



SUMMARY

The Dema Dual Proportioner is a dilution unit that should give trouble free operation if installed and maintained correctly.

The Dual Proportioner provides a safe, controlled and economic method for dilution of two chemicals into open containers, e.g. "bucket fill, sinks etc".

It is not suitable for feeding hoses longer than 1 metre, brushes, piped or valved systems.

These simple proportioners required no electricity and are driven by the water flow; note: the maximum water temperature is 80°C. The unit is self-priming and gives an accurate and adjustable dilution if fed with a consistent water pressure.

The unit has two inbuilt control valves for operation.



Note: the Water Council approves the unit for direct connection to mains water supply.

Holchem guarantee the unit for 12 months from the date of delivery. The guarantee covers material defects, manufacturing defects or incorrect assembly. The guarantee does not cover wear and tear, misuse, use of incompatible chemicals, damage caused by frost or incorrect water supply.

SPECIFICATION

DEMA DUAL PROPORTIONER

HOLCHEM CODE	SKS02520
Flow Rate	Approx. 1.25 m ³ /h (20 l/min) @ 6 bar (80 psi)
Operating Pressure	Minimum 2 bar (30 psi) Maximum 11 bar (150 psi)
Maximum Water Temperature	80°C
Dilution Rate	0.2% to 10% v/v (Variable in steps dependant on metering tip)
Dilution Rate - Adjustment	Set of coloured metering tips (supplied)
Connections	Inlet 3/4" tap thread female Outlet 1/2" hosetail
Total Height	0.22 m
Width	0.16 m
Diameter	0.04 m
Weight	2 Kg
Materials of Construction (water side)	Brass & HDPE
Materials of Construction (chemical side)	HDPE & PVC



PRINCIPLE OF OPERATION

Water enters the unit and passes through the inlet nozzle forming a fast moving stream of water. The collector catches this stream of water.

A partial vacuum is created by this flow of water and is used to suck chemical up into the injector.

Restricting the flow of the chemical into the injector controls the injection rate (this is done by using a metering tip).

SAFETY

1. The equipment should not be used prior to proper installation and commissioning.
2. The equipment should only be used by personnel trained in its use and in the use of the chemicals being dispensed.
3. The equipment should only be adjusted when the unit has been flushed with water and then the supply has been isolated from the equipment.
4. Operators must wear suitable personal protective equipment for the chemical being dispensed.
5. Chemicals must never be mixed either prior to or after dilution.
6. The unit must be made safe prior to any maintenance:
 - a. Flush chemical out of equipment by placing chemical pick-up tube in clean water and running the unit.
 - b. Isolate water supply from the equipment.
 - c. If unit has failed and the chemical cannot be flushed then suitable personal protective equipment must be worn for disassembly.

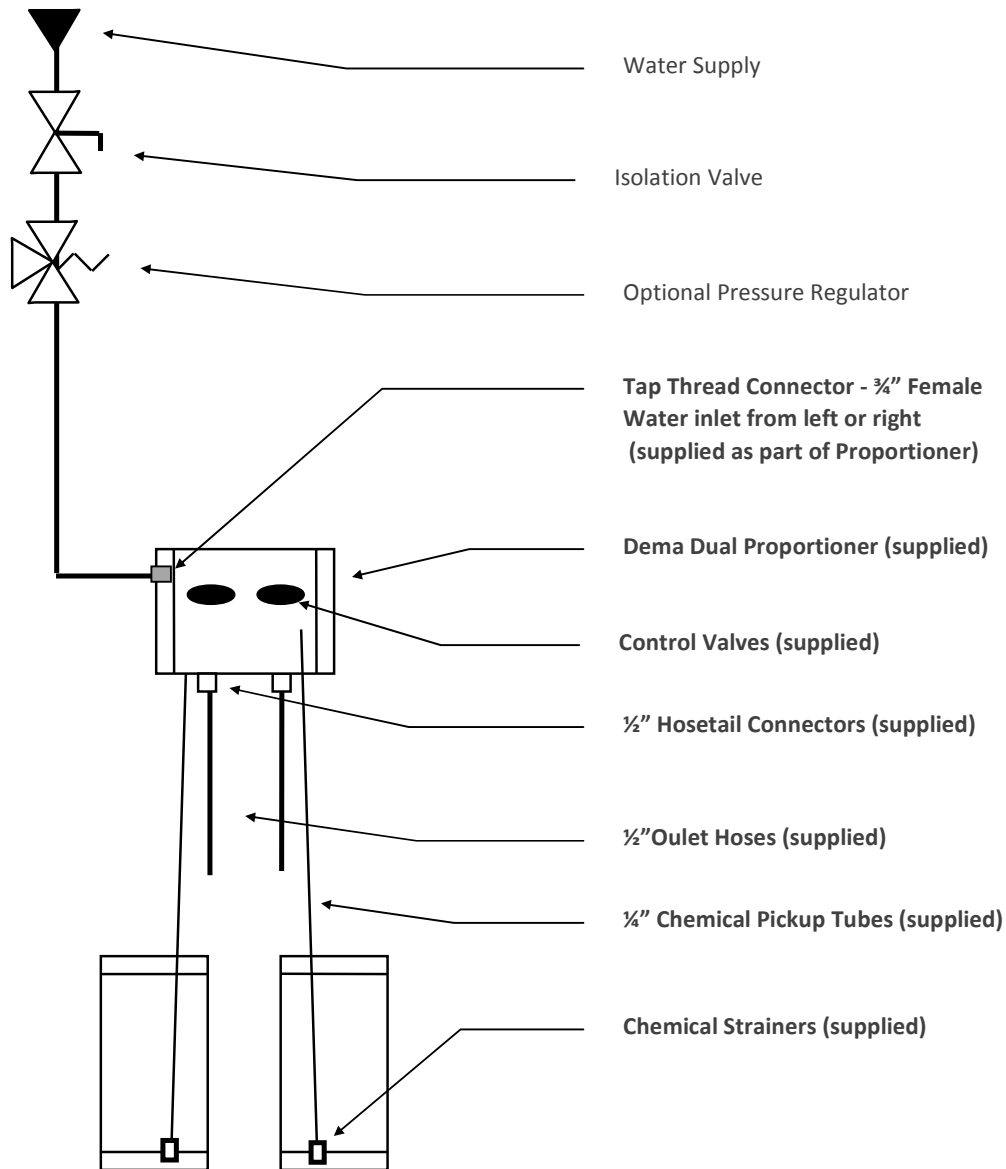
SERVICES REQUIRED

1. Isolated water supply.
2. Water pressure, flow and temperature requirements given in equipment specification.



INSTALLATION.

1. Water Authority regulations state that no chemical dilution equipment may be connected directly to the mains supply. A break in the supply using a type "A" air gap is required.
This unit complies with this regulation and has been approved for direct connection to main supply by the Water Council.
2. All parts of injector must be above maximum liquid level of the neat chemical product.
3. The compatibility of the materials of construction of the dosing unit and the chemical must be checked.
4. If the line pressure is above the rated pressure then a protection device such as a pressure regulator must be fitted.





INSTALLATION \ COMMISSIONING

1. Attach water supply to 3/4" female tap thread connector (see diagram).
2. Fix Proportioner to wall using holes in mounting holes and suitable fixings.
3. Fit coloured metering tips into chemical pickup hoses.
4. Fit chemical suction tube to hoses.
5. Attach chemical tube to chemical strainer and weight.
6. Fit outlet hoses to outlet hoses.
7. Turn on the water and check for leaks.
8. Immerse the chemical pickup tubes in the chemicals to be injected.
9. Open the control valves individually and the unit will self-prime.

ADJUSTING STRENGTH.

IMPORTANT - USE NO TOOLS!

1. Place chemical pickup tubes in clean water and turn on Proportioner until all chemical flushed from system.
2. Turn off water supply.
3. Remove chemical pickup tube from chemical hose tail.
4. Change metering tip in chemical hose tail.
5. Refit chemical pickup tube onto chemical hose tail.
6. Check strength and readjust if required (steps 1 to 6).

MAINTENANCE

1. No routine maintenance required.
2. Recommend chemical suction tube and outlet hose be replaced annually or when showing signs of wear.





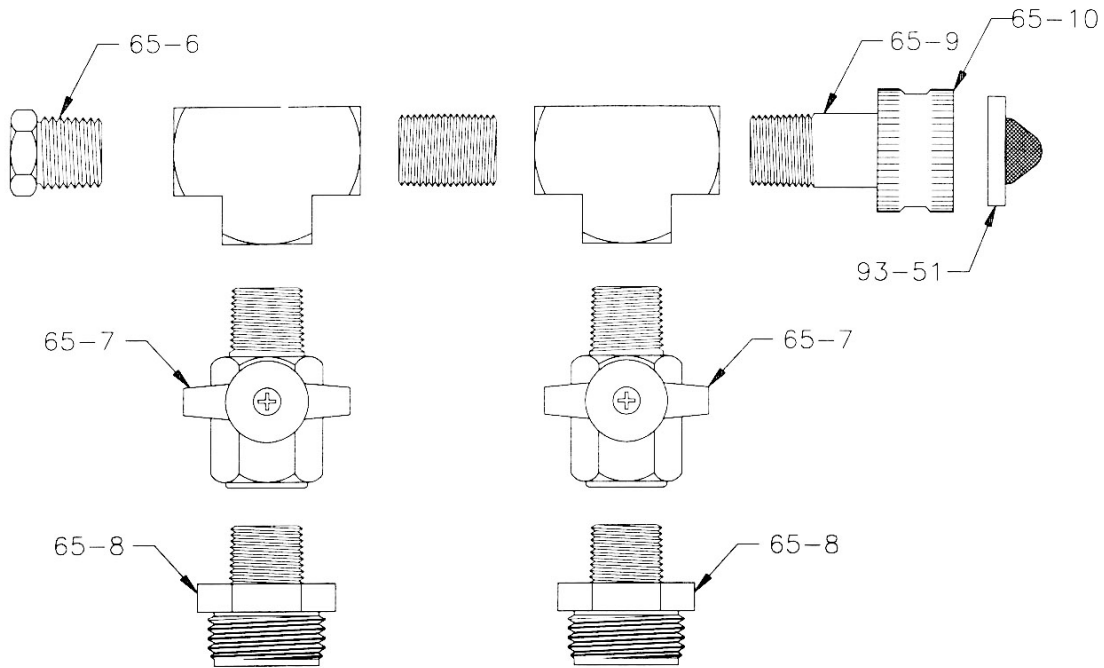
TROUBLE SHOOTING

Fault	Diagnosis	Remedy
No flow of water when control valve opened	No water supply	Check water supply Check all valves or solenoids
	Blocked proportioner	Remove proportioner from supply, disassemble & clear away blockage gently
Water flowing back into chemical Water flowing out of housing	Too long outlet hose	Shorten to 1 metre maximum
	Outlet valved	Remove valve
	Outlet hose kinked	Replace with new
	Blocked proportioner	Remove proportioner from supply, disassemble & clear away blockage gently
No suction of chemical	No flow of water	See above
	No outlet hose	Refit outlet hose
	Low water pressure	See above & investigate supply
	Blocked suction tube or strainer	Clean out and refit
	Air leak on chemical inlet	Check tightness of hosetail to chemical tube - cut & refit if necessary Check chemical suction tube for holes
Under injection	No chemical in container	Replace chemical container
	Suction of air	See above
	Variable or low water pressure	See above & investigate supply
	Outlet hose kinked	Replace with new



PARTS DRAWING (1 OF 2)

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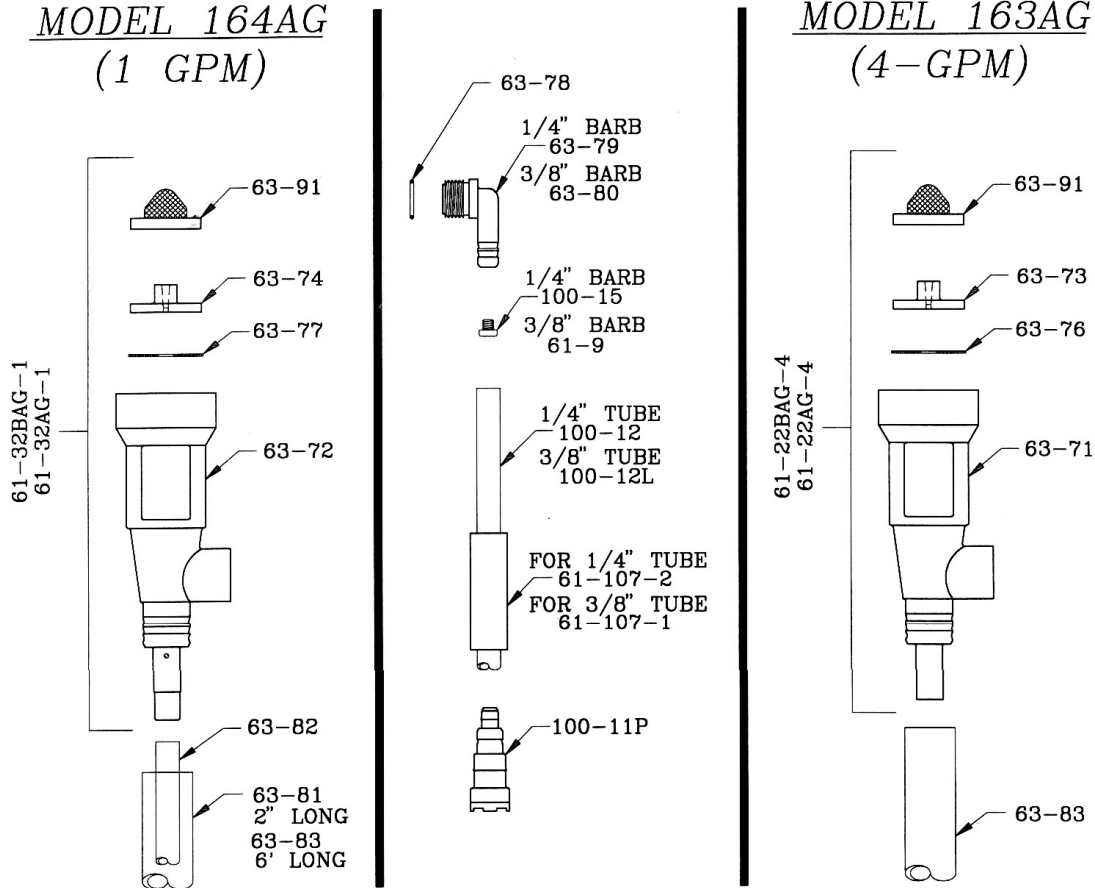
SEE SHEET 6 FOR PROPORTIONER ASSEMBLY

PART NO.	DESCRIPTION
65-6	PLUG
65-7	1/4" BALL VALVE
65-8	ADAPTER
65-9	SWIVEL ADAPTER
65-10	GARDEN HOSE ADAPTER
93-51	STRAINER WASHER



PARTS DRAWING (1 OF 2)

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PART NO.	DESCRIPTION
61-22AG-4	4 GPM (3/8" BARB) PROPORTIONER
61-22BAG-4	4 GPM (1/4" BARB) PROPORTIONER
61-32AG-1	1 GPM (3/8" BARB) PROPORTIONER
61-32BAG-1	1 GPM (1/4" BARB) PROPORTIONER
61-107-1	CERAMIC WEIGHT (3/8" TUBE)
61-107-2	CERAMIC WEIGHT (1/4" TUBE)
63-71	PROPORTIONER BODY (4 GPM)
63-72	PROPORTIONER BODY (1 GPM)
63-73	NOZZLE (4 GPM)
63-74	NOZZLE (1 GPM)
63-76	SCREEN (4 GPM)

PART NO.	DESCRIPTION
63-77	SCREEN (1 GPM)
63-78	O-RING
63-79	INLET BARB (1/4" BARB)
63-80	INLET BARB (3/8" BARB)
63-81	VINYL TUBE (9/16" I.D. X 2" LG.)
63-82	VINYL TUBE (3/16" I.D. X 7" LG.)
63-83	VINYL TUBE (9/16 I.D. X 6' LG.)
63-91	STRAINER WASHER
100-11P	FOOT VALVE
100-12	VINYL TUBE (1/4 I.D. X 8' LG.)
100-12L	VINYL TUBE (3/8" I.D. X 8' LG.)

ACCESSORIES	61-9K	METERING TIP KIT-15 SIZES (3/8" BARB)
	100-15K	METERING TIP KIT-14 SIZES (1/4" BARB)





PARTS LIST

Holchem SKS Code	Supplier Code	Description
02520/01	100-15K	Metering tip kit-14 sizes (1/4" barb)
02520/02	N/A	Black knob
02520/03	100-12	Chemical pick up tube (1/4 id x 8 lg)
02520/09		Proportioner body
02520/10	65-8	Adaptor
02520/11	100-11P	Foot valve
02520/12	61-107-2	Ceramic weight (1/4" tube)
02520/13	63-83	Discharge tube (9/16 id x 6 lg)
02520/14	63-79	Inlet barb (1/4" barb)
02520/15	63-78	O-ring
02520/16	61-22BAG-44	4 gpm (1/4" barb) complete proportioner assembly
02520/17	93-51	Strainer washer
02520/18	65-7	1/4" Ball valve
02520/19	65-9	Swivel adaptor
02520/20	65-10	Garden hose adaptor
02520/21	65-6	Plug

Note. Parts with either no SKS number or description have not been purchased before but can be obtained by quoting the relevant part number on the drawings.

