



ELECTRIC VACUUM PUMPS

HELLAs Electric Vacuum Pump ensures consistent and effective brake power. Until recently, the majority of vehicle brake boosters used the vacuum generated from the manifold of the internal combustion engine. However, with today's advanced engine technologies (i.e. downsizing) or under certain operating conditions (i.e. cold start/engine warm-up phase), the vacuum provided by the engine is no longer sufficient. Furthermore, advanced engine technologies, such as electric or hybrid vehicles, are not capable of generating any vacuum pressure. HELLAs electric vacuum pump provides alternative or additional vacuum for these advancements in technology.

ADVANTAGES

- Reduced energy loss with "switch on-demand"
- Reduction of emissions and CO₂
- No mechanical interface required
- Maintenance free
- Supports a flexible vehicle platform design

HELLA delivers three different types of electric vacuum pumps (UP28, UP30, UP 32). They can be distinguished by their respective performance and by the size of the vehicle braking system.

UP28 VACUUM PUMP

| Technical Data | |
|--------------------------------------|---|
| Operating temperature range | - 40 °C ... + 100 °C (< 20 min. up to + 120 °C) |
| Maximum vacuum level | ≥ 86 % (below ambient pressure level) |
| Pressure build-up time at 100 hPa | pabs = 500 mbar in t ≤ 6 sec pabs = 300 mbar in t ≤ 12 sec |
| Ambient pressure | 12 V |
| Test volume | 3.2 l |
| Pump operating time | ≥ 600 hours |
| Weight | ~1 kg |

UP30 VACUUM PUMP

| Technical Data | |
|--------------------------------------|--|
| Operating temperature range | - 40 °C to 120 °C |
| Voltage range | 10 V ... 16 V |
| Maximum vacuum level | ≥ 86 % (below ambient pressure level) |
| Pressure build-up time at 100 hPa | pabs = 500 mbar in t ≤ 4 sec pabs = 300 mbar in t ≤ 8 sec |
| Ambient pressure | 12 V |
| Test volume | 4 l |
| Pump operating time | ≥ 1200 hours |
| Weight | ~ 1.7 kg |

UP32 VACUUM PUMP

| Technical Data | |
|--------------------------------------|--|
| Operating temperature range | - 40 °C to 120 °C |
| Voltage range | 10 V ... 16 V |
| Maximum vacuum level | ≥ 86 % (below ambient pressure level) |
| Pressure build-up time at 100 hPa | pabs = 500 mbar in t ≤ 3.4 sec pabs = 300 mbar in t ≤ 6.6 sec |
| Ambient pressure | 12 V |
| Test volume | 5 l |
| Pump operating time | ≥ 1200 hours |
| Weight | ~ 1.7 kg |

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