VIKAS RADIATORS
PRIVATE LIMITED

VIKAS RADIATORS

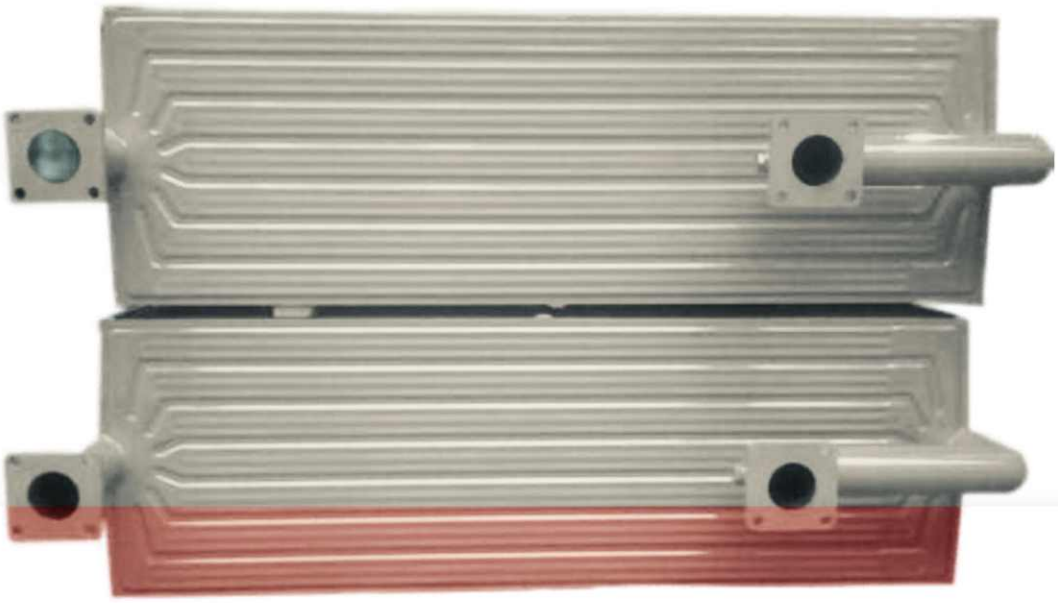
COMMITED TO EXCELLENCE

QUALITY

Quality is the KEY to customer satisfaction and our company focuses on a pro-active approach in identifying and meeting customer needs. Our continuous improvement program makes extensive use of quality circles an employee's ideas thereby making quality improvement a process in which every employee is involve.

TRACEABILITY

VRPL has a unique identification system for each of its radiator. At any point of time, we can provide 100% traceability of our radiators right beginning from the coil used to operators who have handled different processes with name, date & shift identification. Through this system we can verity the quality requirement of customer to customer and accurately check minutes details to provide higher customer satisfaction



ABOUT US

The company started the wheels in motion in 1989 and maintains a blinding pace of growth and development. With a vision to established footprint in the industry as most trusted company to quality products and customer satisfaction. We would also provide and enjoyable and challenging environment to all our employees.

M/s VIKAS RADIATORS PRIVATE LIMITED continued to develop their range of Pressed Steel Radiators for Distribution & Power Transformers. Here, good quality is not a promise, but an assurance (COMMITTED TO EXCELLENCE). The company strength in its manufacturing systems and processes to match that of any company in the world. It ensures to serve its customers exactly as per their requirement every time. **Vikas Radiators** enjoy a unique place with many reputed Transformer Manufacturer Companies in after market segment products. The accuracy and reliability of our products are unquestioned since we have complete state of the art inhouse production infrastructure.The FACT we manufacturer the whole range within our own production facilities MEANS we can control the QUALITY of our procedures and components. Vikas Radiators guarantee this QUALITY in all its systems to the level of any International Quality Standard parameters.In more than 30 years of continuity and experience has only been possible with the support of hundred of satisfied customers all over the worldwide. All these years our philosophy has remained unchanged. With the full support that we have from our customers & suppliers, we are ready for next leap.

TESTING FACILITY

We are fully equipped for the testing of radiator as per IEEMA & DIN Standards.

1. All instruments for dimension measurement

2. Pressure Guage for PTVT

3. We are doing inhouse type test at least once in three months for leak-proofness against transformer oil confirming to IS:335 maintained at a temperature of 100 C +- 5 C and are kept at a pressure of 1KG/CM2 for 8 hours.

4. Thickness Testers

5. Dry film thickness tester for paint, lacquer and galvanize.

6. Paint Peel-off test (Permacel 99 - refer ASTM D 3359 – 02

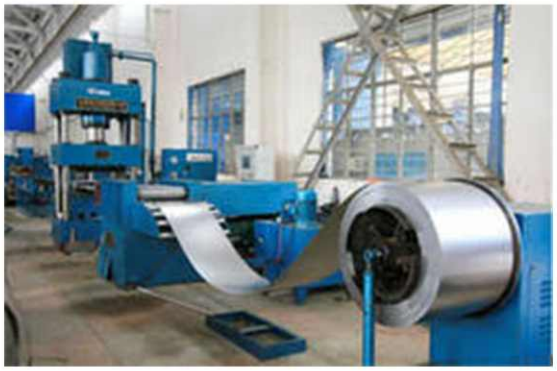
MATERIALS

S. No.	Part	Material
1	Radiator Element	Nominal sheet thickness of 1.0/1.20 mm thickness CRCA steel conforming to Grade D of IS: 513
2.	Top and Bottom header pipes	88.9 / 114 mm OD and 3.2 and up to 3.6mm thick ERW / HFIW pipe as per IS: 1239 Pt 1. (N.B: We can specify header pipe OD and 88.9mm for CC upto 3000MM and 30 Elements, 114mm OD for CC above 3000MM and more than 30 elements)
3	End Plate	CRCA sheet conforming to Grade D of IS: 513, with thickness minimum 2.5MM
4	Step Flange	12mm, 16mm and 18mm thick (minimum) weldable structural steel plate conforming to Grade E 250 Quality A of IS: 2062
5	Sockets for Air Release and Drain Plug	36 mm diameter weldable structural steel rod conforming to Grade E 250 Quality A of IS: 2062.
6	Air vent and drain plugs	36 mm weldable structural steel hexagonal bar conforming to Grade E 250 Quality A of IS: 2062.
7	Bracing Bar	8/10 mm weldable Bright Bar conforming to IS: 7283.
8	Lifting Lugs	10 mm thick, weldable structural steel plate conforming to Grade E 250 Quality A of IS: 2062.
9	Washer for air release and drain plugs	3.0 mm thick Teflon washers.

Cooling Section

The cooling sections are made from 1.0MM and 1.2MM thick CRCA steel strips of drawing quality, in width of 226MM, 300MM, 380MM and 520MM. Each radiator is made-up of a number of sections spaced at 50MM, 60MM and 65MM centers, the number to be determined by the transformer manufacturer depending upon the heat to be dissipated and the maximum allowable oil excess temperature. The radiators are generally made with number of sections varying from 3 to 40. Radiators with higher number of sections can also be manufactured against specific requirements.

SPECIAL FEATURES



Advance CNC Radiator Roll Forming welding line and CNC header tube punching unit applied. High size Precision and convertibility unit applied. High size precision and convertibility with very good surface quality.

Completely automatic welding line with multi spot and two seam welders. Seam welding line with automatic panel combining and automatic spot-welding function increase the productivity and guarantees the welding quality. Panel damage or artificial carrying can be avoided

Advanced, shot blasting and painting booth with wide working space to handle up to 4000mm radiators.

HEADER PIPES

The top and bottom headers are each 90mm OD and 3mm Thickness. The headers extend 25mm beyond the center line of the end section and are blanked at the outer end with welded end covers.

HEADER PIPE EXTENSION

An extra length of MS pipe of same OD is welded onto the headers at the open end. The length of the extension “a” is generally 75mm, or as specified by the customer.

FLANGES

The detachable radiators are provided with standard square flanges, 150mm square, having 4 holes f 20mm DIA on a PCD of 160mm, in the following thickness.
12mm – for CC upto and including 1500mm, and no of sections upto and including 24.
18mm – for CC above 1500mm, and no of sections exceeding 24.

AIR VENT PLUG & DRAIN PLUG

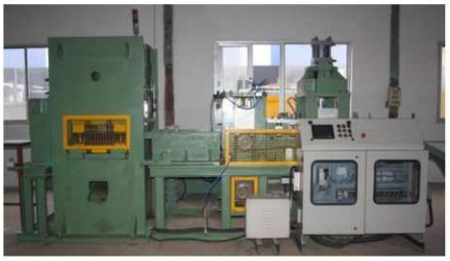
The detachable radiators are also provided with one airvent plug on the top header and one drain plug on the bottom header. Both of RP ½ Size. The Airvent Plug is located between the first and second section on the open end, while the drain plug is located between the last two sections on the blanked end.

BRACING STRAPS

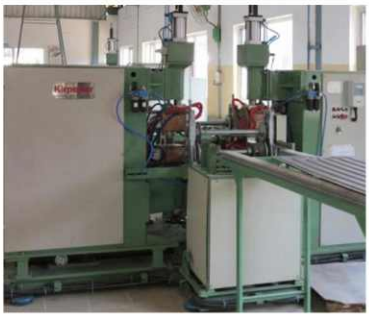
As a standard practice, one pair of bracing straps is provided on radiators having “CC” 1000mm to 2000mm, 2 pairs for “CC” 2100mm to 2800mm, and 3 pairs for “CC” above 2800mm. Radiators with “CC” less than 1000mm are generally not provided with the bracing straps. The straps are made from 8mm DIA MS bright rods.

QUALITY FEATURES

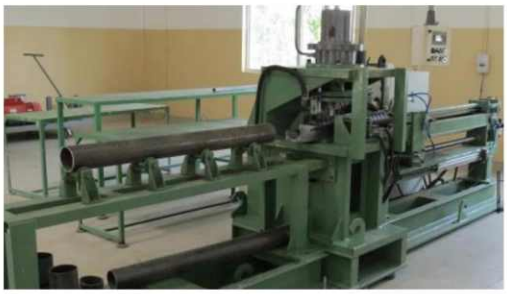
1. With India's first and only fully automated production line, the process ensures straight panels so as to give a table-top look.



2. With minimum human intervention in the entire process flow, the chances of human errors reduce to minimal.



3. With state-of-the-art JIGS and FIXTURES for pipe welding and flange welding, the possibility of error in alignment reduce to nil which helps us to achieve accurate assembly.



4. Grit Blasting with cyclone dust collectors so as to separate dust from abrasive particles and provide a clean surface.

5. A state-of-the-art Paint Shop so as to achieve proper and uniform DFT. It also achieves proper filtration so to achieve impeccable quality

PAINTING

The standard radiators are shot blast-cleaned and given two coats each of RED Oxide Zinc Chrome, Primer, MIO and Enamel / Epoxy / PU finish paint (providing for total dry film thickness of 70 to 350 microns) on the outside, and one coat of heat-resistant varnish on the inside. Other external primer / finish coatings such a s Yellow Zinc Chromate Primer, Zinc Rich Primer, Micaceous Iron Oxide Primer, Epoxy Primer / finish Polyurethane finish, Spray Galvanized etc, can be provided, as required.

CLIENTS

TATA POWER SOLAR

adani Solar

ATLANTA ELECTRICALS PVT. LTD.

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SHILCHAR TECHNOLOGIES LIMITED

SUZLON POWERING A GREENER TOMORROW

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TECHNICAL ASSOCIATES LIMITED Energising India since 1969...

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danish

Header Type Radiator

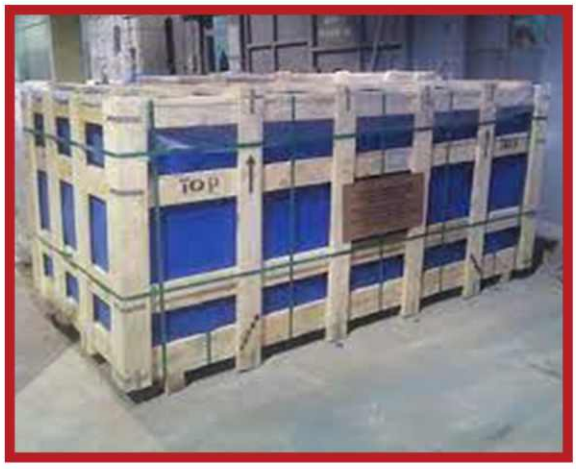
Goose Neck Radiator

Flange Type Radiator

Off Set Type Radiator

Hot Dip Galvanized Radiators

DOMESTIC PACKING



EXPORT PACKING

HEAT DISSIPATION CHART

Heat Dissipation Chart (520MM Width)

Centre Distance CC	Cooling Surface Per	Watts dissipated per section for oil excess temperature of												Oil per section in Litres
		35°C		40°C		45°C		50°C		55°C		60°C		
		ONAN	ONAF	ONAN	ONAF	ONAN	ONAF	ONAN	ONAF	ONAN	ONAF	ONAN	ONAF	
800	0.970	258	425	305	489	360	551	414	622	477	701	519	778	2.77
900	1.090	288	472	328	541	378	615	426	691	497	774	532	859	3.05
1000	1.208	317	550	365	637	412	723	463	810	523	920	549	1028	3.32
1100	1.329	343	597	392	685	446	785	500	875	563	990	628	1109	3.59
1200	1.450	366	635	424	737	479	837	540	940	609	1064	676	1187	3.86
1300	1.570	393	678	455	788	514	890	575	1007	650	1134	723	1263	4.13
1400	1.691	417	716	482	838	544	943	612	1033	689	1204	765	1334	4.41
1500	1.812	437	752	511	876	574	991	626	1115	729	1261	807	1398	4.68
1600	1.933	463	793	536	925	605	1044	679	1176	765	1370	847	1469	4.95
1700	2.054	483	829	562	963	634	1087	712	1221	799	1382	888	1526	5.22
1800	2.174	507	867	588	1014	662	1140	741	1277	837	1442	924	1596	5.49
1900	2.295	528	903	616	1047	691	1181	774	1330	871	1498	963	1652	5.76
2000	2.416	551	939	620	1094	717	1229	805	1380	906	1545	998	1719	6.04
2100	2.537	569	971	661	1132	744	1274	834	1427	931	1608	1035	1772	6.31
2200	2.658	589	1005	686	1171	771	1314	861	1475	970	1659	1069	1831	6.58
2300	2.778	610	1044	710	1205	795	1355	891	1515	1003	1701	1104	1886	6.85
2400	2.899	636	1081	733	1250	824	1406	918	1574	1029	1759	1141	1945	7.12
2500	3.020	653	1113	753	1277	847	1437	948	1613	1059	1796	1170	1996	7.40
2600	3.141	674	1144	774	1321	826	1489	975	1666	1083	1861	1205	2060	7.67
2700	3.262	691	1177	796	1351	898	1545	1003	1714	1119	1906	1239	2111	7.94
2800	3.382	713	1211	818	1394	923	1567	1035	1755	1150	1957	1273	2167	8.21
2900	3.503	731	1245	840	1428	946	1611	1058	1799	1179	2005	1303	2205	8.48
3000	3.624	754	1285	857	1466	1001	1665	1087	1839	1209	2043	1374	2246	8.75
3100	3.745	762	1322	874	1494	1015	1699	1100	1867	1350	2084	1409	2293	9.37
3200	3.866	784	1342	891	1524	1040	1727	1128	1899	1385	2122	1443	2342	**9.65**
3300	3.987	804	1374	910	1550	1065	1753	1145	1925	1419	2154	1477	2388	9.95
3400	4.110	826	1396	928	1578	1088	1778	1173	1950	1449	2194	1507	2424	10.23
3500	4.231	842	1426	948	1608	1114	1810	1203	1984	1483	2232	1535	2465	10.51

CORRECTION FACTOR:

Verticle Distance in mm between core center line	0	100	200	300	400	500	600	800	1000	
Correction Factor:	0.8	0.85	0.89	0.925	0.95	0.975	1.00	1.05	1.1	
Horizontal Distance in mm between radiators:	575	595	620	645	685	735	785			
Correction Factor:	0.76	0.82	0.86	0.91	0.95	0.985	1			
Number of sections per radiator:	2	4-5	6-8	9-11	12-14	15-17	18-20	21-24	25-30	30-35
Correction Factor:	1.11	1.06	1.02	1.00	0.99	0.98	0.97	0.96	0.95	0.94

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