

# СПЕЦИАЛЬНЫЕ ГОРЕЛКИ

# ДЛЯ ПРОМЫШЛЕННЫХ ПЕЧЕЙ



### Этот проспект заключает:

Вводное информации

Горелки HPN-Т типовая серия (7 размеров)

Горелки HN-T

Горелки НР-Т

Горелки HPN-Т...К типовая серия (7 размеров)

Горелки HN-T...К

Горелки HN-T...К 3,3

Горелки НР-Т...К

Горелки HPN-ST типовая серия (7 размеров)

Горелки HNS-T

Горелки HPS-T (HP-ST)

Горелки HPS-T

Горелки HI 160, HI 230

Горелки HIT 160, HIT 230

Горелки РНР 1

Горелки HIT 1000

Горелки GIT 1360

Горелки GIS 1360

Горелки BIG 350

Горелки GVK 1360 (ротационные)

Горелки OPH 330 S, OPH 330



-CUCTEMC'

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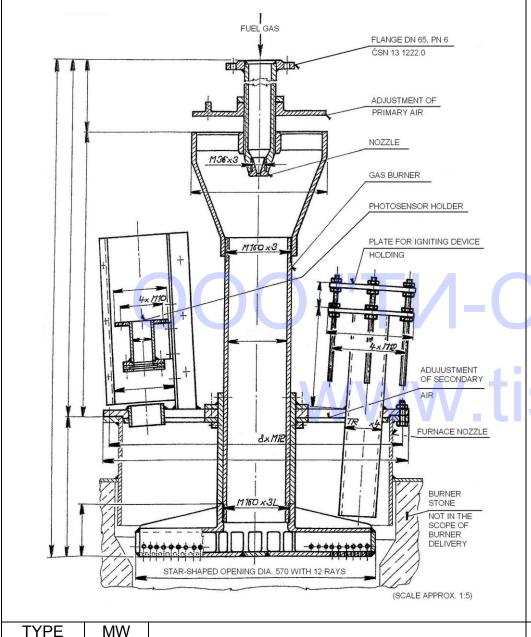








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**BIG 350** 

2,2

### SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

### **BURNERS BIG 350**

THEY ARE GAS – INJECTOR, MIDDLE PRESSURE WITH ATMOSPHERIC COMBUSTION AIR SUCKLED IN FROM SURROUNDINGS TO BURNER WITH UNDERPRESSURE IN THE FURNACE

- WITHOUT STABILIZATION BURNER
- WITH FIXED ELECTROSPARK IGNITING DEVICE
- WITH MANUAL REGULATION OF PRIMER AND SECONDARY COMBUSTION AIR

sys.ru

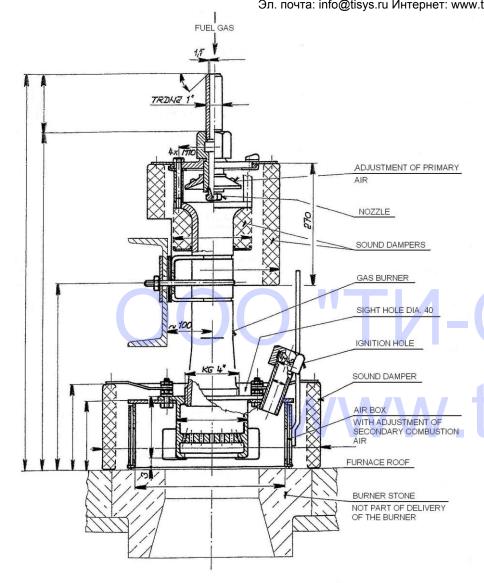
~ kgs

182

BURNERS BIG 350 ARE MANUFACTURED BY



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### SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

### **BURNERS GIS 1360 T**

THEY ARE GAS – INJECTOR, MIDDLE PRESSURE
WITH ATMOSPHERIC COMBUSTION AIR
SUCKLED IN FROM SURROUNDINGS TO THE BURNER WITH
UNDERPRESSURE IN THE FURNACE

- WITHOUT STABILIZATION BURNER

- WITH MANUAL ADJUSTMENT OF PRIMARY AND SECONDARY COMBUSTION AIR

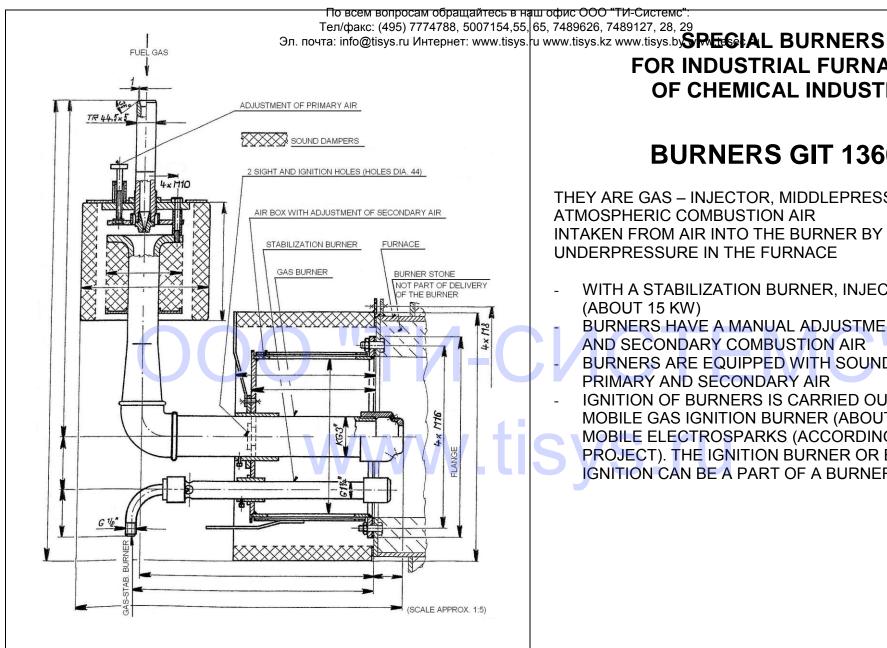
- THE BURNERS ARE EQUIPPED WITH SOUND DAMPERS ON PRIMARY AND SECONDARY AIR
- IGNITION OF BURNERS IS MADE BY MOBILE GAS IGNITION BURNER (APPROX. 15 kW) OR BY MOBILE ELECTROSPARK IGNITING DEVICE (AS PER PROJECT). IGNITION BURNER OR ELECTRIC IGNITION CAN BE PART OF DELIVERY OF THE BURNERS.

TYPE	MW		kgs
GIS 1360T	1,3		54

(SCALE APPROX. 1:5)

BURNERS GIS 1360T ARE MANUFACTURED BY





**TYPE** 

**GIT 1360T** 

MW

# FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

### **BURNERS GIT 1360T**

THEY ARE GAS - INJECTOR. MIDDLEPRESSURE WITH ATMOSPHERIC COMBUSTION AIR INTAKEN FROM AIR INTO THE BURNER BY UNDERPRESSURE IN THE FURNACE

- WITH A STABILIZATION BURNER, INJECTOR SHI-B15 (ABOUT 15 KW)
- BURNERS HAVE A MANUAL ADJUSTMENT OF PRIMARY AND SECONDARY COMBUSTION AIR
- BURNERS ARE EQUIPPED WITH SOUND DAMPERS AT PRIMARY AND SECONDARY AIR
- IGNITION OF BURNERS IS CARRIED OUT EITHER BY A MOBILE GAS IGNITION BURNER (ABOUT 15 KW) OR MOBILE ELECTROSPARKS (ACCORDING TO THE PROJECT). THE IGNITION BURNER OR ELECTRICAL IGNITION CAN BE A PART OF A BURNER DELIVERY

BURNERS GIT 1360T ARE MANUFACTURED BY

∼ kgs

70

# Тел/факс: (495) 7774788, 5007154,55, 65, 7489626, 7489127, 28, 29 Эл. почта: info@tisys.ru Интернет: www.tisys.ru www.tisys.kz www.tisys.by SP.E. LAL BURNERS OIL LEVEL INDICATOR AIR BOX WITH MA-NUAL ADJUSTMENT BEARING BOX LABYRINTH PACKING FAN BLADES + + GAS NOZZLES FUEL GAS FOR STAB. BURNER STABILIZATION BURNER WITH ELECTROSPARK IGNITING EQUIPMENT (SUPPLY OF HV) BURNER STONE (NOT PART OF DELIVERY OF THE BURNER) (SCALE APPROX. 1:7)

# FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

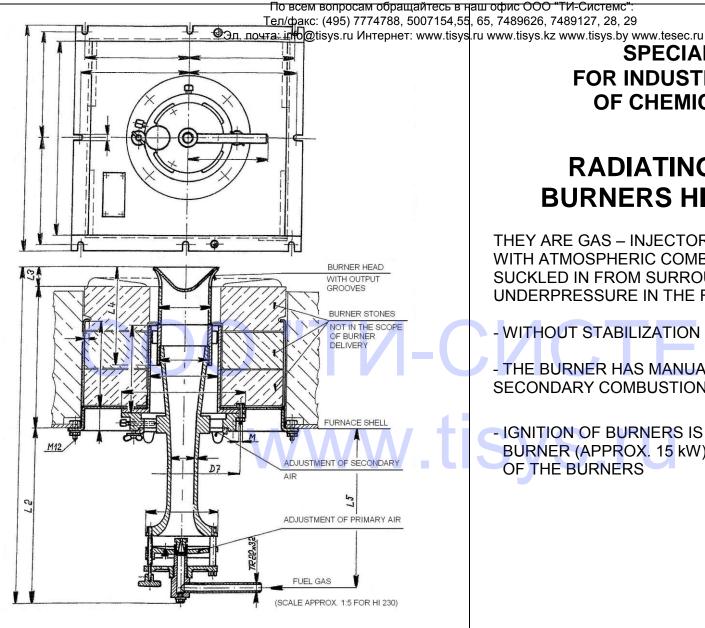
### **BURNERS GVK 1360**

THEY are gas – rotating, noninjector with atmospheric combustion air, WHICH IS INTAKEN INTO THE BURNER:

- 1) BY UNDERPRESSURE IN THE FURNACE (= FURNACE DRAUGHT)
- 2) BY UNDERPRESSURE CREATED IN FANS
- AMOUNT OF COMBUSTION AIR IS ADJUSTED MANUALLY. ON THE AIR BOX, BY SCREEN WITH EIGHT OPENINGS AT HEAD AND AROUND THE CIRCUMFERENCE OF THE SCREEN
- EIGHT BLADES CREATING A FAN ARE LOCATED DIRECTLY ON THE ROTOR OF THE BURNER TOGETHER WITH TEN GAS NOZZLES. THE ROTOR IS PROPELLED BY GAS COMING FROM SUITABLY POSITIONED NOZZLES. THE ROTOR IS ROTATING IN BALL BEARINGS PLACED IN A CAST-IRON BOX WITH AN OIL FILLING WHOSE LEVEL IS INDICATED BY AN OIL LEVEL INDICATOR.
- STABILIZATION GAS INJECTOR BURNER (ABOUT 15 KW) HAS PERMANENTLY INSTALLED AN ELECTRICAL IGNITING SPARK OF THE STABILE ELECTROSPARK IGNITING DEVICE WHICH IS A PART OF EACH BURNER DELIVERY

TYPE	OUTPUT	OVEPRESSURE	~ kgs	ROTARY BURNERS GVK 1	360 ARE M	IANUFACTURED BY
	MIN. 4,4 MW	100 kPa				(P) 1 metal
GVK 1360	NOM. 7 MW	200 kPa	334			akciová společnost
	MAX. 17,5 MW	300 kPa			01/92	3 22 9248.0031

По всем вопросам обращайтесь в нашрофис ООО "ТИ-Системс":



SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

## RADIATING FLASHLESS **BURNERS HI 230 AND HI 160**

THEY ARE GAS - INJECTOR, MIDDLE PRESSURE WITH ATMOSPHERIC COMBUSTION AIR SUCKLED IN FROM SURROUNDINGS TO BURNER WITH UNDERPRESSURE IN THE FURNACE

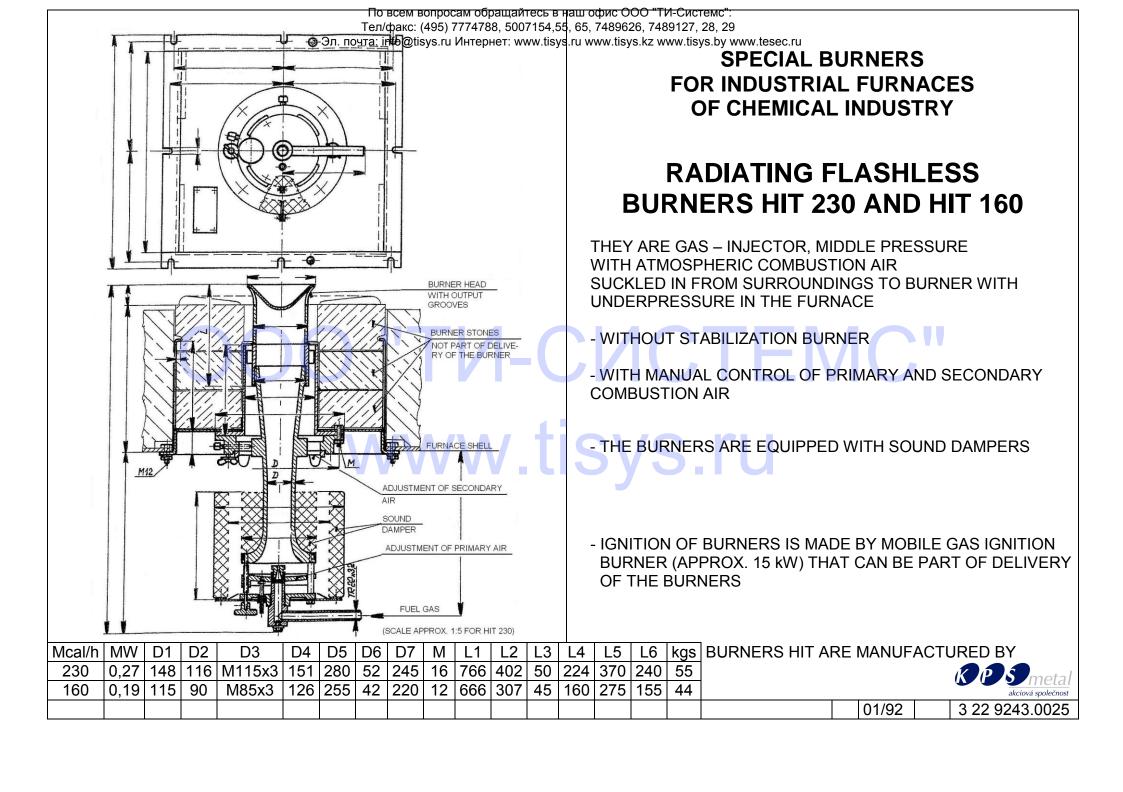
- WITHOUT STABILIZATION BURNER
- THE BURNER HAS MANUAL CONTROL OF PRIMARY AND SECONDARY COMBUSTION AIR
- IGNITION OF BURNERS IS MADE BY MOBILE GAS IGNITION BURNER (APPROX. 15 kW) THAT CAN BE PART OF DELIVERY OF THE BURNERS

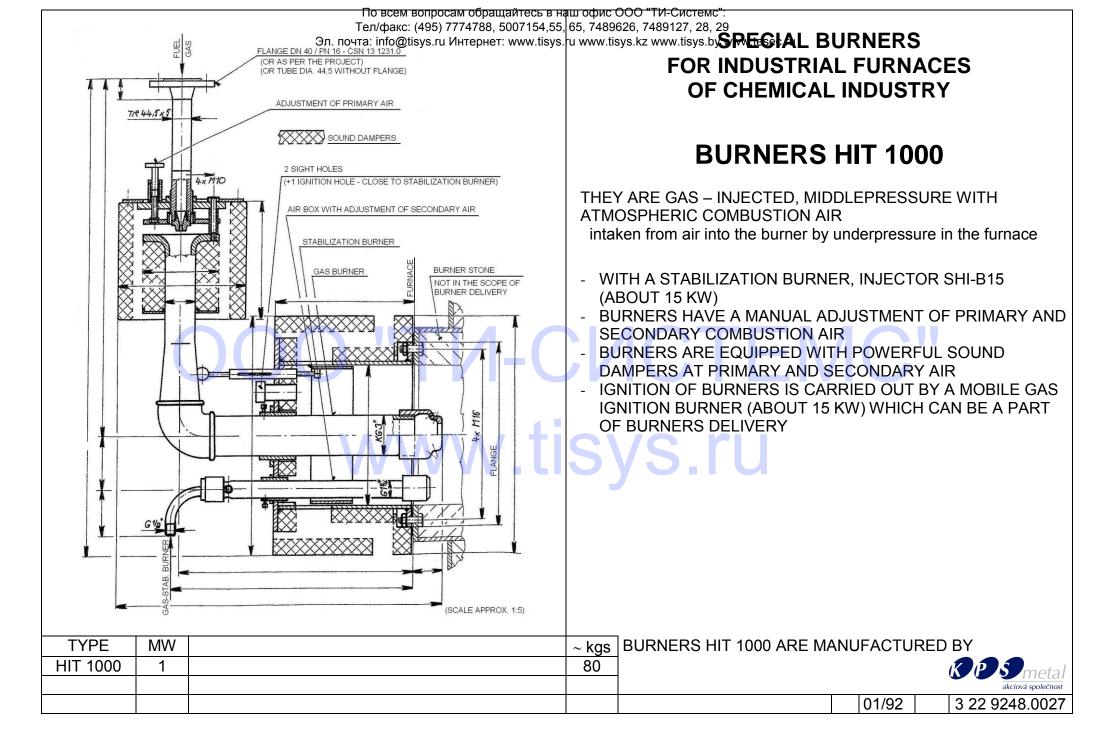
Mcal/h	MW	D1	D2	D3	D4	D5	D6	D7	M	L1	L2	L3	L4	L5	~ kgs
230	0,27	148	116	M115x3	151	280	52	245	16	766	402	50	224	370	50
160	0,19	115	90	M85x3	126	255	42	220	12	666	307	45	160	275	40
												·			

BURNERS HI ARE MANUFACTURED BY

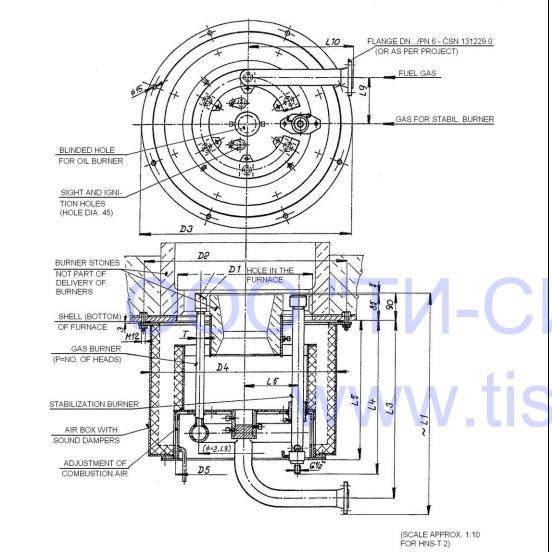


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## SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

# BURNERS TYPE SERIES <u>HNS-T</u> WITH SEVEN DIFFERENT SIZES.

NOMINAL POWER OF EACH SIZE	0,7	1	1,5	2	2,6	3,3	4,1
	MW	MW	MW	MW	MW	MW	MW

THE BURNERS ARE GAS BURNERS WITH ATMOSPHERIC COMBUSTION AIR, INTAKEN FROM AIR INTO THE BURNER BY UNDERPRESSURE IN THE FURNACE

- GAS BURNER IS MIDDLE PRESSURE, NONINJECTOR WITH 5 10 HEADS
- STABILIZATION BURNER IS INJECTOR, GAS WITH A POWER OF ABOUT 15 KW (20 KW FROM HNS-T 2)
- AIR BOX IS INSIDE LINED WITH SOUND DAMPERS AND IT HAS A MANUAL ADJUSTMENT OF THE INTAKEN COMBUSTION AIR
- IGNITION OF BURNERS IS CARRIED OUT EITHER BY A MOBILE GAS IGNITION BURNER (ABOUT 15 KW) WHICH CAN BE A PART OF THE BURNER DELIVERY

THE BURNERS HNS-T CAN BE MANUFACTURED IN DIFFERENT OPTIONS, E.G.

- TYPE IMPLEMENTATION VERTICAL (SEE SKETCH)
- HORIZONTAL IMPLEMENTATION (INLETS OF STABILIZATION BURNER ADJUSTED)
- GAS INLET CAN BE IMPLEMENTED BY ANOTHER FLANGE OR ROTATED IN ANOTHER DIRECTION
- (BURNER CAN BE POSSIBLY EQUIPPED WITH AN OIL BURNER THIS RESULTS IN CREATION OF THE BURNER HPN-ST, SEE CATALOGUE SHEET NO. 3 22-9248.0023)

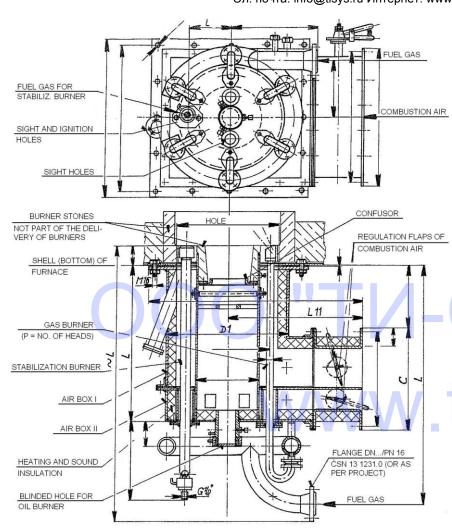
THE BURNERS HNS-T HAVE A MODERN DESIGN WITH LOW NOISINESS (UNDER 85 DB/A), WITH LOW SURPLUS OF AIR AND WITH ECOLOGICAL AND ECONOMICAL OPERATION.

											II.						
MW	D1	D2	D3	D4	D5	L1	L3	L4	L5	L6	L9	L10	Т	Р	DN	kgs	1
0,7	415	655-8Xm12	685	611	450	685	523	465	409	155	145	345	1/2"	5	40	80	1
1	450	700-8xM12	730	656	480	720	558	465	444	170	165	360	1/2"	6	40	95	
1,5	480	740-8xM12	770	696	500	803	633	515	521	180	180	380	3/4"	6	50	110	
2	550	840-8xM12	880	786	560	883	713	660	598	205	200	425	3/4"	8	50	135	
2,6	610	895-12xM12	935	851	600	968	788	660	663	225	220	460	3/4"	10	65	160	
3,3	660	965-12xM12	1005	921	640	1033	853	795	728	245	240	490	3/4"	10	65	185	
4,1	720	1030-12xM12	1070	986	680	1125	938	795	783	265	260	520	1"	10	80	210	

BURNERS HNS-T ARE MANUFACTURED BY



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## SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

# BURNERS TYPE SERIES <u>HN-T</u> WITH SEVEN DIFFERENT SIZES.

NOMINAL POWER OF EACH SIZE	1	1,5	2	2,6	3,3	4,1	5
	MW	MW	MW	MW	MW	MW	MW

The burners are gas with preheated forced combustion air (up to 400 °C)

- GAS BURNER IS MIDDLE PRESSURE, NONINJECTOR WITH 4 10 HEADS
- STABILIZATION BURNER IS INJECTOR, GAS WITH A POWER OF ABOUT 15 KW (4 VARIANTS)
- AIR BOXES ARE INSIDE LINED BY THERMAL AND SOUND INSULATION. THEY HAVE A MANUAL ADJUSTMENT OF PRIMARY AND SECONDARY COMBUSTION AIR, WHICH IS PREAHEATED UP TO 400 °C
- IGNITION OF BURNERS IS CARRIED OUT EITHER BY A MOBILE GAS IGNITION BURNER (ABOUT 15 KW) OR ELECTROSPARKS (ACCORDING TO THE PROJECT AND TYPE OF THE STABILIZATION BURNER)

HN-T BURNERS CAN BE MANUFACTURED IN DIFFERENT OPTIONS, E.G.

- TYPE IMPLEMENTATION VERTICAL (SEE SKETCH)
- HORIZONTAL IMPLEMENTATION (INLETS OF OIL AND STABILIZATION BURNER ADJUSTED)
- GAS INLET CAN BE IMPLEMENTED BY ANOTHER FLANGE OR ROTATED IN ANOTHER DIRECTION
- (BURNER CAN BE EQUIPPED WITH AN OIL BURNER THIS RESULTS IN CREATION OF THE BURNER HPN-T, SEE CATALOGUE SHEET NO. 3 22-9248.0021)

#### THE BURNERS OF THE TYPE HN-T HAVE A MODERN DESIGN

THEY HAVE DECREASED EMISSIONS OF  $\mathrm{NO}_{\mathrm{X}}$  , FUEL CONSUMPTION AND LOW NOISINESS.

THE ECOLOGY, HYGIENE, AND ECONOMY OF OPERATION OF INDUSTRIAL FURNACES IS IMPROVED BY USAGE OF HPN-T BURNERS.

1     350     260     210     580     4x135     508     404     5x95     4x93     1135     968     263     632     142     220     275     521     811     40     4     ½"     1       1,5     370     300     230     600     4x140     528     404     5x100     4x93     1135     968     263     632     150     240     275     331     516     40     4     ½"     1       2     400     340     260     620     4x145     558     404     5x105     4x93     1147     972     263     632     170     235     360     546     856     50     6     ½"     2       2,6     440     370     280     660     4x155     600     465     6x95     5x87     1268     1083     278     705     185     185     474     586     916     65     8     ½"     1																								
1,5     370     300     230     600     4x140     528     404     5x100     4x93     1135     968     263     632     150     240     275     331     516     40     4     ½"     2       2     400     340     260     620     4x145     558     404     5x105     4x93     1147     972     263     632     170     235     360     546     856     50     6     ½"     2       2,6     440     370     280     660     4x155     600     465     6x95     5x87     1268     1083     278     705     185     185     474     586     916     65     8     ½"     3	MW	/ D1	D2	D3	C1	C2	C3	C4	C5	C6	L1	L3	L4	L5	L6	L9	L10	L11	L12	DN	Р	Т	kgs	1
2     400     340     260     620     4x145     558     404     5x105     4x93     1147     972     263     632     170     235     360     546     856     50     6     ½"     2       2,6     440     370     280     660     4x155     600     465     6x95     5x87     1268     1083     278     705     185     185     474     586     916     65     8     ½"     2	1	350	260	210	580	4x135	508	404	5x95	4x93	1135	968	263	632	142	220	275	521	811	40	4	1/2"	205	E
2,6 440 370 280 660 4x155 600 465 6x95 5x87 1268 1083 278 705 185 185 474 586 916 65 8 ½" 2	1,5	370	300	230	600	4x140	528	404	5x100	4x93	1135	968	263	632	150	240	275	331	516	40	4	1/2"	220	N
	2	400	340	260	620	4x145	558	404	5x105	4x93	1147	972	263	632	170	235	360	546	856	50	6	1/2"	235	
3.3   480   400   320   700   5x132   638   493   6x101   5x92   1306   1121   285   743   195   212   510   626   976   65   8   ½"   3	2,6	440	370	280	660	4x155	600	465	6x95	5x87	1268	1083	278	705	185	185	474	586	916	65	8	1/2"	280	
	3,3	480	400	320	700	5x132	638	493	6x101	5x92	1306	1121	285	743	195	212	510	626	976	65	8	1/2"	325	
4,1   530   460   360   750   5x142   688   538   6x110   5x102   1408   1215   294   795   225   226   540   681   1056   80   8   ¾"   3	4,1	530	460	360	750	5x142	688	538	6x110	5x102	1408	1215	294	795	225	226	540	681	1056	80	8	3/4"	375	
5   580   500   400   800   5x152   738   584   7x101   6x92   1485   1293   324   873   250   200   600   736   1136   80   10   ¾"   4	5	580	500	400	800	5x152	738	584	7x101	6x92	1485	1293	324	873	250	200	600	736	1136	80	10	3/4"	430	

(SCALE APPROX. 1:10 FOR HN-T2)

BURNERS HN-T ARE MANUFACTURED BY



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### FUEL GAS FUEL GAS FOR STABILIZATION BURNER COMBUSTION AIR SIGHT AND IGNITION HOLE SIGHT HOLES CONFUSOR BURNER STONES NOT PART OF DELIVER OF BURNERS ADJUSTING FLAPS OF COMBUSTION AIR SHELL (BOTTOM) OF FURNACE GAS BURNER (P = NO, OF HEADS) STABILIZATION BURNER AIR BOX I AIR BOX II FLANGE DN.../PN 16 THERMAL AND SOUND ČSN 13 1231.0 (OR AS INSULATION PER PROJECT) BLINDED HOLE FOR FUEL GAS OIL BURNER

# SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

# BURNERS TYPE SERIES <u>HN-T...K</u> WITH SEVEN DIFFERENT SIZES.

NOMINAL POWER OF EACH SIZE	1	1,5	2	2,6	3,3	4,1	5
	MW	MW	MW	MW	MW	MW	MW

THE BURNERS ARE GAS BURNERS WITH PREHEATED FORCED COMBUSTION AIR (UP TO 400  $^{\circ}$ C)

- GAS BURNER IS MIDDLE PRESSURE, NONINJECTOR WITH 4 10 HEADS
- STABILIZATION BURNER IS INJECTOR, GAS WITH A POWER OF ABOUT 15 KW (4 OPTIONS)
- AIR BOXES ARE INSIDE LINED BY THERMAL AND SOUND INSULATION. THEY HAVE A MANUAL ADJUSTMENT OF PRIMARY AND SECONDARY COMBUSTION AIR, WHICH IS PREAHEATED TO 400 °C
- IGNITION OF BURNERS IS CARRIED OUT EITHER BY A MOVABLE GAS IGNITION BURNER (ABOUT 15 KW) OR ELECTROSPARKS (ACCORDING TO THE PROJECT AND TYPE OF THE STABILIZATION BURNER)

BURNERS HN-T...K CAN BE MANUFACTURED IN DIFFERENT OPTIONS, E.G.:

- TYPE IMPLEMENTATION VERTICAL (SEE SKETCH)
- HORIZONTAL IMPLEMENTATION (INLETS OF OIL AND STABILIZATION BURNER ADJUSTED)
- GAS INLET CAN BE IMPLEMENTED BY ANOTHER FLANGE OR ROTATED IN ANOTHER DIRECTION
- (POSSIBLY BURNER CAN BE EQUIPPED WITH AN OIL BURNER THIS RESULTS IN CREATION OF THE BURNER HPN-T, SEE CATALOGUE SHEET NO. 3 22-9248.0021)

#### THE BURNERS OF THE TYPE HN-T(K) HAVE A MODERN DESIGN

THEY HAVE DECREASED EMISSIONS OF  $NO_X$  , LOWED FUEL CONSUMPTION AND NOISINESS.

THE ECOLOGY, HYGIENE AND ECONOMY OF OPERATION OF INDUSTRIAL FURNACES IS IMPROVED BY USAGE OF HN-T(K) BURNERS.

M	D1	D2	D3	C1	C2	C3	C4	C5	C6	L1	L3	L4	L5	L6	L9	L10	L11	L12	DN	Р	Т	kgs	1
W 1	350	260	210	580	540 8xø19	508	404	5x95	4x93	1135	968	263	632	142	220	275	521	811	40	4	1/2"	205	-  E
1,5		300	230	600	560 8xø19	528	404	5x100	4x93	1135	968	263	632	150	240	275	331	516	40	4	1/2"	220	1
2	400	340	260	620	580 8xø19	558	404	5x105	4x93	1147	972	263	632	170	235	360	546	856	50	6	1/2"	235	1
2,6	440	370	280	660	620 8xø19	600	465	6x95	5x87	1268	1083	278	705	185	185	474	586	916	65	8	1/2"	280	1
3,3	480	400	320	700	660 8x ø19	638	493	6x101	5x92	1306	1121	285	743	195	212	510	626	976	65	8	1/2"	325	
4,1	530	460	360	750	710 8x ø19	688	538	6x110	5x102	1408	1215	294	795	225	226	540	681	1056	80	8	3/4"	375	
5	580	500	400	800	760 8x ø19	738	584	7x101	6x92	1485	1293	324	873	250	200	600	736	1136	80	10	3/4"	430	

(SCALE APPROX. 1:10 FOR HN-T 2 K)

BURNERS HN-T...K ARE MANUFACTURED BY



> FUEL GAS COMBUSTION

RELIEF GAS

DEFLECTOR

GAS BURNER

DIA. C2-8xHOLE DIA.

(P= NO. OF HEADS)

ADJUSTING FLAPS

OF COMBUSTION AIR

SIGHT HOLE

FUEL GAS FOR

SIGHT AND IGNI-

SIGHT HOLE

BURNER STONES

(NOT PART OF DE-

SHELL (BOTTOM)

RELIEF GAS

AIR BOX I

OF FURNACE

LIVERY OF THE

**BURNERS** 

TION HOLE

STABIL. BURNER

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SPECIAL BURNERS FOR INDUSTRIAL FURNACES
OF CHEMICAL INDUSTRY

# BURNERS TYPE SERIES <u>HN-T...K</u> WITH SEVEN DIFFERENT SIZES.

The burners are gas burners with INLET OF COMBUSTION AIR BY UNDERPRESSURE IN THE FURNACE OF WITH preheated forced combustion air (up to 400 °C)

- GAS BURNER IS MIDDLE PRESSURE, NONINJECTOR WITH 4 10 HEADS
- STABILIZATION BURNER SHI-B15 (SHI-B20) OR SHI-B1 IS INJECTOR, GAS WITH A POWER OF ABOUT 17 KW (20 KW FROM NN-T2K-SHI-B15)
- AIR BOXES ARE INSIDE LINED BY THERMAL AND SOUND INSULATION. THEY HAVE A MANUAL ADJUSTMENT OF PRIMARY AND SECONDARY COMBUSTION AIR INTAKEN BY UNDERPRESSURE OR PREAHEATED WITH FORCED COMBUSTION UP TO 400 °C
   IGNITION OF STABILIZATION BURNERS SHI-B15 IS CARRIED OUT BY A MOBILE GAS IGNITION BURNER (ABOUT 15 KW) THAT CAN BE A PART OF DELIVERY OF BURNERS
- IGNITION OF STABILIZATION BURNERS SHI-B15E IS CARRIED OUT BY MEANS OF EMBEDDED IGNITION ELECTRODE AND APPROPRIATE SAFEGUARDING SET

BURNERS HN-T..K CAN BE MANUFACTURED IN VARIOUS OPTIONS, E.G.:

	NER SH B15E)	IZATION HI-B15 (SI AIR BC MAL ANE DINSULA	HI-			ned.		T T	ČSN 1	GE 11-DI 31160.0 GE 11-DN 31160.0 EL GAS LIEF GAS			- - - - THI EM ANI	HOF GAS DIR AIR SUF POS E BUR ISSIO D ECC	RIZON S INLE ECTIC INLET PMENT SSIBLY RNERS NS OF	TAL IN T CAN ON CAN TED W Y WITH G OF TI F NO <sub>X</sub>	NTATI MPLEN I BE IN BE SL /ITH TI H SQU HE TY , FUEL	JPLEME UBE BU IARE AII PE HN- L CONS	TION ENTED I ENTED V JRNER ( R BOX I T(K) HA UMPTIC	VITH OF RE MARK VE A ON AN	INLET ELIEF ( (ED HN MODE ID LOV	R FLAN NECK () GAS (WA I-T (WIT RN DES	SOUND DA ASTE GAS) HOUT LET SIGN WITH NESS. THE	HN-TKs
MW	D1	D2	D3	C1	C2	C3	C4	C5	C6	L3	L4	L5	L6	L9	L10	L11	L12	DN/H1	DN/H2	Р	T	kgs		RS HN-TK ARE
1	D1	D2	D3	C1	C2	C3	C4	C5	C6	L3	L4	L5	L6	L9	L10	L11	L12	DN/H1	DN/H2	Р	T	kgs		RS HN-TK ARE ACTURED BY
1 1,5	D1	D2	D3	C1	C2	C3	C4	C5	C6	L3	L4	L5	L6	L9	L10	L11	L12	DN/H1	DN/H2	Р	T	kgs		
1 1,5 2	D1	D2	D3	C1	C2	C3	C4	C5	C6	L3	L4	L5	L6	L9	L10	L11	L12	DN/H1	DN/H2	P	T	kgs		ACTURED BY
1 1,5 2 2,6																					Т			ACTURED BY  Property of the second se
1 1,5 2 2,6 3,3		D2 400		C1 670		C3 638	C4 493		C6 4x115		L4 285	L5 743			L10 465			DN/H1	DN/H2	P 8	T 3/4"	kgs 360		ACTURED BY  Property of the second se
1 1,5																					T 3/4"			ACTURED BY  Property of the second se

Эл. почта: info@tisys.ru Интернет: www.tisys.ru www.tisys.kz www.tisys.by www.tesec.ru FLANGE DN.../PN6-ČSN131229.0 OR AS PER PROJECT) FUEL GAS FLASH STEAM GAS FOR STABILIZATION FUEL OIL SIGHT AND IGNI TION HOLES (HOLE DIA. 45) BURNER STONES NOT PART OF BURNER DELIVE-SHELL (BOTTOM) OF FURNACE GAS BURNER P = NUMBER OF OIL BURNER STABILIZATION BURNER AIR BOX WITH SOUND DAMPERS ADJUSTMENT OF COMBUSTION AIR (SCALE APPROX.

### SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

### **BURNERS TYPE SERIES HPN-ST WITH SEVEN DIFFERENT SIZES.**

NOMINAL POWER OF EACH SIZE	0,7	1	1,5	2	2,6	3,3	4,1
	MW	MW	MW	MW	MW	MW	MW

The burners are combined oil – gas burners with atmospheric combustion air suckled in from surroundings to the burner with underpressure in the furnace

- OIL BURNER HAS TWO CHAMBERS WITH SPRAYING OF FUEL OIL BY OVERHEATED STEAM
- GAS BURNER IS MIDDLE PRESSURE. NONINJECTOR WITH 5 10 **HEADS**
- STABILIZATION BURNER IS INJECTOR, GAS WITH POWER ABOUT 15
- AIR BOX IS INSIDE EQUIPPED WITH SOUND DAMPERS AND HAS MANUAL ADJUSTMENT OF SUCKLED SECONDARY COMBUSTION AIR
- IGNITION OF BURNERS IS MADE BY MOBILE GAS IGNITION BURNER (APPROX. 15 KW) THAT CAN BE PART OF DELIVERY OF THE BURNERS

The burners HPN-ST can be manufactured in different options, e.g.:

- TYPE WORKMANSHIP VERTICAL (SEE SKETCH)
- HORIZONTAL WORKMANSHIP (INLETS OF OIL AND STABILIZATION **BURNER ADJUSTED)**
- GAS INLET CAN BE IMPLEMENTED BY ANOTHER FLANGE OR ROTATED IN ANOTHER DIRECTION
- WITHOUT OIL BURNER (MARKED: HNS-T)
- WITHOUT GAS BURNER (MARKED: HPS-T)

THE BURNERS HPN-ST HAVE A MODERN DESIGN WITH SMALL NOISINESS (UNDER 85 DB/A), WITH LOW OVERFLOW OF AIR AND WITH ECOLOGICAL AND ECONOMICAL OPERATION.

D1	D2	D3	D4	D5	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	Т	Р	DN	G	kgs	
415	655-8xM12	685	611	450	791	632	523	465	409	155	140	48	145	345	1/2"	5	40	1/2"	95	Βl
450	700-8xM12	730	656	480	806	647	558	465	444	170	140	48	165	360	1/2"	6	40	1/2"	110	M
480	740-8xM12	770	696	500	931	772	633	515	521	180	140	48	180	380	3/4"	6	50	1/2"	125	
550	840-8xM12	880	786	560	967	808	713	660	598	205	140	48	200	425	3/4"	8	50	1/2"	150	
610	895-12xM12	935	851	600	986	827	788	660	663	225	140	48	220	460	3/4"	10	65	1/2"	175	
660	965-12xM12	1005	921	640	1114	971	853	795	728	254	148	52	240	490	3/4"	10	65	3/4"	200	
720	1030-12xM12	1070	986	680	1144	1001	938	795	783	265	148	52	260	520	1"	10	80	3/4"	230	
	415 450 480 550 610	415 655-8xM12 450 700-8xM12 480 740-8xM12 550 840-8xM12 610 895-12xM12 660 965-12xM12	415     655-8xM12     685       450     700-8xM12     730       480     740-8xM12     770       550     840-8xM12     880       610     895-12xM12     935       660     965-12xM12     1005	415     655-8xM12     685     611       450     700-8xM12     730     656       480     740-8xM12     770     696       550     840-8xM12     880     786       610     895-12xM12     935     851       660     965-12xM12     1005     921	415     655-8xM12     685     611     450       450     700-8xM12     730     656     480       480     740-8xM12     770     696     500       550     840-8xM12     880     786     560       610     895-12xM12     935     851     600       660     965-12xM12     1005     921     640	415     655-8xM12     685     611     450     791       450     700-8xM12     730     656     480     806       480     740-8xM12     770     696     500     931       550     840-8xM12     880     786     560     967       610     895-12xM12     935     851     600     986       660     965-12xM12     1005     921     640     1114	415     655-8xM12     685     611     450     791     632       450     700-8xM12     730     656     480     806     647       480     740-8xM12     770     696     500     931     772       550     840-8xM12     880     786     560     967     808       610     895-12xM12     935     851     600     986     827       660     965-12xM12     1005     921     640     1114     971	415         655-8xM12         685         611         450         791         632         523           450         700-8xM12         730         656         480         806         647         558           480         740-8xM12         770         696         500         931         772         633           550         840-8xM12         880         786         560         967         808         713           610         895-12xM12         935         851         600         986         827         788           660         965-12xM12         1005         921         640         1114         971         853	415         655-8xM12         685         611         450         791         632         523         465           450         700-8xM12         730         656         480         806         647         558         465           480         740-8xM12         770         696         500         931         772         633         515           550         840-8xM12         880         786         560         967         808         713         660           610         895-12xM12         935         851         600         986         827         788         660           660         965-12xM12         1005         921         640         1114         971         853         795	415     655-8xM12     685     611     450     791     632     523     465     409       450     700-8xM12     730     656     480     806     647     558     465     444       480     740-8xM12     770     696     500     931     772     633     515     521       550     840-8xM12     880     786     560     967     808     713     660     598       610     895-12xM12     935     851     600     986     827     788     660     663       660     965-12xM12     1005     921     640     1114     971     853     795     728	415       655-8xM12       685       611       450       791       632       523       465       409       155         450       700-8xM12       730       656       480       806       647       558       465       444       170         480       740-8xM12       770       696       500       931       772       633       515       521       180         550       840-8xM12       880       786       560       967       808       713       660       598       205         610       895-12xM12       935       851       600       986       827       788       660       663       225         660       965-12xM12       1005       921       640       1114       971       853       795       728       254	415       655-8xM12       685       611       450       791       632       523       465       409       155       140         450       700-8xM12       730       656       480       806       647       558       465       444       170       140         480       740-8xM12       770       696       500       931       772       633       515       521       180       140         550       840-8xM12       880       786       560       967       808       713       660       598       205       140         610       895-12xM12       935       851       600       986       827       788       660       663       225       140         660       965-12xM12       1005       921       640       1114       971       853       795       728       254       148	415         655-8xM12         685         611         450         791         632         523         465         409         155         140         48           450         700-8xM12         730         656         480         806         647         558         465         444         170         140         48           480         740-8xM12         770         696         500         931         772         633         515         521         180         140         48           550         840-8xM12         880         786         560         967         808         713         660         598         205         140         48           610         895-12xM12         935         851         600         986         827         788         660         663         225         140         48           660         965-12xM12         1005         921         640         1114         971         853         795         728         254         148         52	415         655-8xM12         685         611         450         791         632         523         465         409         155         140         48         145           450         700-8xM12         730         656         480         806         647         558         465         444         170         140         48         165           480         740-8xM12         770         696         500         931         772         633         515         521         180         140         48         180           550         840-8xM12         880         786         560         967         808         713         660         598         205         140         48         200           610         895-12xM12         935         851         600         986         827         788         660         663         225         140         48         220           660         965-12xM12         1005         921         640         1114         971         853         795         728         254         148         52         240	415         655-8xM12         685         611         450         791         632         523         465         409         155         140         48         145         345           450         700-8xM12         730         656         480         806         647         558         465         444         170         140         48         165         360           480         740-8xM12         770         696         500         931         772         633         515         521         180         140         48         180         380           550         840-8xM12         880         786         560         967         808         713         660         598         205         140         48         200         425           610         895-12xM12         935         851         600         986         827         788         660         663         225         140         48         220         460           660         965-12xM12         1005         921         640         1114         971         853         795         728         254         148         52         240         490 <td>415         655-8xM12         685         611         450         791         632         523         465         409         155         140         48         145         345         ½°           450         700-8xM12         730         656         480         806         647         558         465         444         170         140         48         165         360         ½°           480         740-8xM12         770         696         500         931         772         633         515         521         180         140         48         180         380         ¾°           550         840-8xM12         880         786         560         967         808         713         660         598         205         140         48         200         425         ¾°           610         895-12xM12         935         851         600         986         827         788         660         663         225         140         48         220         460         ¾°           660         965-12xM12         1005         921         640         1114         971         853         795         728         254</td> <td>415       655-8xM12       685       611       450       791       632       523       465       409       155       140       48       145       345       ½"       5         450       700-8xM12       730       656       480       806       647       558       465       444       170       140       48       165       360       ½"       6         480       740-8xM12       770       696       500       931       772       633       515       521       180       140       48       180       380       ¾"       6         550       840-8xM12       880       786       560       967       808       713       660       598       205       140       48       200       425       ¾"       8         610       895-12xM12       935       851       600       986       827       788       660       663       225       140       48       220       460       ¾"       10         660       965-12xM12       1005       921       640       1114       971       853       795       728       254       148       52       240       490</td> <td>415       655-8xM12       685       611       450       791       632       523       465       409       155       140       48       145       345       ½"       5       40         450       700-8xM12       730       656       480       806       647       558       465       444       170       140       48       165       360       ½"       6       40         480       740-8xM12       770       696       500       931       772       633       515       521       180       140       48       180       380       ¾"       6       50         550       840-8xM12       880       786       560       967       808       713       660       598       205       140       48       200       425       ¾"       8       50         610       895-12xM12       935       851       600       986       827       788       660       663       225       140       48       220       460       ¾"       10       65         660       965-12xM12       1005       921       640       1114       971       853       795       728       254&lt;</td> <td>415       655-8xM12       685       611       450       791       632       523       465       409       155       140       48       145       345       ½"       5       40       ½"         450       700-8xM12       730       656       480       806       647       558       465       444       170       140       48       165       360       ½"       6       40       ½"         480       740-8xM12       770       696       500       931       772       633       515       521       180       140       48       180       380       ¾"       6       50       ½"         550       840-8xM12       880       786       560       967       808       713       660       598       205       140       48       200       425       ¾"       8       50       ½"         610       895-12xM12       935       851       600       986       827       788       660       663       225       140       48       220       460       ¾"       10       65       ½"         660       965-12xM12       1005       921       640       1114</td> <td>415       655-8xM12       685       611       450       791       632       523       465       409       155       140       48       145       345       ½"       5       40       ½"       95         450       700-8xM12       730       656       480       806       647       558       465       444       170       140       48       165       360       ½"       6       40       ½"       110         480       740-8xM12       770       696       500       931       772       633       515       521       180       140       48       180       380       ¾"       6       50       ½"       125         550       840-8xM12       880       786       560       967       808       713       660       598       205       140       48       200       425       ¾"       8       50       ½"       150         610       895-12xM12       935       851       600       986       827       788       660       663       225       140       48       220       460       ¾"       10       65       ½"       175         660</td>	415         655-8xM12         685         611         450         791         632         523         465         409         155         140         48         145         345         ½°           450         700-8xM12         730         656         480         806         647         558         465         444         170         140         48         165         360         ½°           480         740-8xM12         770         696         500         931         772         633         515         521         180         140         48         180         380         ¾°           550         840-8xM12         880         786         560         967         808         713         660         598         205         140         48         200         425         ¾°           610         895-12xM12         935         851         600         986         827         788         660         663         225         140         48         220         460         ¾°           660         965-12xM12         1005         921         640         1114         971         853         795         728         254	415       655-8xM12       685       611       450       791       632       523       465       409       155       140       48       145       345       ½"       5         450       700-8xM12       730       656       480       806       647       558       465       444       170       140       48       165       360       ½"       6         480       740-8xM12       770       696       500       931       772       633       515       521       180       140       48       180       380       ¾"       6         550       840-8xM12       880       786       560       967       808       713       660       598       205       140       48       200       425       ¾"       8         610       895-12xM12       935       851       600       986       827       788       660       663       225       140       48       220       460       ¾"       10         660       965-12xM12       1005       921       640       1114       971       853       795       728       254       148       52       240       490	415       655-8xM12       685       611       450       791       632       523       465       409       155       140       48       145       345       ½"       5       40         450       700-8xM12       730       656       480       806       647       558       465       444       170       140       48       165       360       ½"       6       40         480       740-8xM12       770       696       500       931       772       633       515       521       180       140       48       180       380       ¾"       6       50         550       840-8xM12       880       786       560       967       808       713       660       598       205       140       48       200       425       ¾"       8       50         610       895-12xM12       935       851       600       986       827       788       660       663       225       140       48       220       460       ¾"       10       65         660       965-12xM12       1005       921       640       1114       971       853       795       728       254<	415       655-8xM12       685       611       450       791       632       523       465       409       155       140       48       145       345       ½"       5       40       ½"         450       700-8xM12       730       656       480       806       647       558       465       444       170       140       48       165       360       ½"       6       40       ½"         480       740-8xM12       770       696       500       931       772       633       515       521       180       140       48       180       380       ¾"       6       50       ½"         550       840-8xM12       880       786       560       967       808       713       660       598       205       140       48       200       425       ¾"       8       50       ½"         610       895-12xM12       935       851       600       986       827       788       660       663       225       140       48       220       460       ¾"       10       65       ½"         660       965-12xM12       1005       921       640       1114	415       655-8xM12       685       611       450       791       632       523       465       409       155       140       48       145       345       ½"       5       40       ½"       95         450       700-8xM12       730       656       480       806       647       558       465       444       170       140       48       165       360       ½"       6       40       ½"       110         480       740-8xM12       770       696       500       931       772       633       515       521       180       140       48       180       380       ¾"       6       50       ½"       125         550       840-8xM12       880       786       560       967       808       713       660       598       205       140       48       200       425       ¾"       8       50       ½"       150         610       895-12xM12       935       851       600       986       827       788       660       663       225       140       48       220       460       ¾"       10       65       ½"       175         660

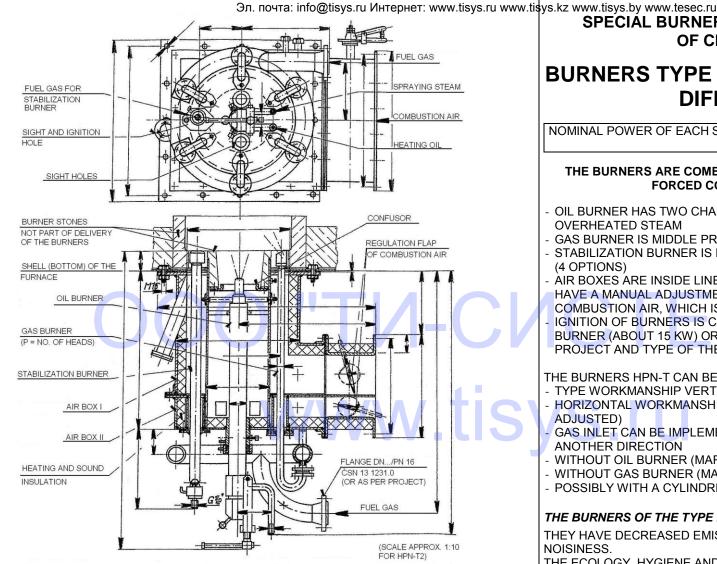
URNERS HPN-ST ARE IANUFACTURED BY



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По всем вопросам обращайтесь в наш офис ООО "ТИ-Системс":

Тел/факс: (495) 7774788, 5007154.55, 65, 7489626, 7489127, 28, 29



### SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

### **BURNERS TYPE SERIES HPN-T WITH SEVEN** DIFFERENT SIZES.

NOMINAL POWER OF EACH SIZE	1	1,5	2	2,6	3,3	4,1	5
	MW	MW	MW	MW	MW	MW	MW

#### THE BURNERS ARE COMBINED OIL - GAS BURNERS WITH PREHEATED FORCED COMBUSTION AIR (UP TO 400 °C)

- OIL BURNER HAS TWO CHAMBERS WITH SPRAYING OF FUEL OIL BY **OVERHEATED STEAM**
- GAS BURNER IS MIDDLE PRESSURE, NONINJECTOR WITH 4 10 HEADS
- STABILIZATION BURNER IS INJECTOR. GAS WITH A POWER OF ABOUT 15 KW (4 OPTIONS)
- AIR BOXES ARE INSIDE LINED BY THERMAL AND SOUND INSULATION. THEY HAVE A MANUAL ADJUSTMENT OF PRIMARY AND SECONDARY COMBUSTION AIR, WHICH IS PREAHEATED UP TO 400 °C
- IGNITION OF BURNERS IS CARRIED OUT EITHER BY A MOBILE GAS IGNITION BURNER (ABOUT 15 KW) OR ELECTRICAL SPARKS (ACCORDING TO THE PROJECT AND TYPE OF THE STABILIZATION BURNER)

THE BURNERS HPN-T CAN BE IMPLEMENTED IN DIFFERENT VARIANTS, E.G.

- TYPE WORKMANSHIP VERTICAL (SEE SKETCH)
- HORIZONTAL WORKMANSHIP (INLETS OF OIL AND STABILIZATION BURNER ADJUSTED)
- GAS INLET CAN BE IMPLEMENTED BY ANOTHER FLANGE OR ROTATED IN ANOTHER DIRECTION
- WITHOUT OIL BURNER (MARKED: HN-T)
- WITHOUT GAS BURNER (MARKED: HP-T)
- POSSIBLY WITH A CYLINDRICAL AIR BOX (MARKED: HPN-T...K)

#### THE BURNERS OF THE TYPE HPN-T HAVE A MODERN DESIGN

THEY HAVE DECREASED EMISSIONS OF NOx, FUEL CONSUMPTION AND LOW NOISINESS.

THE ECOLOGY, HYGIENE AND ECONOMY OF OPERATION OF INDUSTRIAL FURNACES ARE IMPROVED BY USAGE OF HPN-T BURNERS.

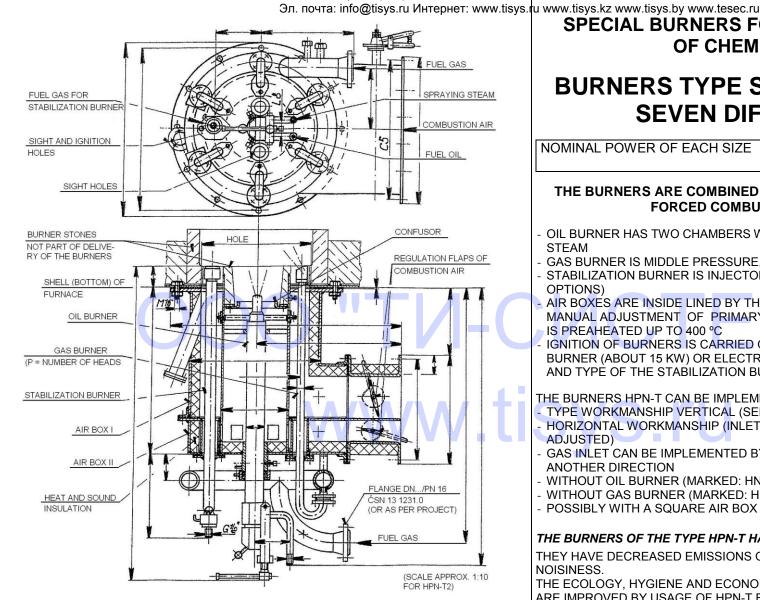
MW	D1	D2	D3	C1	C2	C3	C4	C5	C6	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	G	DN	Р	Т	kgs
1	350	260	210	580	4x135	508	404	5x95	4x93	1342	1178	968	263	632	142	140	48	220	275	521	811	1/2"	40	4	1/2"	225
1,5	370			600	4x140	528	404	5x100	4x93	1342	1178	968	263	632	150	140	48	240	275	331	516	1/2"	40	4	1/2"	245
2	400	340	260	620	4x145	558	404	5x105	4x93	1342	1178	972	263	632	170	140	48	235	360	546	856	1/2"	50	6	1/2"	255
2,6	440	370	280	660	4x155	600	465	6x95	5x87	1344	1180	1083	278	705	185	140	48	185	474	586	916	1/2"	65	8	1/2"	300
3,3	480	400	320	700	5x132	638	493	6x101	5x92	1518	1373	1121	285	743	195	148	52	212	510	626	976	3/4"	65	8	1/2"	350
4,1	530			750	5x142	688	538	6x110	5x102	1530	1384	1215	294	795	225	148	52	226	540	681	1056	3/4"	80	8		400
5	580	500	400	800	5x152	738	584	7x101	6x92	1540	1394	1293	324	873	250	148	52	200	600	736	1136	3/4"	80	10	3/4"	455

**BURNERS HPN-T** ARE

MANUFACTURED BY



Тел/факс: (495) 7774788, 5007154.55, 65, 7489626, 7489127, 28, 29



### SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

### **BURNERS TYPE SERIES HPN-T...K WITH** SEVEN DIFFERENT SIZES.

NOMINAL POWER OF EACH SIZE	1	1,5	2	2,6	3,3	4,1	5
	MW	MW	MW	MW	MW	MW	MW

#### THE BURNERS ARE COMBINED OIL – GAS BURNERS WITH PREHEATED FORCED COMBUSTION AIR (UP TO 400 °C)

- OIL BURNER HAS TWO CHAMBERS WITH SPRAYING OF FUEL OIL BY OVERHEATED **STFAM**
- GAS BURNER IS MIDDLE PRESSURE. NONINJECTOR WITH 4 10 HEADS
- STABILIZATION BURNER IS INJECTOR, GAS WITH A POWER OF ABOUT 15 KW (4 OPTIONS)
- AIR BOXES ARE INSIDE LINED BY THERMAL AND SOUND INSULATION. THEY HAVE A MANUAL ADJUSTMENT OF PRIMARY AND SECONDARY COMBUSTION AIR. WHICH IS PREAHEATED UP TO 400 °C
- IGNITION OF BURNERS IS CARRIED OUT EITHER BY A MOBILE GAS IGNITION BURNER (ABOUT 15 KW) OR ELECTRICAL SPARKS (ACCORDING TO THE PROJECT AND TYPE OF THE STABILIZATION BURNER)

THE BURNERS HPN-T CAN BE IMPLEMENTED IN DIFFERENT VARIANTS, E.G.

- TYPE WORKMANSHIP VERTICAL (SEE SKETCH)
- HORIZONTAL WORKMANSHIP (INLETS OF OIL AND STABILIZATION BURNER ADJUSTED)
- GAS INLET CAN BE IMPLEMENTED BY ANOTHER FLANGE OR ROTATED IN ANOTHER DIRECTION
- WITHOUT OIL BURNER (MARKED: HN-T...K)
- WITHOUT GAS BURNER (MARKED: HP-T...K)
- POSSIBLY WITH A SQUARE AIR BOX MARKED: HPN-T (WITHOUT LETTER K)

#### THE BURNERS OF THE TYPE HPN-T HAVE A MODERN DESIGN

THEY HAVE DECREASED EMISSIONS OF NOx, FUEL CONSUMPTION AND LOW NOISINESS.

THE ECOLOGY, HYGIENE AND ECONOMY OF OPERATION OF INDUSTRIAL FURNACES ARE IMPROVED BY USAGE OF HPN-T BURNERS.

MW	D1	D2	D3	C1	C2	C3	C4	C5	C6	L1	L2	L3	L4	L5	L6	L7	L8	<u> 1</u> 9	L10	L11	L12	G	DN	Р	Т	kgs	E
1	350	260	210	580	540 12xø19	508	404	5x95	4x93	1342	1178	968	263	632	142	140	48	220	275	521	811	1/2"	40	4	1/2"	225	l
1,5	370			600	560 12xø19	528	404	5x100	4x93	1342	1178	968	263	632	150	140	48	240	275	331	516	1/2"	40	4	1/2"	245	Ι.
2	400	340	260	620	580 12xø19	558	404	5x105	4x93	1342	1178	972	263	632	170	140	48	235	360	546	856	1/2"	50	6	1/2"	255	Ì
2,6	440	370	280	660	620 12xø19	600	465	6x95	5x87	1344	1180	1083	278	705	185	140	48	185	474	586	916	1/2"	65	8	1/2"	300	j
3,3	480	400	320	700	660 12xø19	638	493	6x101	5x92	1518	1373	1121	285	743	195	148	52	212	510	626	976	3/4	65	8	1/2"	350	j
4,1	530			750	710 xø19	688	538	6x110	5x102	1530	1384	1215	294	795	225	148	52	226	540	681	1056	3/4	80	8		400	
5	580	500	400	800	760 xø19	738	584	7x101	6x92	1540	1394	1293	324	873	250	148	52	200	600	736	1136	3/4"	80	10	3/4"	455	
					l .																						_

BURNERS HPN-T...K ARE MANUFACTURED BY



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Эл. почта: info@tisys.ru Интернет: www.tisys.ru www.tisys.kz www.tisys.by www.tesec.ru SPRAYING STEAM GAS FOR STABILIZATION BURNER FUEL OIL **BLINDED HOLES** FOR GAS BURNER SIGHT AND IGNI-TION HOLES (HOLES DIA, 45) **BURNER STONES** NOT PART OF DE-LIVERY OF BUR-SHELL (BOTTOM) OF FURNACE OIL BURNER STABILIZ. BURNER AIR BOX WITH SOUND DAMPERS ADJUSTMENT OF COMBUSTION AIR SCALE APPROX. 1:10 FOR HPS-T2

### SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

### **BURNERS TYPE SERIES HPS-T WITH** SEVEN DIFFERENT SIZES.

NOMINAL POWER OF EACH SIZE	0,7	1	1,5	2	2,6	3,3	4,1
	MW	MW	MW	MW	MW	MW	MW

THE BURNERS ARE OIL WITH ATMOSPHERIC COMBUSTION AIR. intaken from air into the burner by underpressure in the furnace

- OIL BURNER IS WITH DOUBLE CHAMBER WITH SPRAYING OF FUEL OIL WITH PREHEATED STEAM
- STABILIZATION BURNER IS INJECTOR. GAS WITH A POWER OF ABOUT 15 KW (20KW FROM HPS-T2)
- AIR BOX IS EQUIPPED WITH SOUND DAMPERS AND HAS A MANUAL ADJUSTMENT OF THE INTAKEN COMBUSTION AIR
- IGNITION OF BURNERS IS CARRIED OUT BY A MOBILE GAS IGNITION BURNER (ABOUT 15 KW) WHICH CAN BE A PART OF THE BURNER **DELIVERY**

The burners HPS-T can be implemented in different OPTIONS, e.g.:

- TYPE IMPLEMENTATION VERTICAL (SEE SKETCH)
- HORIZONTAL IMPLEMENTATION (INLETS OF OIL AND STABILIZATION **BURNER ADJUSTED**)
- (THE BURNER CAN BE EQUIPPED WITH A GAS BURNER THIS RESULTS IN CREATION OF THE BURNER HPN-ST, SEE CATALOGUE SHEET NO. 3 22-9248.0023)

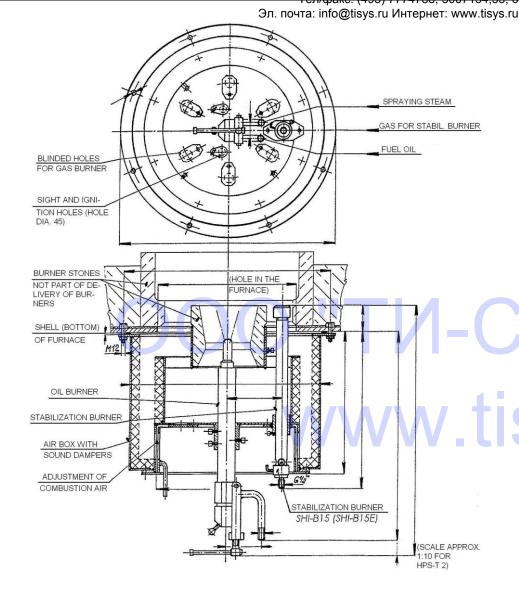
THE BURNERS HPS-T HAVE A MODERN DESIGN WITH LOW NOISINESS (UNDER 85 DB/A), WITH LOW SURPLUS OF AIR AND WITH ECOLOGICAL AND ECONOMICAL OPERATION.

MW	D1	D2	D3	D4	D5	L1	L2	L4	L5	L6	L7	L8			G	kgs	_
0,7	415	655-8xM12	685	611	450	786	632	465	409	155	140	48			1/2"	80	В
1	450	700-8xM12	730	656	480	801	647	465	444	170	140	48			1/2"	90	N
1,5	480	740-8xM12	770	696	500	926	772	515	521	180	140	48			1/2"	105	
2	550	840-8xM12	880	786	560	962	808	660	598	205	140	48			1/2"	120	
2,6	610	895-12xM12	935	851	600	981	827	660	663	225	140	48			1/2"	140	
3,3	660	965-12xM12	1005	921	640	1109	971	795	728	245	148	52			3/4"	160	
4,1	720	1030-12xM12	1070	986	680	1139	1001	795	783	265	148	52			3/4"	185	

BURNERS HPS-T ARE MANUFACTURED BY



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# Эл. почта: info@tisys.ru Интернет: www.tisys.ru www.tisys.by www.tesec.ru OF CHEMICAL INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

# BURNERS TYPE SERIES <u>HPS-T (HP-ST)</u> WITH SEVEN DIFFERENT SIZES.

NOMINAL POWER OF EACH SIZE	0,7	1	1,5	2	2,6	3,3	4,1
	MW	MW	MW	MW	MW	MW	MW

The burners are oil burners with INLET OF combustion air by underpressure in the furnace

- OIL BURNER HAS AN OIL SPRAYER 2K WITH SPRAYING OF FUEL OIL BY PREHEATED STEAM
- THE STABILIZATION BURNER SHI-B15 (SHI-B20) OR SHI-B15E IS INJECTOR, GAS WITH A POWER ABOUT 17 KW (20 KW FROM HPS-T2 SHI-B20)
- AIR BOX IS EQUIPPED WITH SOUND DAMPERS WITH A MANUAL ADJUSTMENT (ROTATING REGISTER) OF INTAKEN COMBUSTION AIR BY UNDERPRESSURE IN THE FURNACE
- IGNITION OF STABILIZATION BURNERS SHI-B15E IS CARRIED OUT BY A PORTABLE GAS IGNITION BURNER (ABOUT 156 KW) WHICH CAN BE A PART OF THE BURNER DELIVERY)
- IGNITION OF STABILIZING BURNERS SHI-B15 SE IS CARRIED OUT BY MEANS OF MOBILE GAS IGNITION BURNER (ABOUT 15 KW) THAT CAN BE A PART OF BURNER DELIVERY
- IGNITION OF STABILIZATION BURNERS SHI-B1 5E IS CARRIED OUT BY MEANS OF AN EMBEDDED IGNITION ELECTRODE AND APPROPRIATE SAFEGUARDING SET

THE BURNERS HPS-T CAN BE IMPLEMENTED IN VARIOUS OPTIONS, E.G.:

- TYPE IMPLEMENTATION VERTICAL (SEE SKETCH)
- HORIZONTAL IMPLEMENTATION (INLETS OF OIL AND STABILIZATION BURNER ADJUSTED)

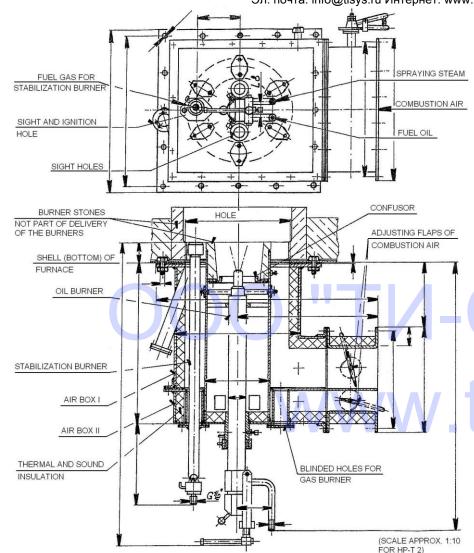
THE BURNERS HPS-T HAVE A MODERN DESIGN WITH LOW NOISINESS (UNDER 85 DB/A), WITH LOW SURPLUS OF AIR AND WITH ECOLOGICAL AND ECONOMICAL OPERATION.

MW	D1	D2	D3	D4	D5	L1	L2	L4	L5	L6	L7	L8			G	kgs	Ì
0,7	415	655-8xM12	685	611	450	786	632	465	409	155	140	48			1/2"	80	Ì
1	450	700-8xM12	730	656	480	801	647	465	444	170	140	48			1/2"	90	
1,5	480	740-8xM12	770	696	500	926	772	515	521	180	140	48			1/2"	105	
2	550	840-8xM12	880	786	560	962	808	660	598	205	140	48			1/2"	120	
2,6	610	895-12xM12	935	851	600	981	827	660	663	225	140	48			1/2"	140	
3,3	660	965-12xM12	1005	921	640	1109	971	795	728	245	148	52			3/4"	160	
4,1	720	1030-12xM12	1070	986	680	1139	1001	795	783	265	148	52			3/4"	185	Ī

BURNERS HPS-T (HP-ST) ARE MANUFACTURED BY



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# SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

# BURNERS TYPE SERIES <u>HP-T</u> WITH SEVEN DIFFERENT SIZES.

NOMINAL POWER OF EACH SIZE	1	1,5	2	2,6	3,3	4,1	5
	MW	MW	MW	MW	MW	MW	MW

The burners are oil burners with preheated forced combustion air (up to 400 °C)

- OIL BURNER HAS TWO CHAMBERS WITH SPRAYING OF FUEL OIL BY OVERHEATED STEAM
- STABILIZATION BURNER IS INJECTOR, GAS WITH A POWER OF ABOUT 15 KW (4 OPTIONS)
- AIR BOXES ARE INSIDE LINED BY THERMAL AND SOUND INSULATION.
   THEY HAVE A MANUAL ADJUSTMENT OF PRIMARY AND SECONDARY
   COMBUSTION AIR WHICH IS PREAHEATED UP TO 400 °C
- IGNITION OF BURNERS IS CARRIED OUT EITHER BY A MOVABLE GAS IGNITION BURNER (ABOUT 15 KW) OR ELECTROSPARKS (ACCORDING TO THE PROJECT AND TYPE OF THE STABILIZATION BURNER)

THE BURNERS HP-T CAN BE IMPLEMENTED IN VARIOUS VARIANTS, E.G.:

- TYPE IMPLEMENTATION VERTICAL (SEE SKETCH)
- HORIZONTAL IMPLEMENTATION (INLETS OF OIL AND STABILIZATION BURNER ADJUSTED)
- (BURNER CAN BE POSSIBLY EQUIPPED WITH A GAS BURNER THIS RESULTS IN CREATION OF THE BURNER HPN-T, SEE CATALOGUE SHEET NO. 3 22-9248.0021)

#### THE BURNERS OF THE TYPE HP-T HAVE A MODERN DESIGN

THEY HAVE DECREASED EMISSIONS OF  $NO_{\chi}$ , LOWERED FUEL CONSUMPTION AND LOW NOISINESS.

THE ECOLOGY, HYGIENE AND ECONOMY OF OPERATION OF INDUSTRIAL FURNACES IS IMPROVED BY USAGE OF HP-T BURNERS.

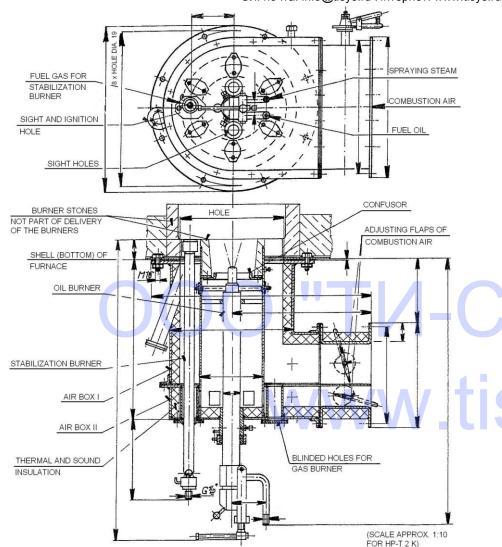
Ν	ΙW	D1	D3	C1	C2	C3	C4	C5	C6	L1	L2	L4	L5	L6	L7	L8	L11	L12		G	kgs	1
	1	350	210	580	4x135	508	404	5x95	4x93	1342	1178	263	632	142	140	48	521	811		1/2"	200	В
1	1,5	370	230	600	4x140	528	404	5x100	4x93	1342	1178	263	632	150	140	48	331	516		1/2"	210	N
	2	400	260	620	4x145	558	404	5x105	4x93	1342	1178	263	632	170	140	48	546	856		1/2"	220	
2	2,6	440	280	660	4x155	600	465	6x95	5x87	1344	1180	278	705	185	140	48	586	916		1/2"	260	
3	3,3	480	320	700	5x132	638	493	6x101	5x92	1518	1373	285	743	195	148	52	626	976		3/4	300	
4	1,1	530	360	750	5x142	688	538	6x110	5x102	1530	1384	294	795	225	148	52	681	1056		3/4	340	
	5	580	400	800	5x152	738	584	7x101	6x92	1540	1394	324	873	250	148	52	736	1136		3/4"	380	

BURNERS HP-T ARE MANUFACTURED BY



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# SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

# BURNERS TYPE SERIES <u>HP-T...K</u> WITH SEVEN DIFFERENT SIZES.

NOMINAL POWER OF EACH SIZE	1	1,5	2	2,6	3,3	4,1	5
	MW	MW	MW	MW	MW	MW	MW

THE BURNERS ARE <u>OIL BURNERS WITH PREHEATED FORCED COMBUSTION</u> <u>AIR (UP TO 400 °C)</u>

- OIL BURNER HAS TWO CHAMBERS WITH SPRAYING OF FUEL OIL BY OVERHEATED STEAM
- STABILIZATION BURNER IS INJECTOR, GAS WITH A POWER OF ABOUT 15 KW (4 OPTIONS)
- AIR BOXES ARE INSIDE LINED BY THERMAL AND SOUND INSULATION. THEY HAVE A MANUAL ADJUSTMENT OF PRIMARY AND SECONDARY COMBUSTION AIR WHICH IS PREAHEATED UP TO 400 °C
- IGNITION OF BURNERS IS CARRIED OUT EITHER BY A MOBILE GAS IGNITION BURNER (ABOUT 15 KW) OR ELECTROSPARKS (ACCORDING TO THE PROJECT AND TYPE OF THE STABILIZATION BURNER)

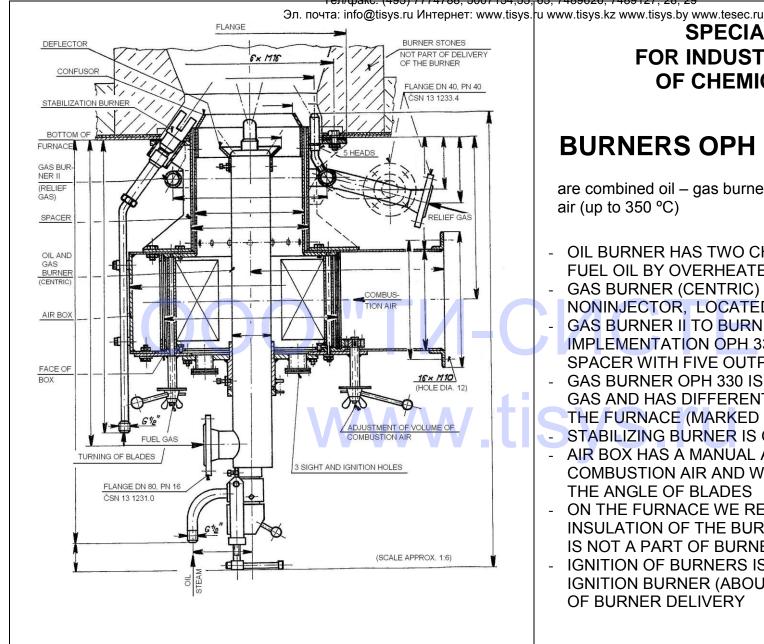
THE BURNERS HP-T..K CAN BE MANUFACTURED IN VARIOUS OPTIONS, E.G.:

- TYPE IMPLEMENTATION VERTICAL (SEE SKETCH)
- HORIZONTAL IMPLEMENTATION (INLETS OF OIL AND STABILIZATION BURNER ADJUSTED)
- (POSSIBLY BURNER CAN BE EQUIPPED WITH A GAS BURNER THIS RESULTS IN CREATION OF THE BURNER HPN-T..K, SEE CATALOGUE SHEET NO. 3 22-9248.0022)

THE BURNERS OF THE TYPE HP-T..K HAVE A MODERN DESIGN. THEY HAVE DECREASED EMISSIONS OF  $NO_{\chi}$ , FUEL CONSUMPTION AND LOW NOISINESS.

THE ECOLOGY, HYGIENE AND ECONOMY OF OPERATION OF INDUSTRIAL FURNACES IS IMPROVED BY USAGE OF HP-T...K BURNERS.

MW	D1	D3	C1	C2	C3	C4	C5	C6	L1	L2	L4	L5	L6	L7	L8	L11	L12	G	kgs	BURNERS HP-TK ARE
1	350	210	580	540x8xø19	508	404	5x95	4x93	1342	1178	263	632	142	140	48	521	811	1/2"	200	MANUFACTURED BY
1,5	370	230	600	560x8x ø19	528	404	5x100	4x93	1342	1178	263	632	150	140	48	331	516	1/2"	210	( Pametal
2	400	260	620	580x8x ø19	558	404	5x105	4x93	1342	1178	263	632	170	140	48	546	856	1/2"	220	akciová společnost
2,6	440	280	660	620x8x ø19	600	465	6x95	5x87	1344	1180	278	705	185	140	48	586	916	1/2"	260	akciova sporeciiosi
3,3	480	320	700	660x8x ø19	638	493	6x101	5x92	1518	1373	285	743	195	148	52	626	976	3/4"	300	
4,1	530	360	750	710x8x ø19	688	538	6x110	5x102	1530	1384	294	795	225	148	52	681	1056	3/4"	340	
5	580	400	800	760x8x ø19	738	584	7x101	6x92	1540	1394	324	873	250	148	52	736	1136	3/4"	380	03/92 3 22 9248.0036



# SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

### **BURNERS OPH 330 S AND OPH 330**

are combined oil – gas burners with preheated forced combustion air (up to  $350\ ^{\circ}\text{C}$ )

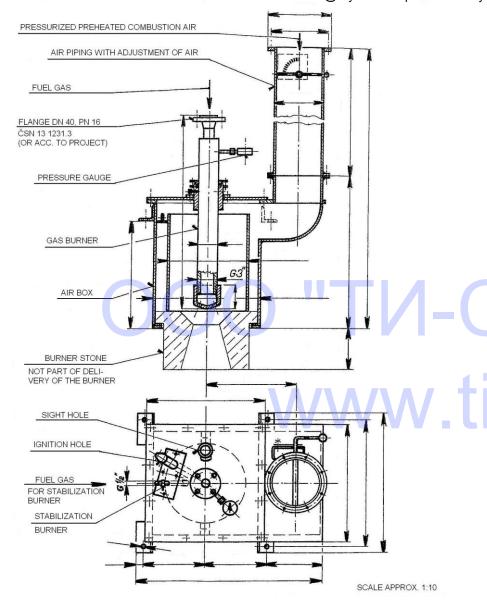
- OIL BURNER HAS TWO CHAMBERS WITH SPRAYING OF FUEL OIL BY OVERHEATED STEAM
- GAS BURNER (CENTRIC) IS MIDDLE PRESSURE,
  NONINJECTOR, LOCATED COAXIALLY ON THE OIL BURNER
- GAS BURNER II TO BURN RELIEF GAS IS IN THE IMPLEMENTATION OPH 330 S ONLY (TUBE RIM AROUND A SPACER WITH FIVE OUTPUT NOZZLES)
- GAS BURNER OPH 330 IS WITHOUT A BURNER FOR RELIEF GAS AND HAS DIFFERENT CONNECTING DIMENSIONS TO THE FURNACE (MARKED BY \* IN THE DRAWING)
- STABILIZING BURNER IS GAS, INJECTOR, ABOUT 15 KW
- AIR BOX HAS A MANUAL ADJUSTMENT OF THE AMOUNT OF COMBUSTION AIR AND WITH A MANUAL ADJUSTMENT OF THE ANGLE OF BLADES
- ON THE FURNACE WE RECOMMEND TO DO A THERMAL INSULATION OF THE BURNER AND AIR INLET (INSULATION IS NOT A PART OF BURNER DELIVERY)
- IGNITION OF BURNERS IS CARRIED BY A MOVABLE GAS IGNITION BURNER (ABOUT 15 KW) WHICH CAN BE A PART OF BURNER DELIVERY

TYPE		~ kgs	Е
OPH 330		212	l
OPH 330 S		224	l

BURNERS OPH 330 (S) ARE MANUFACTURED BY



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### SPECIAL BURNERS FOR INDUSTRIAL FURNACES OF CHEMICAL INDUSTRY

## **OVERHEAD BURNERS PHP**

THEY ARE GAS – NONINJECTOR, MIDDLE PRESSURE WITH PREHEATED ENFORCED COMBUSTION AIR (APPROX. 250°C)

- WITH STABILIZATION INJECTOR BURNER SHI-PV18

(APPROX. 25 KW)

EMC'

- WITH ADJUSTING FLAP FOR MANUAL CONTROL OF COMBUSTION AIR IN THE INLET TO THE BURNER
- IGNITION OF BURNERS IS MADE BY MOBILE IGNITION BURNER (APPROX. 15 kW) THAT CAN BE PART OF DELIVERY OF THE BURNERS

THE PHP BURNERS CAN BE MANUFACTURED ALSO IN OTHER SIZES AND OPTIONS ACC. TO PROJECT.

TYPE	MW	kgs
PHP 1	1	132

BURNERS PHP ARE MANUFACTURED BY

