

# **PRODUCT OVERVIEW**

# **SERVOPRO** Chroma

## SAFE AREA



GAS	MEASURES	APPLICATION		
MULTIPLE	PERCENT	QUALITY		
	TRACE	PROCESS CONTROL		
	ULTRA TRACE			

#### SENSING TECHNOLOGY

LASMA

FLAME IONIZATION

GAS CHROMATOGRAPH

## **KEY APPLICATIONS**

- Medical gas production
- Air separation plants
- Cryogenic truck loading station
- High purity gas production

## HIGHLY VERSATILE TRACE GAS ANALYZER PLATFORM CONFIGURABLE TO A WIDE RANGE OF APPLICATIONS

#### UNRIVALLED PERFORMANCE

- Uses ultra-sensitive and highly selective patented PED sensing technology, delivering the highest reliability and performance currently available
- PlasmaHC measures methane and NMHC without the use of a FID, eliminating the need for maintenance and fuel. ArgonSep separates Ar from O<sub>2</sub> without the need for scrubbers, providing a sensitive, maintenance-free measurement

#### **FLEXIBLE**

- Comprehensive solution for ultra-trace H<sub>2</sub>, Ne, O<sub>2</sub>, N<sub>2</sub>, Ar, CH<sub>4</sub>, CO, CO<sub>2</sub> and NMHC in a number of background gases; H<sub>2</sub>, O<sub>2</sub>, N<sub>2</sub>, Ar, He and CO<sub>2</sub>
- Plasma, FID and TCD technologies used depending on application
- Compact design that fits into a single 4U rack
- Flexible communication options including Ethernet, RS232 and 4-20 mA output

### EASY TO USE

- Comprehensive device interaction and monitoring via intelligent software
- Remote configuration via Ethernet/Internet
- Electronic carrier and sample flow PID control system
- Remote range I.D. contact per impurity

### LOW COST OF OWNERSHIP

- Simplified reporting functions facilitated by the software
- PED sensing technology does not require a separate methanizer

#### **BENCHMARK COMPLIANCE**

- Class B digital apparatus requirements of ICES-001 of Canada through the application of EN 61000-6-3:2007
- Part 15 of the US FCC rules for Class B equipment
- IEC 61010-1 for electrical safety
- EC "Low Voltage Directive" by application of EN 61010-1 and rated for Over Voltage Category II, Pollution Degree 2

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# **PRODUCT OVERVIEW**

# SERVOPRO Chroma

## **SAFE AREA**

### HIGH VERSATILITY FOR DIVERSE APPLICATION NEEDS

Applications that depend on the very highest levels of product purity depend on trace analysis of exceptional sensitivity and performance. Impurities requiring measurement are both diverse in nature and found in a number of background gas streams, so high flexibility is also a must. Measurements need to be reliable, so a technology that can provide stability is essential. No matter what your application monitoring requirements, you'll also want a solution that is easy to use and has a low lifetime cost-of-ownership. We don't believe you should have to compromise.

### **A NO COMPROMISE SOLUTION**

The Chroma's flexible ultra-trace analysis is delivered through a smart combination of cutting-edge sensing technology and intelligent control software. Benefiting from the fast, accurate, sensitive and selective response of Servomex's non-depleting Plasma Emission Detector (PED) cell, Flame Ionization Detector (FID) or Thermal Conductivity (TCD) technologies, the Chroma offers sophisticated configuration and performance options which are far ahead of the competition.

#### **EASY AND INTUITIVE TO USE**

The ability to reduce ongoing maintenance costs and minimize long-term ownership costs is essential, while operational benefits like simple installation requirements are highly attractive. Supported by Servomex's global service network, which offers a complete package of support from commissioning to servicing, the FluegasExact delivers a long life of exceptional performance.



Representantes / Distribuidores Exclusivos

#### Argentina Tel: (+54 11) 5352 2500 Email: info@dastecsrl.com.ar

Web: www.dastecsrl.com.ar

Uruguay www.dastecsrl.com.uy

Paraguay www.dastecsrl.com.py



These analyzers are not intended for any form of use on humans and are not medical devices as described in the Medical Devices Directive 93/42EEC.

Please note: Whilst every effort has been made to ensure accuracy, no responsibility can be accepted for errors and omissions. Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards and guidelines. This document is not intended to form the basis of a contract

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# **TECHNICAL DATA SHEET**

# SERVOPRO Chroma



# **SPECIFICATIONS**

TECHNOLOGY		Plasma Emission Detector (PED), Flame Ionization Detector (FID), Thermal Conductivity Detector (TCD)						
PERFORMANC	CE							
		PL	ASMA EMISSIO	N DETECTOR (I	PED)			
				Backgrou	nd Gas			
Limit of Detec	tion (LOD)	H <sub>2</sub>	0 <sub>2</sub>	N <sub>2</sub>	Ar	He	CO <sub>2</sub>	
	H <sub>2</sub>	-		25ppb or 1% FR*		7.5ppb or 0.75% FR*	100ppb or 1% FR*	
	Ne	-	-	-	-	5ppb or 0.5% FR*	-	
	0 <sub>2</sub>	-	-	25ppb or 1% FR*		7.5ppb or 0.75% FR*	100ppb or 1% FR*	
	N <sub>2</sub>	5ppb or 0	.5% FR*	-	5ppb or 0.5% FR*			
Impurities	Ar	!	5ppb or 0.5% FR*		-	5ppb or 0	5ppb or 0.5% FR*	
	CH₄		25ppb or	1% FR*		7.5ppb or 0.75% FR*	100ppb or 1% FR*	
	со		25ppb or	1% FR*		7.5ppb or 0.75% FR*	100ppb or 1% FR*	
	CO2		25ppb or	1% FR*		7.5ppb or 0.75% FR*	-	
	NMHC		25ppb or			7.5ppb or 0.75% FR*	-	
Min	range = 0-1ppm, f	or all backgrounds	except for CO <sub>2</sub> whe	re min range = 0-10	ppm. Max range i	s application depen	ident	
		FL#		ON DETECTOR (	FID)			
Limit of Detec	tion (LOD)							
		0 <sub>2</sub>		N <sub>2</sub> O		CO <sub>2</sub>		
	CH <sub>4</sub>	1ppm or 1% FR*		-			-	
Impurities	$C_2 - C_4$	100-150ppb <sup>†</sup> or 1%-1.5% <sup>†</sup> FR*		-			-	
	NMHC	100-150ppb <sup>†</sup> or	1%-1.5% <sup>†</sup> FR*	-			-	
	СО	•		Complies with Euro				
	Ν	lin range = 0-1ppm.	. Max range = 600p	pm (impurity and ap	oplication depend	ent)		
		THERM	IAL CONDUCT	IVITY DETECTO	OR (TCD)			
Limit of Detec	tion (LOD)			Backgrou	ind Gas			
		N <sub>2</sub>				N <sub>2</sub> O		
Impurities	N <sub>2</sub> (assay)	Complies with US or European Pharmacopeia				-		
	CO2	- Complies v Ranges from ppm to 100% (impurity and application dependent)			with European Pharmacopeia			
		Ranges from	ppm to 100% (imp	ounty and applicatio	n dependent)			
SIGNAL OUTP		1 x 4 20 m 4 out	nut par paak up					
Analog output		1 x 4-20 mA output per peak - up to 8 outputs 1 x Remote range identification output per peak - up to 8						
Digital outputs		2 x Alarm dry contact outputs - user pre-settable limited 1 x System status dry contact output						
Digital inputs		1 x digital isolated input - remote initiation of analysis						
Serial comms		Remote interaction via RS232 ASCII protocol and ethernet/internet						
OPERATING E	NVIRONMENT	_						
Temperature		+5°C - +40°C/41	°F - 104°F					
Relative humi	dity	0-95% RH non-	condensing					
Altitude		2000m (max)						
Ingress Protec	tion e greater. FR = Ful	IP20						

\* Whichever is the greater. FR = Full Range † Dependent on impurity

The performance specification has been written and verified in accordance with the international standard IEC 61207-1:1994 "Expression of performance of gas analyzers"



# SERVOMEX **%**

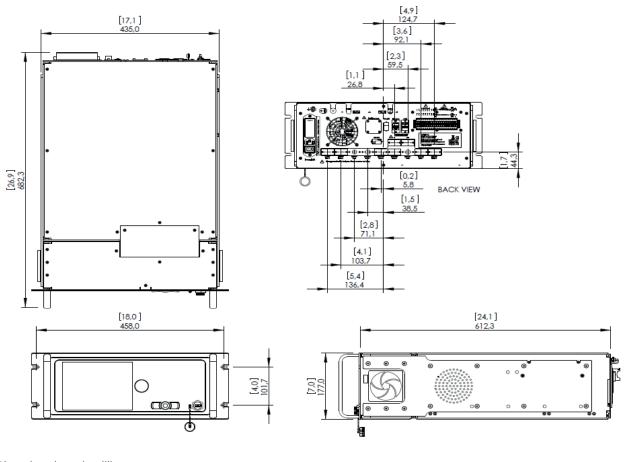
SAMPLE GAS	
Condition	Sample must be oil free, non-corrosive, non-condensing and non-flammable mixtures
Sample flow	Typically 25-150ml/min (application dependent)
Sample pressure	10-20psig (application dependent)
CARRIER GAS	
Carrier gas	Argon or helium (or both)
Carrier gas flow	Typically 30-350ml/min
Carrier gas pressure	100psig (PED, TCD), 120psig (FID)
PHYSICAL	
Size	482mm (18.9") Wide x 177mm (7") High x 600mm (23.6") Deep
Weight	11-27kg (25-60lb) (application dependent)
UTILITIES	
Supply voltage	100-120Vac or 220-240Vac**, 50/60Hz

\*\* The analyzer is supplied configured with one of these voltage ranges; specify range at time of order

## COMPLIANCE

EC DIRECTIVES	This product complies with the EMC Directive, the Low Voltage Directive, and all other applicable directives.
ELECTRICAL SAFETY	Electrical safety to IEC 61010-1: Ed 3. Rated for "Overvoltage Category II" and "Pollution Degree 2"

# **DIMENSIONAL DRAWINGS**



Dimensions shown in millimetres (dimensions in square brackets are in inches)



# APPLICATION CONFIGURATIONS



	Background gas	Application	Min Range	Max Range	Product variant	Packages	Detector	Form factor
-	CRUDE ARGON	$N_2$ in 10% Ar and 90% $O_2$	0-50ppm	0-5000ppm	4401A1	Pack 1A	Plasma	MC
AIR SEPARATION	OXYGEN	CH <sub>4'</sub> NMHC	0-10ppm/0-5ppm	0-600ppm/0- 200ppm	4405A1	Pack 2A	Plasma	MC
		CH <sub>4</sub> , C <sub>2</sub> H <sub>2</sub> , C <sub>2</sub> H <sub>4</sub> , C <sub>2</sub> H <sub>6</sub> , C <sub>3</sub> H <sub>6</sub> , C <sub>3</sub> H <sub>8</sub>		0-600ppm CH <sub>4</sub> , 0-200ppm C <sub>2</sub> H <sub>2</sub> , 0-300ppm other C <sub>2</sub> 0-200ppm C <sub>3</sub> , 0-100ppm C <sub>4</sub>	4409A1	Pack 1A	FID	PC + SC
	HCs in LOX/AIR	CH <sub>4</sub> , C <sub>2</sub> H <sub>2</sub> , C <sub>2</sub> H <sub>4</sub> , C <sub>2</sub> H <sub>6</sub> , C <sub>3</sub> H <sub>6</sub> , C <sub>3</sub> H <sub>8</sub> , C <sub>4</sub> H <sub>6</sub> , C <sub>4</sub> H <sub>10</sub>	0-10ppm CH <sub>4</sub> 0-2ppm others		4409A1	Pack 2A	FID	PC + SC
◄		C <sub>1</sub> -C <sub>3</sub> , NMHC			4409A1	Pack 2B	FID	PC + SC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO	0-10ppm	0-200ppm	4402A1	Pack 1A	Plasma	MC
	ARGON	CO <sub>2</sub>	0-10ppm	0-200ppm	4402A1	Pack 1B	Plasma	MC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO, CO <sub>2</sub>	0-10ppm	0-200ppm	4402A1	Pack 2A	Plasma	MC
		O <sub>2</sub> ,H <sub>2</sub> ,N <sub>2</sub> ,CH <sub>4</sub> ,CO	0-10ppm	0-200ppm	4403A1	Pack 1A	Plasma	MC
		Ar	0-10ppm	0-200ppm	4403A1	Pack 1B	Plasma	MC
		СО	0-10ppm	0-200ppm	4403A1	Pack 1C	Plasma	MC
	HELIUM	N <sub>2</sub> , Ar	0-10ppm	0-200ppm	4403A1	Pack 2A	Plasma	MC
	HELIOW	CO, N <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub>	0-10ppm	0-200ppm	4403A1	Pack 2B	Plasma	MC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO, Ar, Ne	0-10ppm	0-200ppm	4403A1	Pack 3A	Plasma	PC + SC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub> , Ar, Ne	0-10ppm	0-200ppm	4403A1	Pack 3B	Plasma	PC + SC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO, CO <sub>2</sub> , Ar, Ne	0-10ppm	0-200ppm	4403A1	Pack 4A	Plasma	MC + SC
		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub>	0-10ppm	0-200ppm	4404A1	Pack 1A	Plasma	MC
		Ar	0-10ppm	0-200ppm	4404A1	Pack 1B	Plasma	MC
		CO <sub>2</sub>	0-10ppm	0-200ppm	4404A1	Pack 1C	Plasma	MC
S	NITROGEN	СО	0-10ppm	0-200ppm	4404A1	Pack 1D	Plasma	MC
or less		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , Ar	0-10ppm	0-200ppm	4404A1	Pack 2A	Plasma	MC
5 or		O <sub>2</sub> , H <sub>2</sub> ,CH <sub>4</sub> ,CO	0-10ppm	0-200ppm	4404A1	Pack 2B	Plasma	MC
de		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub>	0-10ppm	0-200ppm	4404A1	Pack 2C	Plasma	MC
Gra		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , Ar, CO	0-10ppm	0-200ppm	4404A1	Pack 3A	Plasma	PC + SC
RIAL GAS QUALITY - Grade 5		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , Ar, CO <sub>2</sub>	0-10ppm	0-200ppm	4404A1	Pack 3B	Plasma	PC + SC
<b>LIT</b>		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO, CO <sub>2</sub>	0-10ppm	0-200ppm	4404A1	Pack 3C	Plasma	PC + SC
7U2		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , Ar, CO, CO <sub>2</sub>	0-10ppm	0-200ppm	4404A1	Pack 4A	Plasma	MC + SC
AS (	OXYGEN	N <sub>2</sub>	0-10ppm	0-200ppm	4405A1	Pack 1A	Plasma	MC
Г С		Ar	0-10ppm	0-200ppm	4405A1	Pack 1B	Plasma	MC
RIA		N <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub>	0-10ppm	0-200ppm	4405A1	Pack 2B	Plasma	MC
JST		Ar, N <sub>2</sub>	0-10ppm	0-200ppm	4405A1	Pack 2C	Plasma	MC
INDUS.		N <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub>	0-10ppm	0-200ppm	4405A1	Pack 3A	Plasma	PC + SC
_		H <sub>2</sub> , CO, CH <sub>4</sub> , CO <sub>2</sub>	0-10ppm	0-200ppm	4405A1	Pack 3B	Plasma	PC + SC
		N <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub> , CO	0-10ppm	0-200ppm	4405A1	Pack 4A	Plasma	MC + SC
		N <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub> , CO, Ar	0-10ppm	0-200ppm	4405A1	Pack 5A	Plasma	MC + SC
		N <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub> , CO, Ar, NMHC	0-10ppm	0-200ppm	4405A1	Pack 6A	Plasma	PC + SC + SC
	HYDROGEN	N <sub>2</sub>	0-10ppm	0-200ppm	4407A1	Pack 1A	Plasma	MC
		N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , CO	0-10ppm	0-200ppm	4407A1	Pack 1B	Plasma	MC
		N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub>	0-10ppm	0-200ppm	4407A1	Pack 2A	Plasma	MC
		CO, CO <sub>2</sub> , CH <sub>4</sub>	0-10ppm	0-200ppm	4407A1	Pack 2B	Plasma	MC
		N <sub>2</sub> , Ar	0-10ppm	0-200ppm	4407A1	Pack 2C	Plasma	MC
		N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , CO	0-10ppm	0-200ppm	4407A1	Pack 3A	Plasma	PC + SC
		N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , CO, Ar	0-10ppm	0-200ppm	4407A1	Pack 4A	Plasma	MC + SC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub>	0-10ppm	0-200ppm	4408A1	Pack 1A	Plasma	MC
	CARBON	Ar	0-10ppm	0-200ppm	4408A1	Pack 1B	Plasma	MC
	DIOXIDE	O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO	0-10ppm	0-200ppm	4408A1	Pack 2A	Plasma	MC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO, Ar	0-10ppm	0-200ppm	4408A1	Pack 3A	Plasma	PC + SC
NOTES		ASSIS. SC = SECONDARY CHASSIS. PC	STAND-ALONE COMP					

NOTES MC = MASTER CHASSIS, SC = SECONDARY CHASSIS, PC = STAND-ALONE COMPUTER

For higher ranges, or other applications, please contact Servomex





	Background gas	Application	Min Range	Max Range	Product variant	Packages	Detector	Form factor
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub>	0-1ppm	0-10ppm	4402A1	Pack 1A	Plasma	MC
	ARGON	O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO	0-1ppm	0-10ppm	4402A1	Pack 2A	Plasma	MC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO, CO <sub>2</sub>	0-1ppm	0-10ppm	4402A1	Pack 3A	Plasma	PC + SC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub>	0-1ppm	0-10ppm	4403A1	Pack 1A	Plasma	MC
		Ar	0-1ppm	0-10ppm	4403A1	Pack 1B	Plasma	MC
		СО	0-1ppm	0-10ppm	4403A1	Pack 1C	Plasma	MC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO	0-1ppm	0-10ppm	4403A1	Pack 2A	Plasma	MC
	HELIUM	O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , Ar	0-1ppm	0-10ppm	4403A1	Pack 2B	Plasma	MC
	HELIOW	O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , Ar, CO	0-1ppm	0-10ppm	4403A1	Pack 3A	Plasma	PC + SC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , Ar, CO <sub>2</sub>	0-1ppm	0-10ppm	4403A1	Pack 3B	Plasma	PC + SC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO, Ar, Ne	0-1ppm	0-10ppm	4403A1	Pack 4A	Plasma	MC + SC
		O <sub>2</sub> , H <sub>2</sub> , N <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub> , Ar, Ne	0-1ppm	0-10ppm	4403A1	Pack 4B	Plasma	MC + SC
		$O_{2'}$ H $_{2'}$ N $_{2'}$ CH $_{4'}$ CO, Ar, Ne, CO $_2$	0-1ppm	0-10ppm	4403A1	Pack 5A	Plasma	MC + SC
		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub>	0-1ppm	0-10ppm	4404A1	Pack 1A	Plasma	MC
ē		Ar	0-1ppm	0-10ppm	4404A1	Pack 1B	Plasma	MC
beti		CO <sub>2</sub>	0-1ppm	0-10ppm	4404A1	Pack 1C	Plasma	MC
or		СО	0-1ppm	0-10ppm	4404A1	Pack 1D	Plasma	MC
5N	NITROGEN	O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , Ar	0-1ppm	0-10ppm	4404A1	Pack 2A	Plasma	MC
ade	NITROGEN	O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO	0-1ppm	0-10ppm	4404A1	Pack 2B	Plasma	MC
5		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub>	0-1ppm	0-10ppm	4404A1	Pack 2C	Plasma	MC
∠		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , Ar, CO	0-1ppm	0-10ppm	4404A1	Pack 3A	Plasma	PC + SC
ALI'		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , Ar, CO <sub>2</sub>	0-1ppm	0-10ppm	4404A1	Pack 3B	Plasma	PC + SC
INDUSTRIAL GAS QUALITY - Grade 5N or better		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO, CO <sub>2</sub>	0-1ppm	0-10ppm	4404A1	Pack 3C	Plasma	PC + SC
iAS		O <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , Ar, CO, CO <sub>2</sub>	0-1ppm	0-10ppm	4404A1	Pack 4A	Plasma	MC + SC
AL 0	OXYGEN	N <sub>2</sub>	0-1ppm	0-10ppm	4405A1	Pack 1A	Plasma	MC
TRI		Ar	0-1ppm	0-10ppm	4405A1	Pack 1B	Plasma	MC
SN		CH <sub>4</sub> , NMHC	0-1ppm	0-10ppm	4405A1	Pack 2A	Plasma	MC
N		N <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub>	0-1ppm	0-10ppm	4405A1	Pack 2B	Plasma	MC
		Ar, N <sub>2</sub>	0-1ppm	0-10ppm	4405A1	Pack 2C	Plasma	MC
		N <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub>	0-1ppm	0-10ppm	4405A1	Pack 3A	Plasma	PC + SC
		H <sub>2</sub> , CO, CH <sub>4</sub> , CO <sub>2</sub>	0-1ppm	0-10ppm	4405A1	Pack 3B	Plasma	PC + SC
		N <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub> , CO	0-1ppm	0-10ppm	4405A1	Pack 4A	Plasma	MC + SC
		N <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , CO <sub>2</sub> , CO, Ar	0-1ppm	0-10ppm	4405A1	Pack 5A	Plasma	MC + SC
		$\rm N_{2'}$ $\rm H_{2'}$ $\rm CH_{4'}$ $\rm CO_{2'}$ CO, Ar, NMHC	0-1ppm	0-10ppm	4405A1	Pack 6A	Plasma	PC + SC + SC
	HYDROGEN	N <sub>2</sub>	0-1ppm	0-10ppm	4407A1	Pack 1A	Plasma	MC
		N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub>	0-1ppm	0-10ppm	4407A1	Pack 2A	Plasma	MC
		CO, CO <sub>2</sub> , CH <sub>4</sub>	0-1ppm	0-10ppm	4407A1	Pack 2B	Plasma	MC
		N <sub>2</sub> , Ar	0-1ppm	0-10ppm	4407A1	Pack 2C	Plasma	MC
		N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , CO	0-1ppm	0-10ppm	4407A1	Pack 3A	Plasma	PC + SC
		N <sub>2</sub> , CO <sub>2</sub> , CH <sub>4</sub> , CO, Ar	0-1ppm	0-10ppm	4407A1	Pack 4A	Plasma	MC + SC
	CARBON DIOXIDE	N <sub>2</sub>	0-1ppm	0-10ppm	4408A1	Pack 1A	Plasma	MC
		Ar	0-1ppm	0-10ppm	4408A1	Pack 2A	Plasma	MC
S	NITROUS OXIDE	CO <sub>2</sub>	0-300ppm	0-300ppm	4415A1	-	TCD	MC
ASE		СО	0-5ppm	0-5ppm	4409A1	-	FID	PC + SC
MEDICAL GASES	CARBON DIOXIDE	со	0-5ppm	0-5ppm	4409A1	-	FID	PC + SC
EDIO		0-100% N <sub>2</sub> matrix	0-100%	0-100%	4415A1	Pack 1	TCD	MC
Σ	NITROGEN	0-100% N, matrix + 0-30% O,	0-100%/0-30%	0-100%/0-30%	4415A1	Pack 2	TCD	MC
NOTES		2 HASSIS SC - SECONDARY CHASSIS PO						

NOTES MC = MASTER CHASSIS, SC = SECONDARY CHASSIS, PC = STAND-ALONE COMPUTER

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For higher ranges, or other applications, please contact Servomex







Representantes / Distribuidores Exclusivos

Argentina
 Tel: (+54 11) 5352 2500
 Email: info@dastecsrl.com.ar
 Web: www.dastecsrl.com.ar

: 03/20

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Uruguay www.dastecsrl.com.uy

Paraguay www.dastecsrl.com.py

These analyzers are not intended for any form of use on humans and are not medical devices as described in the Medical Devices Directive 93/42EEC.

Please note: Whilst every effort has been made to ensure accuracy, no responsibility can be accepted for errors and omissions.

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