



US00D722576S

(12) **United States Design Patent**  
**Zimmer**(10) **Patent No.:** **US D722,576 S**  
(45) **Date of Patent:** \*\* Feb. 17, 2015(54) **HOUSING FOR ELECTRONIC MODULES  
WITH COOLING FINS**(71) Applicant: **Liebherr-Elektronik GmbH**, Lindau (DE)(72) Inventor: **Martin Zimmer**, Tettnang (DE)(73) Assignee: **Liebherr-Elektronik GmbH**, Lindau (DE)(\*\*) Term: **14 Years**(21) Appl. No.: **29/478,926**(22) Filed: **Jan. 9, 2014**(30) **Foreign Application Priority Data**

Jul. 12, 2013 (EP) ..... 2 273 391

(51) **LOC (10) Cl.** ..... **13-03**(52) **U.S. Cl.**USPC ..... **D13/179**(58) **Field of Classification Search**

CPC .... F28D 1/0246; F28D 1/0426; F28D 15/02; F28D 15/0266; F28D 15/0275; F28D 15/04; F28F 13/003; F28F 13/12; F28F 1/325; F04D 25/0613; F04D 25/068; F04D 29/281422; F21V 29/2293; F21V 29/2231; G03B 21/16; G06F 1/20; G06F 1/203; H01L 23/34; H01L 23/367; H01L 23/3672; H01L 23/40; H01L 23/4006; H01L 23/4093; H01L 23/427; H01L 23/467; H05K 7/20; H05K 7/20127; H05K 7/20145; H05K 7/20154; H05K 7/20172; H05K 7/20336

USPC ..... D13/179; 165/80.3, 104.26, 104.33, 165/122, 151, 185; 257/706, 707, 718-722; 361/695, 697, 700, 702, 704, 709, 710, 361/711, 719

See application file for complete search history.

(56)

**References Cited****U.S. PATENT DOCUMENTS**

|           |      |         |                     |           |
|-----------|------|---------|---------------------|-----------|
| 3,592,260 | A *  | 7/1971  | Berger .....        | 165/121   |
| D368,253  | S *  | 3/1996  | Graves .....        | D13/179   |
| D403,666  | S *  | 1/1999  | Maack et al. .....  | D13/179   |
| 6,144,092 | A *  | 11/2000 | Kappes et al. ..... | 257/718   |
| D449,587  | S *  | 10/2001 | Cronin .....        | D13/179   |
| 6,313,399 | B1 * | 11/2001 | Suntio et al. ..... | 174/17 VA |
| 6,326,761 | B1 * | 12/2001 | Tareilus .....      | 318/722   |
| 6,421,239 | B1 * | 7/2002  | Huang .....         | 361/696   |
| D483,019  | S *  | 12/2003 | Cook et al. .....   | D13/179   |
| 6,671,177 | B1 * | 12/2003 | Han .....           | 361/719   |
| 6,778,390 | B2 * | 8/2004  | Michael .....       | 361/695   |
| 6,847,525 | B1 * | 1/2005  | Smith et al. .....  | 361/703   |

(Continued)

*Primary Examiner* — Selina Sikder(74) *Attorney, Agent, or Firm* — Alleman Hall McCoy Russell & Tuttle LLP(57) **CLAIM**

The ornamental design for a housing for electronic modules with cooling fins, as shown and described.

**DESCRIPTION**

FIG. 1 is a front view of a design for a housing for electronic modules with cooling fins according to the present disclosure. FIG. 2 is a back view of the housing for electronic modules with cooling fins of FIG. 1.

FIG. 3 is a left view of the housing for electronic modules with cooling fins of FIG. 1.

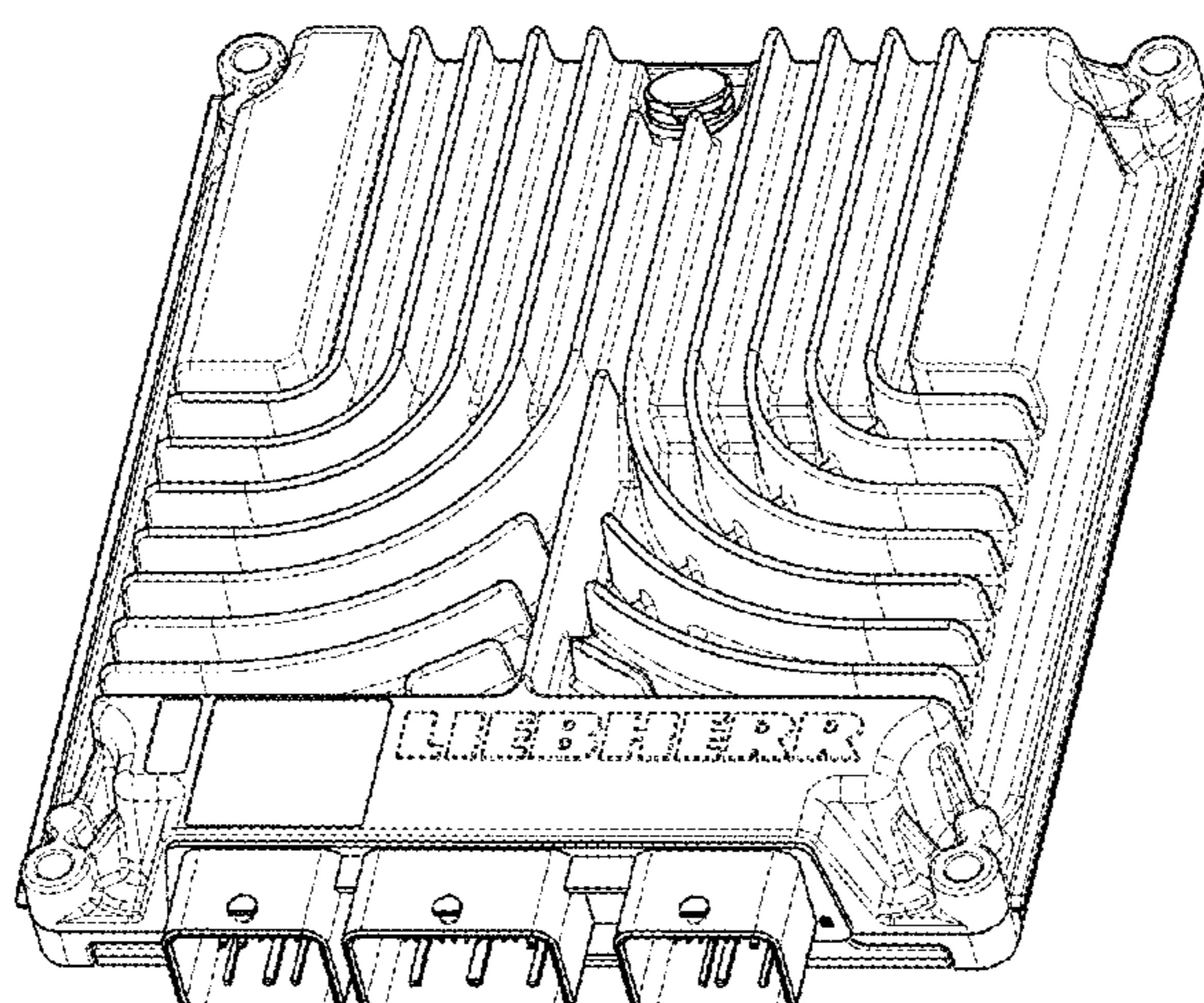
FIG. 4 is a right view of the housing for electronic modules with cooling fins of FIG. 1.

FIG. 5 is a top view of the housing for electronic modules with cooling fins of FIG. 1.

FIG. 6 is a bottom view of the housing for electronic modules with cooling fins of FIG. 1; and,

FIG. 7 is a perspective view of the housing for electronic modules with cooling fins of FIG. 1.

The solid lines in FIGS. 1-7 illustrate a housing for electronic modules with cooling fins according to the present disclosure. The broken lines form no part of the claimed design.

**1 Claim, 7 Drawing Sheets**

**US D722,576 S**

Page 2

---

|              |                                     |                                       |
|--------------|-------------------------------------|---------------------------------------|
| (56)         | <b>References Cited</b>             |                                       |
|              | U.S. PATENT DOCUMENTS               |                                       |
|              | 2008/0291632 A1*                    | 11/2008 Bremicker et al. .... 361/707 |
|              | 2011/0051370 A1*                    | 3/2011 Leutwein ..... 361/697         |
|              | 2012/0103589 A1*                    | 5/2012 Sohn et al. ..... 165/185      |
| D627,316 S * | 11/2010 Theisen et al. .... D13/182 | * cited by examiner                   |

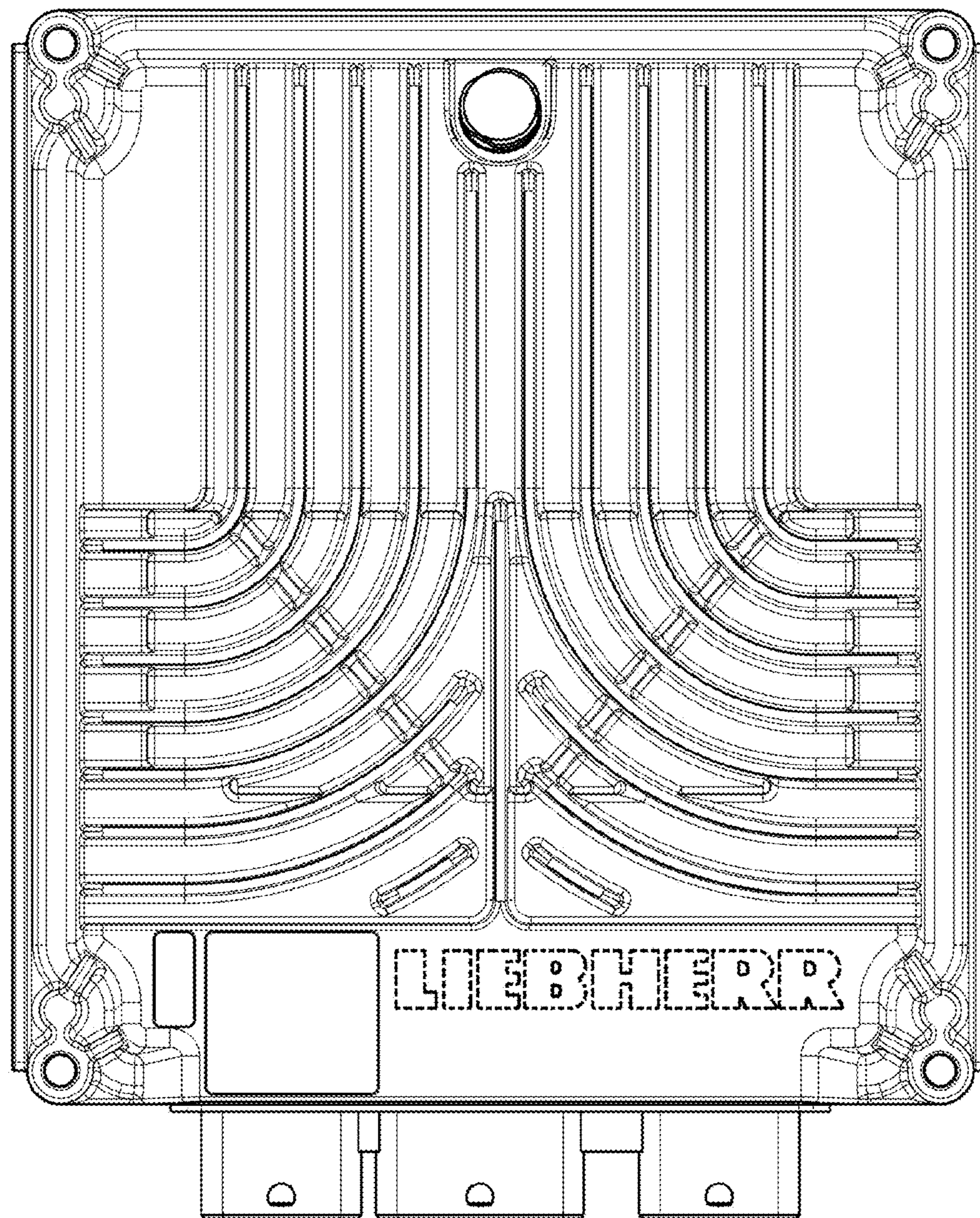
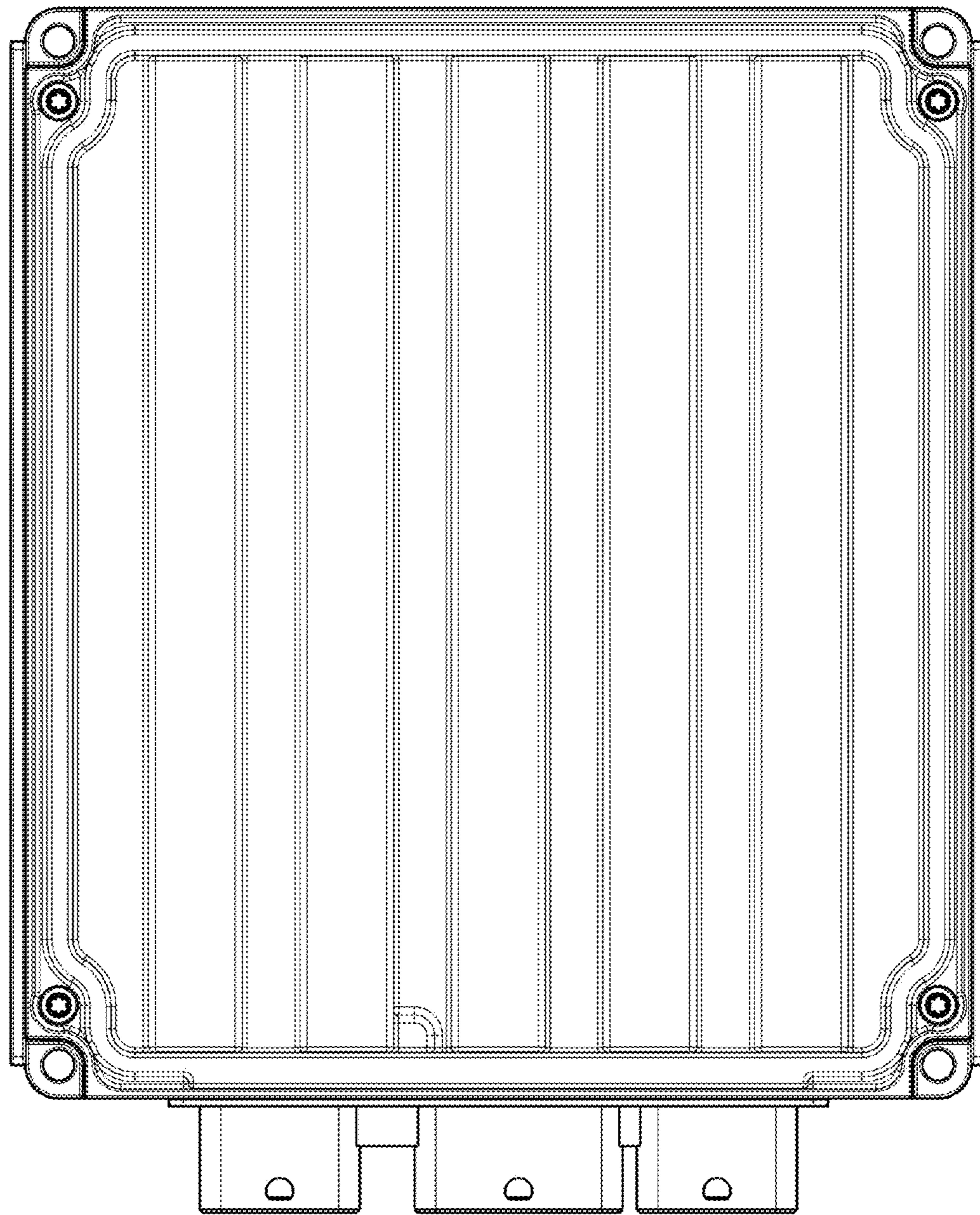
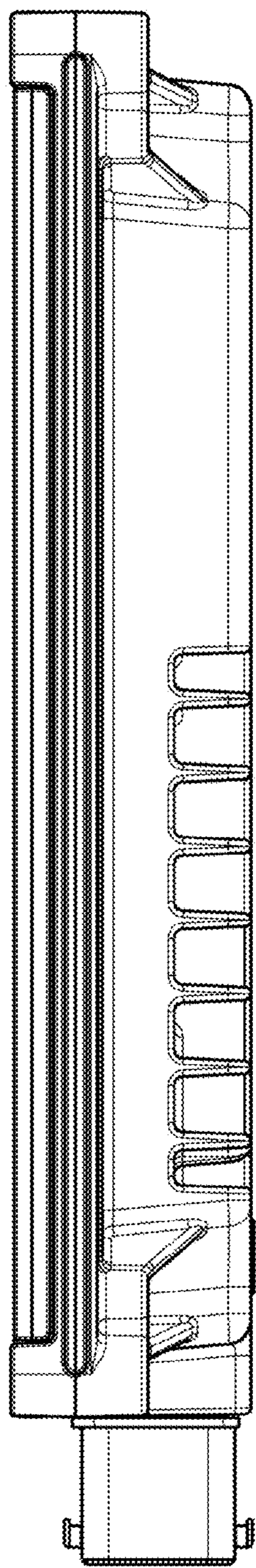


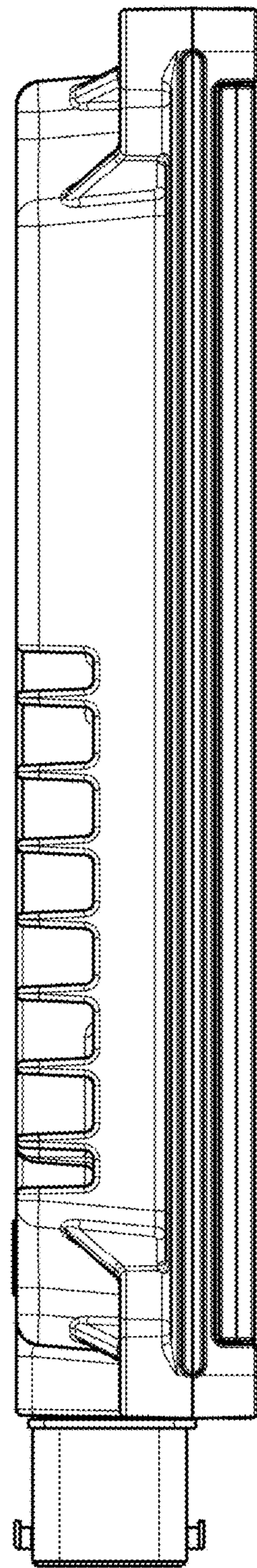
FIG. 1



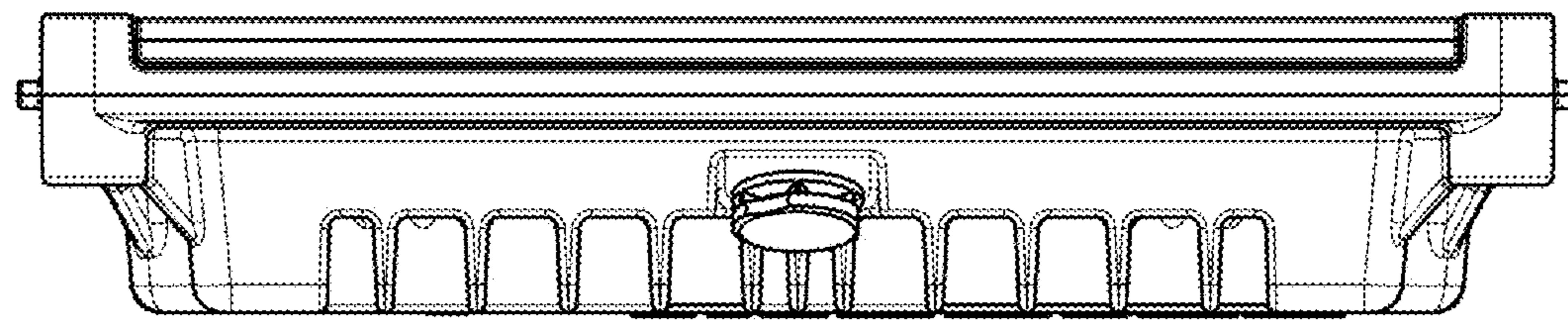
**FIG. 2**



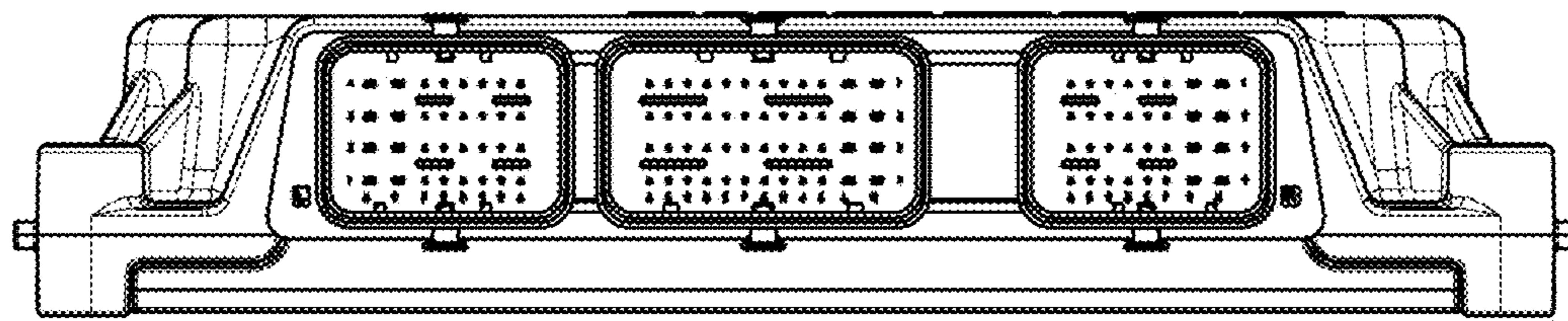
**FIG. 3**



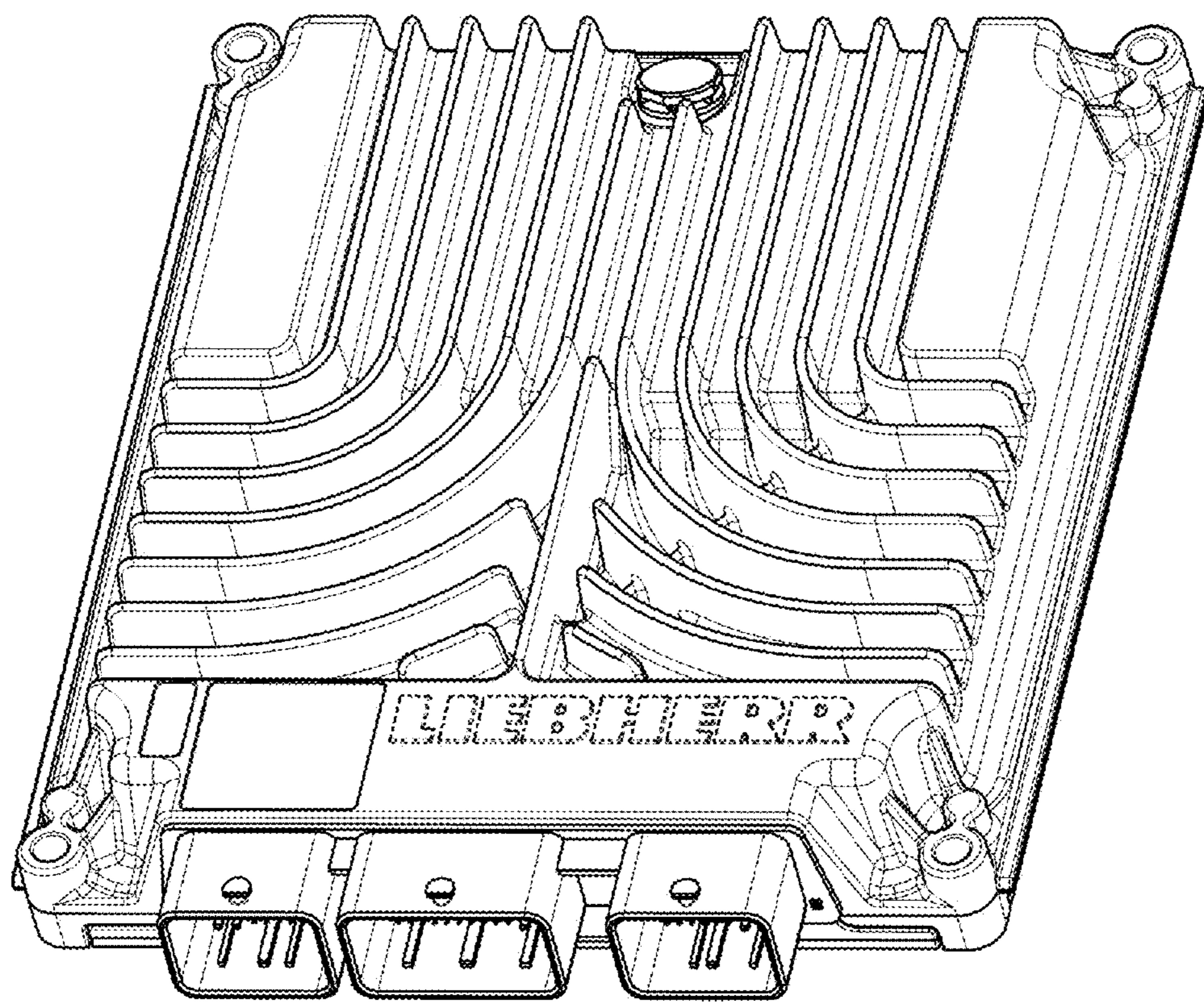
**FIG. 4**



**FIG. 5**



**FIG. 6**



**FIG. 7**