BM2 BIEMMEDUE
heating, cleaning and drying

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TITAN

GENERATORI TOPLOG VAZDUHA VELIKOG PROTOKA SA INDIREKTNIM SAGOREVANJEM I CENTRIFUGALNIM VENTILATOROM

INDIRECT COMBUSTION HEAVY DUTY MOBILE SPACE HEATERS WITH CENTRIFUGAL FAN

ECO Steam · Vojvode Putnika 43, Trnava, 35000 Jagodina · tel. +381 63 640 101 · info@eco-steam.rs · www.eco-steam.rs

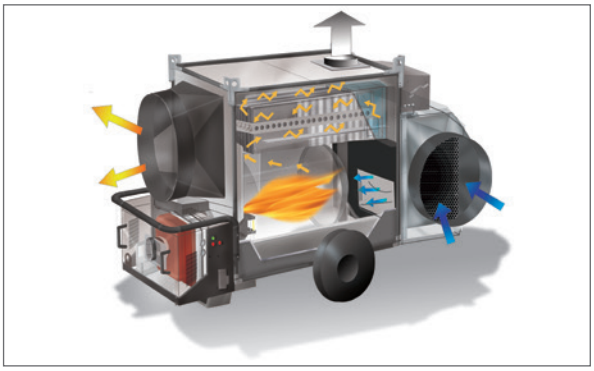
TITAN - GENERATORI TOPLOG VAZDUHA VELIKOG PROTOKA SA INDIREKTNIM SAGOREVANJEM I CENTRIFUGALNIM VENTILATOROM

- Poklopac gorionika koji štiti od udara, prašine, vode i atmosferskih uticaja i služi kao kada za prikupljanje dizela/kondenzata
- Gorionik sa snorkel priključkom koji obezbeđuje čist vazduh za sagorevanje preko usisnog creva sa spoljne strane
- Novi izmenjivač toplote u kombinaciji sa novim, snažnijim ventilatorima omogućava toplotni stepen iskorišćenja od 96%;
- Bolje učvršćenje nosive konstrukcije mašine zahvaljujući čvrstim konzolama koje omogućavaju premeštanje po bilo kojoj površini
- Nosiva konstrukcija sa uklonjivim panelima za unutrašnje pranje, čak i kada je mašina okačena
- Paneli sa ukrštenim ojačanjima za veću krutost i čvrstoću
- Za pričvršćivanje se koriste isključivo metrički vijci i umetci, bez samourezujućih vijaka
- Plastična zaštita odvoda dima komore za sagorevanje sa lancima za fiksiranje
- Ventilator, zaštita (IP 55):
  - vrlo tih (buka ≤ 69 db na 2 metra);
  - visokih performansi, obezbeđuje veliki protok vazduha i statički pritisak (500 Pa) za ravnomernu distribuciju toplog vazduha na velike udaljenosti putem kanala ili creva;
  - ventilator pričvršćen za nosivu konstrukciju pomoću čvrstih nosača i konzola za pričvršćivanje;
  - podesiva klapna za dovod svežeg vazduha;
- Zadnji upravljački električni orman (IP 65):
  - smešten pozadi, tako da nije u kontaktu sa prašinom, vodom, snegom itd;
  - opremljen čvrstim metalnim poklopcem koji omogućava i odlaganje alata i dokumenata;
- Prednji servisni električni orman (IP 65):
  - smešten na prednjoj strani mašine, unutar poklopca gorionika: da ne bi bio u kontaktu sa prašinom, vodom, snegom; radi lakšeg održavanja; radi lakše kontrole i intervencije operatera

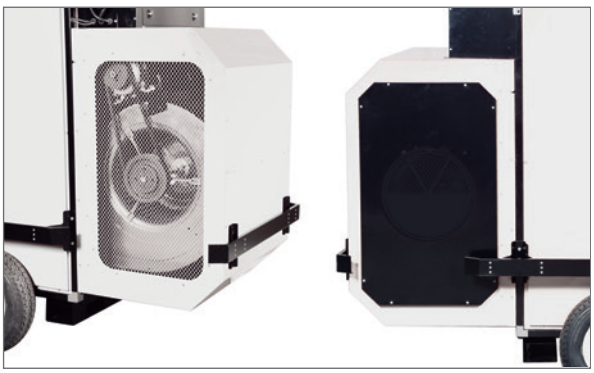
- Svaka glavna komponenta (ventilator, gorionik, termostati, itd.) opremljena je brzim električnim priključcima:
  - brzina montaže/demontaže i tehničke intervencije;
  - eliminacija grešaka pri montaži/demontaži.

- *Burner cover: protects the burner against blows, dust, water, weather and collect diesel fuel/condensation recovery basin*
- *Burner is supplied with snorkel jack to ensure clean air combustion through connection with outdoor air uptake duct*
- *The new heat exchanger with the newly designed higher performance fans ensure heat efficiency of 96%*
- *Better anchorage to the machine's weight bearing structure through sturdy attachment rods which allow for movement on any floors*
- *Bearing structure with removable panels for interior washing, also in hanging models*
- *Panels with reinforcement cross pleats to ensure superior rigidity and strength*
- *Exclusive use of metric screws and inserts for fastening, no self-tapping screws*
- *Protection cap of combustion chamber exhaust in plastic material with retention chains guards*
- *Ventilator (IP 55):*
  - *very low noise fan (noise level ≤ 69db at 2 meters)*
  - *high output, high performance fan guarantees increased air flow and static pressure (500 Pa) for uniform and long distance diffusion of warm air through channels or ducts*
  - *fan anchorage on machine's bearing structure through sturdy rods*
  - *adjustable fresh air re-uptake shutter*
- *Control rear electrical panel (IP 65):*
  - *located at the top rear of the machine to avoid contact with dust, water, snow*
  - *supplied with a sturdy metal cover to prevent damage and unauthorized access; also handy for storage of tools, papers, etc;*
- *Service front electrical panel (IP 65):*
  - *located at the front of the machine inside the burner cover lid: to prevent contact with dust, water, snow; for easier maintenance; to facilitate controls and maintenance by the operator*
- *Every main component (fan, burner, thermostats, etc.) is supplied with quick couplings of electrical connections:*
  - *fast assembly, disassembly and technical maintenance*
  - *eliminates installation/disassembly mistakes*









DODATNA OPREMA NA ZAHTEV / *ACCESSORIES ON DEMAND*

ADAPTER 1 PRAVAC ***ONE WAY ADAPTER***	**ADAPTER 2 PRAVCA** ***TWO WAYS ADAPTER***
	
Mod. TITAN 145 (Ø 600 mm) **Šif.** 02AC871	**Mod.** TITAN 145 (Ø 500 mm) **Šif.** 02AC872
Mod. TITAN 185 (Ø 650 mm) **Šif.** 02AC881	**Mod.** TITAN 185 (Ø 500 mm) **Šif.** 02AC882
Mod. TITAN 235 (Ø 700 mm) **Šif.** 02AC891	**Mod.** TITAN 235 (Ø 600 mm) **Šif.** 02AC892
ADAPTER 4 PRAVCA ***FOUR WAYS ADAPTER***	**FLEKSIBILNA PVC CREVA L= 6 m SA TRAKOM ZA FIKSIRANJE** ***FLEXIBLE AIR DUCTS 6 m WITH CLIP***
	
Mod. TITAN 145 (Ø 350 mm) **Šif.** 02AC873	**Mod.** Ø 350 mm **Šif.** 02AC563
	Mod. Ø 400 mm **Šif.** 02AC564
Mod. TITAN 185 (Ø 350 mm) **Šif.** 02AC883	**Mod.** Ø 450/500 mm **Šif.** 02AC566
	Mod. Ø 600 mm **Šif.** 02AC567
Mod. TITAN 235 (Ø 400 mm) **Šif.** 02AC893	**Mod.** Ø 650/700 mm **Šif.** 02AC568

TITAN - GENERATORI TOPLOG VAZDUHA VELIKOG PROTOKA SA INDIREKTNIM SAGOREVANJEM I CENTRIFUGALNIM VENTILATOROM

USISNI ADAPTER 1 PRAVAC
AIR INLET ADAPTER



Mod. TITAN 145 (Ø 645 mm)
Šif. 02AC874

Mod. TITAN 185 (Ø 715 mm)
Šif. 02AC884

Mod. TITAN 235 (Ø 745 mm)
Šif. 02AC894

OJAČANO CREVO ZA USIS VAZDUHA
REINFORCED FLEXIBLE AIR INLET DUCT



Mod. TITAN 145 (Ø 650 mm, l=6m)
Šif. 02AC797

Mod. TITAN 185 (Ø 720 mm, l=6m)
Šif. 02AC798

Mod. TITAN 235 (Ø 750 mm, l=6m)
Šif. 02AC804

Mod. Svi/*All*
Obujmica za crevo- *clip for flexible duct* (Ø 400-750 mm)
Šif. 02AC663

KIT REZERVOARA
TANK KIT



INDIKATOR NIVOA/*FUEL LEVEL GAUGE*





Mod. TITAN 145 (litara/liters= 120)
Šif. 02AC847

Mod. TITAN 185 (litara/liters= 170)
Šif. 02AC857

Mod. TITAN 235 (litara/liters= 200)
Šif. 02AC867

Mod. Indikator nivoa - *Fuel level gauge*
Šif. 02AC510

KIT BOČNOG BRANIKA
SIDE BUMPERS KIT

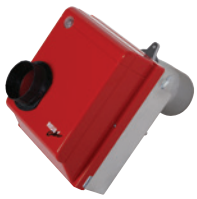
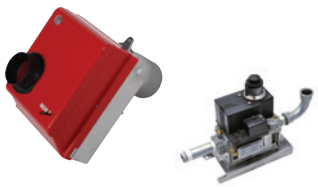
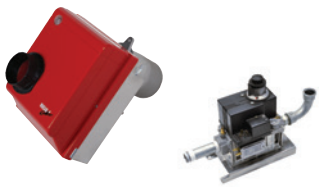
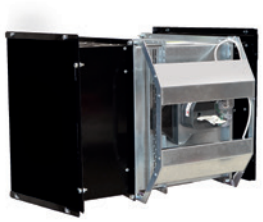
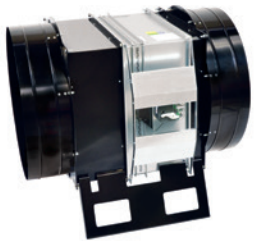


Mod. TITAN 145
Šif. 02AC875

Mod. TITAN 185
Šif. 02AC885

Mod. TITAN 235
Šif. 02AC895

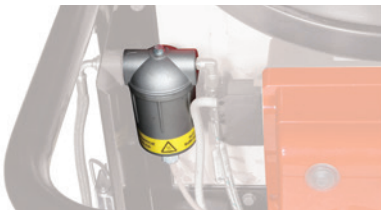
TITAN - *MOBILNI GENERATORI TOPLOG VAZDUHA VELIKOG PROTOKA SA INDIREKTNIM SAGOREVANJEM I CENTRIFUGALNIM VENTILATOROM*

KIT KONZOLA ZA VILJUŠKAR ***LIFTING KIT***	**KIT OKRETNIH TOČKOVA** ***SWIVELLING WHEELS KIT***	**GORIONIK NA DIZEL ECOFLAM** ***ECOFLAM DIESEL BURNER***
		
Mod. TITAN 145 **Šif.** 02AC846	**Mod.** TITAN 145 / 185 (Ø 150 mm) **Šif.** 02AC816*	**Mod.** TITAN 145 DIESEL/*OIL* **Šif.** 072B113
Mod. TITAN 185 **Šif.** 02AC856		**Mod.** TITAN 185 DIESEL/*OIL* **Šif.** 072B114
Mod. TITAN 235 **Šif.** 02AC866	**Mod.** TITAN 235 (Ø 180 mm) **Šif.** 02AC817*	**Mod.** TITAN 235 DIESEL/*OIL* **Šif.** 072B115
GORIONIK NA DIZEL RIELLO ***RIELLO DIESEL BURNER***	**GORIONIK RIELLO TNG + GASNA RAMPA** ***LPG RIELLO BURNER + GAS TRAIN***	**GORIONIK RIELLO METAN + GASNA RAMPA** ***NATURAL GAS RIELLO BURNER + GAS TRAIN***
		
Mod. TITAN 145 DIESEL/*OIL* **Šif.** 076B103	**Mod.** TITAN 145 TNG/*LPG* **Šif.** 074B103-05	**Mod.** TITAN 145 METAN/*NATURAL GAS* **Šif.** 074B104-05
Mod. TITAN 185 DIESEL/*OIL* **Šif.** 076B104	**Mod.** TITAN 185 TNG/*LPG* **Šif.** 074B103-07	**Mod.** TITAN 185 METAN/*NATURAL GAS* **Šif.** 074B104-07
Mod. TITAN 235 DIESEL/*OIL* **Šif.** 076B105	**Mod.** TITAN 235 TNG/*LPG* **Šif.** 074B105-08	**Mod.** TITAN 235 METAN/*NATURAL GAS* **Šif.** 074B106-08
SNORKEL ZIDNI PROLAZ + CREVO ***SNORKEL PASS PLATE + FLEXIBLE DUCT***	**KIT PROTIVPOŽARNE KLAPNE IZLAZ VAZDUHA (REI 120)** ***AIR OUTLET FIRE SHUTTER KIT(REI 120)***	**KIT PROTIVPOŽARNE KLAPNE ULAZ VAZDUHA (REI 120)** ***AIR INLET FIRE SHUTTER KIT (REI 120)***
		
Mod. TITAN 145/185 (Ø 100 mm) **Šif.** 02AC793	**Mod.** TITAN 145 **Šif.** 02AC878	**Mod.** TITAN 145 (Ø 645 mm) **Šif.** 02AC910**
Mod. Crevo /*Duct* TITAN 145/185 RIELLO (Ø 100 mm, l=5m) **Šif.** 02AC577	**Mod.** TITAN 185 **Šif.** 02AC888	**Mod.** TITAN 185 (Ø 715 mm) **Šif.** 02AC911**
Mod. TITAN 235 (Ø 150 mm) **Šif.** 02AC794		
Mod. Crevo /*Duct* TITAN 235 RIELLO (Ø 150 mm, l=5m) **Šif.** 02AC792	**Mod.** TITAN 235 **Šif.** 02AC898	**Mod.** TITAN 235 (Ø 745 mm) **Šif.** 02AC913**

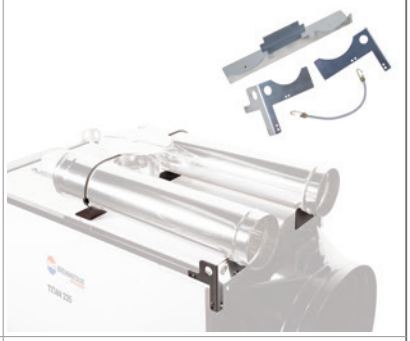
* Mogu se montirati samo bez ugrađenog rezervoara - *Only without tank*

** Obavezna kombinacija sa "usisnim adapterom" - *Additionally it's necessary to buy " air inlet adapter"*

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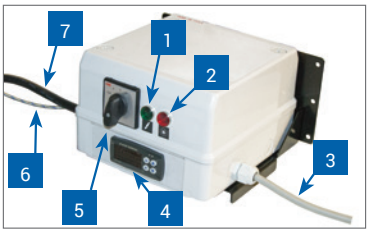
SOBNI TERMOSTAT +5/+30°C SA KABLOM L=10 m I UTIKAČEM 90° *ROOM THERMOSTAT +5/+30°C CABLE 10 m, PLUG 90°*	**TERMOSTAT ZA POLJOPRIVREDU/GRAĐILIŠTE -5/+50°C SA KABLOM L=10 m I UTIKAČEM 90°** *HEAVY DUTY THERM. -5/+50°C CABLE 10 m, PLUG 90°*	**PRECIZNI ELEKTRONSKI TERMOSTAT IP55 SA DISPLEJEM -10/+70°C BEZ KABLA I UTIKAČA** *ELECTRONIC THERMOSTAT IP55 WITH DISPLAY -10/+70°C WITHOUT POWER CORD AND PLUG*
		
Šif. 02AC581	**Šif.** 02AC582	**Šif.** 02AC294
GREJANI FILTER ZA DIZEL *PRE-HEATED FUEL FILTER*	**KIT ZA JEDNOCEVNO PRIKLJUČENJE SA FILTEROM-ODZRAČIVAČEM** *SINGLE PIPE EXTERNAL FUEL TANK CONNECTION KIT WITH DE AERATOR*	**FILTER-SEPARATOR VODE** *ANTI-WATER FILTER*
		
Šif. 02AC818	**Šif.** 02AC819	**Šif.** 02AC801
KIT ZA DVOCEVNO PRIKLJUČENJE SPOLJAŠNJEG REZERVOARA DIZELA (l= 5 m) + KIT BRZIH SPOJNICA *TWO-PIPE EXTERNAL FUEL TANK CONNECTION KIT (l=5 m) + QUICK CONNECTIONS KIT*	**GASNI FILTER** *GAS FILTER* **(P.ul MAKS 2 bar)**	**GASNI FILTER-REGULATOR** *GAS FILTER REGULATOR* **(P.ul MAKS 2 bar)**
		
Mod. Kit dvocevnog priključka rezervoara/ *Two-pipe external tank connection kit* **Šif.** 02AC668	**Mod.** TITAN 145 (DN 25 - 1") **Šif.** 03AC603	**Mod.** TITAN 145 GAS METAN - *NATURAL GAS* (DN 25 3/4" or 1") (P.izl podeš. 20mbar) **Šif.** 03AC617
Mod. Kit brzih spojnica (M+F x 2)/ *Quick connections kit (M+F x 2)* **Šif.** 02AC669	**Mod.** JUMBO 185/235 (DN 32 - 1 1/4") **Šif.** 03AC604	**Mod.** TITAN 145 TNG - *LPG* (DN 253/4" or 1") (P.izl podeš. 30mbar) **Šif.** 03AC618
		Mod. TITAN 185/235 (DN 32 - 1 1/4") (P.izl nepodešen - to be set) **Šif.** 03AC602
GASNO CREVO SREDNJEG PRITISKA (l = 3 m) + ZAPORNI VENTIL + PRIKLJUČNI FITINZI *MEDIUM PRESSURE GAS HOSE (l= 3 m) + GAS VALVE + CONNECTIONS* **(P. MAKS 10 bar)**	**GASNO CREVO NISKOG PRITISKA (l= 2 m) + ZAPORNI VENTIL + PRIKLJUČNI FITINZI** *LOW PRESSURE GAS HOSE (l= 2 m) + GAS VALVE + CONNECTIONS* **(P.ul MAKS 0,5 bar)**	**INOX CEV ZA ODVOD DIMA L = 1 m** *STAINLESS STEEL EXHAUST PIPE L = 1 m*
		
Mod. TITAN 145 Crevo/*Hose* gas 1" **Šif.** 03AC615	**Mod.** TITAN 145 Crevo/*Hose* gas 1" **Šif.** 03AC612	**Mod.** TITAN 145/185/235 (Ø 200 mm) **Šif.** 02AC287
Mod. TITAN 185/235 Crevo/*Hose* gas 1 1/4" **Šif.** 03AC616		

TITAN - *MOBILNI GENERATORI TOPLOG VAZDUHA VELIKOG PROTOKA SA INDIREKTNIM SAGOREVANJEM I CENTRIFUGALNIM VENTILATOROM*

INOX ZAVRŠETAK DIMNJAKA *STAINLESS STEEL CHIMNEY POT*	KIT NOSAČA ZA ODVOD DIMA *CHIMNEY SUPPORT KIT*	KIT ZAŠTITE ODVODA DIMA *CHIMNEY HOLDER KIT*
		
Mod. TITAN 145/185/235 (Ø 200 mm) **Šif.** 02AC658	**Mod.** TITAN 145/185/235 **Šif.** 02AC814	**Mod.** TITAN 145 **Šif.** 02AC844
		Mod. TITAN 185 **Šif.** 02AC854
		Mod. TITAN 235 **Šif.** 02AC864

Zadnji električni orman- Rear *electrical panel*





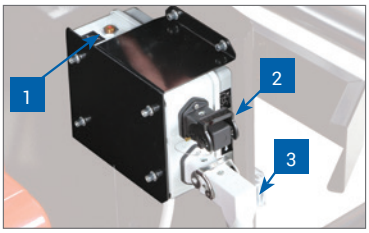
Legenda

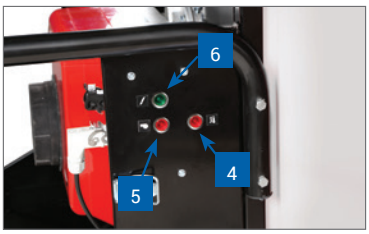
1 Električno napajanje
2 Pregrevanje motora (samo za trofazne)
3 Kabl motora
4 Termoregulator koji omogućava:
-podešavanje FAN termostata za kontrolu ventilatora: prethodno zagrevanje i naknadna ventilacija komore za sagorevanje
-podešavanje LIMIT termostata za kontrolu gorionika
-prikaz radnih sati mašine
-temperatura vazduha na izlazu
-izmena podešavanja putem lozinke
5 Prekidač sa 4 položaja:
O= STOP
V= VENTILACIJA (SVEŽ VAZDUH)
H= GREJANJE
H+V= GREJANJE SA STALNOM VENTILACIJOM
6 Sonda termoregulatora
7 Kabl za napajanje

Legend

1 Electrical power supply
2 Motor overheat (only for three-phase)
3 Motor cable
4 Thermoregulator allows for:
-FAN thermostat setting to control the fan: before heating and after ventilation of combustion chamber
-LIMIT thermostat setting for burner control
-display of machine's hours of work
-temperature of air exiting the outlet
-setting changes with password
5 Switch 4 positions:
***O**= STOP*
***V**= VENTILATION (FRESH AIR)*
***H**= HEATING*
***H+V**= HEATING WITH CONTINUOUS VENTILATION*
6 Heat adjustment probe
7 Power cable

Prednji upravljački orman- *Service front electrical panel*





Legenda

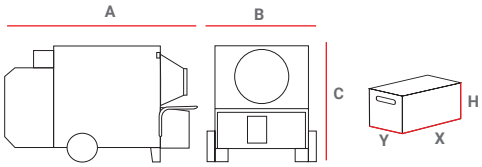
1 OVERHEATING: sigurnosni termostat u slučaju pregrevanja sa ručnim resetovanjem
2 Utičnica filtera za predgrevanje
3 Utičnica sobnog termostata/ higrostata/tajmera
4 Lampica pregrevanja termostata (overheating limit)
5 Lampica gorionika
6 Lampica napajanja

Legend

1 OVERHEATING: safety thermostat in case of overheating, with manual reset
2 Pre-heating filter socket
3 Socket for thermostat ambient/ humidistat/timer
4 Thermostat overheat indicator light (overheating)
5 Burner indicator light
6 Electric power indicator light

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INDIRECT COMBUSTION HEAVY DUTY MOBILE SPACE HEATERS WITH CENTRIFUGAL FAN



* Kompletna mašina sa gorionikom i izlazom 1 pravac
Complete machine with burner and one way adapter

TEŽINA I DIMENZIJE MAŠINE* *WEIGHTS AND DIMENSIONS MACHINE**					PAKOVANJE *PACKAGING*			
MOD	A	B	C	Neto/*Net*	X	Y	H	Bruto/*Gross*
	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[kg]
TITAN 145	2191	900	1515	361	-	-	-	-
1/1	-	-	-	-	2175	780	1480	390
TITAN 185	2413	920	1620	430	-	-	-	-
1/2	-	-	-	-	2140	800	1590	435
2/2	-	-	-	-	800	600	520	15
TITAN 235	2630	1042	1840	535	-	-	-	-
1/2	-	-	-	-	2315	880	1750	524
2/2	-	-	-	-	800	600	520	22

		JEDNOFAZNO / SINGLE PHASE	TROFAZNO / THREE PHASE	
MODEL *MODEL*		**TITAN 145M * (OIL-GAS)**	**TITAN 185T * (OIL-GAS)**	**TITAN 235T * (OIL-GAS)**
ŠIFRA *CODE*		02AG171	02AG182 (V 400,3~,50 hZ)	02AG192 (V 400,3~,50 hZ)
TOPLOTNA SNAGA NAZIVNA *RATED HEAT POWER*	Hs [kW] Hs [kcal/h - BTU/h]	144,72 124.455 497.821	185,54 159.563 638.254	235,72 202.715 810.861
KORISNA TOPLOTNA SNAGA *OUTPUT HEAT POWER*	Hs [kW] Hs [kcal/h - BTU/h]	138,93 119.477 477.908	178,12 153.181 612.724	227,47 195.620 782.480
ISKORIŠĆENJE *EFFICIENCY*	[%]	96,00	96,00	96,50
PROTOK VAZDUHA *AIR FLOW*	[m^3/h]	14.000	16.000	20.000
RASPOL. STAT. PRITISAK *AVAILABLE STATIC PRESS*	[Pa- mm H_2O]	300 - 30	500 - 50	500 - 50
PORAST TEMPERATURE *TEMPERATURE RISE*	na 20°C [°C]	42	46	47
STVARNI RADNI OPSEG *EFFECTIVE HEAT RANGE*	[m]	56	63	70
POTROŠNJA DIZELA *OIL CONSUMPTION*	[kg/h]	11,45	14,68	18,65
POTROŠNJA METANA *NATURAL GAS CONSUMPTION G20*	[m^3/h]	13,855	17,682	22,035
PRITISAK NAPAJANJA *INLET PRESSURE G20*	[mbar]	20	20	20
POTROŠNJA TNG *LPG CONSUMPTION G31*	[m^3/h - kg/h]	5,403 - 10,57	6,981 - 13,63	8,637 - 16,92
PRITISAK NAPAJANJA *INLET PRESSURE G31*	[mbar]	37	37	37
NAPAJANJE ELEKTRICNO *ELECTRICAL POWER*	[V - ph - Hz]	230 - 1 - 50	400-3-50 (230-3-50)◆	400-3-50 (230-3-50)◆
ELEKTRIČNA SNAGA *POWER CONSUMPTION*	[W]	3100	4200	4850 (230V) 4970 (400V)
Ø DIMNJAK *Ø FLUE*	[mm]	200	200	200
Ø CREVO IZLAZA VAZDUHA / L.MAKS. *Ø OUTLET HOSE / L.MAX*	[mm/m] 1 PRAVAC - *1 WAY*	600 - 50	700 - 50	700 - 50
	[mm/m] 2 PRAVCA - *2 WAYS*	500 - 30	500 - 30	600 - 30
	[mm/m] 4 PRAVCA - *4 WAYS*	350 - 25	350 - 25	400 - 25
Ø CREVO SNORKEL / L. MAKS. *Ø OUTLET SNORKEL / L. MAX*	[mm/m]	100 - 6	100 - 6	150 - 6
Ø CREVO USISA VAZDUHA / L. MAKS. *Ø INLET HOSE / L. MAX*	[mm/m]	650 - 10	720 - 10	750 - 10

* Mašina bez gorionika i izlaza vazduha - *Machine without burner and air adapter*
◆Dostupno na zahtev - *Available on demand*