TESUCO

TECHNICAL SUPPLIES COMPANY

Laser

QUALITY GAS EQUIPMENT

tesuco.com.au

Our name Tesuco® comes from **Te**chnical **Su**pplies **Co**mpany.

Tesuco Pty Ltd

Head Office	Unit 12, 110-120 Silverwater Road, Silverwater NSW 2128
Hours	Mon - Fri 8am - 5pm
Phone	+61 2 9737 9937
Sales	sales@tesuco.com.au
Orders	orders@tesuco.com.au
Website	tesuco.com.au

Scan QR code to view our complete range of laser equipment.

Laser Process Gas Supply Regulators

Laser cutting equipment requires special gases and special gas control equipment to operate efficiently.

Process gases are required to be delivered at high pressure and high flow rates that standard gas regulators cannot deliver. High purity resonator gases are used to assist the Laser lens and extend this expensive piece of equipment's life. High purity gases require high quality, high purity gas regulators with purge systems to maintain gas quality during changeover.

Process Gas Supply

For process gases there is a wide range to suit the various outlet pressures and flow rates required, for ease of matching the equipment to the laser machines requirements. The range includes single and two stage regulators for oxygen and nitrogen, with flow rates up to 150 m^3/hr. There are also twin supply manifolds with high pressure connection leads to suit the supply requirement.

High pressure, high flow outlet point panels are also available for these gases.

Resonator Gas Supply

For resonator gases, all regulators and gas panels are suitable for 99.9999 (6.0) gas purity and have isolation and purge valve systems as standard. The range includes regulators, single and twin manifold panels and a semi-automatic changeover panel. Regulators and panels are available for helium, nitrogen, carbon dioxide and pre-mix gases.

Outlet point panels are also available for these gases.

Versatility

Tesuco® carry in stock a large range of fittings, connection leads, isolation valves and purge valves and can custom make systems to your requirements.

HIGH FLOW PANEL

Nitrogen

This single stage nitrogen regulator is a single stage piston regulator (great reliability) with high inlet pressure, 30,000 kPa and outlet pressure up to 5,500 kPa. With it's very high flow rate up to 220 m³/hr, it is ideal for the process applications for large capacity laser cutting machines.

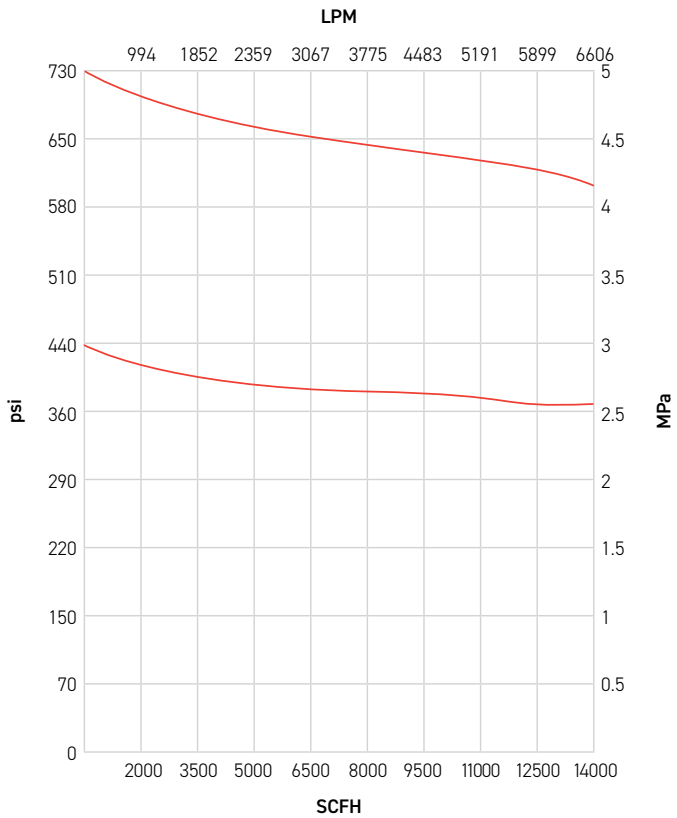
It is mounted on a stainless steel panel with an 1800mm high pressure Type 51 connection lead.

The panel allows it to mounted remotely of the cylinder pack, thus avoiding any possibility of impact damage when changing packs.

They feature solid brass design, accurate pressure gauges and a safety relief valve, protecting from overpressure.

It is fitted with a 1/2" BSP outlet to suit most laser leads.

SPECIFICATIONS	RG1SNI55P	RG1SNI55P36
Flow rate	184 m³/hr @ 2,500 kPa 220 m³/hr + @ 4,000 kPa	
Inlet configuration	Side entry	
Max. inlet pressure	30,000 kPa	
Max. outlet pressure	5,500 kPa	
Inlet connection	Type 51	
Outlet connection	1/2" BSP RH Male	



Laser Process Gas Supply
Regulators

SINGLE STAGE
Nitrogen

SPECIFICATIONS	RG1SNI100	RG1SNI10051	RG1SNI20	RG1SNI50	RG1SNI5051	RI1SNI60
Flow rate	340 m³/hr	340 m³/hr	100 m/hr	135 m³/hr	135 m³/hr	150 m³/hr
Inlet configuration	Side Entry	Side Entry	Side Entry	Side Entry	Side Entry	Side Entry
Max. inlet pressure	40,000 kPa	40,000 kPa	40,000 kPa	40,000 kPa	40,000 kPa	30,000 kPa
Max. outlet pressure	10,000 kPa	10,000 kPa	2,000 kPa	5,000 kPa	5,000 kPa	6,000 kPa
Inlet connection	Type 50	Type 51	Type 50	Type 50	Type 51	Type 50
Outlet connection	1/4" NPT FM	1/4" NPT FM	1/4" NPT FM	1/4" NPT FM	1/4" NPT FM	1/4 SAE flare RH
Features	Piston Regulator	Piston Regulator	Piston Regulator	Piston Regulator	Piston Regulator	Piston Regulator

SINGLE STAGE
Oxygen

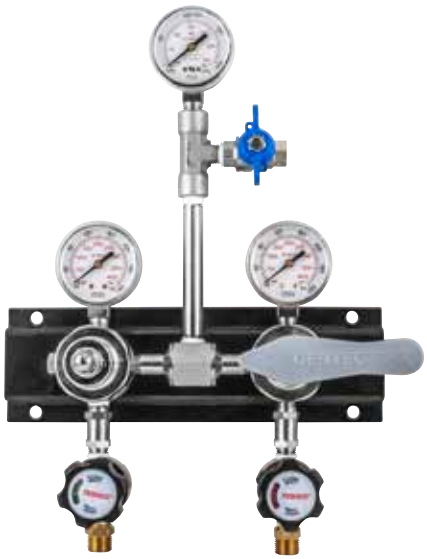
SPECIFICATIONS	RG1SOX50	RG1SOX20
Flow rate	135 m³/hr	100 m³/hr
Inlet configuration	Side entry	Side entry
Max. inlet pressure	20,000 kPa	20,000 kPa
Max. outlet pressure	5,000 kPa	2,000 kPa
Inlet connection	Type 10	Type 10
Outlet connection	¼" NPT FM	¼" NPT FM

SAFETY RELIEF VALVE SYSTEMS

SPECIFICATIONS	ARVOXSP		ARVIGSP	
Inlet connection	5/8-18 UNF RH FM			
Outlet connection	1/2" Compression Fitting			
Safety relief valve settings	1,300 kPa 2,000 kPa	ARV130-L ARV200X	1,300 kPa 2,600 kPa 4,000 kPa	ARV13IG ARV26IG ARV40IG
Features	Connects to regulator outlet, isolation valve fitted			

LASER PROCESS, HIGH PRESSURE, HIGH FLOW
Gas Outlet Points

SPECIFICATIONS	OTLOPOX	OTLOPNI
Gas service	Oxygen	Nitrogen
Flow rate	183 m³/hr	
Inlet configuration	Top	
Max. inlet pressure	5,000 kPa	
Outlet pressure	1,000 - 5,000 kPa	
Inlet connection	G 1/2 FM RH	
Outlet connection	G 1/2 M RH	



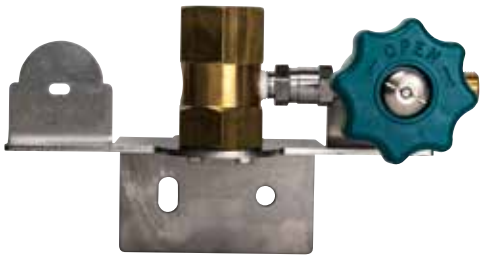
OXYGEN, INERT & FUEL GASES
High Flow

Maximum Working Pressure: 20,000 kPa

SPECIFICATIONS	GMSACNIH	GMSACOXH
Gas service	Nitrogen	Oxygen
Inlet pressure	20,000 kPa	
Outlet pressure	1,360 - 1,600 kPa (Dependent on supply side)	
Flow rate @ 1,360 kPa 1,000 kPa 340 kPa	 1900 L/min (114 m³/hr) 1817 L/min (109 m³/hr) 1321 L/min (79.26 m³/hr)	

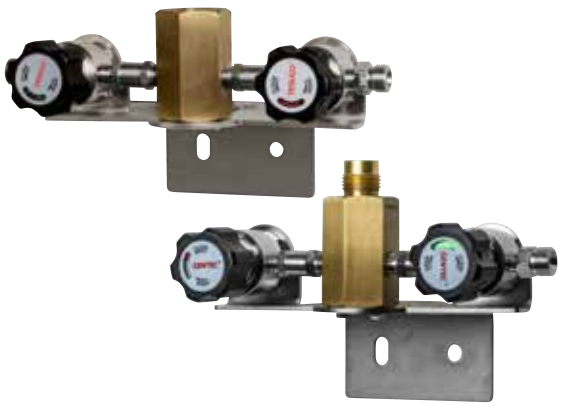
OXYGEN & NITROGEN
Single

SPECIFICATIONS	MMS0X	MMSNI
Max. inlet pressure	20,000 kPa	
Inlet connection	3/8" BSP RH Male	
Outlet connection	Type 10	Type 50
Features	Open and close windows on isolation valves, non-return valves, centre block and stainless steel bracket	



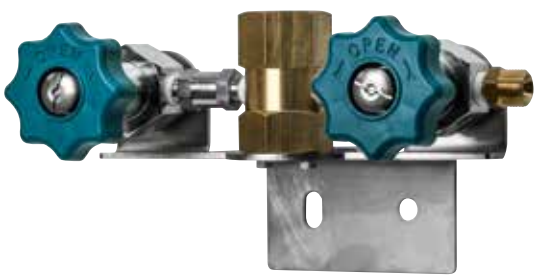
NITROGEN TYPE 51
Single

SPECIFICATIONS	MMSNIH
Max. inlet pressure	30,000 kPa
Inlet connection	3/8" BSP RH Male
Outlet connection	Type 51
Features	Isolation valves, non-return valves, centre block and stainless steel bracket



OXYGEN & NITROGEN
Twin

SPECIFICATIONS	MMT0X	MMTNI
Max. inlet pressure	20,000 kPa	
Inlet connection	3/8" BSP RH Male	
Outlet connection	Type 10	Type 50
Features	Open and close windows on isolation valves, non-return valves, centre block and stainless steel bracket	



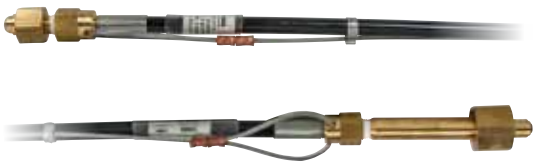
NITROGEN TYPE 51
Twin

SPECIFICATIONS	MMTNIH
Max. inlet pressure	30,000 kPa
Inlet connection	3/8" BSP RH Male
Outlet connection	Type 51
Features	Isolation valves, non-return valves, centre block and stainless steel bracket

OXYGEN

Other lengths available to customer specifications

SPECIFICATIONS	HOX08W	HOX18W
	20,000 kPa	
	Type 10	
	3/8" BSP RH Male	
	800 mm	1800 mm
	Anti-whip cable, anti-kink springs, heat sink	



NITROGEN
Type 50

Other lengths available to customer specifications

SPECIFICATIONS	HNI08W	HNI18W
Max. inlet pressure	20,000 kPa	
Inlet connection	Type 50	
Outlet connection	3/8" BSP RH Male	
Length	800 mm	1800 mm
Features	Anti-whip cable	

NITROGEN
Type 51

Other lengths available to customer specifications

SPECIFICATIONS	HNI08WP	HNI18WP
Max. inlet pressure	30,000 kPa	
Inlet connection	Type 51	
Outlet connection	3/8" BSP RH Male	
Length	800 mm	1800 mm
Features	Anti-whip cable	

Laser Resonator Gas Supply
Regulators 99.999% (6.0) Purity

SINGLE STAGE

Regulators can be fitted with various inlets to suit gas type various outlets available to suit application.

SPECIFICATIONS	GR1CBONIA604	GR1CBOHEA104	GR1CBOCDA304
Gas service	Nitrogen	Helium	Carbon Dioxide
Flow rate	69 m³/hr	69 m³/hr	69 m³/hr
Inlet configuration	Side entry	Side entry	Side entry
Max. inlet pressure	30,000 kPa	30,000 kPa	30,000 kPa
Max. outlet connection	680 kPa	680 kPa	680 kPa
Inlet connection	Type 50	Type 10	Type 30
Outlet connection	1/4 Genlok	1/4 Genlok	1/4 Genlok

TWO STAGE

Regulators can be fitted with various inlets to suit gas type various outlets available to suit application.

SPECIFICATIONS	GR2CBONIA604	GR2CBOHEA104	GR2CBOCDA304
Gas service	Nitrogen	Helium	Carbon Dioxide
Flow rate	20 m³/hr	20 m³/hr	20 m³/hr
Inlet configuration	Side entry	Side entry	Side entry
Max. inlet pressure	30,000 kPa	30,000 kPa	30,000 kPa
Max. outlet connection	680 kPa	680 kPa	680 kPa
Inlet connection	Type 50	Type 10	Type 30
Outlet connection	1/4 Genlok	1/4 Genlok	1/4 Genlok

SINGLE INLET

SPECIFICATIONS	GPS60C2010NI	GPS60C2010HE	GPS60C2010CD	GPS60C2010PM
Gas service	Nitrogen	Helium	Carbon Dioxide	Pre-Mix
Flow rate	68 m³/hr	68 m³/hr	68 m³/hr	68 m³/hr
Inlet configuration	Single	Single	Single	Single
Max. inlet pressure	30,000 kPa	30,000 kPa	30,000 kPa	30,000 kPa
Max. outlet connection	1,000 kPa	1,000 kPa	1,000 kPa	1,000 kPa
Inlet connection	Type 50	Type 10	Type 30	Type 30
Outlet connection	1/4 Genlok	1/4 Genlok	1/4 Genlok	1/4 Genlok

TWIN INLET

SPECIFICATIONS	GPT60C2010NI	GPT60C2010HE	GPT60C2010CD	GPT60C2010PM
Gas service	Nitrogen	Helium	Carbon Dioxide	Pre-Mix
Flow rate	80 m³/hr	80 m³/hr	80 m³/hr	80 m³/hr
Inlet configuration	Twin	Twin	Twin	Twin
Max. inlet pressure	30,000 kPa	30,000 kPa	30,000 kPa	30,000 kPa
Max. outlet connection	1,000 kPa	1,000 kPa	1,000 kPa	1,000 kPa
Inlet connection	Type 50	Type 10	Type 30	Type 10
Outlet connection	1/4 Genlok	1/4 Genlok	1/4 Genlok	1/4 Genlok

Laser Resonator Gas Supply

SEMI-AUTOMATIC PANEL

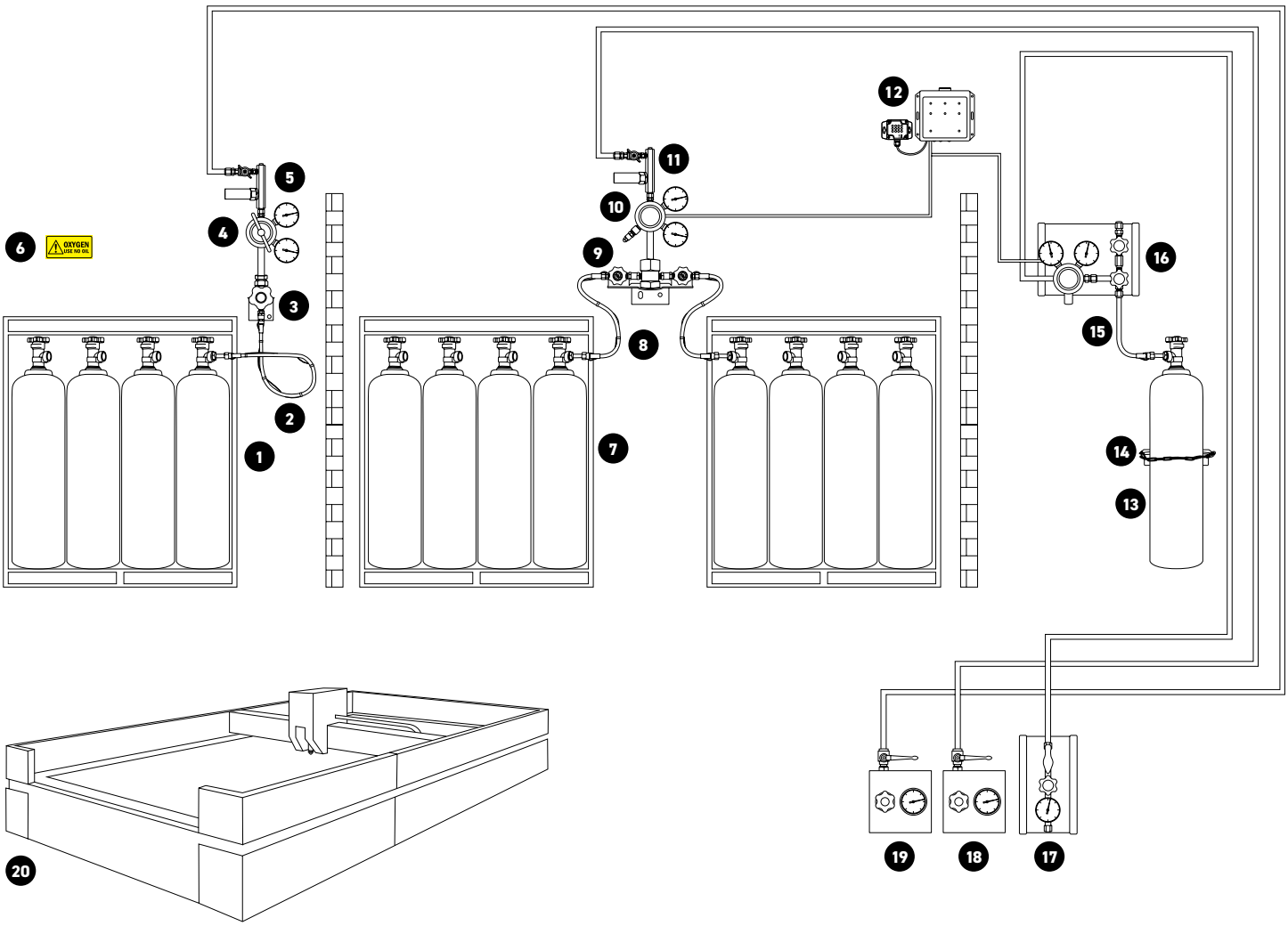
SPECIFICATIONS	GMSD60C2010NI	GMSD60C2010HE	GMSD60C2010CD	GMSD60C2010PM
Gas service	Nitrogen	Helium	Carbon Dioxide	Pre-Mix
Flow rate	20 m³/hr	20 m³/hr	20 m³/hr	20 m³/hr
Inlet configuration	Side	Side	Side	Side
Max. inlet pressure	30,000 kPa	30,000 kPa	30,000 kPa	30,000 kPa
Max. outlet connection	680 kPa	680 kPa	680 kPa	680 kPa
Inlet connection	Type 50	Type 10	Type 30	Type 10
Outlet connection	1/4 Genlok	1/4 Genlok	1/4 Genlok	1/4 Genlok

OUTLET POINT SYSTEMS

SPECIFICATIONS	GO1A60C4010	GO2A60C4010	GO3A60C4010
Gas service	All laser gases	All laser gases	All laser gases
Flow rate	60 m³/hr	60 m³/hr	60 m³/hr
Inlet configuration	Top	Top	Top
Max. inlet pressure	4,000 kPa	4,000 kPa	4,000 kPa
Max. outlet connection	1,000 kPa	1,000 kPa	1,000 kPa
Inlet connection	1/4 NPT FM	1/4 NPT FM	1/4 NPT FM
Outlet connection	1/4 NPT FM	1/4 NPT FM	1/4 NPT FM

Laser Manifold & Outlet Schematic

System Variations



	PART NO	DESCRIPTION
1	GAS SUPPLIER	Oxygen pack
2	HOX18W	High pressure leads
3	MMSOX	Oxygen single manifold
4	ARV13SP	Oxygen relief/isolation valve system
5	W-MANLAB-01	Oxygen warning label "USE NO OIL"
6	HOX18W	Oxygen 1800 mm high pressure lead for packs
7	GAS SUPPLIER	Nitrogen pack
8	HNI18WH	Nitrogen 1800 mm high pressure leads type 51
9	MMTNIH	Twin type 51 nitrogen manifold
10	RG2SNI4051	Two stage type 51 nitrogen regulator

	PART NO	DESCRIPTION
11	ARVIG40	4,000 kPa relief/isolation valve system
12	AA2100	Alarm panel
13	GAS SUPPLIER	Pre-mix high purity gas
14	ACBL	Cylinder bracket
15	HOX08W	High pressure lead 800 mm
16	GPS60C2010PM	High purity regulator panel with purge
17	GO1A60C4010	High purity outlet point
18	OTLOPNI	High flow high pressure N_2 outlet point
19	OTLOPOX	High flow high pressure O_2 outlet point
20		Laser machine

DOWNLOAD BROCHURE

DISTRIBUTED BY

TESUCO TECHNICAL SUPPLIES COMPANY

HOSPITALITY
GAS SAFETY
INDUSTRIAL
SCIENTIFIC
MEDICAL

Phone +61 2 9737 9937
Email sales@tesuco.com.au
Website tesuco.com.au

Certified System™
Quality
ISO 9001

Brochure Number: BRO_IND_LEQ_V05