

Triumph

the data protector..



SMF UPS Batteries



Today's global businesses demand a 24X7 uptime environment making Uninterruptible Power Supplies (UPS) an integral part of the infrastructure. Batteries are the single most critical element of UPS system. HBL POWER SYSTEMS takes pride in positioning itself as the industry leader in manufacturing reliable, safe, high-quality customized Sealed Maintenance Free battery for UPS.

UPGRADE IN TECHNOLOGY

Triumph UPS batteries use state of the art heavy duty grids with high purity specialized alloy along with Valve Regulated Lead Acid (VRLA) technology. These batteries are designed to suit long and frequent power failures.

SUPERIOR FEATURES & BENEFITS INCLUDE

Low Internal Resistance	High rate discharge performance Fast charge capability
Low Self discharge	Long shelf life
High Energy Density	Less weight
High Purity Specialized alloy	Long life
Deep Discharge Capability	Withstands frequent & long power failures

APPLICATIONS

UPS , Solar Power Equipment, Medical Instruments, Fire & Security Alarm Systems

DESIGN AND CONSTRUCTION FEATURES

Positive Plate:

Flat pasted type with lead calcium high tin alloy grid to resist corrosion & for longer life.

Negative Plate:

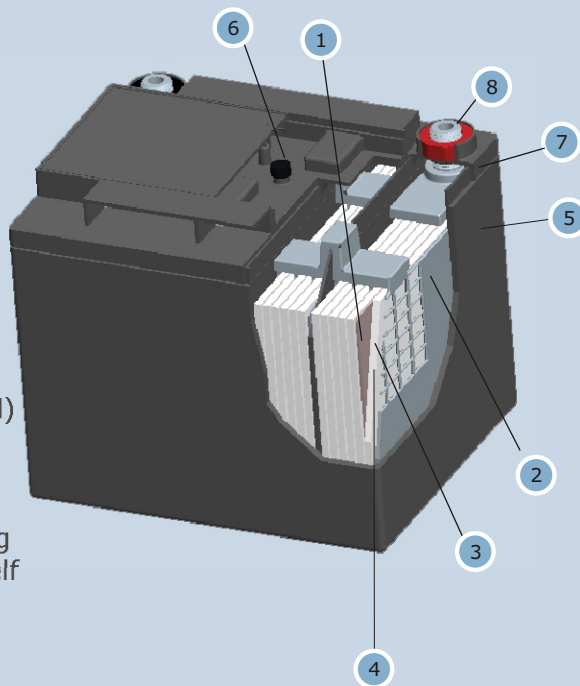
Flat pasted type with lead calcium alloy grid for maintenance free characteristics.

Separator:

High porosity absorbent type glass mat separator (AGM) with low internal resistance.

Electrolyte:

High purity sulphuric acid along with additives to maximize shelf life and to improve heat dissipation.



Container:

High impact ABS container for better strength.

Safety Valve :

Self releasing, pressure regulating EPDM valve.

Container and cover sealing:

Heat sealing / Special Epoxy sealing for better joint strength.

Terminals:

High conductivity brass terminals for better electrical conductivity .

RANGE OF 12V MONOBLOCS

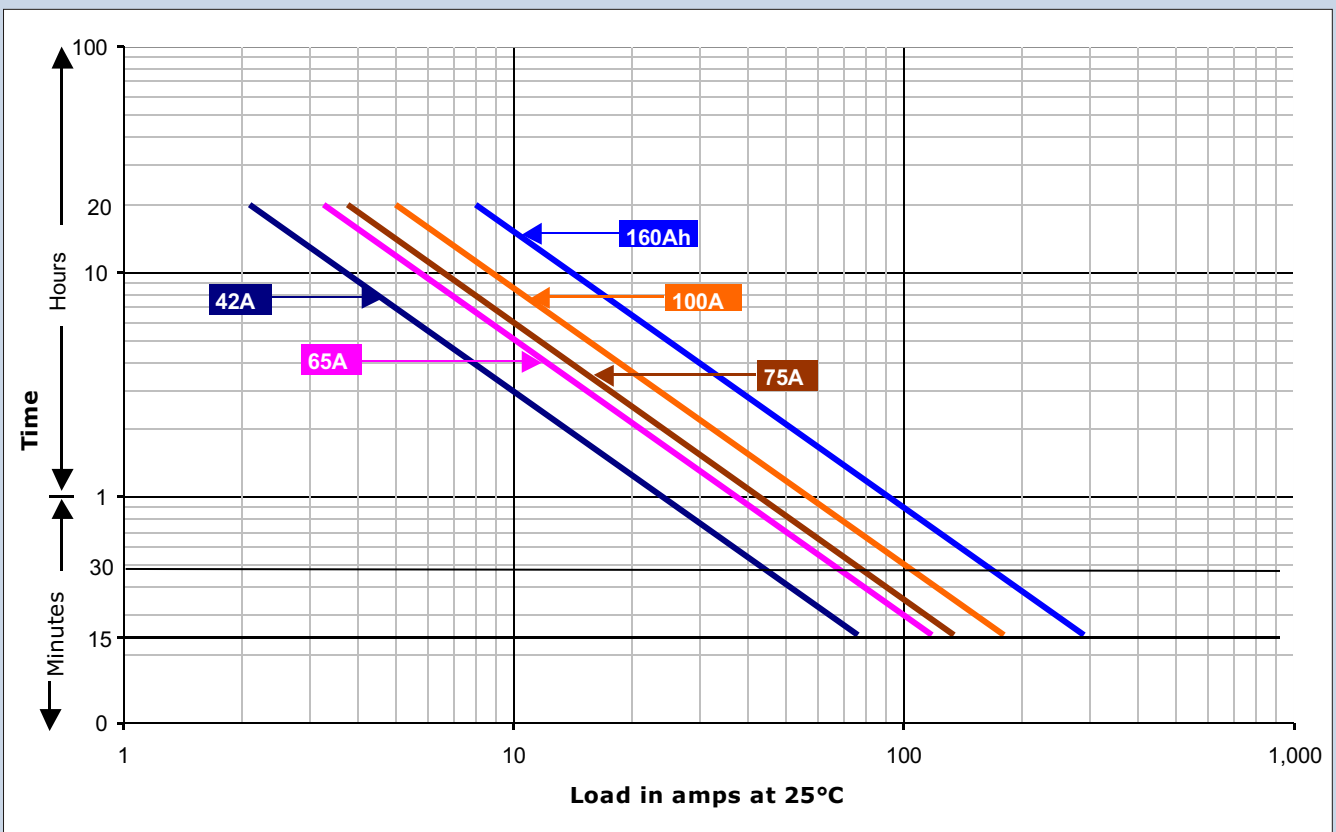
Model	Capacity (Ah)	Dimensions (mm)			Weight App (Kg)
		L	W	H	
TP 42	42	197	165	170	14
TP 65	65	330	168	176	21
TP 75	75	350	168	176	24
TP 100	100	410	175	225	32
TP 160	160	525	220	225	54

DISCHARGE CURRENTS AT 25°C

Model	Capacity	Discharge current in amps						
		15 min / 1.60V	30 min / 1.60V	1 hour / 1.60V	3 hour / 1.70V	5 hour / 1.75V	10 hour / 1.75V	20 hour / 1.75V
TP 42	42	76	44	26.4	10.50	6.84	3.90	2.10
TP 65	65	118	68	40.9	16.25	10.59	6.04	3.25
TP 75	75	135	79	47.2	18.75	12.21	6.96	3.75
TP 100	100	180	105	62.9	25.00	16.29	9.29	5.00
TP 160	160	290	168	100.6	40.00	26.06	14.86	8.00

The batteries conform to JIS 8702 standard.

BATTERY SELECTION CHART

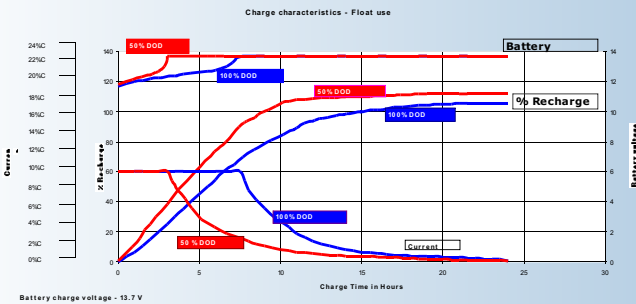


CHARGE PARAMETERS

APPLICATION	CHARGE SETTING for 12V Battery at 25°C
Cyclic	14.4 V
Stand-by	Boost: 14.0V & Float: 13.7V Single Setting: 13.8V
Current Limit (% of rated capacity)	Minimum: 10% Maximum: 20%
Charge Voltage compensation	18 mv to be reduced for every 1°C rise in temperature and vice versa.

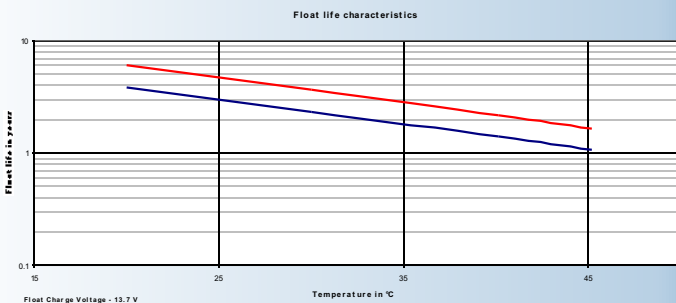
CHARGE CHARACTERISTICS

The graph shows the charge characteristics at a constant voltage 13.7 V with a current limit of 10% of rated capacity of the battery at a temperature of 25°C.



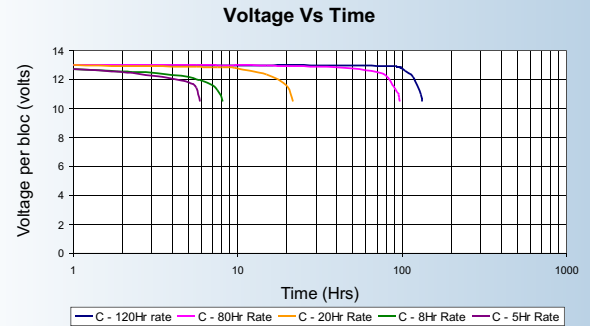
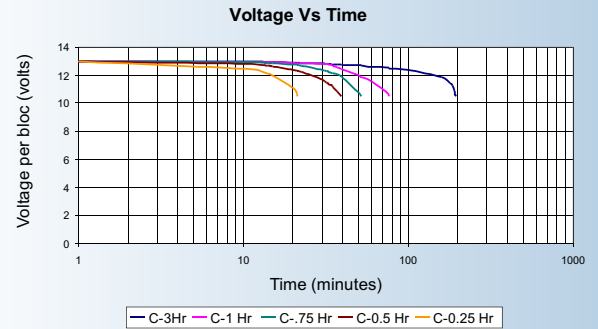
FLOAT LIFE

Battery float life varies with temperature of operation. Life reduces with the increase in operating temperature.



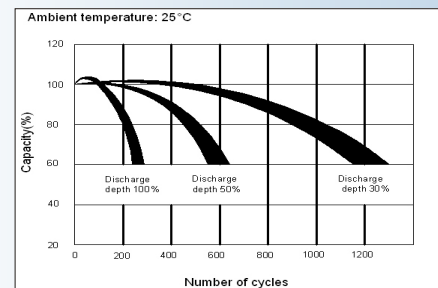
DISCHARGE CHARACTERISTICS

The curves in the figure illustrate the typical discharge characteristics at an ambient temperature of 25°C. The C20 expresses the nominal capacity of the battery at 20 hr discharge rate.



CYCLE LIFE

Battery cycle life is highly dependent on the depth of discharge, recharge and ambient temperature that the battery experiences during each cycle. The number of cycles related to the depth of discharge with respect to % capacity is shown in graph.



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