



ULTRA-CAPACITOR JUMP STARTER

HYP A-X500

HypaStart X500 Mini | User, Charging & Jump-Starting Manual | 12 V



12 V

Starting system

1200 A

Peak current

6.0 L

Petrol vehicles up to

3.0 L

Diesel vehicles up to

Read this manual carefully before use and retain it for future reference.

WARNING: Incorrect jump-start connections can produce very high current and sparks. This can cause serious injury, battery explosion, fire or damage to vehicle electronics. Use this product only on compatible 12 V starting systems and follow the connection sequence in this manual.

1. Document information

This manual provides safety, charging, jump-starting, operating, inspection, troubleshooting, storage and support information for the Durst HypaStart X500 Mini, model HYPA-X500.

Item	Information
Product covered	Durst HypaStart X500 Mini, model HYPA-X500, 12 V compact ultra-capacitor jump starter.
Intended users	Vehicle owners, 4WD/adventure users, roadside personnel, workshop personnel and support staff who are competent to identify 12 V battery polarity and follow vehicle jump-starting precautions.
Installer qualifications	No permanent installation is specified. Normal use involves temporary extra-low-voltage connection to a vehicle starting battery. Do not modify fixed mains wiring or the product. Repairs and internal servicing are for qualified technical personnel only.
Market	Worldwide, subject to applicable local regulations and any market-specific instructions supplied by Durst.
Read before use	Read the complete manual before charging or connecting the HYPA-X500 to a vehicle.
Retention	Keep this manual with the product and pass it on if the product is transferred to another user.

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3. Symbols and conventions

Safety messages are ranked by risk level. Each signal word indicates the severity of the hazard.

Signal word	Meaning
DANGER	Immediate hazard that will cause death or serious injury if not avoided.
WARNING	Hazard that could cause death or serious injury.
CAUTION	Hazard that could cause minor or moderate injury.
NOTICE	Condition that could damage the product, vehicle, connected equipment or property.

3.1 Electrical and product conventions

	Meaning
+ / POSITIVE	Positive battery terminal or positive clamp connection.
- / NEGATIVE	Negative battery terminal or negative clamp connection.
12 V DC	12-volt direct-current vehicle starting system.
A	Ampere (electric current).
F	Farad (capacitance).
°C	Degrees Celsius.
USB-C	USB Type-C charging connector; HYPA-X500 input is listed as 5 V / 3 A.
Power symbol	Power / status-button symbol on the front control panel.

4. Package contents

Inspect the package before first use. The package contains:

Item	Quantity	Status / notes
HYPA-X500 main unit with integrated jump-start clamp leads	1	Supplied
USB to USB-C charging cable	1	Supplied
User manual	1	Supplied

4.1 Items the user may need to supply

- A suitable compliant USB power supply that provides 5 V / 3 A if USB charging is required.
- Eye protection and other PPE required by the worksite or vehicle manufacturer.
- Vehicle documentation showing the approved jump-start points, especially on vehicles with remote battery terminals or battery-management systems.

If any item is missing, damaged or appears to be the wrong model, do not use the product. Contact Durst before use.

5. Product overview

The HypaStart X500 Mini is a compact 12 V ultra-capacitor jump starter designed for 4WD, adventure, touring, camping, marine, motorcycle and everyday vehicle applications. Bringing capacitor jump-starting technology into a consumer-ready format, the HYPA-X500 delivers up to 1200 A peak current for emergency starting support without relying on a conventional internal lithium battery. The X500 Mini combines long cycle life, low-temperature starting capability, integrated safety protection and built-in LED lighting for reliable roadside and off-grid use.

5.1 Key features

- 12 V compact ultra-capacitor jump starter.
- 1200 A peak starting current.
- Suitable for up to 6.0 L petrol and 3.0 L diesel vehicles.
- Capacitor-based starting technology with no conventional internal lithium battery.
- 3000 F × 5 capacitor bank.
- Starts in temperatures down to -45 °C.
- 5 V / 3 A USB-C charging input.
- Integrated high-brightness LED light.
- Constant, strobe and SOS lighting modes.
- Built-in short-circuit, over-current, over-charge, over-voltage, over-temperature, reverse-polarity, reverse-charge and over-discharge protection.
- Compatible with all 12 V vehicle starter-battery chemistries.
- Designed for 4WD, adventure, touring, camping, marine, motorcycle, automotive and roadside emergency use.

5.2 Typical applications

- Everyday passenger vehicles and SUVs
- 4WD, adventure touring and camping
- Motorcycles with 12 V starting systems
- Marine applications with 12 V starting systems
- Roadside and workshop emergency starting

5.3 Intended use and limitations

- Use only with compatible 12 V vehicle starting systems.
- Compatible with all 12 V vehicle starter-battery chemistries. Always follow the vehicle manufacturer's approved jump-start procedure and connection points.
- Do not use on 24 V systems or other voltages.
- Do not use as a general-purpose DC power supply, battery charger or welding source.
- Do not use on a vehicle whose manufacturer prohibits jump starting or specifies a different connection procedure.
- Do not use in an explosive atmosphere or where flammable vapours are present.
- Do not use a damaged, leaking, impact-damaged, overheated or wet unit.

6. Safety instructions

WARNING: Vehicle batteries can deliver extremely high short-circuit current and may release explosive gas. Sparks, short circuits or incorrect polarity can cause fire, explosion, burns, eye injury and damage to vehicle electronics. Remove metal jewellery, keep sparks/flames away, identify battery polarity before connection and never allow the clamps to touch each other.

WARNING: Battery acid is corrosive. Contact can cause severe eye and skin injury. Wear eye protection when working around lead-acid batteries. If acid contacts skin or eyes, follow the battery manufacturer's first-aid instructions and seek medical assistance as required.

WARNING: The HYPA-X500 can retain stored electrical energy in its capacitor bank. Shorting connectors or opening the enclosure can cause high current, burns, fire or component rupture. Do not disassemble, pierce, short, modify or attempt internal repairs. Service must be performed by qualified technical personnel.

WARNING: Incorrect voltage can damage the product and vehicle. Connecting the HYPA-X500 to a 24 V system or unsupported equipment can cause overheating, component failure or fire. Use only on a 12 V starting system.

WARNING: Rotating engine parts and hot components can start moving or remain hot during jump starting. Hands, clothing and cables can be caught or burned. Keep the unit, clamps and leads clear of belts, fans, pulleys, exhaust components and other hot or moving parts before cranking the engine.

NOTICE: Water, conductive contamination and impact can damage the product. Internal insulation and protection functions may be compromised. Keep the product dry, do not immerse it, and have impact-damaged equipment inspected before reuse.

6.1 Immediate shutdown conditions

- Smoke, burning smell, unusual heat, swelling, cracking or leakage from the unit.
- Damaged insulation, exposed conductors, loose clamps or damaged connectors.
- Repeated fault indication after correct connection and cooling.
- Clamps, leads or connector becoming abnormally hot.
- Water ingress or the product being dropped or crushed.

6.2 Restrictions for untrained users

Do not allow children to use the HYPA-X500. A user must be able to correctly identify positive and negative battery terminals and follow both this manual and the vehicle manufacturer's jump-starting instructions.

7. Product identification



Figure 1. HYPA-X500 Diagram front & back view

Location / component	Description
Power / START button	Front-panel button used to switch/wake the unit, check stored charge, operate the LED work light and activate the low-voltage override when the connected vehicle battery is below 10 V.
Charge-level indicators	Four front-panel LEDs marked 25%, 50%, 75% and 100%.
Reverse-polarity indicator	Front-panel warning indicator for incorrect clamp polarity or connection.
Fault indicator	Front-panel warning triangle for a protection or fault condition.
USB-C input	5 V / 3 A charging input on the front control panel.
LED work light	Rear high-brightness lamp with constant, strobe and SOS modes.
Battery clamps and leads	Red positive clamp and black negative clamp, stored at the rear of the unit.

8. Technical specifications

Product specifications

Specification	Value
Model	HYPA-X500
Product Name	HypaStart X500 Mini
Product Type	Compact Ultra-Capacitor Jump Starter
Voltage	12 V
Peak Current	1200 A
Capacitors	3000 F × 5
Vehicle Suitability	Up to 6.0 L petrol, 3.0 L diesel
Battery Chemistry Compatibility	All 12 V vehicle starter-battery chemistries
Input	5 V / 3 A USB-C
Minimum Source Battery Voltage	10 V DC for the HYPA-X500 to fully charge from a connected vehicle battery
Lighting	High-brightness LED light with constant, strobe and SOS modes
Operating Temperature	-45 °C to +70 °C
Protection	Short Circuit, Over Current, Over Charge, Over Voltage, Over Temperature, Reverse Polarity, Reverse Charge, Over Discharge
Dimensions	328 × 113 × 228 mm
Weight	3.8 kg
Product Family	HypaStart
Variant	X500 Mini
Energy Storage	Ultra-capacitor; no conventional internal lithium battery
Country of Manufacture	China

9. Dimensions and mounting information

The HYPA-X500 is a portable product and does not require permanent mounting.

Item	Information
Overall dimensions	328 × 113 × 228 mm
Weight	3.8 kg
Mounting	Portable unit; no permanent mounting required
Ventilation	Keep openings clear. Do not cover the unit during charging or jump-starting.
Operating placement	Place on a stable, dry surface with leads clear of hot and moving engine components.

10. Before installation / connection

The HYPA-X500 does not require fixed installation. Complete the following checks before charging or connecting it to a vehicle.

1. Confirm the product label/model is HYPA-X500 and the vehicle uses a 12 V starting system.
2. Read the vehicle manufacturer's jump-start procedure and identify the approved positive and negative/earth connection points.
3. Inspect the HYPA-X500 enclosure, clamp leads, insulation, USB-C port and clamps for damage, contamination or looseness.
4. Confirm the clamps are separated and cannot touch each other or conductive bodywork.
5. Remove jewelry and keep flames, smoking materials and ignition sources away from the battery area.
6. Place the HYPA-X500 on a stable, dry surface where it cannot fall into the engine bay.
7. Route the leads so they cannot contact belts, fans, pulleys, exhaust components or other hot/moving parts.
8. Check the HYPA-X500 charge level. Ensure more than two charge-level LEDs are illuminated before a jump-start attempt.
9. If charging the HYPA-X500 from the vehicle battery, check the source battery voltage. A minimum of 10 V is required for the HYPA-X500 to successfully fully charge from the battery. If the vehicle battery is below 10 V, use the low-voltage override procedure in Section 14 when a jump start is required.

WARNING: Some vehicles have battery-management systems, remote jump terminals or specific grounding points. Connecting directly to the wrong battery terminal or chassis point may damage vehicle electronics or create sparks. **Always follow the vehicle manufacturer's approved jump-start connection points.**

11. Mechanical installation

Permanent mechanical installation is not applicable to the HYPA-X500. For safe temporary positioning during use:

1. Set the HYPA-X500 upright on a dry, stable surface near the approved jump-start points.
2. Keep the product outside the path of cooling fans, belts and other moving components.
3. Keep the enclosure and cables away from exhaust manifolds, turbochargers, radiator components and other hot surfaces.
4. Do not place the unit where it can fall, be crushed by a bonnet/hood or be driven over.
5. Confirm the clamp leads reach the approved connection points without tension or unsafe routing.

The HYPA-X500 is a portable unit. Do not drill, permanently mount or modify the enclosure.

12. Compliance and document control

The HYPA-X500 is a portable extra-low-voltage product for use with a 12 V vehicle starting system or a compliant 5 V USB power source. Follow all product markings and Australian electrical-safety and recycling requirements.

Item	Information
Electrical system	12 V vehicle starting system; 5 V / 3 A USB-C charging input
Mains USB power supply	Use only a compliant 5 V USB power source suitable for the Australian market
User software / firmware	No user software, app, account or firmware update is required for normal operation
End-of-life	Dispose through an appropriate electronic-waste or recycling service; do not place in the general waste stream if local rules prohibit it

13. Electrical connection

This section describes temporary jump-start connection only. It is not a permanent vehicle wiring installation.

WARNING: Reversed polarity or clamp-to-clamp contact can create an extremely high-current fault. This can cause sparks, burns, fire, battery explosion and electronic damage. **Confirm polarity before connection. Connect red to positive (+) and black to the approved negative (-) terminal or vehicle earth point specified by the vehicle manufacturer.**

13.1 Connection sequence

1. With the vehicle ignition OFF, position the HYPA-X500 close enough to the battery for the clamp leads to reach the terminals without being stretched.
2. Connect the RED clamp firmly to the vehicle battery positive (+) terminal or approved positive jump point.
3. Connect the BLACK clamp firmly to the vehicle battery negative (-) terminal or the approved chassis/earth point specified by the vehicle manufacturer.
4. Check that the reverse-polarity or fault indicator does not show an abnormal condition. If a fault is indicated, disconnect the clamps and correct the connection before continuing.
5. Ensure both clamps have clean, secure metal contact and that the cables coming from the rear of the HYPA-X500 are clear of hot surfaces, fans, belts and other moving parts.

13.2 Connection guide

Vehicle / source	HYPA-X500 connection	Purpose
12 V battery positive (+)	Red clamp	Positive jump-start connection
12 V battery negative (-) or approved vehicle earth	Black clamp	Negative / return connection
HYPA-X500 blue port	Clamp assembly connector	Connects the clamp assembly to the jump starter
Vehicle battery below 10 V	Low-voltage override using Power / START button	Enables a jump-start attempt when normal low-voltage detection prevents standard operation; follow Section 15.
5 V / 3 A USB power source	USB-C input	Charges the capacitor bank from USB

13.2 Disconnection sequence after a successful start

1. Once the engine has started and is running normally, remove the jump-start clamps within 30 seconds.
2. Remove the BLACK clamp from the negative/earth connection point.
3. Remove the RED clamp from the positive (+) terminal.
4. Once the clamps are disconnected, stow the leads so the clamps cannot contact each other.

14. Operating instructions

14.1 Check stored charge

1. Place the HYPA-X500 on a stable surface with the clamps separated.
2. Press the power button to display the stored charge level.
3. Read the four charge-level LEDs as shown in Section 15.
4. Before a jump-start attempt, ensure more than two charge-level LEDs are illuminated.

14.2 Charge from USB-C

NOTICE: An incorrect USB power supply can cause charging faults or damage. The HYPA-X500 input is specified as 5 V / 3 A. Use a compliant USB power source that provides the required 5 V output and a serviceable USB to USB-C cable. Do not force damaged connectors.

1. Place the HYPA-X500 on a dry, non-flammable, stable surface with ventilation openings unobstructed.
2. Connect the USB cable to a suitable 5 V USB power source.
3. Insert the USB-C connector into the HYPA-X500 USB-C input.
4. Observe the charge-level LEDs. During charging, the LEDs flash in sequence and the steadily illuminated LEDs indicate the current level.
5. Charging is complete when all four indicators illuminate and then turn off.
6. Disconnect the USB-C cable and inspect the port before storage or use.

14.3 Recover energy from a 12 V vehicle battery

1. Confirm the battery/vehicle system is 12 V, the battery is not physically damaged, frozen, leaking or otherwise unsafe to connect, and measure the battery voltage if practical.
2. Confirm the vehicle uses a **12 V starting system**. Do not connect the HYPA-X500 if the battery is physically damaged, frozen, leaking, swollen or otherwise unsafe.
3. Connect the **RED clamp** to the battery positive (+) terminal and the **BLACK clamp** to the battery negative (-) terminal or the vehicle manufacturer's approved earth point.
4. Allow the HYPA-X500 to recover energy from the vehicle battery while watching the **charge-level indicator LEDs**. If the X500 is charging normally, the indicated charge level should gradually increase as energy is transferred from the vehicle battery.
5. Wait until **more than two charge-level LEDs are illuminated** before attempting to start the vehicle.
6. If the charge-level LEDs do not increase, or the HYPA-X500 does not begin charging normally, the vehicle battery may be too discharged to fully charge the X500 through the normal battery-charging process. The minimum source-battery voltage for normal charging is **10 V**.
7. If normal charging does not occur, charge the HYPA-X500 through its **5 V / 3 A USB-C input** when available. If the immediate task is to jump-start the vehicle, use the **Low-Voltage Override** procedure below.

14.4 Low-voltage battery override (vehicle battery below 10 V)

WARNING: The low-voltage override bypasses normal low-voltage detection for a starting attempt. Incorrect polarity, damaged battery or unsafe connections can cause very high current, sparks, fire, battery explosion or vehicle damage. Use override only on a compatible 12 V system after confirming polarity and safe clamp connections. Stop immediately if a fault appears, the battery is damaged, or the clamps/leads become abnormally hot.

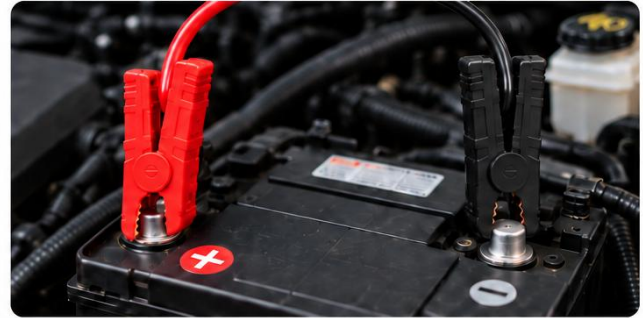
1. Confirm the vehicle uses a compatible 12 V starting system and that the vehicle battery is below 10 V.
2. Confirm the HYPA-X500 has sufficient stored charge for a jump-start attempt and connect it to the battery using the normal sequence: RED clamp to positive (+), BLACK clamp to negative (-) or the vehicle manufacturer's approved earth point.
3. Press and hold the Power / START button. Keep holding it until the green ready light illuminates.
4. When the green ready light is on, release the button and attempt to start the vehicle using the normal jump-start procedure.
5. After the engine starts, remove the clamps within 30 seconds and disconnect in the normal sequence. Do not make more than three consecutive start attempts and allow at least two minutes between attempts.

14.5 Jump-start a 12V vehicle

WARNING: Cranking an incompatible vehicle or repeatedly cranking can overheat the product, clamps, battery or starter circuit. Overheating and high current can cause burns, fire or component damage. Use only on a compatible 12 V vehicle, limit attempts as stated below, and stop immediately if cables/clamps become hot or a fault indication appears.



STEP 1 Connect the clamp assembly to the HYPA-X500 via the blue jump-start port.



STEP 2 Connect RED to battery positive (+), then BLACK to battery negative (-) or the vehicle manufacturer's approved earth point.



STEP 3 Start the vehicle. Stop the attempt if the engine does not crank normally, a fault appears or the leads/clamps become abnormally hot.



STEP 4 After the engine starts, remove the clamps within 30 seconds, then stow the clamps so they cannot touch each other.

Attempt limit: do not make more than three consecutive start attempts. Allow at least two minutes between attempts. If the vehicle still does not start, stop and diagnose the battery or vehicle fault rather than continuing to crank.

14.6 Use the LED work light

1. With the HYPA-X500 already switched on, press the ON / Power button once to activate the LED work light.
2. Press the ON / Power button again to toggle through the lighting modes: constant → strobe → SOS → off. Press again as required to continue cycling through the modes.
3. Do not aim the light at a driver's eyes or use strobe mode where it could create a safety hazard.

14.7 Power interruption / automatic behavior

The unit enters sleep mode when no load is connected. Press the Power / START button to wake the unit before use.

15. Controls, indicators and protection functions

15.1 Charge-level indicators

LED indication	Stored charge indication
One LED flashing	0% / recharge required
One LED illuminated	25%
Two LEDs illuminated	50%
Three LEDs illuminated	75%
Four LEDs illuminated	100%

During USB charging, the LEDs flash in sequence; LEDs that remain steadily illuminated represent the current level. Charging is complete when all four indicators illuminate and then turn off.

15.2 Front-panel controls and warnings

Item	Function	User response
Power / START button	Displays stored charge, operates the LED work light and activates the low-voltage override when held with a connected vehicle battery below 10 V.	Override: hold until the green ready light illuminates. Work light: with the unit already on, press once to activate, then press again to toggle constant → strobe → SOS → off.
Fault indicator lights up green	Confirms the low-voltage override is active for a starting attempt.	For a vehicle battery below 10 V, hold the Power / START button until the green light comes on before attempting to start.
Reverse-polarity indicator	Polarity/connection warning	Do not crank. Switch off/stop, disconnect clamps safely and correct polarity.
Fault indicator	General fault / protection indication	Stop. Check polarity, shorts, overheating and cable/clamp condition. Retry only after the cause is corrected.

15.3 Protection features

Protection	Purpose	Safe user action
Short circuit	Limits output during a short circuit.	Disconnect and remove the short-circuit condition before reuse.
Over current	Limits excessive output current.	Stop the attempt, allow the unit to cool and check vehicle compatibility.
Over charge	Protects the capacitor bank during charging.	Stop charging if abnormal behaviour occurs and use only the specified charging method.
Over voltage	Protects against excessive voltage.	Disconnect the source and verify a 12 V vehicle system or 5 V USB source.
Over temperature	Protects the unit at excessive temperature.	Stop operation and allow the unit to cool in a safe location.
Reverse polarity	Warns/protects against incorrect polarity.	Disconnect and reconnect with correct polarity.
Reverse charge	Protects against reverse current after starting.	Disconnect after starting as instructed.
Over discharge	Protects the capacitor bank from excessive discharge.	Recharge the unit before use.

If a fault indicator remains on after correcting the connection, allowing the unit to cool and recharging it, stop using the product and contact Durst support.

16. Maintenance and cleaning

The HYPA-X500 has no user-serviceable internal parts. Keep the enclosure closed.

16.1 Before each use

- Inspect the enclosure for cracks, deformation, leakage or impact damage.
- Inspect both clamps, jaw springs, copper/contact surfaces and lead insulation.
- Check the USB-C port for contamination, bent parts or moisture.
- Confirm the indicators and power button operate normally.

16.2 Cleaning

- Disconnect the HYPA-X500 from the vehicle and USB power source.
- Allow the unit to cool to ambient temperature.
- Wipe the enclosure with a soft, dry or lightly dampened cloth.
- Clean clamp contact surfaces with a dry non-conductive brush or cloth as required.
- Allow all surfaces to dry completely before storage or reconnection.

NOTICE: Liquid, solvents and abrasive cleaners can damage the enclosure, insulation and connectors. Damage can reduce safety and reliability. Do not immerse, pressure-wash or spray cleaners into the product. Do not use petrol, aggressive solvents or conductive cleaning fluids.

16.3 Service-only tasks

- Opening the enclosure
- Replacing internal capacitors or protective components
- Repairing internal wiring or PCB assemblies
- Replacing any internal fuse unless Durst supplies a specific approved service procedure

17. Storage and transport

17.1 Storage

- Disconnect the unit from all power sources and vehicle batteries before storage.
- Clean and dry the product before storage.
- Stow the clamps so the jaws cannot contact each other or conductive objects.
- Protect the USB-C port and leads from crushing, sharp bends and contamination.
- Store in a dry location away from direct sunlight, ignition sources and corrosive chemicals.
- Check the unit and charge level before planned use after extended storage.

The HYPA-X500 uses ultra-capacitor energy storage rather than a conventional internal lithium battery. A periodic lithium-battery maintenance-charge schedule is not required.

17.2 Transport

- Secure the product against movement, impact and crushing.
- Protect clamps and connectors from short circuit.
- Keep the product dry during transport.
- For commercial freight, air freight or returns, protect the clamps and connectors against short circuit and follow Durst and carrier packaging instructions.

18. Troubleshooting

Symptom, indicator or error	Possible cause	Safe corrective action	When to contact support
No LEDs / product appears off	Capacitor bank is discharged; button not operated correctly; internal fault	Charge via 5 V / 3 A USB-C and retry the charge check. Inspect for damage.	If the unit will not accept charge or remains unresponsive.
Will not charge by USB-C	Unsuitable USB supply/cable; damaged/dirty port; internal fault	Use a known serviceable 5 V / 3 A supply and cable; inspect/clean the port while disconnected.	If the port is loose/damaged or charging still fails.
Will not fully charge from vehicle battery	Source vehicle battery is below 10 V; poor clamp contact; source battery is damaged/discharged	Measure source battery voltage. Normal vehicle-battery charging requires at least 10 V. Improve clamp contact or charge the HYPA-X500 by 5 V / 3 A USB-C.	If the source battery is 10 V or above and the HYPA-X500 still will not recover charge.
Reverse-polarity indication	Clamps reversed or connected to wrong points	Do not crank. Disconnect safely and reconnect red to + and black to approved -/earth.	If indication remains with correct polarity.
Fault indicator	Short circuit, over-current, over-voltage, over-temperature or other protection event	Stop operation. Disconnect. Check for wrong voltage, clamp contact, shorting and overheating. Allow unit to cool.	If the fault repeats after the cause is corrected.
Vehicle does not crank	Insufficient HYPA-X500 charge; poor clamp contact; vehicle battery below 10 V without override active; vehicle/battery/starter fault; incompatible vehicle	Ensure more than two charge LEDs; improve clamp contact; verify a 12 V system. If the vehicle battery is below 10 V, use the approved low-voltage override procedure and wait for the green ready light before starting.	After the permitted attempt limit or if vehicle electrical faults are suspected.
Cranks slowly / reduced performance	Low stored charge; high-resistance connection; starter/battery fault; temperature or protection limiting output	Recharge, clean/reseat clamps and allow unit to recover/cool.	If performance remains low on a compatible vehicle.
Unexpected shutdown	Protection event or low stored charge	Disconnect, inspect and recharge. Allow to cool before reuse.	If repeated or accompanied by heat/smoke/odour.
Clamps or leads become hot	High-resistance connection, excessive current, damaged lead/clamp	Stop immediately, disconnect and allow to cool. Inspect contact surfaces and damage.	Before reuse if heat was severe or any insulation is damaged.
LED work light does not operate	Low charge or control fault	Ensure the unit is switched on. Press the ON / Power button once to activate the light, then press it again to toggle through the modes. Recharge the unit if required.	If other functions work but the light remains inoperative.
Repeated failure after correct use	Product or vehicle fault	Remove the product from service.	Contact Durst support with model, serial number, symptoms and photos if safe to obtain.

WARNING: Do not troubleshoot by bypassing polarity, over-current or other protection circuits, and do not use any low-voltage bypass method other than the approved button-operated override in Section 15. Unapproved protection bypass can cause fire, battery explosion, serious injury or vehicle damage. If normal checks and the approved override do not resolve the issue, stop and contact Durst.

19. Decommissioning and disposal

WARNING: The capacitor bank may retain electrical energy after the product is switched off. Opening the case or shorting terminals can cause high current, burns or component rupture. **Do not open the enclosure or deliberately short the clamps/connector to “discharge” the product.**

- Remove the HYPA-X500 from service if it is damaged, leaking, repeatedly faulting or no longer serviceable.
 - Disconnect it from the vehicle and USB power source.
 - Stow and insulate/protect the clamps from accidental contact.
 - Contact Durst or a suitable electronic-waste / hazardous-goods recycling service for disposal instructions appropriate to the capacitor assembly.
 - Recycle packaging materials through local services where available.
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20. Support information

Item	Information
Business	Durst Industries (Aust.) Pty Ltd
Address	1/11 Packard Ave, Castle Hill NSW 2154, Australia
Telephone	+61 2 9660 1755
Email	sales@durst.com.au
Website	durst.com.au
Business hours	Monday-Friday 8:30 am-5:00 pm; Saturday/Sunday closed
Model	HYP A-X500
Serial number location	Record the serial number shown on the product identification label before contacting support.

When contacting support, provide: model number, serial number, purchase date/proof of purchase, vehicle type and voltage, a clear description of the symptom, indicator behaviour and photos of damage/connection points if safe to obtain.

Service / repair requests are available through Durst's support website. Contact Durst before shipping the product.