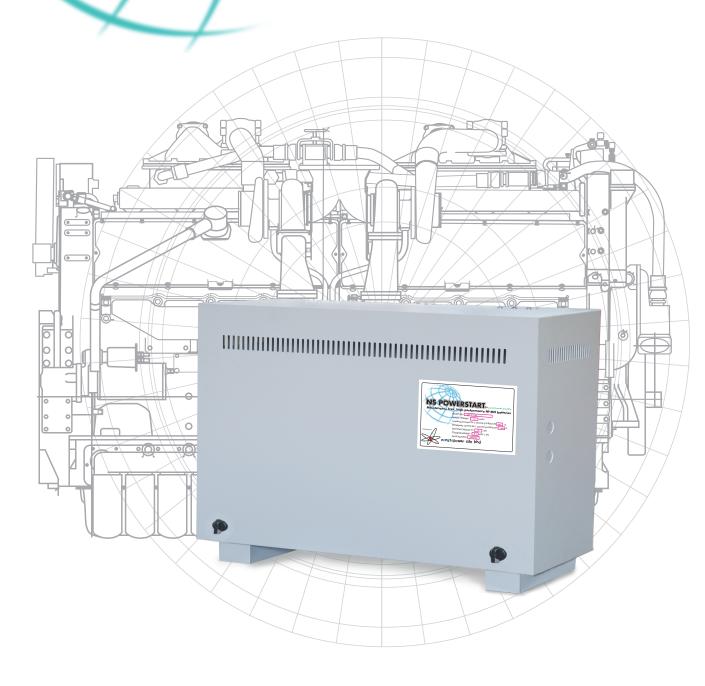
# NS POWERSTART® Environmental Friend

## Maintenance free, high performance NI-MH batterie







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## Powerful assurance for engine starting application

NS POWERSTART is where vital engine starting for emergency back-up duties need guaranteed instant power. The built-in reliability of sintered/pbe technology Nickel Metal Hydride battery packs complete with auto charge control and monitoring system provides you cost-effective trouble-free service with long life span.

## **Environmental friendly, non-toxic**

NS POWERSTART innovative design incorporate high performance nickel metal hydride batteries serve to preserve our environment with many times more superior in performance than other bulky, health harming battery systems commonly used in the market.

### High performance - best for engines

NS POWERSTART deliver more than 5 times the discharge capacity compared to traditional high rate nickel cadmium Battery with 5C discharge rate to an end voltage of 1.0 volt per cell.

### **Superior reliability**

NS POWERSTART with built-in reliability of sintered/pbe technology high performance nickel metal hydride batteries packs complete with auto charge control and monitoring system ensured cost-effective and trouble-free service during it's life span. There is no risk of sudden death battery.

## **Perfect battery sizing**

NS POWERSTART designed with modular battery packs ensured perfect battery sizing for various engine range and field upgradable.

### Maintenance free for life

NS POWERSTART equipped with valve regulated gas recombination nickel metal hydride battery technology do not require periodical checking of battery electrolyte level and topping up, hence reduce operating cost to a very minimum.

#### nonstopower **Performance Characteristics** Sdn. Bhd. (822490-P) **Single Cells** MPV Capacity Percentage Cycle Life 1.4 1 250 1.224 100 1.2 1 113 1.0 80 70 60 50 40 30 20 Capacity (%) <u>@</u> 60 € 0.8 Capacity ( 0.0 Aoltage 0.0 40 20 0.2 0.2C 0.2C 50 100 150 200 250 300 350 400 450 500 No. of Cycles **Discharge Current** Discharge Current Charge: 0.1C x 16 hrs Charge: 0.1C x 16 hrs Charge: 0.5C x 126 mins Discharge: 0.2C,1C,5C to 1.0V Discharge: 0.2C,1C,5C to 1.0V Discharge: 0.5C to 1.0V Temperature: 25°C Temperature: 25°C Temperature: 25°C Life Expectancy Discharge Curves of High Drain Cell Permanent Charge at 0.05C 1.4 Charge: 1C to - dV = 5mV1.35 1C Temperature: 25°C Years before end of life 1.3 3C 6 1.25 5 Voltage (V) 1.2 4 1.15 1.1 3 1.05 2 0.95 20 30 40 50 60 10 20 30 40 70 80 90 100 Cell Temperature (°C) Efficiency (%) End life - 75% of the nominal capacity

## **Battery Packs**

### **High drain series**

High drain series is specially customized for powerful delivery of electrical energy on demand. It was developed through an integration of comprehensive NiMH battery technology. Improvements in the positive and negative electrode technology, and in the current collecting system have further lowered the internal resistance and greatly enhance the 10C discharge characteristics of the high drain seires batteires.

## **Excellent high current discharge characteristics**

It is designed to meet the need for high current discharge, such as for engine cranking and can deliver a high current exceeding 10C.

### Reliable, long cycle life

In addition to excellent high rate discharge performance, high drain series batteries also provide hundreds of charge/discharge cycles, showing reliable cycle life characteristics.



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## **Battery Specifications**

## **Battery Packs**

Model No.	Nominal Voltage (V)	Capacity* AH at 5 hour rate	Weight (kg)	Cranking Current (A) 90 seconds @ V min 0.85V/cell	Breakaway Current (A) 1 second @ Vmin 0.65V/cell	Dimension (mm) H x W x D
NSP 21 H10X	12	21	21	192	402	520 x 330 x 260
NSP 28 H10X	12	28	23	256	536	520 x 330 x 260
NSP 35 H10X	12	35	25	320	670	520 x 330 x 260
NSP 42 H10X	12	42	27	384	804	520 x 330 x 260
NSP 21 H20X	24	21	26	192	402	520 x 330 x 260
NSP 28 H20X	24	28	29	256	536	520 x 330 x 260
NSP 35 H20X	24	35	32	320	670	520 x 330 x 260
NSP 42 H20X	24	42	35	384	804	520 x 600 x 260
NSP 49 H20X	24	49	38	448	938	520 x 600 x 260
NSP 56 H20X	24	56	41	512	1072	520 x 600 x 260
NSP 63 H20X	24	63	44	576	1206	520 x 600 x 260
NSP 70 H20X	24	70	47	640	1340	520 x 600 x 260
NSP 77 H20X	24	77	60	704	1474	520 x 600 x 260
NSP 84 H20X	24	84	63	<i>7</i> 68	1608	520 x 900 x 260
NSP 91 H20X	24	91	66	832	1742	520 x 900 x 260
NSP 98 H20X	24	98	69	896	1876	520 x 900 x 260
NSP 105 H20X	24	105	72	960	2010	520 x 900 x 260
NSP 112 H20X	24	112	75	1024	2144	520 x 900 x 260
NSP 119 H20X	24	119	78	1088	2278	520 x 900 x 260
NSP 126 H20X	24	126	86	1152	2412	520 x 1000 x 260
NSP 133 H20X	24	133	89	1216	2546	520 x 1000 x 260
NSP 140 H20X	24	140	92	1280	2680	520 x 1000 x 260
NSP 147 H20X	24	147	95	1344	2814	520 x 1000 x 260

Remarks: \*Capcity test condition: charge at 0.1C for 16 hrs. rest 15 mins, then discharge at 0.2C to 1.0V per cell. Specification subject to change without prior notice for product improvement.



nonstopower sdn bhd (822490-P)