



JSL INDUSTRIES LTD

'Jyoti' TEXTILE MOTORS

Introduction

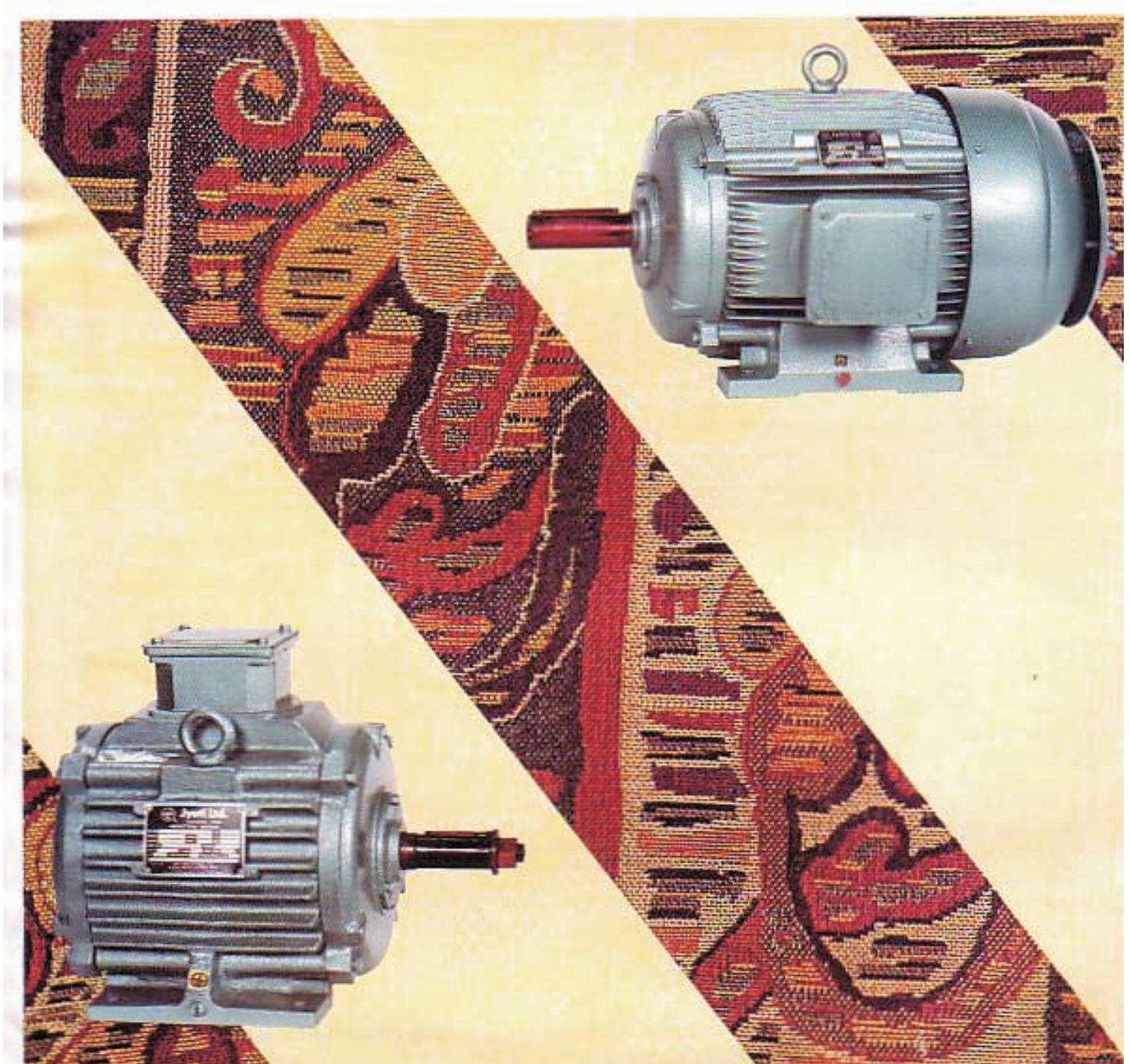
Features & Technical Specification

Dimensional Details

1. Loom & Card Foot Mounted Motor
2. Loom & Card Flat Mounted Motor
3. TEFC Side Terminal Box Ring Frame Motor

To cater to a wide range of torque characteristics and all textile machinery drives.

'Jyoti' Textile Motors



GENERAL CONSTRUCTIONAL FEATURES OF 'JYOTI' TEXTILE MOTORS

Specially designed to cater to wide range of torque characteristics during starting, running, reversing and stopping of Textile Machinery.

'JYOTI' range of Textile Motors embraces practically all Textile Machinery drives and are suitable for operation on 415 volts±10% supply with IP 55 protection and F class of Insulation with temperature rise limited to 'B'. The range comprises motors meeting requirements of Textile processes such as Fibre Preparation, Carding, Weaving, Combing and Drawing, Spinning and Doubling

RATING CHART

Motors	Frame Size	1500 RPM Syn.	1000 RPM Syn.	750 RPM Syn.
Loom	LR 100L LP 112M		0.75 kW 0.75 kW 1.10 kW 1.50 kW	1.10kW
	LP 132 S			
Card	LP 132 M CP 132 S CP 132 M		2.20 kW 1.50 kW 2.20 kW	
	CP 160 M RCTF-160 M	9.30 to 11.00 kW	3.70 kW	
	RCTF-160 L			13.15 kW
RCTF-180 M	18.50 kW			

Other ratings can be offered on specific request

TORQUE CHARACTERISTICS OF MOTORS

Syn.Speed	Type of Motor	St/FL Torque	Pullout/ FL Torque
1000	CARD	350%	375%
750	CARD	275%	300%
1000	LOOM	230%	270%
750	LOOM	200%	230%
1500	Ring Frame	175%	210%

LOOM MOTORS

Looms are subject to very irregular and intermittent operations which would mean fluctuating power requirements. In addition to this, they require electric motors having high starting torque as well as compact body. 'JYOTI' Loom Motors are designed to meet these requirements. These motors are totally enclosed, surface cooled type and they conform to IS : 2972 (Part-1). Motors are available in output ratings as shown in the Rating Chart.

Motors are either foot mounting type or flat base mounting type as per customers requirements. The flat base mounting motors are suitable for resilient (cradle) mounting

CARD MOTORS

The carding process in textile industry requires high starting torque and a long starting period. 'JYOTI' Card Motors have been specially designed to meet these requirements and are available as shown in the Rating Chart. These motors are foot / flat base mounting type and conform to IS : 2972 (Part-II)

RING FRAME MOTORS

The most essential requirement of the Ring Frame Drive is smooth acceleration which will help in minimising the breakage of yarn and at the same time maintaining the yarn tension at desirable level. 'JYOTI' Ring Frame Motors are designed to meet these requirements. 'JYOTI' ring frame motors are totally enclosed fan-cooled type. Fan shelter is specially designed to minimise the blockage due to Cotton fluff and to ensure proper cooling of the motor. Terminal box is provided either on LHS or RHS looking from shaft end as per customer's requirement. Motors with terminal box on top can also be supplied against specific requirement in case of spinning frame narrow width having limited space.

These motors are available in output ratings as shown in the Rating Chart in the synchronous speed of 1500 RPM

STATOR

The finned construction of stator cast iron frame offers optimum cooling characteristics combined with long lasting reliability and of rugged construction. Stacks are made of low loss silicon-steel stampings to reduce iron losses. The insulation in JYOTI textile motors is of class 'B' and temperature rise is limited to 80°C over ambient of 40°C as per IS : 325. Materials are so selected as to suit electrical, mechanical, thermal and environmental conditions. Modified polyester enamelled winding wires as per IS:13730 (Part-III) are used for adequate electrical insulation and good thermal properties. The overhangs are well shaped and are rigidly braced to withstand stresses due to starting currents. Vacuum and pressure impregnation with thermosetting varnish is carried out to strengthen the windings and to improve the heat transfer.

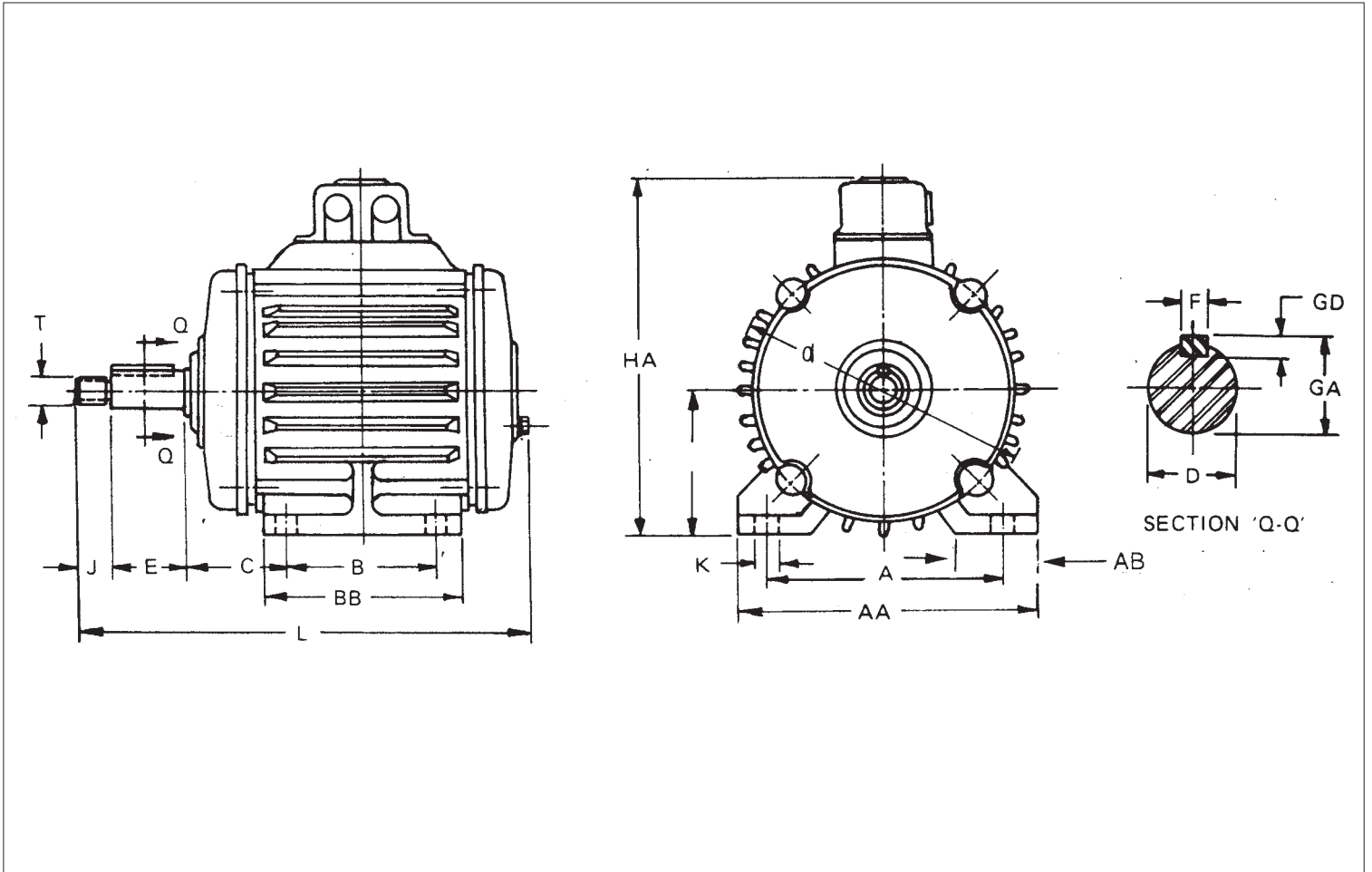
ROTOR

Rotor Stampings are stacked with pressure and then diecast with EC grade aluminium. Finally, they are shrink fitted on the shaft. It is balanced on highly sensitive dynamic balancing machine to limit vibration in accordance with IS : 12075

TEST

All motors are tested in the course of manufacture and before despatch in accordance with IS: 325 and IS : 2972.

GENERAL DIMENSIONAL SKETCH OF 'JYOTI' LOOM & CARD FOOT MOUNTED MOTOR



Frame	H	HA+	B	BB+	A	AA	C*	E*	T THRDS	d+	J	L+	D	F	GD	GA	K	AB
LP-112M	112.00 111.50	281	140	170	190	225	70	60	M20	222	22	352	28J6	8	7	31	12	55
LP-132S CP-132S	132.00 131.50	321	140	170	216	265	89	80	M24	265	28	410	38k6	10	8	41	12	52.5
LP-132M CP-132M	132.50 131.50	321	178	225	216	265	89	80	M24	265	28	458	38k6	10	8	41	12	52.5

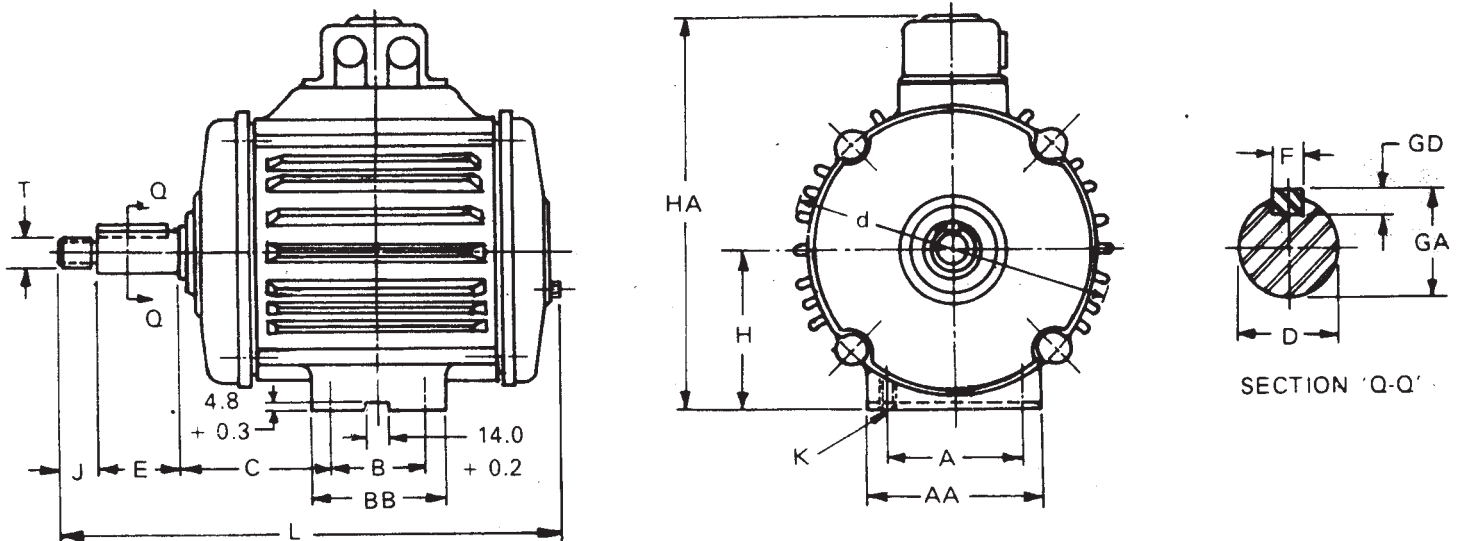
NOTES :

- THESE DIMENSIONS MAY VARY BY 5mm. DUE TO VARIATIONS IN CASTING
- THESE DIMENSIONS MAY VARY BY ± 0.75 mm.

ALL DIMENSIONS ARE IN mm EXCEPT OTHER WISE STATED

THE OVERALL DIMENSIONAL SKETCH IS MADE AS PER IS : 2972 (PART I & II) 1979

GENERAL DIMENSIONAL SKETCH OF 'JYOTI' LOOM & CARD FLAT MOUNTED MOTOR



Frame	H	HA+	B	BB+	A	AA	C*	E*	T THRDS	d+	J	L+	D	F	GD	GA	K THRDS
LP-112M	112.00 111.50	281	70	100	100	130	105	60	M20	222	22	352	28J6	8	7	31	M16 X 20
LP-132S CP-132S	132.00 131.50	321	70	100	100	130	124	80	M24	265	28	410	38k6	10	8	41	M16 X 20
LP-132M CP-132M	132.00 131.50	321	70	100	100	130	143	80	M24	265	28	458	38k6	10	8	41	M16 X 20

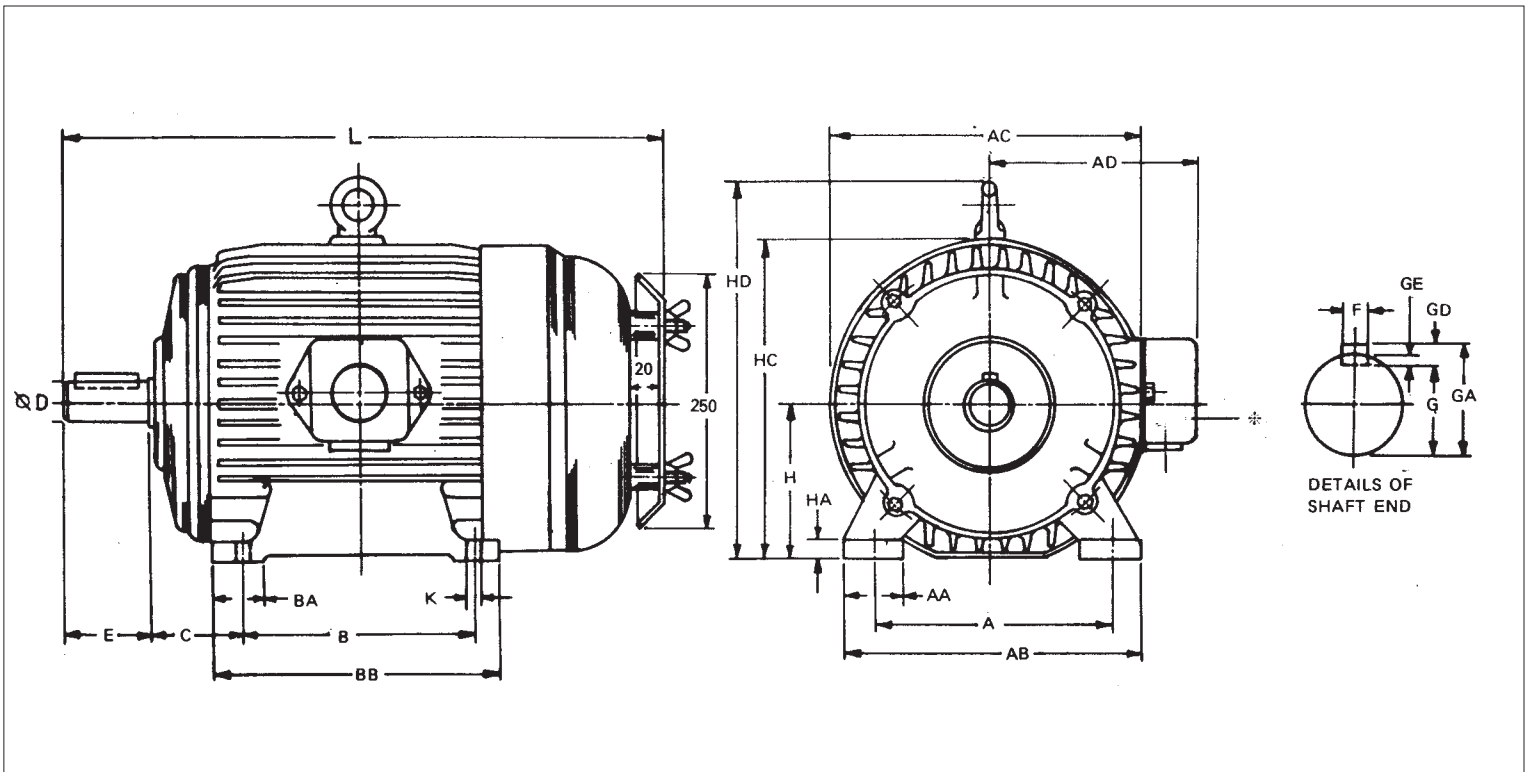
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THE OVERALL DIMENSIONAL SKETCH IS MADE AS PER IS : 2972 (PART I & II) 1979

GENERAL DIMENSIONAL SKETCH OF 'JYOTI' TEFC SIDE TERMINAL BOX RING FRAME MOTOR (IP 44) (WITH CLEAN AIR FLOW ARRANGEMENT)



Frame	AA	AB+	AC	AD+	A*	BA	BB+	B*	C*	D	E*	F	GD	GA	H	HA+	HC+	HD+	ØK	LB+	L+	D1	THRS
RCTF-160M	61	315	320	233	254	75	266	210	108	42K6	110	12	8.000 7.910	45	160.00 159.00	20	320	382	15	495	617	M16X32	
RCTF-160L	61	315	320	233	254	75	305	254	108	42K6	110	12	8.000 7.910	45	160.00 159.00	20	320	375	15	540	695	M16X32	
RCTF-180M	73	356	365	251	279	75	297	241	121	48K6	110	14	9.000 8.910	51.5	180.00 179.00	25	364	430	15	576	730	M16X32	
RCTF-180L	73	356	365	251	279	75	335	279	121	48K6	110	14	9.000 8.910	51.5	180.00 179.00	25	364	430	15	614	768	M16X32	

NOTES :

- THESE DIMENSIONS MAY VARY BY 5mm. DUE TO VARIATIONS IN CASTING
- THESE DIMENSIONS MAY VARY BY ± 0.75 mm.

ALL DIMENSIONS ARE IN mm EXCEPT OTHER WISE STATED

* ALTERNATIVE TOP TERMINAL CAN BE PROVIDED IN 160L FRAME