

# VITOCROSSAL 200

Gas fired condensing boiler 404 to 628 kW

### Datasheet Part numbers and prices: see pricelist





# VITOCROSSAL 200 Type CT2

Gas fired condensing boiler for natural gas  $\mathsf{E}$  and LL With modulating MatriX cylinder burner

### Benefits at a glance

- Condensing Unit with MatriX cylinder burner as two-boiler system up to 1256 kW.
- Standard efficiency: up to 98% (H<sub>s</sub>)/109% (H<sub>i</sub>).
- The stainless steel, corrosion-resistant Inox-Crossal heating surface ensures high operational reliability and a long service life.
- Inox-Crossal heating surface for highly effective heat transfer and high condensation rate.



- Self-cleaning effect through smooth stainless steel surface.
- MatriX cylinder burner for particularly quiet and environmentally responsible operation with a modulating range of 33 to 100%.
- Optional open flue or balanced flue operation.
- Cascade with pre-fitted accessories on the hydraulic and flue gas side.
- (A) Inox-Crossal heating surface made from stainless steel
- B Highly effective thermal insulation
- C Water cooled stainless steel combustion chamber
- D Wide water galleries good natural circulation
- (E) Modulating MatriX cylinder burner

# **Boiler specification**

#### Specification

TµT <sub>k</sub> = 50/30 °C         KW         135-404         186-503         209-528           Rated thermal load         kW         127-381         158-474         198-593           Product ID         CE-0085 BS 0.399         95           Permiss. operating temperature         °C         95         95         95           Permiss. operating temperature         °C         95         95         95           Permiss. operating temperature         °C         10         110         110         110           I safety temperature)         -         -         -         -         -         -           I safety temperature         mm         1315         1444         1550         55         155         1	Rated output				
Ty/Te         Bol(6) °C         KW         123-370         153-460         192-575           Rated thermal load         kW         127-381         158-474         198-583           Product ID         CE-0085 BS 0399         95         95         95           Permissible flow temperature         °C         101         110         110           (= safety temperature)         °C         101         110         110           Permissible operating pressure         bar         5.5         5.5         5.5         5.5           Boiler obor         mm         1315         1494         1550         805         805           Width widt, boiler door         mm         805	T <sub>V</sub> /T <sub>R</sub> = 50/30 °C	kW	135-404	168-503	209-628
Rated thermal load         kW         127-381         158-474         198-593           Product D         CE-0085 BS 0399         95         195         1900         1930         1930         1930         1930         1930         1930         1930         1930         1930         1930         1940         196         1965         1965         1965         1965         1965         1965         1965         1965	T <sub>V</sub> /T <sub>R</sub> = 80/60 °C	kW	123-370	153-460	192-575
Product ID         CC-0085 BS 0.399           Permiss.operating temperature         °C         95         96         95           Permiss.operating temperature)         °C         110         110         110           (: safety temperature)          5.5         5.5         5.5           Boiler oboy dimensiona         mm         1315         1494         1550           Width excl. boiler door         mm         845         845         845           Height (incl. connectors)         mm         1300         13930         1930           Total length incl. burner hood (dimension b)         mm         1820         1900         2055           Total width incl. cylinder         mm         1200         12000         12000         12000           Total height         mm         1250         1300         1500         1000         1000         1000         1000         1000         1000         1000         1000         100         100         100         100         100         100         100         100         100         100         140         155         155         156         156         156         156         156         156         156         156	Rated thermal load	kW	127-381	158-474	198-593
Permissible flow temperature         'C         95         95         95           Permissible flow temperature         'C         110         110         110           (:safety temperature)         -         5.5         5.5         5.5           Boiler body dimensions         -         -         5.5         5.5           Length (dimension a)         mm         131         1494         1550           Width excl. boiler door         mm         805         805         805           Width excl. boiler door         mm         1320         1930         1930           Total length incl. burner hood (dimension b)         mm         1820         1900         2055           Total width incl. burner hood (dimension b)         mm         1820         1300         1500           Total width incl. burner hood (dimension b)         mm         1200         1200         1200           Total width incl. burner hood (dimension b)         mm         1850         1300         1500           Width         mm         1200         1200         1200         1200           Total width incl. burner thermal insulation and boiler control         kg         736         790         928           Unit	Product ID			CE-0085 BS 0399	
Permissible flow temperature         "C         110         110         110           Permissible operature         bar         5.5         5.5         5.5         5.5           Boiler body dimensions         mm         1315         1494         1550           Width excl. boiler door         mm         845         845         845           Height (incl. connectors)         mm         1300         1930         1930           Total dimensions         mm         1200         1200         2055           Total width incl. burner hood (dimension b)         mm         1820         1900         2055           Total width incl. burner hood (dimension b)         mm         1825         1985         1985           Foundations         mm         1250         1300         1500         1200           Width         mm         100         100         100         100         100           Width         mm         1250         1300         1500         900         900         900         900         900         900         900         900         900         900         900         900         900         900         900         900         900         900	Permiss. operating temperature	°C	95	95	95
(= safety temperature)	Permissible flow temperature	°C	110	110	110
Permissible operating pressure         bar         5.5         5.5         5.5         5.5           Boiler body dimensions         mm         1315         1494         1550           Width excl. boiler door         mm         805         805         805           Width excl. boiler door         mm         845         845         845           Height (incl. connectors)         mm         1930         1930         1930           Total length incl. burner hood (dimension b)         mm         1820         1900         2055           Total width incl. cylinder         mm         1200         1200         1200         1200           Total width incl. cylinder         mm         1925         1985         1985         1985           Foundations         -         -         0         100         1000         1000           Width         mm         900<	(= safety temperature)				
Boiler body dimensions         mm         1315         1494         1550           Length (dimension a)         mm         1315         1494         1550           Width incl. boiler door         mm         845         845         845           Width incl. boiler door         mm         845         845         845           Height (incl. connectors)         mm         1920         1920         1200           Total length incl. burner hood (dimension b)         mm         1820         1900         2055           Total width incl. burner hood (dimension b)         mm         1920         1200         1200           Total ength incl. burner hood (dimension b)         mm         1920         1200         1200           Total width incl. cylinder         mm         1920         1200         1200           Total width incl. cylinder         mm         1920         1200         1200           Midth exc.         mm         1920         1200         1200           Height         mm         1920         1200         1200           Total width incl. width incl. cylinder         mm         1920         1200           Boiler connections         gatod total setod total setod total setod total setod total setod	Permissible operating pressure	bar	5.5	5.5	5.5
Length (dimension a) mm 1315 1494 1550 Width excl. boiler door mm 845 845 845 Height (incl. connectors) mm 1930 1330 1330 Total length incl. burner hood (dimension b) mm 1820 1900 2055 Total width incl. dyinder mm 1200 1200 Total height mcl. dyinder mm 1985 1985 Foundations Foundations Length mm 100 100 100 Width M mm 900 900 900 Width M mm 100 100 Weight - boiler body kg 596 639 Total weight burner, thermal insulation and boiler control kg 736 Boiler connections Boiler forw 100 100 Boiler schemester 11 trees 260 324 405 Boiler connections Boiler forw PN 6 DN 100 100 Boiler forw 100 100 Boiler schemester 11 trees 260 324 405 Boiler connections Boiler forw PN 6 DN 100 100 Boiler schemester 11 trees 260 50 Stafty connection (safety valve) PN 16 DN 50 50 Drain R 11 mg 21/2 32/20 Stafty connection (safety valve) PN 16 DN 50 50 Drain R 11 mg 21/2 32/20 Stafty connection (safety valve) PN 16 DN 50 50 Drain R 11 mg 21/2 32/20 Stafty connection (safety valve) PN 6 DN 100 100 Drain C 20 Fue gas parameters <sup>11</sup> Temperature (at return temperature 60 °C) °C 75 To 5 To 5 Standard efficiency - at rated output °C 45 45 45 - at partial load kg/h 193 240 Standard Partial Pa	Boiler body dimensions				
Width excl. boiler door         mm         805         805         805           Height (incl. connectors)         mm         1930         1930         1930           Total length incl. burrer bood (dimension b)         mm         1820         1900         2055           Total length incl. burrer bood (dimension b)         mm         1820         1900         1200         1200           Total length incl. burrer bood (dimension b)         mm         1820         1900         1200	Length (dimension a)	mm	1315	1494	1550
Width Incl. boiler door         mm         845         845         845           Height (incl. connectors)         mm         1930         1930         1930           Total liength incl. burner hood (dimension b)         mm         1820         1900         2055           Total width incl. cylinder         mm         1200         1200         1200           Total width incl. cylinder         mm         1985         1985         1985           Foundations         mm         1250         1300         1500           Width         mm         900         900         900         900           Width         mm         100         100         100         100           Weight	Width excl. boiler door	mm	805	805	805
Height (incl. connectors)       mm       1930       1930       1930         Total dimensions       mm       1820       1900       2055         Total width incl. cylinder       mm       1200       1200       1200         Total kingth incl. burner hood (dimension b)       mm       1885       1985       1985         Foundations       mm       1250       1300       1500         Length       mm       100       000       900       900         Width       mm       100       100       100       100         Height       mm       100       100       100       100         Height       mm       100       100       100       100         Boiler body       kg       596       639       768         Total weight       -       -       -       -       -         - Boiler with burner, thermal insulation and boiler control       kg       736       790       928         unit       -	Width incl. boiler door	mm	845	845	845
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Height (incl. connectors)	mm	1930	1930	1930
Total length incl. burner hood (dimension b)         mm         1820         1900         2055           Total width incl. cylinder         mm         1200         1200         1200         1200           Foundations         mm         1985         1985         1985         1985           Foundations         mm         1250         1300         1500           Width         mm         900         900         900           Height         mm         100         100         100           Weight	Total dimensions				
Total width incl. cylinder         mm         1200         1200         1200           Total height         mm         1985         1985         1985           Fundations         nmm         1250         1300         1500           Length         mm         900         900         900           Height         mm         100         100         100           Weight	Total length incl. burner hood (dimension b)	mm	1820	1900	2055
Total height         mm         1985         1985         1985           Foundations         mm         1250         1300         1500           Width         mm         900         900         900           Height         mm         100         100         100           Weight	Total width incl. cylinder	mm	1200	1200	1200
Foundations         mm         1250         1300         1500           Length         mm         1250         1300         1500           Width         mm         900         900         900           Height         mm         100         100         100           Weight         -         -         -         -           - Boiler body         kg         596         639         768           Total weight         -         -         -         -           - Boiler body         kg         736         790         928           Ontert boiler water         litres         260         324         405           Boiler connections         -         -         -         -           Boiler flow         PN 6 DN         100         100         100           Solier flow         PN 6 DN         50         50         50           Drain         R         1"         1"         1"           Condensate drain, flue gas collector/siphon         Ømm         32/20         32/20           Flue gas parameters <sup>*1</sup> -         -         -         -              - at rated output         °C	Total height	mm	1985	1985	1985
Length         mm         1250         1300         1500           Width         mm         900         900         900         900           Height         mm         100         100         100           Weight         -         596         639         768           - Boiler body         kg         576         639         768           Total weight         -         -         506         324         405           Boiler connections         -         -         260         324         405           Boiler flow         PN 6 DN         100         100         100         100           Boiler flow         PN 6 DN         100         100         100         100           Safety connection (safety valve)         PN 16 DN         50         50         50           Drain         R         1*         1*         1*         1*           Condensate drain, flue gas collector/siphon         Ørm         32/20         32/20         32/20         32/20           Flue gas parameters*1         -         -         -         -         -         -         -         -         -         -         -         -	Foundations				
Width         mm         900         900         900           Height         mm         100         100         100           Weight         - <td< td=""><td>Length</td><td>mm</td><td>1250</td><td>1300</td><td>1500</td></td<>	Length	mm	1250	1300	1500
Height         mm         100         100         100           Weight         -	Width	mm	900	900	900
Weight - Boiler bodykg596639768- Boiler body- Boiler with burner, thermal insulation and boiler controlkg736790928unit- Boiler with burner, thermal insulation and boiler controlkg736790928unit- Boiler with burner, thermal insulation and boiler controlkg736790928Content boiler waterlitres260324405Boiler connections	Height	mm	100	100	100
− Boiler body       kg       596       639       768         Total weight       −       −       736       790       928         − Boiler with burner, thermal insulation and boiler control       kg       736       790       928         Content boiler water       litres       260       324       405         Boiler connections         0       100       100         Boiler return       PN 6 DN       100       100       100       100         Safety connection (safety valve)       PN 16 DN       50       50       50         Drain       R       1"       1"       1"       1"       1"         Condensate drain, flue gas collector/siphon       Ørm       32/20       32/20       32/20       32/20         Flue gas parameters*1           1"       1"       1"         Temperature (at return temperature 30 °C)       °C       45       45       45       45         - at rated output       °C       45       45       45       45         - at rated output       °C       75       75       75         Mass flow rate (for natural gas)       -       -       -<	Weight				
Total weight - Boiler with burner, thermal insulation and boiler control unitkg736790928Content boiler waterlitres260324405Boiler connections100100100Boiler flowPN 6 DN100100100100Boiler returnPN 6 DN100100100Safety connection (safety valve)PN 16 DN505050DrainR1"1"1"Condensate drain, flue gas collector/siphonØmm32/2032/2032/20Flue gas parameters*1Temperature (at return temperature 30 °C)4545- at rated output°C45454545- at rated output°C75757575Mass flow rate (for natural gas) at rated outputkg/h578719900-at partial load300300Available draughtPa7070707070707070Tiu gas connectionØmm250250250250250250250Standard efficiency at heating system temp. 40/30 °C%0.250.240.230.240.23	- Boiler body	kg	596	639	768
− Boiler with burner, thermal insulation and boiler control         kg         736         790         928           Content boiler water         litres         260         324         405           Boiler connections	Total weight				
unit         Itres         260         324         405           Boiler connections         -         <	- Boiler with burner, thermal insulation and boiler control	kg	736	790	928
Content boiler water         litres         260         324         405           Boiler connections         PN 6 DN         100         100         100           Boiler flow         PN 6 DN         100         100         100           Boiler return         PN 6 DN         100         100         100           Safety connection (safety valve)         PN 16 DN         50         50         50           Drain         R         1"         1"         1"         1"           Condensate drain, flue gas collector/siphon         Ømm         32/20         32/20         32/20           Flue gas parameters*1         Temperature (at return temperature 30 °C)         -         -         -         -           - at partial load         °C         445         445         445           - at partial load         °C         45         45         45           - at rated output         °C         75         75         75           Mass flow rate (for natural gas)         -         -         -         -           - at rated output         Kg/h         578         719         900           - at rated output         Pa         70         70         70	unit	-			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Content boiler water	litres	260	324	405
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Boiler connections				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Boiler flow	PN 6 DN	100	100	100
Safety connection (safety valve)         PN 16 DN         50         50           Drain         R         1"         1"         1"           Condensate drain, flue gas collector/siphon         Ømm         32/20         32/20         32/20           Flue gas parameters*1          1"         1"         1"         1"           Temperature (at return temperature 30 °C)         °C         45         45         45           - at partial load         °C         440         400         400           Temperature (at return temperature 60 °C)         °C         75         75         75           Mass flow rate (for natural gas)         -         -         -         -         -           - at partial load         kg/h         578         719         900         -         -           - at partial load         kg/h         193         240         300         Available draught         Pa         70         70         70         70           - at partial load         kg/h         193         240         300         Available draught         Pa         70         70         70         70         70         70         70         70         75         250         <	Boiler return	PN 6 DN	100	100	100
Drain         R         1"         1"         1"           Condensate drain, flue gas collector/siphon         Ømm         32/20         32/20         32/20           Flue gas parameters*1         Temperature (at return temperature 30 °C)         -         45         45         45           - at rated output         °C         445         445         45           - at partial load         °C         400         400         400           Temperature (at return temperature 60 °C)         °C         75         75         75           Mass flow rate (for natural gas)         -         -         -         1900         3000           - at partial load         kg/h         578         719         9000         3000           - at partial load         kg/h         193         240         3000         3000           Available draught         Pa         70         70         70         70         70           to the flue outlet*2         mbar         0.7         0.7         0.7         0.7         7           Flue gas connection         Ømm         250         250         250         250         250           Standard efficiency         up to 98 (H_s)/109 (H_i)	Safety connection (safety valve)	PN 16 DN	50	50	50
$\begin{array}{c c} \underline{Condensate drain, flue gas collector/siphon} & \underline{ 0} mm & \underline{32/20} & \underline{32/20} & \underline{32/20} \\ \hline \textbf{Flue gas parameters}^{*1} & & & & & & & & \\ \hline \text{Temperature (at return temperature 30 °C)} & & & & & & & & & \\ - at rated output & & ^{\circ}\text{C} & & 45 & 45 & & 45 \\ - at partial load & & ^{\circ}\text{C} & & 440 & 440 & & 440 \\ \hline \text{Temperature (at return temperature 60 °C)} & ^{\circ}\text{C} & & 75 & & 75 & & 75 \\ \hline \text{Mass flow rate (for natural gas)} & & & & & & & \\ - at rated output & & kg/h & 578 & 719 & 9000 \\ - at partial load & & kg/h & 193 & 2440 & 3000 \\ - at partial load & & kg/h & 193 & 2440 & 3000 \\ - at partial load & & kg/h & 193 & 2440 & 3000 \\ - at partial load & & & & & & & & \\ - at rated output & Pa & & 70 & 70 & 70 & 70 \\ to the flue outlet^{*2} & mbar & 0.7 & 0.7 & 0.7 & 0.7 \\ \hline \textbf{Flue gas connection} & & & & & & & & \\ at heating system temp. 40/30 ^{\circ}\text{C} & & & & & & & & & \\ at heating system temp. 75/60 ^{\circ}\text{C} & & & & & & & & & & \\ \hline \textbf{Standby loss q_{b,70}} & & & & & & & & & & & & & & \\ \hline \textbf{Standby loss q_{b,70}} & & & & & & & & & & & & & & & & & \\ \hline \end{array}$	Drain	R	1"	1"	1"
Flue gas parameters *1 Temperature (at return temperature $30 ^{\circ}\text{C}$ ) - at rated output - at rated output - at partial load Temperature (at return temperature $60 ^{\circ}\text{C}$ ) - at rated output - at partial load Available draught to the flue outlet*2 Flue gas connection Standard efficiency at heating system temp. 40/30 $^{\circ}$ C % % - at partial output - at heating system temp. 75/60 $^{\circ}$ C % - at heating system temp. 75/60 $^{\circ}$ C % - at heating system temp. 75/60 $^{\circ}$ C % - at heating system temp. 75/60 $^{\circ}$ C - at heating system temp. 75/60 $^{\circ}$ C - 25 - 2024 - 2023	Condensate drain, flue gas collector/siphon	Ømm	32/20	32/20	32/20
Temperature (at return temperature 30 °C)°C4545- at rated output°C454545- at partial load°C404040Temperature (at return temperature 60 °C)°C757575Mass flow rate (for natural gas)°C757575- at rated outputkg/h578719900- at partial loadkg/h193240300Available draughtPa707070to the flue outlet*2mbar0.70.70.7Flue gas connectionØ mm250250Standard efficiencyat heating system temp. 40/30 °C%up to 98 (H_s)/109 (H_i)at heating system temp. 75/60 °C%0.250.240.23	Flue gas parameters <sup>*1</sup>				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Temperature (at return temperature 30 °C)				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	<ul> <li>at rated output</li> </ul>	°C	45	45	45
Temperature (at return temperature 60 °C)°C7575Mass flow rate (for natural gas)kg/h578719- at rated outputkg/h578719- at partial loadkg/h193240Available draughtPa7070to the flue outlet*2mbar0.70.7Flue gas connectionStandard efficiencyat heating system temp. 40/30 °C%up to 98 (H_s)/109 (H_i)at heating system temp. 75/60 °C%0.250.24Standby loss q_b,70%0.250.240.23	<ul> <li>at partial load</li> </ul>	°C	40	40	40
Mass flow rate (for natural gas)kg/h578719900- at rated outputkg/h578719900- at partial loadkg/h193240300Available draughtPa707070to the flue outlet*2mbar0.70.70.7Flue gas connection $\emptyset$ mm250250250Standard efficiencyat heating system temp. 40/30 °C%up to 98 (H_s)/109 (H_i)at heating system temp. 75/60 °C%0.250.240.23	Temperature (at return temperature 60 °C)	°C	75	75	75
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Mass flow rate (for natural gas)				
- at partial load       kg/h       193       240       300         Available draught       Pa       70       70       70         to the flue outlet*2       mbar       0.7       0.7       0.7         Flue gas connection       Ø mm       250       250       250         Standard efficiency       at heating system temp. 40/30 °C       %       up to 98 (H_s)/109 (H_i)         at heating system temp. 75/60 °C       %       0.25       0.24       0.23	- at rated output	kg/h	578	719	900
Available draught         Pa         70         70         70           to the flue outlet*2         mbar         0.7         0.7         0.7         0.7           Flue gas connection         Ø mm         250         250         250         250           Standard efficiency         up to 98 (H_s)/109 (H_i)         up to 98 (H_s)/109 (H_i)         0.25         0.24         0.23	<ul> <li>at partial load</li> </ul>	kg/h	193	240	300
to the flue outlet*2         mbar         0.7         0.7         0.7           Flue gas connection         Ø mm         250         250         250         250           Standard efficiency at heating system temp. 40/30 °C         %         up to 98 (H_s)/109 (H_i)         up to 98 (H_s)/109 (H_i)           Standby loss q <sub>b,70</sub> %         0.25         0.24         0.23	Available draught	Ра	70	70	70
Flue gas connection         Ø mm         250         250         250           Standard efficiency at heating system temp. 40/30 °C         %         up to 98 (H <sub>s</sub> )/109 (H <sub>i</sub> ) up to 95 (H <sub>s</sub> )/106 (H <sub>i</sub> )           at heating system temp. 75/60 °C         %         0.25         0.24         0.23	to the flue outlet <sup>*2</sup>	mbar	0.7	0.7	0.7
Standard efficiency         up to 98 (H <sub>s</sub> )/109 (H <sub>i</sub> )           at heating system temp. 40/30 °C         %         up to 98 (H <sub>s</sub> )/109 (H <sub>i</sub> )           at heating system temp. 75/60 °C         %         up to 95 (H <sub>s</sub> )/106 (H <sub>i</sub> )           Standby loss q <sub>b,70</sub> %         0.25         0.24         0.23	Flue gas connection	Ø mm	250	250	250
at heating system temp. 40/30 °C     %     up to 98 (H <sub>s</sub> )/109 (H <sub>i</sub> )       at heating system temp. 75/60 °C     %     up to 95 (H <sub>s</sub> )/106 (H <sub>i</sub> )       Standby loss q <sub>b,70</sub> %     0.25     0.24     0.23	Standard efficiency				
at heating system temp. 75/60 °C         %         up to 95 (H <sub>s</sub> )/106 (H <sub>i</sub> )           Standby loss q <sub>b,70</sub> %         0.25         0.24         0.23	at heating system temp. 40/30 °C	%	1	up to 98 (H <sub>s</sub> )/109 (H <sub>i</sub>	)
Standby loss q <sub>b,70</sub> %         0.25         0.24         0.23	at heating system temp. 75/60 °C	%	1	up to 95 (H <sub>s</sub> )/106 (H <sub>i</sub>	)
	Standby loss q <sub>b,70</sub>	%	0.25	0.24	0.23

 $^{\ast 1}$  Calculating values for sizing the flue system to EN 13384, based on 10 % CO\_2 for natural gas.

Flue gas temperatures measured as gross values at 20 °C combustion air temperature.

5822 448 GB The details for partial load refer to 33 % of rated output. Calculate the flue gas mass flow rate accordingly when the partial load differs from that stated above (subject to burner mode).

 $^{*2}$ When using the Vitocrossal 200 with moisture-resistant stacks, the draught may be max. 0 Pa.

# Boiler specification (cont.)



AGA Flue gas connection

- DB G 1/2" fem. connection for pressure limiter
- E Drain
- KOA Condensate drain
- KR Boiler return
- KTS Boiler water temperature sensor

- KV Boiler flow
- RG Fem. connection G ½" for additional control equipment RLU Ventilation air connection ∅ 200/250 mm for balanced flue operation (accessory)
- SA Safety connection (safety valve)
- SA Salety connection (salety valve)

#### Dimensions

Rated output	kW	404	503	628
а	mm	1315	1390	1550
b	mm	1820	1900	2055

### Boiler specification (cont.)

#### Positioning

#### Minimum clearances



To enable convenient installation and maintenance, observe the stated clearance dimensions; maintain the minimum clearances where space is tight (dimensions in brackets). In the delivered condition, the boiler door opens to the left. You can reposition the hinge brackets so that the door can open to the r.h. side.

	Recommended clear-	In case of flue gas header
	ance excl. accessories	(accessory) for two-boiler
		systems
Dimen-	700 mm	1000 mm
sion a		
Dimen-	—	1550 mm
sion b		

- A Boiler
   B Burner with burner hood
   C Hydraulic system connection (accessory)
- D Flue gas header (accessory)
- E Anti-vibration boiler supports (accessory)

#### Positioning

- Avoid air contamination through halogenated hydrocarbons (e. g. as in sprays, paints, solvents and cleaning agents)
- Avoid very dusty conditions
- Avoid high levels of humidity
- Protect against frost and ensure good ventilation

Otherwise, the system may suffer faults and damage. In rooms where air contamination from halogenated hydrocarbons is to be expected, operate the boiler only in balanced flue mode.

# Boiler specification (cont.)

#### Pressure drop on the heating water side



The Vitocrossal 200 is only suitable for fully pumped hot water heating systems.

# Specification, MatriX cylinder burner

### Specification

Rated boiler output	kW	404	503	628
T <sub>V</sub> /T <sub>R</sub> 50/30 °C				
Burner output, lower/upper*1	kW	127/381	158/474	198/593
Burner type		VM IV-1	VM IV-2	VM IV-3
Product ID		CE	-0085 BS 0400	
Voltage	V		230	
Frequency	Hz		50	
Power consumption				
at upper output	W	575	530	880
at lower output	W	80	85	95
Version		Modulating		
Dimensions				
Length (dimension b)	mm	632	632	632
Total length (dimension c)	mm	927	967	1027
Length incl. burner hood (dimension a)	mm	653	653	653
Width (dimension d)	mm	844	844	844
Height (dimension e)	mm	935	935	935
Weight	kg	41	48	50
Burner with combination valve and burner h	ood			
Gas supply pressure	mbar	20	20	20
Gas connection	R	1¼"	11⁄4"	11⁄2"
Connection values relative to the max. loa	d with			
<ul> <li>Natural gas E (5.45 kWh/m<sup>3</sup>)</li> </ul>	m³/h	13.4-40.3	16.7-50.2	21.0-62.8
<ul> <li>Natural gas LL (8.13 kWh/m<sup>3</sup>)</li> </ul>	m³/h	15.6-46.9	19.4-58.3	24.4-73.0



- (A) Boiler door
  (B) Air pressure switch
  (C) Fan
  (D) Display and programming unit
  (E) Gas supply pipe
  (F) Gas train
  (G) Venturi mixing pipe
  (H) Rumor gauge accomply

- $\stackrel{\scriptstyle{\leftarrow}}{\boxplus}$  Burner gauze assembly
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<sup>\*1</sup>Corresponds to the rated thermal load of the boiler.

- (K) Ignition electrodes
  (L) Ionisation electrode
  (M) Thermal insulation block
  (N) Electronic ignition
  (O) Burner hood
  (P) Burner control unit
  (R) Rotary valve damper with servomotor

-N

0

**P** 

-**R** 

### **Delivered condition**

Boiler body with fitted mating flanges and gaskets to all connectors and fitted protective crate, plus flue gas header.

- 1 Carton with thermal insulation
- 1 Carton with MatriX cylinder burner
- 1 Carton with burner hood
- 1 Carton containing the boiler control unit and 1 bag with technical documentation
- 1 Product pack (boiler coding card and technical documentation)

#### **Control unit versions**

For single boiler systems:

without Vitocontrol control panel

Vitotronic 100 (type GC1)

for operation with a constant boiler water temperature or for weather-compensated operation in conjunction with a control panel (see below) or an external control unit.

Vitotronic 200 (type GW1)

for modulating boiler water temperature

without mixer control

Vitotronic 300 (type GW2)

for modulating boiler water temperature

with mixer control for up to two heating circuits with mixerwith Vitocontrol control panel

Vitotronic 100 (type GC1) and LON module (accessories) and

Vitocontrol control panel with Vitotronic 300-K (type MW1S) for weather-compensated operation and mixer control for up to 2 heating circuits with mixer and additional Vitotronic 200-H, type HK1S or HK3S for 1 or up to 3 heating circuits with mixer or

Control panel with external control unit (on site)

#### For multi-boiler systems:

(up to 4 boilers)

without Vitocontrol control panel

Vitotronic 100 (type GC1) and LON module in conjunction with a Vitotronic 300-K (type MW1)

for modulating boiler water temperature (one boiler is supplied with the standard controls for a multi-boiler system) and

Vitotronic 100 (type GC1) and LON module for modulating boiler water temperature

for each additional boiler in a multi-boiler system with Vitocontrol control panel

Vitotronic 100 (type GC1) and LON module for modulating boiler water temperature

for each boiler in a multi-boiler system and

**Vitocontrol control panel** with Vitotronic 300-K (type MW1S) for multi-boiler system, weather-compensated operation and mixer control for up to 2 heating circuits with mixer and additional Vitotronic 200-H, type HK1S or HK3S for 1 or up to 3 heating circuits with mixer

or

Control panel with external control unit (on site)

### **Boiler accessories**

#### Stainless steel flue gas header for two-boiler system

Connection to the flue system, optional outlet on the l.h. or r.h. side.

Example: (outlet on the r.h. side)



A Boiler flue connection with test ports and inspection aperture
 B Motorised flue gas damper
 C Sliding element, 250 mm
 Tee connector

Ē Sliding element, 500 mm

#### Dimensions

Internal diameter	mm	300	350	400
а	Ømm	300	350	400
b	mm		1550	
b <sub>max</sub>	mm		1680	
d	mm		703	

Selection	table	for	the	max.	draught	70	Pa
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Rated output (kW)	Diameter of the effective ver-
	tical flue pipe up to 30 metres
	(in mm)
2x370	Ø 300
2x460	Ø 350

F Longitudinal part 500 mm

G Inspection cover
 H Flue pipe with condensate drain
 K Flue gas system

Rated output (kW)	Diameter of the effective ver- tical flue pipe up to 30 metres (in mm)
2x575	Ø 400

Use a flue pipe with the same diameter as that of the flue gas header.

Secure the boiler flue connection with a floor connector and keep free of load or torque stresses.

#### Note

Details refer to open flue operation.

### Boiler accessories (cont.)

#### Hydraulic system pipework for two-boiler system



Dim. a: 1550 mm

Rated output in kW		Int. dia.
Single boiler	Dual-boiler sys-	
-	tem	
404	808	
503	1006	DN 100/125
628	1256	

A Flow manifoldB Mating flanges with gaskets

© Return collector

D Motorised butterfly valves

#### **Additional accessories**

See pricelist and "Boiler accessories" datasheet.

### **Operating conditions**

For water quality requirements, see the technical guide to this boiler.

-		
		Requirements
1.	Heating water flow rate	None
2.	Boiler return temperature (minimum value)	None
3.	Lower boiler water temperature	None
4.	Reduced mode	None – total reduction is possible
5.	Weekend setback	None – total reduction is possible

# **Design information**

#### Neutralisation

During condensation an acidic condensate with a pH value of between 3 and 4 is produced. This condensate can be neutralised by processing it through a neutralising system. For further information, see the technical guide to this boiler and "Boiler accessories" datasheet.

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# Design information (cont.)

#### Burner adjustment

MatriX cylinder burner tested at operating temperature and adjusted in the factory.

#### For further information on design/engineering

For further information regarding this boiler, see the technical guide and "Boiler accessories" datasheet.

# **Tested quality**

**CE** designation according to current EC Directives.



Subject to technical modifications.

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VITOCROSSAL 200