

SI TECH®

SEMI AUTOMATIC EXHAUST VALVES

SI TECH variable volume exhaust valves are designed to control the gas volume in the suit. Desired gas volume is set by rotating the lid during the pre-dive buoyancy check, in the water. Correctly set, the valve will automatically vent gas as the diver ascends. The setting can be easily overridden by pressing on the valve lid to manually dump gas.

SI TECH Exhaust valves are designed to act as safety valves with a maximum overpressure at maximum setting of 40 Mbar with flow rate > 100 N lit/min. For adequate insulation and buoyancy at surface, a minimum pressure of 20 Mbar can be maintained for extended surface duration.

SI TECH exhaust valves are designed to be reliable, pressure sensitive and easy to operate. Optimum valve performance is obtained by following the instructions in the valve user's manual, which is supplied to suit manufacturers.



Exhaust valve ORIGINAL

The original: reliable, pressure sensitive and easy to operate

10100 Exhaust valve **ORIGINAL** SMALL guide ridge

10500 Exhaust valve **ORIGINAL** LARGE guide ridge

More models are available to fit different suit material thickness.

The Original semi automatic exhaust valve, designed in 1971, was produced exclusively for Viking dry suits for almost two decades.

SI TECH "Exhaust valve Low Profile" was introduced in the late 1980ies. 11000- and 11500-series were replaced by 11700- and 11800-series. The check valve was moved into the nut and the thread was extended during the autumn of 2000. To increase the manual dump capacity further modifications were made and the latest model, "Exhaust valve LOW PROFILE, HIGH FLOW" (11300-series) was introduced December 2000:



Exhaust valve LOW PROFILE, HIGH FLOW

Reliable low profile design, pressure sensitive, increased manual dump capacity and ratchet action for easy operation

11330 **HIGH FLOW** low lid LARGE guide ridge

11340 **HIGH FLOW** low lid SMALL guide ridge

11370 **HIGH FLOW** high lid LARGE guide ridge

11380 **HIGH FLOW** high lid SMALL guide ridge

The high lid is 4,5 mm higher than the low lid.

Exhaust valve ATTACHMENT TOOLS



18210 **Internal attachment tool** for Exhaust valve original (10000series)

18240 **Internal attachment tool combi**

High Flow and all older Low profile (and rot. intake)

18430 **External attachment tool**

High Flow and other Low Profile exhaust valves with notches

SI TECH®

INTAKE VALVES AND CONNECTORS

The flow capacity of SI TECH intake valves exceeds the restricted flow in SI TECH dry suit inflation hoses that have the restricting orifice. If using other hoses together with SI TECH intake valves, it is recommendable to make sure that the flow rate is somewhat restricted (see the restricting orifice chapter on page 4).



Intake valve **FIXED** (high push button)

- 21150 Intake valve, Int'l, SMALL guide ridge
- 21450 Intake valve, CEJN, SMALL guide ridge
- 21560 Intake valve, CEJN, LARGE guide ridge THIN
- 21650 Intake valve, Int'l, LARGE guide ridge, heavy v. port

Intake valve **ROTATING**

- 21730 Rot. intake valve, low button, Int'l, large g.r.
- 21740 Rot. intake valve, low button, CEJN, large g.r.
- 21780 Rot. intake valve, high button, Int'l, large g.r.
- 21790 Rot. intake valve, high button CEJN, large g.r.
- 21830 Rot. intake valve, low button, Int'l, small g.r.
- 21840 Rot. intake valve, low button, CEJN, small g.r.
- 21880 Rot. intake valve, high button, Int'l, small g.r.
- 21890 Rot. intake valve, high button CEJN, small g.r.

Optional when ordering new rotating intake valves:

- 21007 Protective cap CEJN quick connector
- 21008 Protective cap Int'l quick connector

Replace old type quick connector sockets with a **COMBO**:

- 21017 Combo: 21007 + CEJN quick connector
- 21018 Combo: 21008 + Int'l quick connector

Intake valve, **SLIDE ACTIVATOR, ROTATING**

- 24780 Rot. intake slide, large guide ridge (Int'l QC+protective cap)
- 24880 Rot. intake slide, small guide ridge (Int'l QC+protective cap)

SWIVEL CONNECTOR for hose with valve head

- 24700 Swivel connector, LARGE guide ridge
- 24800 Swivel connector, SMALL guide ridge
(use with hose with valve head #30100)

To convert an ordinary lp dry suit inflation hose, use:

- 24810 Valve head adapter for hose with Int'l quick connector
- 24820 Valve head adapter for hose with CEJN quick connector

ATTACHMENT TOOLS for rotating intake

- 18220 External attachment tool for rotating intake valves
- 18240 Internal attachment tool for rotating intake valves
(same as for High Flow Exhaust valves)

ATTACHMENT TOOL for fixed intake valves

- 18260 Attachment tool for fixed intake valves
(and exhaust valves with check valve in the attachment nut)

SI TECH®

VALVE PORTS

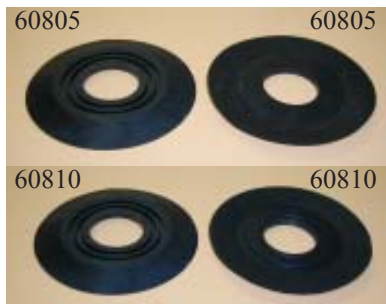
Valve ports are used to **ensure attachment strength** (specially in flexible suit materials) and to obtain a **non-destructible sealing** between the valve and the suit. This will secure the valve if/when exposed to (abnormal) tension. The valve port will support most valves for a maximum tension of 50 kp in attachment strength. SI TECH provides valve ports in different materials and external diameters with guide *grooves* that fit both small and large diameter valve guide *ridges*.

A guide *ridge* on the valve is fitting into the guide groove of the valve port. SI TECH *valves* are provided with either small or large diameter guide *ridge*. SI TECH valve ports with **dual guide grooves** will accommodate a variety of valves.

SMALL guide groove fits: guide ridge mm circa 47.4 externally and 43.6 internally
LARGE guide groove fits: guide ridge mm circa 58.4 externally and 54.6 internally
A small diameter guide ridge is recommendable, especially for flexible suit materials.

SI TECH valve ports are designed to provide a **waterproof attachment** of the valve to the dry suit and to facilitate detachment for service and rinsing without using glue or silicone. **The guide ridges should be carefully centred in the valve port guide grooves when attaching the valve.**

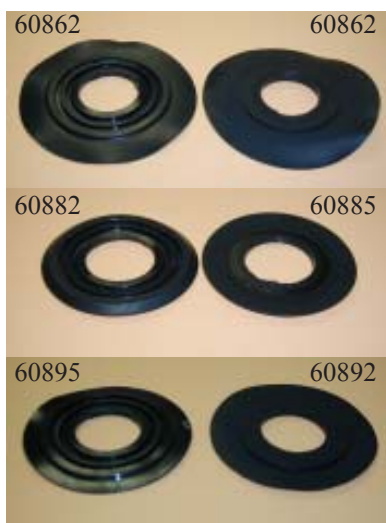
All SI TECH valve ports can be glued and the PU valve ports are radio frequency weldable. Valve ports with rear elevated **flange** are intended for thick neoprene materials. In order to avoid neoprene or textile threads snagging the valve thread and to avoid compressing of the material. The hole in the suit should have the same diameter as the flange and the edge of the flange is glued onto the neoprene surface of the hole. All valve ports below have a **33 mm** hole diameter.



CHLOROPRENE VALVE PORTS

60805 Chloroprene valve port, diameter **100 mm**, dual guide grooves

60810 Chloroprene valve port, diameter **100 mm**, dual guide grooves, elevated rear **flange**



POLYURETHANE VALVE PORTS

60862 PU valve port, diameter **100 mm**, dual guide grooves elevated rear **flange**

60882 PU valve port, diameter **75 mm**, dual guide grooves elevated rear **flange**

60885 PU valve port, diameter **75 mm**, dual guide grooves

60892 PU valve port, diameter **85 mm**, dual guide grooves elevated rear **flange**

60895 PU valve port, diameter **85 mm**, dual guide grooves



INTERNAL POLYURETHANE VALVE PORT NO GLUE RESIDUE

60852 Internal valve port NGR, PU, no guide grooves
Order unit: PAIR Delivered: UN-CUT



DRY SUIT INFLATION HOSES & QUICK CONNECTOR SOCKETS



30100 **Hose CEJN, 75 cm**

20006 Quick connector **socket CEJN** with groove (type-b)
Flow and leakage test the valve after changing the quick
connector socket (rec. 10-15 BAR)



32500 **Hose INT'L , 75 cm**

20101 Quick connector **socket INT'L** with groove for
protective cap retainer
Flow and leakage test the valve after changing the quick connector
socket (rec. 10-15 BAR)



32100 **Hose with valve head, 75 cm**
(for swivel connector valves #24700 and #24800)

37004 **Protective cap** for valvehead
(included when ordering valve head hoses)



Hose 30100, 32500 and 32100 are standard items.

Standard hose features:

- * thread UNF 3/8 to regulator LP port
- * flow restricting orifice (1 mm)

More options are listed in the price list. Different length, other
type of thread and other special features are available on request.

SI TECH standard hoses have a **flow restricting orifice** (1mm) for easy buoyancy control, especially for less experienced dry suit divers, by preventing over inflation that may cause uncontrolled or unexpected ascent. If the hose is damaged or free flowing the flow restricting orifice reduces the injuries that may be caused by the whipping hose. If the suit inflation hose for any reason would free flow the orifice will prevent pressure loss to the second stage, which could cause infinite breathing resistance.

Hoses with higher flow rate are available for experienced divers.



Quick connector ADAPTERS

Connect CEJN or INT'L hose female to swivel connector #24700 and #24800

24810 **Valve head adapter** for hose with **INT'L** quick connector
24820 **Valve head adapter** for hose with **CEJN** quick connector

SI TECH®

SPECIAL VALVES



Extend
your time in
the water!

Product information sheet
with user's manual available.

URINE DUMP VALVE

11900 Urine dump valve, (small guide ridge)

Items included in 11900: valve port, exhaust valve with an attachment nut furnished with a socket and a silicone hose.

Uridomes are attached to the silicone hose. Uridomes and valve port blank plug (enables diving with detached urine dump valve) are ordered separately.

Disposable uridomes packed individually for best hygiene.

11907 Self-adhesive **uridome** (disposable) diameter 25 mm

11908 Self-adhesive **uridome** (disposable) diameter 30 mm

11909 Self-adhesive **uridome** (disposable) diameter 35 mm

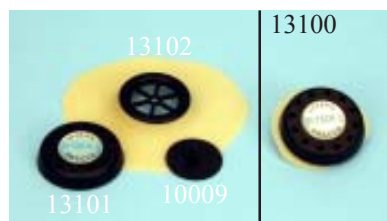


VALVE PORT BLANK PLUG

Plug up the valve port when removing the valve. (Valve port is not included)

60325 **Valve port blank plug**, SMALL guide ridge

60330 **Valve port blank plug**, LARGE guide ridge



NON-ADJUSTABLE DUMP VALVES

13100 **Latex hood valve cpl.** (no valve port needed)

Snap into place in a tiny hole in the latex hood.

13200 **Dump valve**, fully automatic, no guide ridge

Valve ports #60840 and #60830 are ordered separately

60840 **PU valve port**, for dump valve #13200

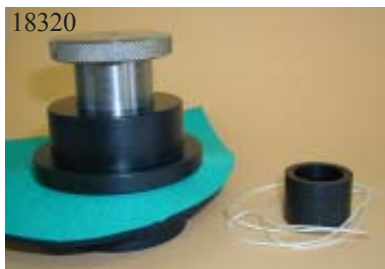
18420 **Attachment tool set** for dump valve #13200



Please note that the use of fully automatic dump valves (that can't be closed manually) may have a negative effect on the performance of the exhaust valve.

SI TECH®

VALVE SERVICE AND SPARE PARTS



Exhaust valve TEST BLOCK with U-TUBE

18150 Exhaust valve TEST BLOCK with U-TUBE

Replaces #18100, Test Panel (adapters and tools included:
#18355, #18608, #20006 CEJN QC socket and #18132 torque pin)

Test block ADAPTORS

18355 Adaptor for check valve test (for #18150)

(low profile valves with 3 letter batchcodes, before High Flow)

18608 Adaptor 11000series/10000series (for #18150)

(low profile valves with 3 letter batchcodes, before High Flow)

Exhaust valve ASSEMBLY TOOL

18400 Assembly tool

for Low Profile and LP High Flow exhaust valves
(essential for re-assembly of LP/LP HiFlo exhaust valves)

CUTTING TOOL for valve port #60852 and neoprene

18320 Tool to angel cut thick neoprene & positioning guide for valve port #60852

A chamfered edge to prolong the sealing surface is obtained by the cutting tool. To ease the valve port attachment, a positioning guide can be used to lift the external lip.

ANTI FRICTION WASHERS

Included as standard in all new valves

Reduces the friction between the valve and the valve port, making it easier to detach the valve for rinsing and service.

10013	Internal diameter 31 mm	external 49 mm
11016	Internal diameter 33,5 mm	external 64 mm
21209	Internal diameter 30 mm	external 60 mm
21509	Internal diameter 37,5 mm	external 58 mm

ADJUSTMENT WASHER (normally not needed)

Supplied, on request only, with new valves.

11034 Back up washer

Used as spacer when using valve port #60852 in thin suit materials (see manual for #60852).