



Big Dutchman®



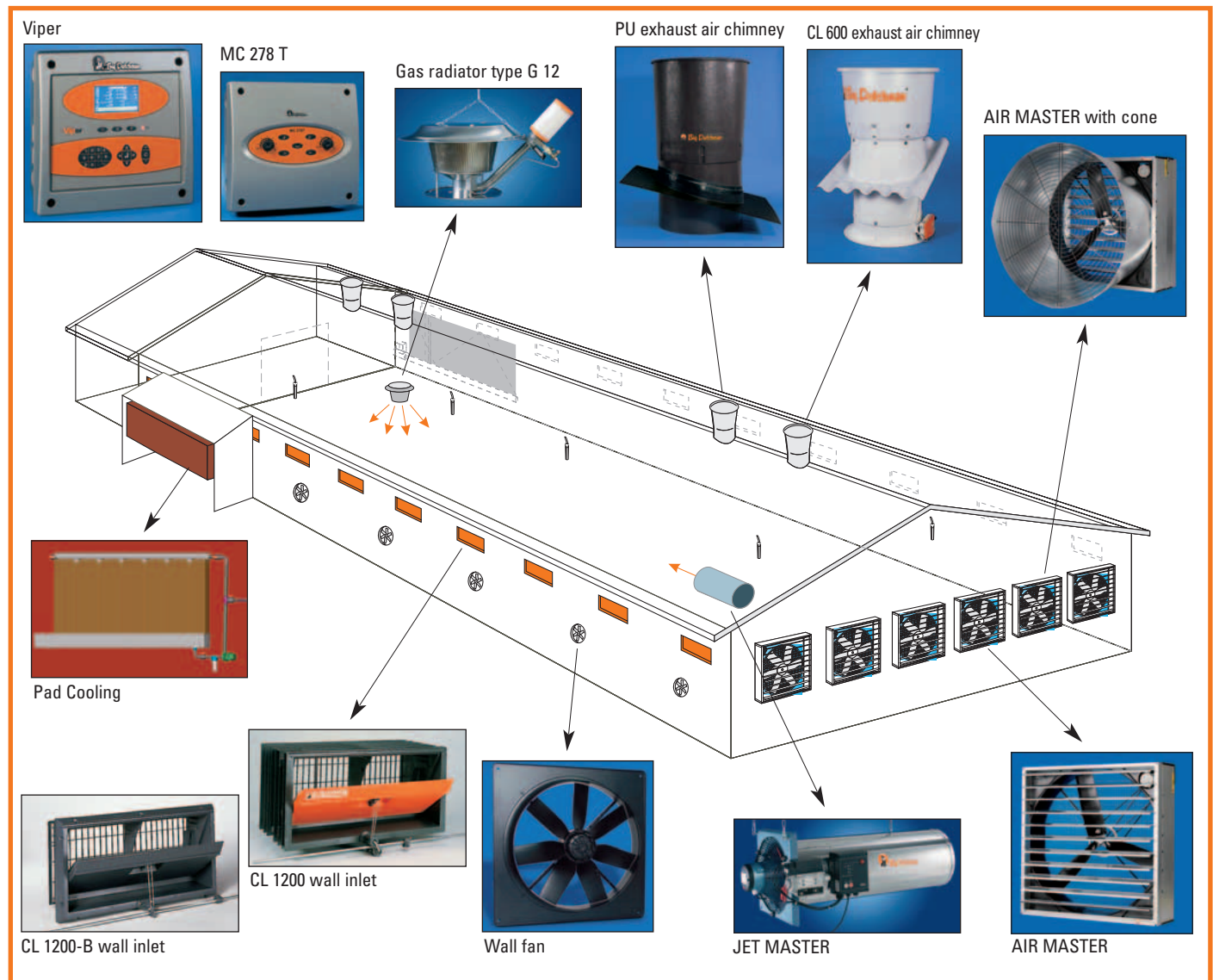
Viper

The flexible climate and production computer
for your poultry house

Viper – the modular climate and production computer for an optimal climate

Viper's climate control features include:

- connection of up to 8 temperature sensors;
- regulation of up to 6 room heaters;
- frost protection and inactive zone heating, i.e. if only one half of the house is to be heated, different brooding zones can be established, that means only one part of the house is heated whereas the temperature in the other half is kept at the frost protection level;
- control for up to 4 brooding zones (gas radiator);
- controls up to 16 MultiStep® groups (8 groups in side mode and 8 in tunnel mode);
- fan stage control (16 stages in side mode and 16 stages in tunnel mode);
- minimum ventilation in pulse-pause mode (optional);
- tunnel ventilation control, i.e. tunnel inlets are opened or closed corresponding to the required air speed;
- night set-back, temperature regulation at night for a certain period of time, subsequently, Viper switches back to normal control;
- cooling and humidification;
- temperature-controlled emergency opening function with MC 278 T- or MC 278 CT emergency opening;
- connection of a CO₂ sensor to actively regulate the minimum ventilation as a function of the CO₂ content of the house air;
- connection of additional sensors, for example for NH₃ or air speed control;
- active ventilating pressure control (optional); that is negative pressure sensors measure the pressure outside the house and the negative pressure inside the house and Viper controls the air supply based on these values;
- trend curves are displayed on the large LCD.



Climate control – Viper makes your dreams come true

Big Dutchman's newly developed **Viper** is a state-of-the-art climate computer that allows for modern and uncomplicated control of the entire house climate. That means Viper can be used for all established types of ventilation (natural, mechanic and combined). This also includes side-, cross-, tunnel- or Combi-

tunnel ventilation. Viper controls inlet and exhaust based on in-house and outside temperatures. Parameters can be adjusted to the age of the birds, to ensure that the birds always receive an ideal amount of fresh air.



Different control principles – what does that mean?

Climate control with **Viper** can be done in three different ways. These three modes of control can be freely selected by the operator.

- Basic Mode (simple control)
- Flex Mode (flexible control)
- Ultimatic Mode (sophisticated control).

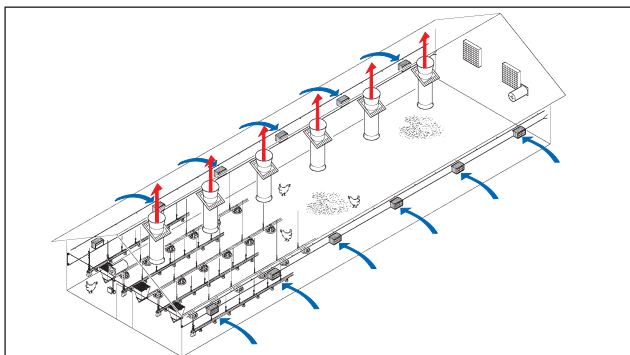
Simple control mechanisms can be regulated in Basic Mode. For special applications, the combination of

inlet and exhaust air can be individually adjusted in Flex Mode. If Ultimatic Mode is used, it is possible to use PID control (very accurate and sophisticated temperature control), to display the windchill factor in case of tunnel ventilation, or to display the amount of exhaust air in $m^3/h/bird$ ("real-air principle").

Examples of the use of Viper in the area of climate control

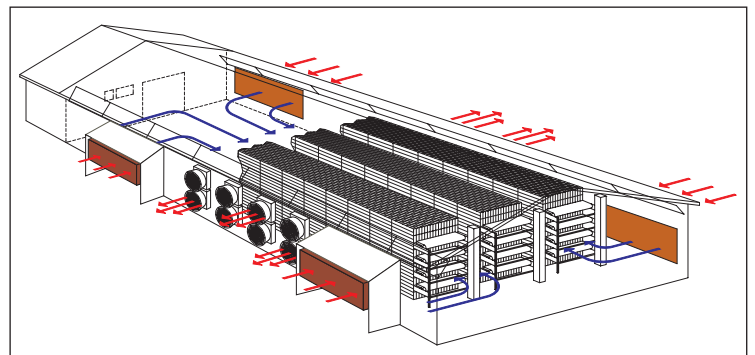
Side ventilation with

- CL 1200 wall inlets for fresh air supply;
- CL 600 exhaust air chimney for exhaust air removal;
- gas-powered JET MASTER for heating and
- the Fogging Cooler cooling system.



Tunnel ventilation with

- double tunnel (in case of very long houses) for fresh air supply;
- AIR MASTER with cone for exhaust air removal and
- the Pad Cooling cooling system.



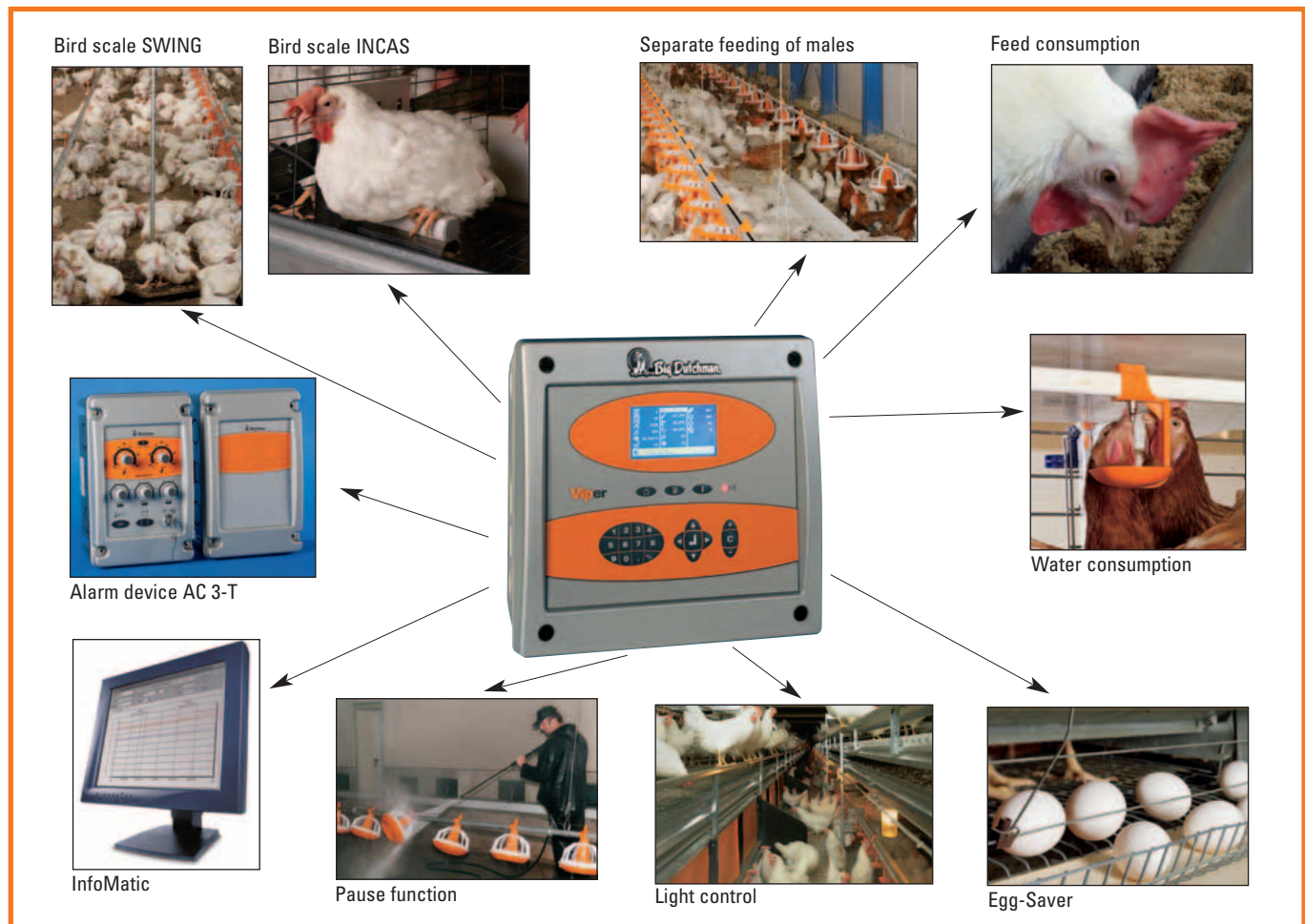
Viper – the production computer for more efficiency in the house

Viper is not only a climate computer, but also a full management and production computer. Viper registers all important data concerning production, growth, feed and water consumption, mortality and climate.

This allows you to react quickly to any changes occurring during production and to take the required action. This will lead to a better production performance and a higher yield.

Viper's production control features include:

- recording of feed consumption – total, daily and per bird – by means of silo or pulse scale;
- control of target feeding through two hoppers per house that can be filled with a defined amount of feed, for example for feeding of broiler breeders with separate male feeding;
- recording of water consumption – total, daily and per bird – by means of a water metre with pulse generator;
- connection to up to 2 bird scales (INCAS or SWING) for registration of bird weights;
- light control over freely-programmable timer with sunrise/sunset simulation, a change of the luminous intensity is also possible;
- up to 4 free timers for individual tasks can be connected, for example for Egg-Saver, zone lighting, water on/off;
- pause function to help the producers to optimize the phase between two batches, regarding soaking, cleaning, drying and pre-heating of the house;
- compatible to the PC management program InfoMatic for preparation and display of production and climate data in form of tables or graphs;
- activation of alarms in case of power failure, deviations of temperature, water or feed, as well as a minimum supply in the silo.



Additional features of Viper – large display, easy-to-operate

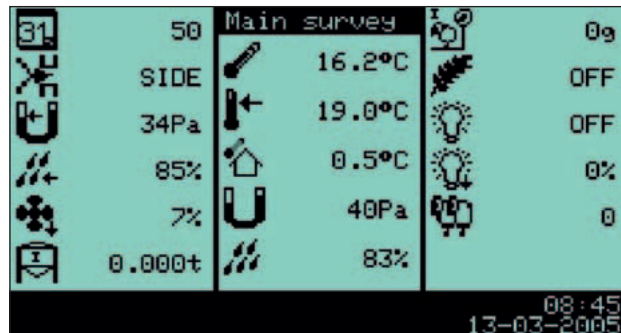
Viper features a large, graphic display on which all functions can easily be read. The icons used in the main menus are easy to interpret, which facilitates the operation.

As standard, the computer is delivered with the languages German and English. However, other languages are also available upon request, such as Danish, Romanian, Russian, Spanish, Thai ...

Example display – Viper main menu

All important data for climate and production control are displayed on 5 freely-selectable displays. This gives you a quick overview of the situation inside your house.

Viper can be password-protected for up to three different levels to provide more security and to ensure that unauthorized persons are not able to make any unauthorized changes to the settings.



Extension device

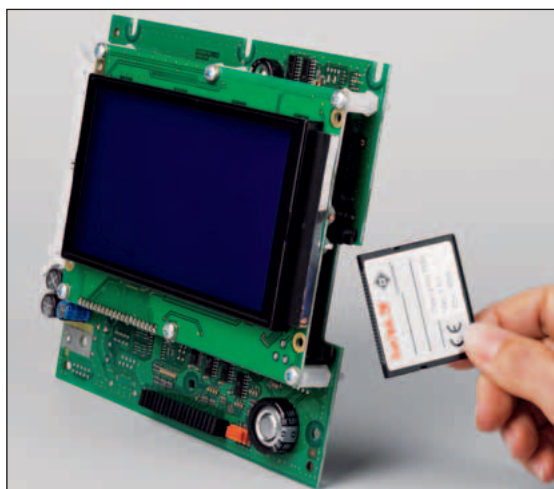
If the Viper standard package is not sufficient, it is possible to add on an extension allowing 10 to 40 additional relay modules to be incorporated with or without manual control. Any changes carried out manually are recorded by the software and can be looked up in the log files later.

There are also relay modules available that can be used for direct connection of single-phase fans or motors for up to 30 amp.



Compact Flash Card

It is possible to save data or settings (back-up) or easily install new programs with a compact flash card.



Sophisticated feed weighing

Viper can register feed consumption by means of different feed scales. These include:

- mechanical tilting scales and
- electronic silo scales by means of scale modules.

The scale module allows for connection of up to two silo scales with up to 8 load cells each. The silo content can easily be monitored; feed deliveries are registered and recorded.



Mechanical tilting scale



Silo scale with electronic load cells

Viper is available with different extension stages – adapted to your requirements

Type	Viper 710	Viper 1520	Viper 2330	Viper 1500/ Viper 2300	Viper X 30/ Viper X 40
A) Maximum number of analogue inputs	7	15	23	15/23	
- outside temperature sensors	1	1	1	1	
- inside temperature sensors, maximum	8	8	8	8	
- humidity sensors, maximum	2	2	2	2	
- Pad sensors*	1	1	1	1	
- negative pressure sensors	1	1	1	1	
- free sensors (NH ₃ , CO ₂ , O ₂ , air speed), maximum	4	4	4	4	
- CO ₂ sensors for control of minimum ventilation*	1	1	1	1	
- external signal 0-10 V for speed control	2	2	2	2	
- signal for CL 74 (servomotor at the chimney 0-10 V)	2	2	2	2	
- CL 74 V with feedback potentiometer for stepless exhaust air	2	2	2	2	
- fresh air servomotor feedback potentiometer	6	6	6	6	
- servomotor tunnel feedback potentiometer	2	2	2	2	
- water metre	1	1	1	1	
- sensor cross auger	1	1	1	1	
- counter input for pulse scale	1	1	1	1	
- bird scales	2	2	2	2	
- dimmer light, analogue output	1	1	1	1	
- heating, analogue output	6	6	6	6	
B) Maximum number of digital outputs	10	20	30		30/40
- contacts for heating	6	6	6		6
- contacts for gas radiators	4	4	4		4
- contacts for Pad Cooling	2	2	2		2
- contacts for spray cooling	2	2	2		2
- contacts for soaking	1	1	1		1
- contacts for wetting	1	1	1		1
- side mode groups for exhaust air in MultiStep	8	8	8		8
- tunnel mode groups for exhaust air in MultiStep	8	8	8		8
- side mode groups for exhaust air on/off	16	16	16		16
- tunnel mode groups for exhaust air tunnel stages	16	16	16		16
- side inlets (2 relays per 1 servomotor)	6	6	6		6
- tunnel inlets (2 relays per 1 servomotor)	2	2	2		2
- silo 1	1	1	1		1
- silo 2	1	1	1		1
- cross auger	1	1	1		1
- light on/off	1	1	1		1
- timers	4	4	4		4
- feeding	1	1	1		1
- alarm	1	1	1		1

It is not possible to use more analogue inputs or digital outputs than stated in row A and B.

The Viper scale module can be connected to all Viper extension stages.

Depending on the type of Viper, control of stepless fans can be done with internal or external triac.

* only in Ultimatic-Mode



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