NXT-048 Burner

Technical Data Sheet

Designed for CBND-40E-200D-40, 40 K PPH sat.

48 MM BTU/H NG; 46 MM BTU/H #2 OIL

For indoor applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=8.34' W=6.69' Lturn=11.33' Ltot=13.00'	FD fan, fuel train and control panel are windbox mounted. Right- or left-hand drum arrangements available.	Fully Metered (FM), Parallel Positioning (PP) and Single Point Positioning (SP). All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 9% FGR	#2 Oil, 9% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	60	105	30	75
CO emissions ppmvd @3%O_2	50	75	50	75
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Fan motors of 100 HP and above are only offered with manual start/stop control. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

	Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Fan test block No FGR/FGR (HP)	Allowed furnace pressure @ MCR (inwc)	
	NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)		No FGR NG	9% FGR NG
FM	20	100	95	240	80	45	40/40 Oil & 40/50 NG	3.5	3.9
SP, PP	18	95	95	240	80	45			

Allowed furnace pressure given for NG fuel including 0.75 inwc margin. Oil-only application will result in slightly reduced furnace pressure. Pressure control valve not included. See piping spec for design ratings. See also general operating conditions for additional details.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Fan & motor specification
Commissioning plan

NXT-060 Burner

Technical Data Sheet

Designed for CBND-50E-200D-45, 50 K PPH sat.

60 MM BTU/H NG; 58 MM BTU/H #2 OIL

For indoor applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=8.34' W=6.69' Lturn=12.67' Ltot=14.67'	FD fan, fuel train and control panel are windbox mounted. Right- or left-hand drum arrangements available.	Fully Metered (FM), Parallel Positioning (PP) and Single Point Positioning (SP). All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 10% FGR	#2 Oil, 10% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	60	105	30	75
CO emissions ppmvd @3%O_2	50	75	50	75
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Fan motors of 100 HP and above are only offered with manual start/stop control. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

	Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Fan test block No FGR/FGR (HP)	Allowed furnace pressure @ MCR (inwc)	
	NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)		No FGR NG	10% FGR NG
FM	20	100	95	300	80	60	50/60 Oil & 60/75 NG	5.1	5.7
SP, PP	18	95	95	300	80	60			

Allowed furnace pressure given for NG fuel including 0.75 inwc margin. Oil-only application will result in slightly reduced furnace pressure. Pressure control valve not included. See piping spec for design ratings. See also general operating conditions for additional details.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Fan & motor specification
Commissioning plan

NXT-072 Burner

Technical Data Sheet

Designed for CBND-60E-200D-50, 60 K PPH sat.

72 MM BTU/H NG; 69 MM BTU/H #2 OIL

For indoor applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=8.34' W=6.69' Lturn=14.00' Ltot=16.33'	FD fan, fuel train and control panel are windbox mounted. Right- or left-hand drum arrangements available.	Fully Metered (FM), Parallel Positioning (PP) and Single Point Positioning (SP). All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 11% FGR	#2 Oil, 11% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	60	105	30	75
CO emissions ppmvd @3%O_2	50	75	50	75
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Fan motors of 100 HP and above are only offered with manual start/stop control. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

	Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Fan test block No FGR/FGR (HP)	Allowed furnace pressure @ MCR (inwc)	
	NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)		No FGR NG	11% FGR NG
FM	20	100	95	360	80	70	75/100 Oil & 75/100 NG	7.1	8.2
SP, PP	18	95	95	360	80	70			

Allowed furnace pressure given for NG fuel including 0.75 inwc margin. Oil-only application will result in slightly reduced furnace pressure. Pressure control valve not included. See piping spec for design ratings. See also general operating conditions for additional details.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Fan & motor specification
Commissioning plan

NXT-085 Burner

Technical Data Sheet

Designed for CBND-70E-300D-55, 70 K PPH sat.

85 MM BTU/H NG; 81 MM BTU/H #2 OIL

For indoor applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=8.97' W=6.69' Lturn=15.33' Ltot=18.00'	FD fan, fuel train and control panel are windbox mounted. Right- or left-hand drum arrangements available.	Fully Metered (FM), Parallel Positioning (PP) and Single Point Positioning (SP). All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 12% FGR	#2 Oil, 12% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	70	110	30	75
CO emissions ppmvd @3%O_2	50	75	50	75
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Fan motors of 100 HP and above are only offered with manual start/stop control. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

	Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Fan test block No FGR/FGR (HP)	Allowed furnace pressure @ MCR (inwc)	
	NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)		No FGR NG	12% FGR NG
FM	22	125	120	420	80	80	75/100 Oil & 75/100 NG	5.3	6.1
SP, PP	20	120	120	420	80	80			

Allowed furnace pressure given for NG fuel including 0.75 inwc margin. Oil-only application will result in slightly reduced furnace pressure. Pressure control valve not included. See piping spec for design ratings. See also general operating conditions for additional details.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Fan & motor specification
Commissioning plan

NXT-097 Burner

Technical Data Sheet

Designed for CBND-80E-300D-65, 80 K PPH sat.

97 MM BTU/H NG; 93 MM BTU/H #2 OIL

For indoor applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=8.97' W=6.69' Lturn=18.33' Ltot=21.33'	FD fan, fuel train and control panel are windbox mounted. Right- or left-hand drum arrangements available.	Fully Metered (FM), Parallel Positioning (PP) and Single Point Positioning (SP). All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 13% FGR	#2 Oil, 13% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	75	115	30	80
CO emissions ppmvd @3%O_2	50	75	50	75
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Fan motors of 100 HP and above are only offered with manual start/stop control. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

	Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Fan test block No FGR/FGR (HP)	Allowed furnace pressure @ MCR (inwc)	
	NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)		No FGR NG	13% FGR NG
FM	22	125	120	475	80	90	100/125 Oil & 100/150 NG	7.1	8.4
SP, PP	20	120	120	475	80	90			

Allowed furnace pressure given for NG fuel including 0.75 inwc margin. Oil-only application will result in slightly reduced furnace pressure. Pressure control valve not included. See piping spec for design ratings. See also general operating conditions for additional details.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Fan & motor specification
Commissioning plan

NXT-109 Burner

Technical Data Sheet

Designed for CBND-90E-300D-70, 90 K PPH sat.

109 MM BTU/H NG; 104 MM BTU/H #2 OIL

For indoor applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=8.97' W=6.69' Lturn=19.67' Ltot=23.00'	FD fan, fuel train and control panel are windbox mounted. Right- or left-hand drum arrangements available.	Fully Metered (FM), Parallel Positioning (PP) and Single Point Positioning (SP). All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 13% FGR	#2 Oil, 13% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	80	120	30	80
CO emissions ppmvd @3%O_2	50	75	50	75
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Fan motors of 100 HP and above are only offered with manual start/stop control. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

	Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Fan test block No FGR/FGR (HP)	Allowed furnace pressure @ MCR (inwc)	
	NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)		No FGR NG	13% FGR NG
FM	22	125	120	540	80	100	125/150 Oil & 125/150 NG	9.1	10.8
SP, PP	20	120	120	540	80	100			

Allowed furnace pressure given for NG fuel including 0.75 inwc margin. Oil-only application will result in slightly reduced furnace pressure. Pressure control valve not included. See piping spec for design ratings. See also general operating conditions for additional details.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Fan & motor specification
Commissioning plan

NXT-120 Burner

Technical Data Sheet

Designed for CBND-100E-400D-75, 100 K PPH sat.

120 MM BTU/H NG; 115 MM BTU/H #2 OIL

For 50ºF to 100ºF combustion air applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=9.04' W=6.69' Lturn=21.00' Ltot=24.67'	Designed for remote installation of FD fan, fuel train and control panel. Choice of right- or left-hand fuel rack. Choice of right, left, top, or bottom combustion air inlet flanged connection.	Fully Metered (FM) Combustion Control System (CCS) with O_2 trim. All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 13% FGR	#2 Oil, 13% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	80	120	30	85
CO emissions ppmvd @3%O_2	50	75	50	75
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Burner + Windbox DP No FGR/FGR	AHG DP No FGR/FGR
NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)	(in wc)	(in wc)
22	125	120	600	80	115	8.0/8.5 Oil & 8.2/8.7 NG	2.1/2.3 Oil & 3.3/3.6 NG

Pressure control valve not included. See piping spec for design ratings. See also general design data for additional details. All pressure drops are given at worst case conditions specified in the general design data. Burner + Windbox DP includes a windbox mounted opposed blade damper. Actual site DP may vary. DP shown does not include any design margin.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Commissioning plan

NXT-132 Burner

Technical Data Sheet

Designed for CBND-110E-400D-85, 110 K PPH sat.

132 MM BTU/H NG; 127 MM BTU/H #2 OIL

For 50ºF to 100ºF combustion air applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=9.04' W=6.69' Lturn=24.00' Ltot=28.00'	Designed for remote installation of FD fan, fuel train and control panel. Choice of right- or left-hand fuel rack. Choice of right, left, top, or bottom combustion air inlet flanged connection.	Fully Metered (FM) Combustion Control System (CCS) with O_2 trim. All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 14% FGR	#2 Oil, 14% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	80	120	30	85
CO emissions ppmvd @3%O_2	50	75	50	75
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Burner + Windbox DP No FGR/FGR	AHG DP No FGR/FGR
NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)	(in wc)	(in wc)
22	125	120	660	80	125	8.3/8.8 Oil & 8.5/9.0 NG	2.2/2.6 Oil & 3.4/3.1 NG

Pressure control valve not included. See piping spec for design ratings. See also general design data for additional details. All pressure drops are given at worst case conditions specified in the general design data. Burner + Windbox DP includes a windbox mounted opposed blade damper. Actual site DP may vary. DP shown does not include any design margin.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Commissioning plan

NXT-144 Burner

Technical Data Sheet

Designed for CBND-120E-400D-90, 120 K PPH sat.

144 MM BTU/H NG; 138 MM BTU/H #2 OIL

For 50ºF to 100ºF combustion air applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=9.04' W=6.69' Lturn=25.00' Ltot=29.67'	Designed for remote installation of FD fan, fuel train and control panel. Choice of right- or left-hand fuel rack. Choice of right, left, top, or bottom combustion air inlet flanged connection.	Fully Metered (FM) Combustion Control System (CCS) with O_2 trim. All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 15% FGR	#2 Oil, 15% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	85	125	30	90
CO emissions ppmvd @3%O_2	50	75	75	100
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Burner + Windbox DP No FGR/FGR	AHG DP No FGR/FGR
NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)	(in wc)	(in wc)
22	125	120	720	80	135	8.6/9.1 Oil & 8.8/9.3 NG	2.2/2.3 Oil & 3.0/3.2 NG

Pressure control valve not included. See piping spec for design ratings. See also general design data for additional details. All pressure drops are given at worst case conditions specified in the general design data. Burner + Windbox DP includes a windbox mounted opposed blade damper. Actual site DP may vary. DP shown does not include any design margin.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Commissioning plan

NXT-162 Burner

Technical Data Sheet

Designed for CBND-135E-500D-95, 135 K PPH sat.

162 MM BTU/H NG; 155 MM BTU/H #2 OIL

For 50ºF to 100ºF combustion air applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=10.11' W=6.69' Lturn=26.33' Ltot=31.33'	Designed for remote installation of FD fan, fuel train and control panel. Choice of right- or left-hand fuel rack. Choice of right, left, top, or bottom combustion air inlet flanged connection.	Fully Metered (FM) Combustion Control System (CCS) with O_2 trim. All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 16% FGR	#2 Oil, 16% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	85	130	30	90
CO emissions ppmvd @3%O_2	50	75	75	100
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Burner + Windbox DP No FGR/FGR	AHG DP No FGR/FGR
NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)	(in wc)	(in wc)
24	150	145	820	80	145	8.9/9.4 Oil & 9.1/9.6 NG	2.3/2.4 Oil & 2.8/3.4 NG

Pressure control valve not included. See piping spec for design ratings. See also general design data for additional details. All pressure drops are given at worst case conditions specified in the general design data. Burner + Windbox DP includes a windbox mounted opposed blade damper. Actual site DP may vary. DP shown does not include any design margin.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Commissioning plan

NXT-180 Burner

Technical Data Sheet

Designed for CBND-150E-500D-100, 150 K PPH sat.

180 MM BTU/H NG; 173 MM BTU/H #2 OIL

For 50ºF to 100ºF combustion air applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=10.11' W=6.69' Lturn=27.67' Ltot=33.00'	Designed for remote installation of FD fan, fuel train and control panel. Choice of right- or left-hand fuel rack. Choice of right, left, top, or bottom combustion air inlet flanged connection.	Fully Metered (FM) Combustion Control System (CCS) with O_2 trim. All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 17% FGR	#2 Oil, 17% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	90	130	30	95
CO emissions ppmvd @3%O_2	50	75	75	100
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Burner + Windbox DP No FGR/FGR	AHG DP No FGR/FGR
NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)	(in wc)	(in wc)
24	150	145	900	80	175	9.2/9.7 Oil & 9.4/9.9 NG	2.0/2.2 Oil & 3.4/3.6 NG

Pressure control valve not included. See piping spec for design ratings. See also general design data for additional details. All pressure drops are given at worst case conditions specified in the general design data. Burner + Windbox DP includes a windbox mounted opposed blade damper. Actual site DP may vary. DP shown does not include any design margin.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Commissioning plan

NXT-210 Burner

Technical Data Sheet

Designed for CBND-175E-500D-115, 175 K PPH sat.

210 MM BTU/H NG; 201 MM BTU/H #2 OIL

For 50ºF to 100ºF combustion air applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=10.11' W=6.69' Lturn=32.00' Ltot=38.00'	Designed for remote installation of FD fan, fuel train and control panel. Choice of right- or left-hand fuel rack. Choice of right, left, top, or bottom combustion air inlet flanged connection.	Fully Metered (FM) Combustion Control System (CCS) with O_2 trim. All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 17% FGR	#2 Oil, 17% FGR
Excess Air %*	15	15	15	15
NOx emissions ppmvd @3%O_2	90	130	30	95
CO emissions ppmvd @3%O_2	50	75	75	100
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Burner + Windbox DP No FGR/FGR	AHG DP No FGR/FGR
NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)	(in wc)	(in wc)
24	150	145	1040	80	200	9.5/10.0 Oil & 9.7/10.2 NG	2.8/3.0 Oil & 3.5/3.7 NG

Pressure control valve not included. See piping spec for design ratings. See also general design data for additional details. All pressure drops are given at worst case conditions specified in the general design data. Burner + Windbox DP includes a windbox mounted opposed blade damper. Actual site DP may vary. DP shown does not include any design margin.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Commissioning plan

NXT-240 Burner

Technical Data Sheet

Designed for CBND-200E-600D-120, 200 K PPH sat.

240 MM BTU/H NG; 230 MM BTU/H #2 OIL

For 50ºF to 100ºF combustion air applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=10.09' W=6.69' Lturn=32.67' Ltot=39.67'	Designed for remote installation of FD fan, fuel train and control panel. Choice of right- or left-hand fuel rack. Choice of right, left, top, or bottom combustion air inlet flanged connection.	Fully Metered (FM) Combustion Control System (CCS) with O_2 trim. All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 17.5% FGR	#2 Oil, 17.5% FGR
Excess Air %*	15	17.5	15	17.5
NOx emissions ppmvd @3%O_2	95	130	30	95
CO emissions ppmvd @3%O_2	50	75	75	100
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Burner + Windbox DP No FGR/FGR	AHG DP No FGR/FGR
NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)	(in wc)	(in wc)
26	150	145	1200	80	230	9.8/10.3 Oil & 10.0/10.5 NG	2.9/3.0 Oil & 3.5/3.7 NG

Pressure control valve not included. See piping spec for design ratings. See also general design data for additional details. All pressure drops are given at worst case conditions specified in the general design data. Burner + Windbox DP includes a windbox mounted opposed blade damper. Actual site DP may vary. DP shown does not include any design margin.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Commissioning plan

NXT-271 Burner

Technical Data Sheet

Designed for CBND-225E-600D-125, 225 K PPH sat.

271 MM BTU/H NG; 260 MM BTU/H #2 OIL

For 50ºF to 100ºF combustion air applications, uncontrolled or 30 ppm NOx emissions

Designed for furnace dimensions of at least:	Physical arrangement:	Combustion Control System (CCS) compatibility options:	Fuel Options:	Choice of NFPA or CSA compliance for U.S. or Canadian units, respectively (contact us for TSSA compliance).
H=10.11' W=6.69' Lturn=33.67' Ltot=41.33'	Designed for remote installation of FD fan, fuel train and control panel. Choice of right- or left-hand fuel rack. Choice of right, left, top, or bottom combustion air inlet flanged connection.	Fully Metered (FM) Combustion Control System (CCS) with O_2 trim. All systems use 4-20mA and pneumatic actuators.	Main Fuel: Natural gas and/or #2 oil. Igniter fuel: Natural gas and/or propane.	

Performance guarantees

	NG, no FGR	#2 Oil, no FGR	NG, 18% FGR	#2 Oil, 18% FGR
Excess Air %*	17.5	17.5	17.5	17.5
NOx emissions ppmvd @3%O_2	95	135	30	100
CO emissions ppmvd @3%O_2	50	75	75	100
VOC lb/MM BTU (HHV)	0.004	0.004	0.004	0.004
Total PM lb/MM BTU (HHV)	0.01	0.05	0.01	0.05
Turndown	10	8	10	8

Performance guarantees are based on normal operating conditions and valid from 25% to 100% MCR, boiler with gas tight furnace division wall and to nominal operating pressure and temperature. Igniter emissions are not guaranteed. For application where CB does not provide the controls, emissions are guaranteed in manual mode only. SOx emissions are not burner dependent and depend solely on the sulfur content of the fuel. Burner/boiler systems are not intended for automatic recycling use. Please contact your local representative for more details.

*Excess air given for MCR only.

Specific operating conditions

Regulated pressure at train inlet (psig)			Atomizing steam flow (pph)	Atomizing air for cold start		Burner + Windbox DP No FGR/FGR	AHG DP No FGR/FGR
NG	#2 Oil	Atomizing Steam		(psig)	(SCFM)	(in wc)	(in wc)
26	150	145	1350	80	260	10.1/10.6 Oil & 10.3/10.8 NG	2.7/2.9 Oil & 3.7/3.9 NG

Pressure control valve not included. See piping spec for design ratings. See also general design data for additional details. All pressure drops are given at worst case conditions specified in the general design data. Burner + Windbox DP includes a windbox mounted opposed blade damper. Actual site DP may vary. DP shown does not include any design margin.

Reference documents

Please reference the below documents for additional information on the content outlined in this data sheet. All documents are available in the Cleaver-Brooks Boiler Book.

Guide specifications
General design data
Product dimension tables
Piping specifications
Inspection and test plan
Paint specification
Scope detail
Job document list
Commissioning plan