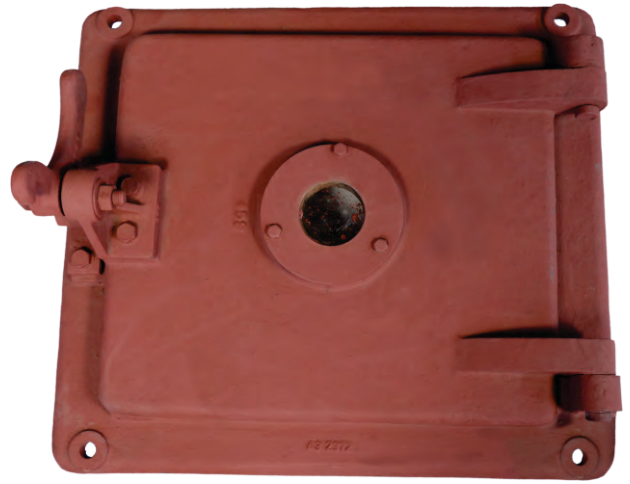
Furnace Doors 3



SECTION A-A



SECTION B-B

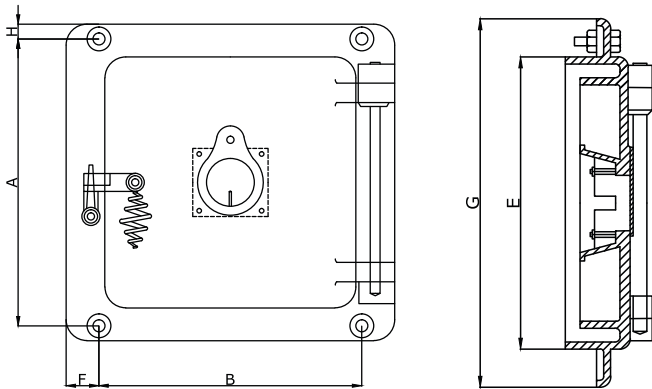
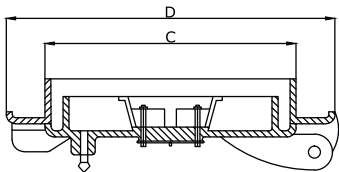


MATERIAL - ALLOY CAST IRON

DIMENSIONS ARE IN MM

SR.No	A	B	C	D	E	F	G	H	REMARK
D9	484	514	454	422	372	604	404	534	WITH PEEP HOLE

Furnace Doors 4

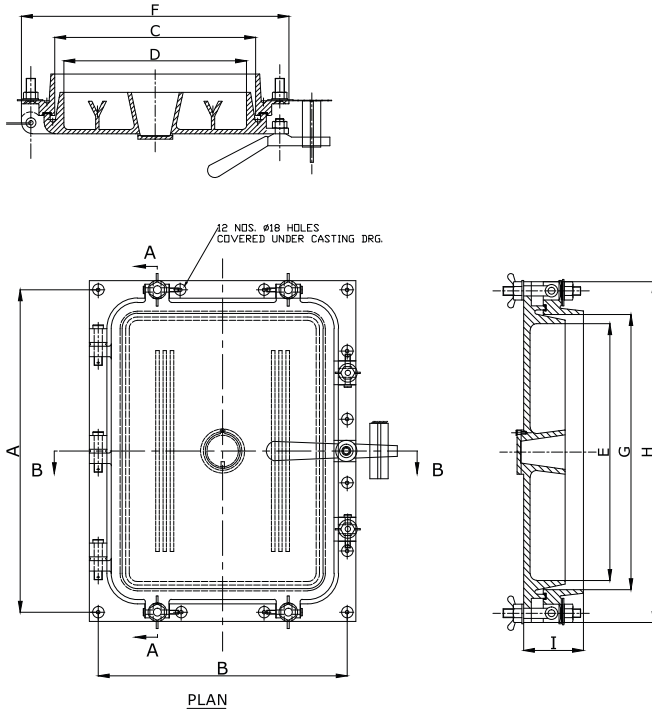


MATERIAL - ALLOY CAST IRON

DIMENSIONS ARE IN MM

SR.NO	A	B	C	D	E	F	G	H	REMARK
D10	480	440	420	550	420	55	530	25	WITH PEEP HOLE

Furnace Doors 5

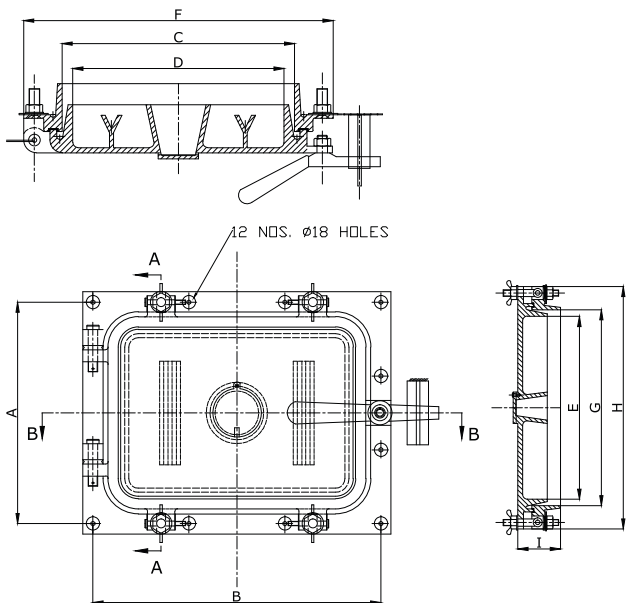


DIMENSIONS ARE IN MM

SR.NO	A	B	C	D	E	F	G	H	I	REMARK
D11	738	570	460	418	588	610	630	780	137	WITH PEEP HOLE

MATERIAL - ALLOY CAST IRON

Furnace Doors 6



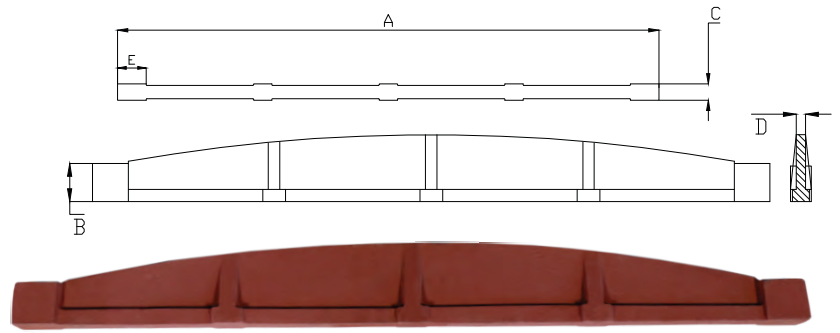
DIMENSIONS ARE IN MM

SR.NO	A	B	C	D	E	F	G	H	I	REMARK
D12	438	570	460	418	288	610	330	480	137	WITH PEEP HOLE

MATERIAL - ALLOY CAST IRON

Grate Bar Single

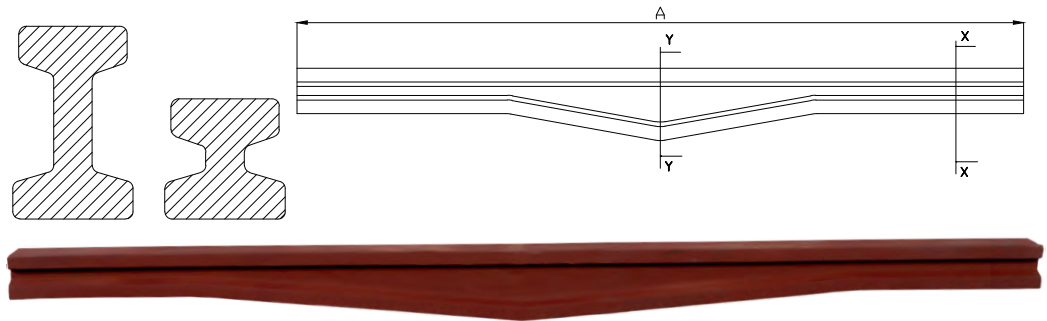
DIMENSIONS ARE IN MM					
SR.NO	A	B	C	D	E
G1	530	45	32	12	36
G2	890	47	32	12	47
G3	822	45	32	8	45
G4	730	50	32	8	45
G5	1010	50	32	8	45
G6	540	45	35	12	50
G7	615	45	35	12	50
G8	690	45	35	12	50
G9	578	45	32	12	55



MATERIAL - ALLOY CAST IRON

Grate Bar Support

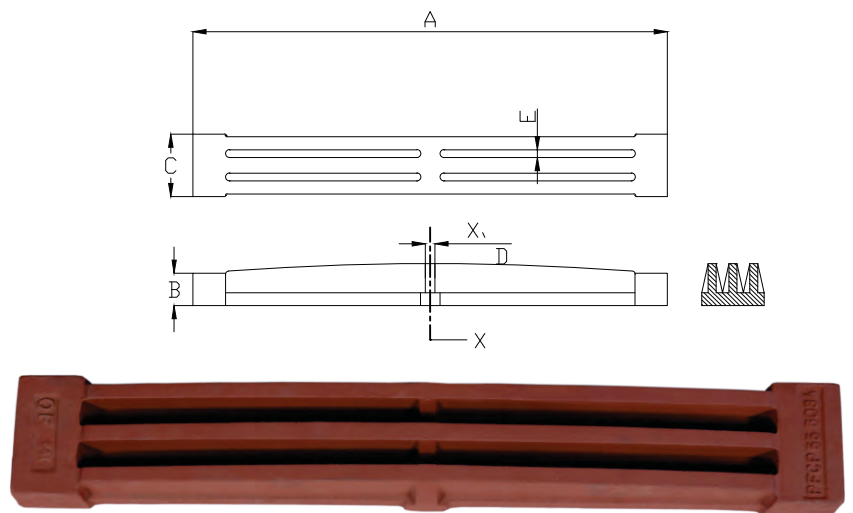
DIMENSIONS ARE IN MM	
SR.NO	A
S1	740
S2	1066
S3	1422
S4	1132
S5	940
S6	1280
S7	1120
S8	800
S9	1150
S10	1030
S11	930
S12	1308
S13	642
S14	860
S15	980
S16	1010



MATERIAL - ALLOY CAST IRON

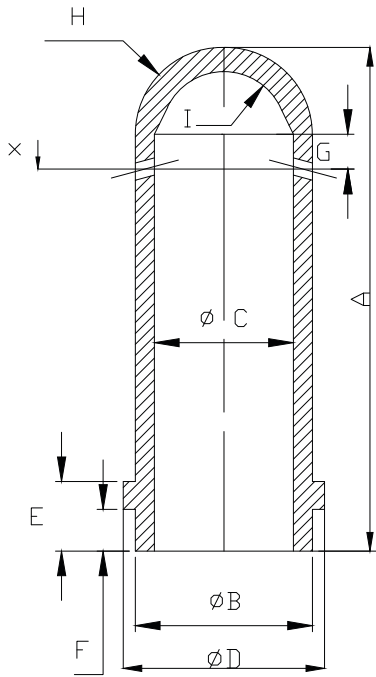
Grate Bar Triplex

DIMENSIONS ARE IN MM					
SR.NO	A	B	C	D	E
T1	730	50	96	15	10
T2	530	50	96	15	10
T3	630	50	96	15	10
T4	690	45	105	15	15
T5	540	45	105	15	15
T6	615	45	105	15	15
T7	690	45	90	15	8
T8	615	45	90	15	8
T9	615	45	96	15	10
T10	540	50	90	15	8
T11	540	50	96	15	10
T12	578	50	90	15	8
T13	578	50	96	15	10



MATERIAL - ALLOY CAST IRON

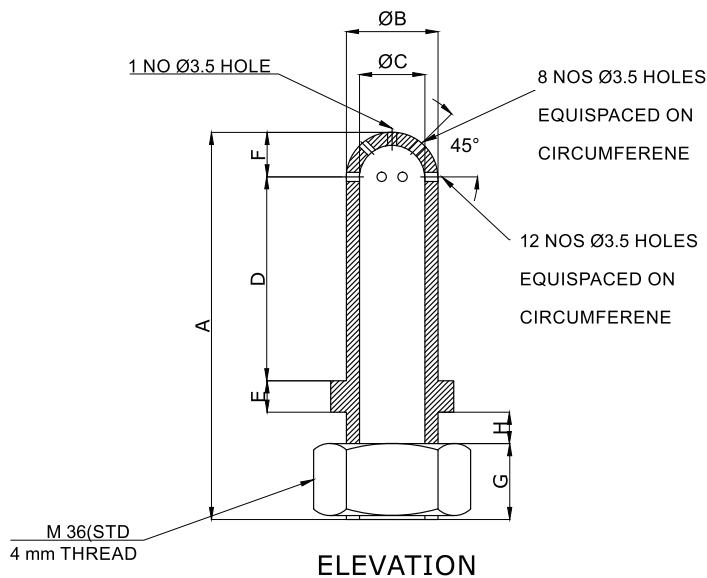
Nozzle 1 & 2



DIMENSIONS ARE IN MM									
SR.No	A	ØB	ØC	ØD	E	F	G	H	I
N1	110	51	40	58	20	12	10	R25	R18
N2	135	51	40	58	20	12	10	R25	R18

MATERIAL - ALLOY CAST IRON

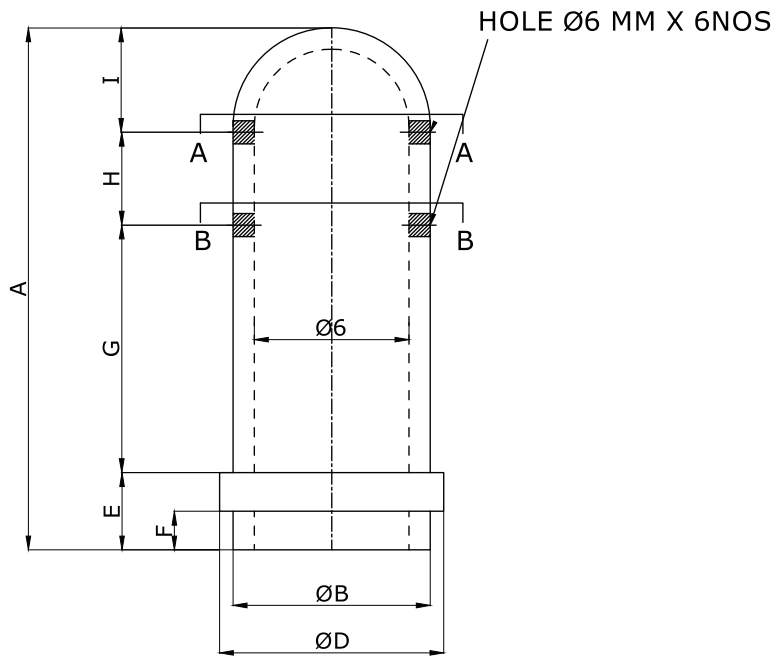
Nozzle 3



DIMENSIONS IN MM										
Size	A	ØB	ØC	D	E	F	G	H	I	J
N3	148	35	25	78	12	17	29	12	R27	47

MATERIAL - ALLOY CAST IRON

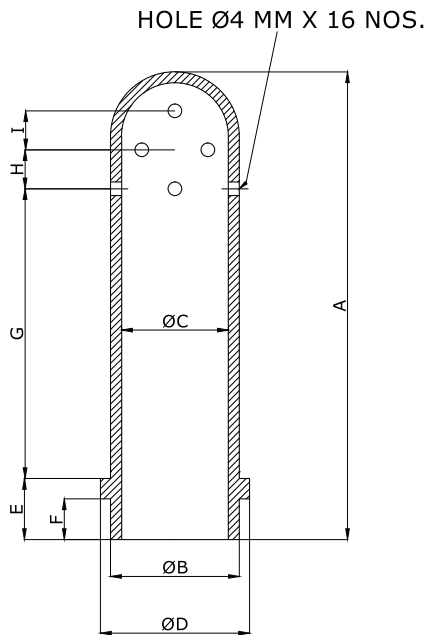
Nozzle 4



DIMENSIONS IN MM									
Size	A	ØB	ØC	ØD	E	F	G	H	I
N4	135	50	40	58	20	10	64	24	27

MATERIAL - ALLOY CAST IRON

Nozzle 5

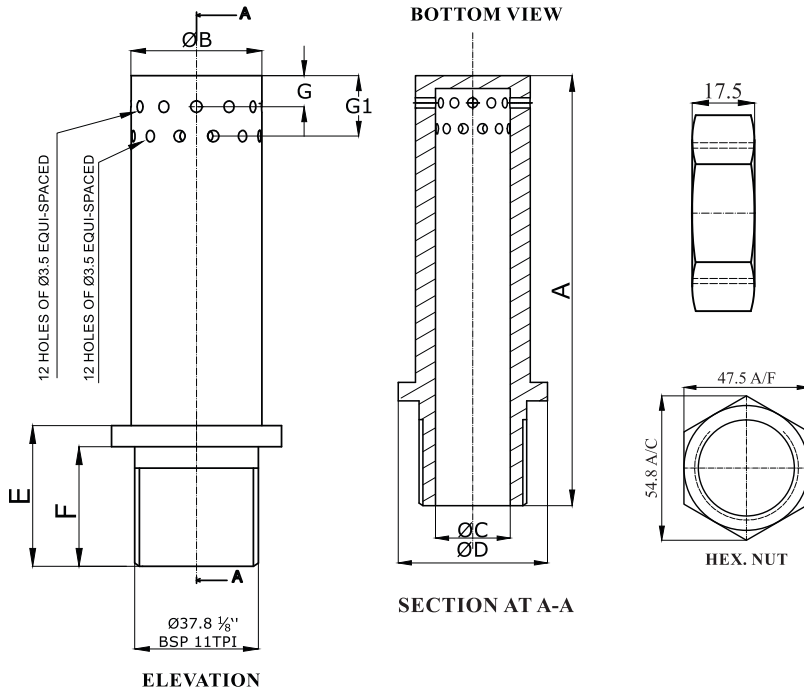


DIMENSIONS IN MM									
Size	A	ØB	ØC	ØD	E	F	G	H	I
N5	138	38	31.5	44	18	12	85.5	11.5	11.5

MATERIAL - ALLOY CAST IRON



Nozzle 6

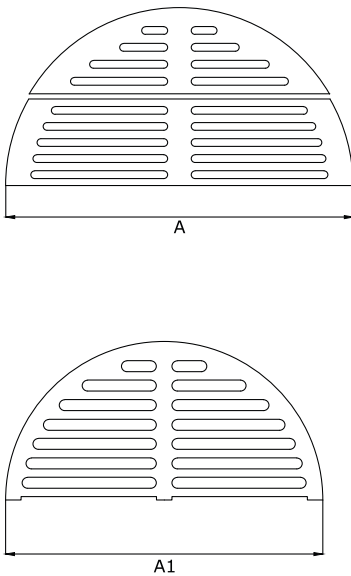


Note : We can provide Nozzle holes as per Customer Requirement & Design

DIMENSIONS IN MM								
Size	A	ØB	ØC	ØD	E	F	G	G1
N6	150	40	26	52	43	36	12	18.5

MATERIAL - ALLOY CAST IRON

Round Jali 2 Pcs / 4 Pcs



DIMENSIONS IN MM							
SR.NO	J1	J2	J3	J4	J5	J6	J7
A	740	1100	800	680	720	900	1000

DIMENSIONS IN MM		
SR.NO	J8	J9
A1	490	530

MATERIAL - ALLOY CAST IRON

Cyclone

Cyclone 1

DIMENSIONS ARE IN MM									
SR.NO	A	B	C	D	E	ØF	G	ØH	ØI
C1	785	283	254	312	9	80	156	250	274

MATERIAL - WEAR RESISTANT Ni-HARD CASTING WITH
Min 500 BHN HARDNESS

Cyclone 2

DIMENSIONS ARE IN MM									
SR.NO	A	B	C	D	E	F	G	H	I
C2	800	300	280	12	8	122	260	90	R75

MATERIAL - IS 210 Gr FG 220 TO 260 WITH Cr

Cyclone 3

DIMENSIONS ARE IN MM									
Size	A	ØB	ØC	ØD	E	ØF	G	H	ØI
C3	798	276	280	398	9	106	315	330	25

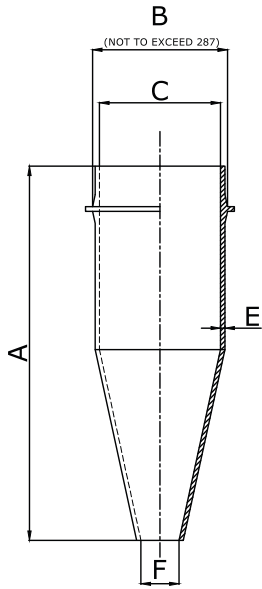
MATERIAL - IS 3355 Gr 2A

Cyclone 4

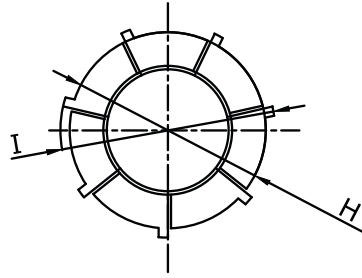
DIMENSIONS ARE IN MM									
Size	A	ØB	ØC	ØD	E	ØF	G	H	ØI
C4	900	268	268	370	8	100	280	330	16

MATERIAL - IS 210 Gr. FG 220 WITH Cr

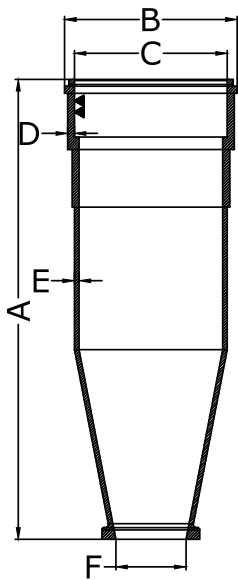
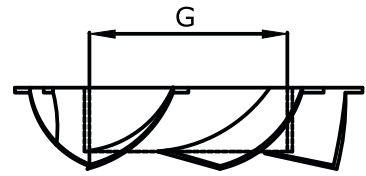




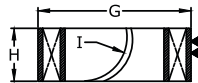
Cyclone 1



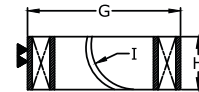
SPINNER



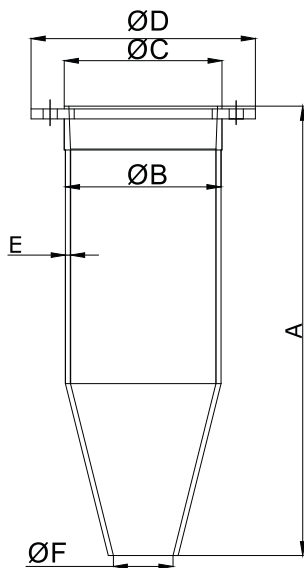
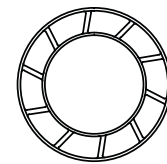
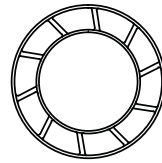
Cyclone 2



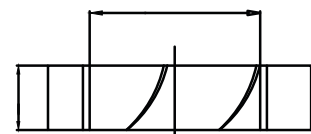
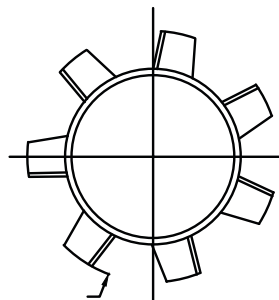
CYCLONE RH



CYCLONE LH



Cyclone 3 & 4



VANE

Travelling Grate



TECHNICAL FEATURES

The curvature design of the grates keeps the grates closed without the aid of auxiliary weights, when making the turn around the sprockets. With this design, no gaps appear between the grates, thereby directing all foreign materials into the ash pit and not into the drive shaft mechanism.

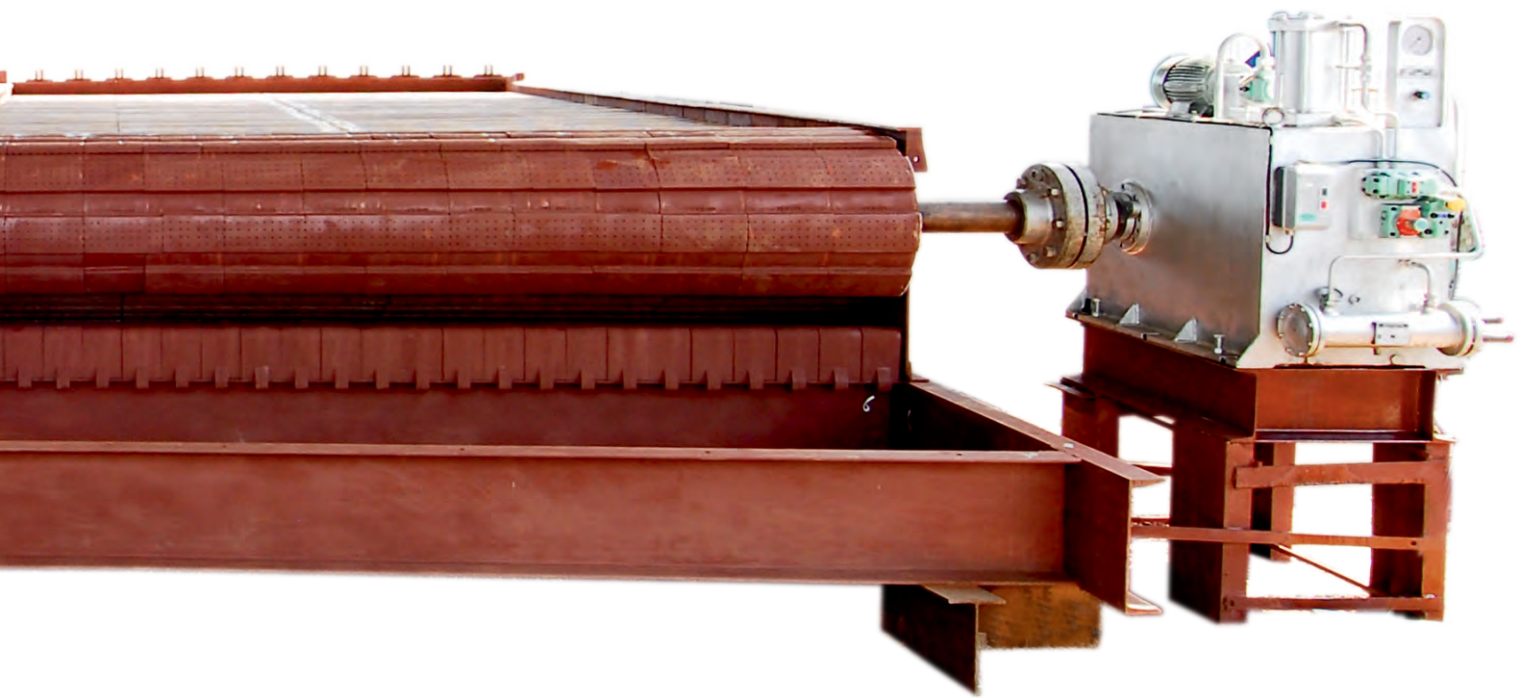
In stoker firing, part of the fuel is burned in suspension and part on the grate. The fuel is projected across the furnace by a series of fuel feeders with a uniform spreading action, permitting suspension burning of the fine particles during travel. The larger pieces fall on the grate for combustion, forming a thin fast burning fuel bed from 1 to 2 inches thick.

This method of firing fuel provides for extreme load fluctuation as ignition is almost instantaneous on increase of firing rate and the thin fuel bed can be burned out rapidly when required.

The travelling grate has an extraordinary ability to burn any type of fuel with a wide range of burning characteristics with no limit on the ash content.

An over fire air system is provided for successful suspension burning. This air mixes with the furnace gases and creates the turbulence required to complete combustion.

To compensate for variation of the ash content in the fuel, the grate speed can be adjusted manually. The ash is continuously discharged over the front end of the grate into an ash pit or hopper.



SALIENT FEATURE

CATENARY DESIGN provides for automatic take up or tensioning of grate chains to prevent jamming. Effective catenary is maintained by gravity, thus making external shaft adjustments unnecessary.

GRATE SURFACE consists of a series of grates specifically designed for spreader stoker firing. To reduce maintenance cost, grate surface is made in short sections (12" & 9") of best quality, heavy-duty, heat resisting cast iron alloy with uniformly spaced tapered self-cleaning air-metering openings and with close fitting overlapping edges to prevent air leakage at the joints.

GRATE CURVATURE design keeps the grate closed without the aid of auxiliary weights when making the turn around the sprockets, with this design, no gaps appear between the grates, thereby directing all foreign materials into the ash pit and not into the driven shaft mechanism.

GRATE ACCESS is provided by a grate removal door. Design is such that any grate section can be replaced without taking the stoker out of service. Simply remove a single bolt, nut and washer and slide the grate off the grate bar.

GRATE SUPPORT within the furnace is provided by a series of skids and skid rails, each constructed of chill hardened cast iron for maximum life.

FRONT AND REAR SHAFT carry the grate chains on hardened sprockets. Bearings and sprockets are strategically located along the shafts for maximum load-bearing efficiency.

THE GRATE CHAIN are forged steel thereby eliminating breakage and grate shutdown.

FRONT AND REAR AIR SEALS automatically keep excess air to a minimum within the furnace.

UNDERGRATE ACCESS DOORS located on each side of the stoker frame, provide inspection of and access to grate catenary.

HEAVY DUTY FLANGE COUPLING connecting hydraulic/Planetary drive and main drive shaft.

Dumping Grate



TECHNICAL FEATURES

The fuel is projected across the furnace by a series of fuel feeders with uniform spreading action. Dumping grate has ability to burn variety of fuel with wide range of burning characteristics. With this design ash get dump by using operating levers.

SALIENT FEATURES

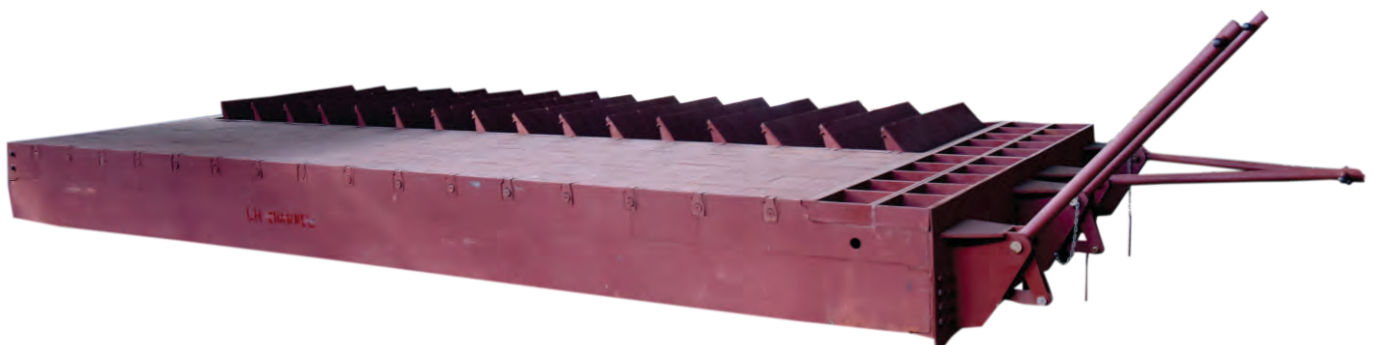
GRATE SURFACE consists of a series of grates specifically designed for spreader stoker firing. To reduce maintenance cost, grate surface is made in short section (6") of best quality, heavy - duty, heat resisting cast iron alloy.

EASY GRATE REMOVAL: Design is such that any grate section can be replaced by simply removing a locking arrangement and slide the grate off the grate bar.

EASE OF OPERATION: Operation is very easy.

NO POWER CONSUMPTION : No power consumption as the operation of dumping grate is manual.

ROBUST CONSTRUCTION : Longer life.



Pulsating Grate



SALIENT FEATURE

Transportation and mixing of fuel is effective as it burns on the grate.

Special alloy castings for corrosion resistance and longer wear life.

Hydraulically operated water cooled ram feeder maintains continuous waste feeding.

Fully machined grate bars ensure proper clearances for thermal expansion, movement and air flow area.

Larger grate width with modular construction.

Air plenum is divided in multiple sections along length, enables independent control of air flow to each section as per combustion requirement.

Pulsating grate is suitable for low quality fuels having high moisture content, low GCV, inconsistent fuel size with very large particle. This design is suitable for municipal solid waste, high moisture agricultural and industrial waste-palm fibre, empty fruit bunches, stalk fuel having high moisture content.

Our Clients

OEM's



Small Boilers



Large Boilers



Export



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