

# Tristel Technologies – TTec2000

The TTec2000 Dosing Unit has been exclusively developed for the automatic generation of Tristel Technologies' unique chlorine dioxide solutions. The TTec2000 is used for injecting controlled amounts of chlorine dioxide into water for control of biofilm growth in systems, water disinfection, taste and odour control, and chemical oxidation of certain water and waste water contaminants.

## Construction:

The TTec2000 Dosing Unit comprises:

Cabinet with two pumps, reactor, electrical connection box  
(With options of: leak detection plate, gas removal filter system)

Base pump fitted with:

- Delivery hose to mixer chamber
- Pulse cable from connector to controller
- Power supply cable from connector to controller

Activator pump fitted with:

- Delivery hose to mixer chamber
- Pulse cable from connector to controller
- Power supply cable from connector to controller

Reactor with:

- Mixer chamber with 2 injectors
- delivery hose/pipe connector

Separate programmable controller together with:

- 1m mains power supply cable fitted with 13 amp moulded plug
- Control cable to pump unit
- Power cable to pump unit

The system is also supplied with the following parts not mounted or connected :

- 1 Redox probe with 5m cable
- Injection fitting (if dilution water option not selected)
- 3m electricity supply cable
- Pulse head
- 10 mtr high pressure PTFE hose

## Functions:

The TTec2000 Dosing Unit has a sophisticated programmable electronic controller. The Controller signals the pumps to dose an exact volume of Base and Activator into the mixer chamber where chlorine dioxide is released into solution.

Once the mixer chamber is fully charged with the required ratio of the Base and Activator solution, any injection of chemical into the mixer chamber results in the discharge of chlorine dioxide solution from the mixer into the water supply. The volume of solution injected into the mixer corresponds to the volume of chlorine dioxide solution injected into the water supply.



**TTec2000**

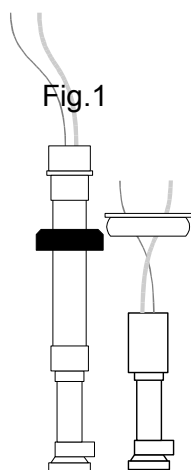
g/ClO<sub>2</sub> per hour g/ClO<sub>2</sub> per hour = g/ClO<sub>2</sub> per m<sup>3</sup> water x m<sup>3</sup> water flow per hour  
 or g/ClO<sub>2</sub> per hour = ppm required x m<sup>3</sup> water flow per hour  
 or time taken to dose a volume (min) = 60 x ((ppm required x m<sup>3</sup> system volume) / g/ClO<sub>2</sub> per hour)

To calculate your chlorine dioxide requirement (see separate information sheet for cooling towers):

Model Number 230V 50Hz	2K 1-6 & 3-6*	2K 1-9	2K 1-14
Model Number 110V 50Hz	2K 1-6-A & 3-6-A*	2K 1-9-A	2K 1-14-A
Max. g/h ClO <sub>2</sub> against max. back pressure	72	108	180
SCD pump stroke volume at 100%	0.84 ml	1.24 ml	1.92 ml
Max. system pressure in bar	7	6	4
Max. consumption of precursors in l/h	SCD Solution	6	9
	15% HCl	0.6	0.9
Max. flow, max. concentration at max. pressure with 1 l/pulse water meter	7.2 m/hr, 10 mg/l	7.2 m/hr, 15 mg/l	7.2 m/hr, 25 mg/l
Max. flow, max. concentration at max. pressure with 10 l/pulse water meter	72 m/hr, 1 mg/l	72 m/hr, 1.6 mg/l	72 m/hr, 2.5 mg/l
Max. flow, max. concentration at max. pressure with 100 l/pulse water meter and input multiply factor (IMF)	144 m/hr, 0.5 mg/l IMF = 5	144 m/hr, 0.8 mg/l IMF = 5	144 m/hr, 1.2mg/l IMF = 5
Max. flow, max. concentration at max. pressure with 100 l/pulse water meter and input multiply factor (IMF)	180 m/hr, 0.4 mg/l IMF = 4	180 m/hr, 0.6 mg/l IMF = 4	180 m/hr, 1 mg/l IMF = 4
Max. flow, max. concentration at max. pressure with 100 l/pulse water meter and input multiply factor (IMF)	240 m/hr, 0.3 mg/l IMF = 3	240 m/hr, 0.4 mg/l IMF = 3	240 m/hr, 0.7 mg/l IMF = 3
Max. flow, max. concentration at max. pressure with 100 l/pulse water meter and input multiply factor (IMF)	360 m/hr, 0.2 mg/l IMF = 2	360 m/hr, 0.3 mg/l IMF = 2	360 m/hr, 0.5 mg/l IMF = 2
Hoses/Connections	SCD   Acid	SCD   Acid	SCD   Acid
Suction hose	6/4 mm PTFE	12/6 mm PVC	12/6 mm PVC
Bleed Hose	6/4 mm clear PVC	Self Priming	Self Priming
Delivery line connections	6/4 mm Unions (Compression)	PVC sockets (cemented)	PVC sockets (cemented)
Delivery line material	4/6 mm PTFE hose	12 mm PVC pipe	12 mm PVC pipe

### SUCTION ASSEMBLIES

Ttec2000 MODEL NUMBER	PART NUMBER	DESCRIPTION	TO FIT DRUM SIZE	SUCTION HOSE SIZE + BLEED HOSE SIZE
2K 1-6 & 3-6 2K 1-6A & 3-6A	SL 6-4R (fig.1)	Rigid suction lance with low level switch, foot valve st Strainer, drum cap. Cable 2m, suction/bleed hose 1.5m	10/25L	6/4mm + 6/4mm
2K 1-9 2K 109A 2K 1-14 2K 1-14A	SL 12-6R (fig.1)	Rigid suction lance with low level switch, foot valve st Strainer, drum cap. Cable 2m, suction/bleed hose 1.5m	10/25L	12/6mm +6/4mm
2K 1-6 2K 1-6A	SL 6-4R (fig.2)	Rigid suction lance with low level switch, foot valve st Strainer, drum cap. Cable 2m, suction/bleed hose 1.5m	10/25/50/100/200/500L	6/4mm +6/4mm
2K 1-9 2K 1-9A 2K 1-14 2K 1-14A	SL 12-16R (fig.2)	Rigid suction lance with low level switch, foot valve st Strainer, drum cap. Cable 2m, suction/bleed hose 1.5m	10/25/50/100/200/500L	12/6mm + 6/4mm



\* Model VG2K 3-6/3-6-A is a portable system which replaces the old PDS unit. It comes complete with water meter and 3 flexible connection hoses. See installation schematics for configuration.

Fig.2

		INPUTS	OUTPUTS
<b>Analog</b>		n.a.	Current output 4-20 mA (ORP) Voltage output 0-1V (ORP)
<b>Volt free</b>		Contact (0-5V) 2 x Low level drum 2 x External alarm	Alarms (c/n.o./n.c.) Duplicate SCD pump pulse
<b>12V</b>		n.a.	12V Powered on alarm 12V external power supply
<b>Mains</b>	<b>Model 1-n</b>	230V	230V Auxiliary power
	<b>Model 1-n-A</b>	110V	110V Auxiliary power