

November 2008

Experience and Innovation

Continuous innovations, supported by several years of experience, allow us to satisfy our customers throughout the world. We are able to efficiently combine the strength of our experience with knowledge of the newest technologies in order to further assist our customers.

Customer Care

Thanks to the biggest capacity in this sector **Twistloc** is able to guarantee on time delivery. We export to more than ten countries in the world through SNC's international corporate structure.

Technical Assistance

To assist our customers we have a staff dedicated to providing technical assistance. We can provide assistance in new technologies.

Partnership

Our people work in concert with our customers and suppliers to develop and manufacture solutions that add value to the finished product. Let us work with you on your projects.

AUTHORIZED SALES REPRESENTATIVE

SNC Company

303-501, TechnoPark III, 36-1, SamjeongDong, OjeongGu BucheonSi 421-741, KOREA
Tel : +82-32-624-1270/2 | Fax : +82-32-624-1273 | www.twistloc.com

 and **Twistloc** are registered trade marks of SNC Company. Copyright 2008. All rights reserved.



The Perfect Connection Every Time **Twistloc**®

 **SNC**
The Perfect Connection Every Time

SNC Company

303-501, TechnoPark III, 36-1, SamjeongDong, OjeongGu BucheonSi 421-741, KOREA

Tel : +82-32-624-1270/2 | Fax : +82-32-624-1273 | www.twistloc.com

We are committed to constant research and development, and all product specifications in this catalog are subject to change without notice. For further information, please contact your local Sales Representative.

 and **Twistloc®** are registered trade marks of SNC Company. Copyright 2008. All rights reserved.

As a leading manufacturer of Twist and Lock fittings, all of us at SNC are committed to continuous R&D activities to return our clients' affection with consistent and good quality products.

Quality-First Production



- The core value of the SNC products lies in quality competitiveness and quality value.
- Strict quality control is implemented throughout the processes from design at its BUCHEON Center to production at its INCHEON factory.
- Total quality control is applied to the entire processes from the beginning of the initial design process to production, final assembly, post production test and packaging ensuring the very best quality output.
- Based on its quality performance, SNC has been accredited by the world leading certification agencies.



Twistloc® which incorporates pressure combined system of push fit and compression, the twist and lock system is suitable for plumbing, local/home potable cold and hot water supply and central heating systems.

Twistloc® fittings are designed to be suitable for 1/4-1 1/2 dia. Copper, PEX and CPVC pipes. These products have been tested and approved in accordance with:

ASSE 1061-2006 and IGC 188 -2004,
IGC 157-2007
ASME A112.81.1 and CSA B125.1-2005,
NSF 14 & 61

Twistloc® provides for the perfect plastic plumbing system, and is manufactured to the ISO 9001 TUV standard.

The specification of the products complies with the requirements of the central local/home heating and water supply systems.

Various tests have proved that the **Twistloc®** products are resistant to temperature and pressure beyond the normal operation ranges.

The **Twistloc®** products must be installed to the correct plumbing regulations.

Quality Warranty for 25 Years

SNC products under long-term test programs and strict quality standards are backed by a 25-year warranty provided that they are installed and maintained as recommended by SNC, to the copper, PEX and CPVC which have been produced in conformity with the ASTM standards.

SNC products are used in local/home plumbing and heating systems, and are supplied to the terms and conditions of SNC.

Characteristic about quality of the material

Polysulfone polymer for **Twistloc®**

Fittings have traditionally been made of materials such as brass, copper, stainless steel and other plastics. Our fittings can outperform these materials, providing greater design freedom and lower costs in hot water systems for plumbing and heating applications.

Our fittings material offers several advantages not available with others used for high-performance in hot water systems.

This tough, rigid, long-term hydrostatic strength thermoplastic has a high heat deflection temperature and maintains its properties over a wide temperature range. The hydrolytic, dimensional and oxidative stability of our base material is superior to those of other engineering polymers.

Our fittings material can resist mineral build-up and corrosion, even in aggressive water environments. This was clearly seen in a field study in Cape Coral, Florida. Working in conjunction with a local code official, a home builder installed a PEX system in a home using fittings made from polysulfone.

The fittings shown above were removed after several years of service from the cold water supply lines of two different homes with similar floor plans. Removed after four years, the polysulfone fitting has no apparent mineral build-up or corrosion, and the surface-although slightly dulled-appears as new. In a similar amount of time, the copper fitting had developed pin hole leaks.

In hot water systems, our fittings have very good resistance to prolonged exposure to chlorinated water at temperatures as high as 90°C (194°F) these materials could perform well in hot, chlorinated water delivery systems.

Our **Twistloc®** Fittings Features;

- Excellent thermal stability
- High toughness and strength
- Good environmental stress cracking resistance
- High heat deflection temperature, 345°F (174°C)
- Combustion resistance
- Approved for food contact and potable water[NSF, KTW, WRAS]
- Low creep



PRODUCTS

SR Series



DROP EAR ELBOW

PART NO	DESCRIPTION	TUBE SIZE	THREAD SIZE
SR67101	3/8"CTS DROP EAR EL	3/8"CTS	1/2" FIP
SR67102	1/2"CTS DROP EAR EL	1/2"CTS	1/2" FIP



ENLARGER CONNECTOR

PART NO	DESCRIPTION	TUBE SIZE	STEM SIZE
SR67111	3/8" CTS Stack x 1/2"CTS	1/2"CTS	3/8"CTS
SR67112	3/4" CTS Stack x 1CTS	1"CTS	3/4"CTS



FEMALE ADAPTOR

PART NO	DESCRIPTION	TUBE SIZE	THREAD SIZE
SR67121	3/8CTS X 3/8" FIP CPL	3/8"CTS	1/2" FIP
SR67122	1/2"CTS X 1/2" FIP	1/2"CTS	1/2" FIP
SR67123	1/2"CTS X 3/4" FIP CPL	1/2"CTS	3/4" FIP
SR67124	3/4"CTS X 3/4" FIP	3/4"CTS	3/4" FIP
SR67125	1"CTS X 1" FIP CPL	1"CTS	1" FIP



FEMALE ADAPTER GARDEN HOSE THREAD

PART NO	DESCRIPTION	TUBE SIZE	THREAD SIZE
SR67126	1/2" CTS X GH ADAPT	1/2"CTS	3/4" GH



MALE CONNECTOR

PART NO	DESCRIPTION	TUBE SIZE	THREAD SIZE
SR67131	3/8"CTS X 1/2" MIP CPL	3/8"CTS	1/2" MIP
SR67132	1/2"CTS X 1/2" MIP	1/2"CTS	1/2" MIP
SR67133	1/2"CTS X 3/4" MIP CPL	1/2"CTS	3/4" MIP
SR67134	3/4"CTS X 3/4" MIP	3/4"CTS	3/4" MIP
SR67135	1"CTS X 1" MIP CPL	1"CTS	1" MIP



MALE ELBOW

PART NO	DESCRIPTION	TUBE SIZE	THREAD SIZE
SR67141	1/2"CTS X 1/2" MIP EL	1/2"CTS	1/2" MIP



REDUCING CONNECTOR

PART NO	DESCRIPTION	TUBE SIZE	STEM SIZE
SR67151	1/4"OD X 1/2"CTS STEM	1/8"CTS	1/2"CTS
SR67152	3/8"CTS X 1/2"CTS STEM	3/8"CTS	1/2"CTS
SR67153	1/2"CTS X 3/4"CTS STEM	1/2"CTS	3/4"CTS



SWIVEL ELBOW UNION

PART NO	DESCRIPTION	TUBE SIZE	THREAD SIZE
SR67161	1/2"CTS X 1/2" FIP EL	1/2"CTS	1/2" NPS
SR67162	1/2" CTS X GH ADAPT SWIVEL	1/2"CTS	3/4" FGH
SR67163	1/2" CLOSET ADP EL	1/2"CTS	3/4" Closet



SWIVEL ELBOW UNION _ Brass Nut

PART NO	DESCRIPTION	TUBE SIZE	THREAD SIZE
SR67161B	1/2"CTS X 1/2" FIP EL	1/2" CTS	1/2" NPS
SR67162B	1/2" CTS X GH ADAPT SWIVEL	1/2" CTS	3/4" FGH
SR67163B	1/2" CLOSET ADP EL	1/2" CTS	3/4" Closet



SWIVEL UNION CONNECTOR

PART NO	DESCRIPTION	TUBE SIZE	THREAD SIZE
SR67171	1/2" CLOSET ADP	1/2"CTS	3/4" Closet

PRODUCTS

SR Series



SWIVEL UNION CONNECTOR _ Brass Nut

PART NO	DESCRIPTION	TUBE SIZE	THREAD SIZE
SR67171B	1/2" CLOSET ADP	1/2"CTS	1" NPS
SR67172B	1/2"CTS X 1/2" FIP EL	1/2" CTS	1/2" NPS
SR67173B	1/2" CTS X GH ADAPT SWIVEL	1/2" CTS	3/4" NPS



TUBE END STOP

PART NO	DESCRIPTION	TUBE SIZE
SR67181	1/2"CTS END STOP	1/2"CTS
SR67182	3/4" CTS END STOP	3/4"CTS
SR67183	1" CTS END STOP	1"CTS



TUBE ELBOW UNION

PART NO	DESCRIPTION	TUBE SIZE	STEM SIZE
SR67191	1/2"CTS X 1/2CTS STEM	1/2"CTS	1/2"CTS
SR67192	3/4"CTS X 3/4"CTS STEM	3/4"CTS	3/4"CTS



ELBOW UNION

PART NO	DESCRIPTION	TUBE SIZE	TUBE SIZE
SR67201	3/8"CTS ELBOW	3/8"CTS	3/8"CTS
SR67202	1/2" CTS EIL UNION	1/2"CTS	1/2"CTS
SR67203	3/4" CTS EIL UNION	3/4"CTS	3/4"CTS
SR67204	1"CTS ELBOW	1"CTS	1"CTS
SR67205	3/4"CTS X 1/2"CTS	3/4"CTS	1/2"CTS



TUBE TEE UNION

PART NO	DESCRIPTION	TUBE SIZE A	TUBE SIZE B	TUBE SIZE C
SR67210	1/2"CTS STACK-BRANCH TEE	1/2"CTS	1/2"CTS	1/2"CTS



TUBE TEE UNION CONNECTOR

PART NO	DESCRIPTION	TUBE SIZE A	TUBE SIZE B	TUBE SIZE C
SR67211	1/2"CTS STACK TEE	1/2"CTS	1/2"CTS	1/2"CTS
SR67212	3/4"CTS STACK TEE	3/4"CTS	3/4"CTS	3/4"CTS



UNION CONNECTOR

PART NO	DESCRIPTION	TUBE SIZE	TUBE SIZE
SR67221	3/8"CTS UNION	3/8"CTS	3/8"CTS
SR67222	1/2"CTS X 3/8"CTS UNION	1/2"CTS	3/8"CTS
SR67223	1/2"CTS UNION	1/2"CTS	1/2"CTS
SR67224	3/4"CTS X 1/2"CTS UNION	3/4"CTS	1/2"CTS
SR67225	3/4"CTS UNION	3/4"CTS	3/4"CTS
SR67226	1"CTS X 3/4"CTS UNION	1"CTS	3/4"CTS
SR67227	1"CTS X 1"CTS UNION	1"CTS	1"CTS



TEE UNION

PART NO	DESCRIPTION	TUBE SIZE A	TUBE SIZE B	TUBE SIZE C
SR67301	3/8" CTS TEE	3/8"CTS	3/8"CTS	3/8"CTS
SR67302	1/2"CTS X 1/2" X 1/4"OD TEE	1/2"CTS	1/2"CTS	1/4"
SR67303	1/2"CTS TEE	1/2"CTS	1/2"CTS	1/2"CTS
SR67304	3/4" X 3/4" X 1/2"CTS TEE	3/4"CTS	3/4"CTS	1/2"CTS
SR67305	3/4"CTS TEE	3/4"CTS	3/4"CTS	3/4"CTS
SR67306	1"CTS TEE	1"CTS	1"CTS	1"CTS
SR67307	1"CTS X 3/4"CTS X 3/4"CTS	1"CTS	3/4"CTS	3/4"CTS
SR67308	1"CTS X 3/4"CTS X 1"CTS	1"CTS	3/4"CTS	1"CTS
SR67309	1"CTS X 1"CTS X 3/4"CTS	1"CTS	1"CTS	3/4"CTS
SR67310	3/4"CTS X 1/2"CTS X 1/2"CTS	3/4"CTS	1/2"CTS	1/2"CTS

PRODUCTS

SV Series



HAND VALVE FEMALE ADAPTER

PART NO	DESCRIPTION	TUBE SIZE	THREAD SIZE
SV67101	1/4"CTS X 1/2" FIP	1/4"CTS	1/2" NPS



HAND VALVE ELBOW UNION

PART NO	DESCRIPTION	TUBE SIZE	TUBE SIZE
SV67211	Angle Valve 1/4"CTS X 1/2"CTS	1/4"CTS	1/2"CTS
SV67212	Angle Valve 3/8"CTS X 1/2"CTS	3/8"CTS	1/2"CTS



HAND VALVE UNION CONNECTOR

PART NO	DESCRIPTION	TUBE SIZE	TUBE SIZE
SV67221	3/8"CTS VALVE UNION	3/8"CTS	3/8"CTS
SV67222	1/2"CTS X 1/4"OD VALVE	1/2"CTS	1/4"OD
SV67223	1/2"CTS VALVE	1/2"CTS	1/2"CTS
SV67224	3/4" PUSH STRAIGHT VALVE	3/4"CTS	3/4"CTS
SV67225	1/2"CTS X 3/8"CTS STRAIGHT VALVE	1/2"CTS	3/8"CTS

www.twistloc.com

Pipe Size

- * 1/4" CTS = 3/8" O.D.
- * 3/8" CTS = 1/2" O.D.
- * 1/2" CTS = 5/8" O.D.
- * 3/4" CTS = 7/8" O.D.
- * 1" CTS = 1 1/8" O.D.

AR Series _ Not suitable for heating System



REDUCER

PART NO	DESCRIPTION	TUBE SIZE	STEM SIZE
AR67101	1/2"CTS X 3/4"CTS STEM	1/2"CTS	3/4"CTS



BARB CONNECTOR

PART NO	DESCRIPTION	TUBE SIZE	BARB SIZE
AR67111	3/4"CTS	3/4"CTS	1/2"

Cartridges System



Suitable for heating System

PART NO	TUBE SIZE
SCR 07	3/8"CTS
SCR 08	1/2"CTS
SCR 10	3/4"CTS
SCR 12	1"CTS

HOW TO ASSEMBLE



Feature;

- Excellent thermal stability
- High toughness and strength
- Good environmental stress cracking resistance
- High heat deflection temperature, 345°F (174°C)
- Combustion resistance
- Low creep
- Strong Grip Strength

PRODUCTS

Accessories



COLLETS

PART NO	TUBE SIZE
SCOL 04	1/4"OD
SCOL 06	1/4"CTS
SCOL 07	3/8"CTS
SCOL 08	1/2"CTS
SCOL 10	3/4"CTS
SCOL 12	1"CTS



EPDM O-RING

PART NO	TUBE SIZE
SEBR 04	1/4"OD
SEBR 06	1/4"CTS
SEBR 07	3/8"CTS
SEBR 08	1/2"CTS
SEBR 10	3/4"CTS
SEBR 12	1"CTS



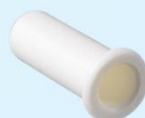
INSERT RING

PART NO	TUBE SIZE
SIR 04	1/4"OD
SIR 06	1/4"CTS
SIR 07	3/8"CTS
SIR 08	1/2"CTS
SIR 10	3/4"CTS
SIR 12	1"CTS



COLLETS KIT

PART NO	TUBE SIZE
SCK 04	1/4"OD
SCK 06	1/4"CTS
SCK 07	3/8"CTS
SCK 08	1/2"CTS
SCK 10	3/4"CTS
SCK 12	1"CTS



TUBE INSERT

PART NO	TUBE SIZE
STS06	1/4"CTS
STS07	3/8"CTS
STS08	1/2"CTS
STS10	3/4"CTS
STS12	1"CTS



PIPE BEND

PART NO	SIZE
SPB 08	Up to 1/2"CTS



HEAVY PIPE CUTTER

PART NO	TUBE SIZE
TLC-HPC	Up to 15/8"OD



EPDM CONE RING

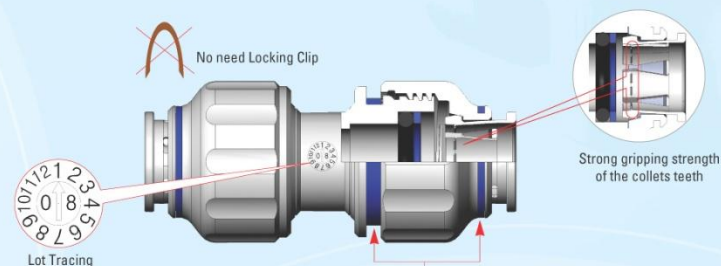
PART NO	SIZE
SEBCR 07	1/2" BSP
SEBCR 09	3/4" BSP
SEBCR 11	1" BSP



PIPE CUTTER

PART NO	TUBE SIZE
TLC-PC	Up to 3/4"CTS

System Advantages & Benefits



Pink	Green	Yellow	Blue	Red	Black
1/4" OD	3/8" OD	1/2" OD	5/8" OD	7/8" OD	1 1/8" OD
-	1/4" CTS	3/8" CTS	1/2" CTS	3/4" CTS	1" CTS

- Easy recognition of size by color
- Easy verification of coupling (lock/unlock) status at a long distance
- All white system
- Removable and re-useable without damage to plumbing or fittings
- Light weight for easy handling at sites
- Strong gripping suitable for heating systems
- Lot Tracing on all products
- Flexibility enables cabling works on the pipe through hard access area
- No risk of flame or fire from a blowtorch
- Permanent anti-leak connection
- No corrosion
- No scale deposits
- Low heat diffusion ensures safe surface temperature
- Plumbing flexibility reduces the risk of burst under freezing temperature
- No lead, non toxic
- *Patent Pending*
- *No need to use COLLET LOCKING CLIP*

Tube Insert

We recommend the use of tube insert for PEX pipe connections with **Twistloc®** fittings.

Fittings & Valves Performance

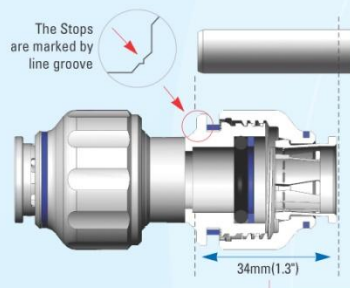
Max. Working Pressure @ Max. Working Temp.

250psi @ 73.4°F	150psi @ 140°F	100psi @ 180°F
17bar @ 23°C	10bar @ 60°C	6.9bar @ 82.2°C

INSTALLATION GUIDE

Pipe Cutting

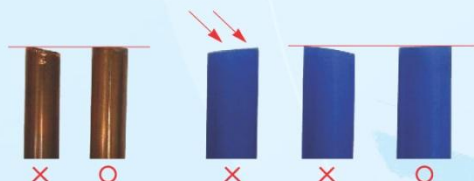
The stops are located in the following distances from the fitting end.



	SIZE		TUBE STOP	
Pink	1/4"OD	-	0.7"	19mm
Green	3/8"OD	1/4"CTS	0.8"	22mm
Yellow	1/2"OD	3/8"CTS	1"	27mm
Blue	5/8"OD	1/2"CTS	1.3"	34mm
Red	7/8"OD	3/4"CTS	1.4"	36mm
Black	1 1/8"OD	1"CTS	1.6"	41mm

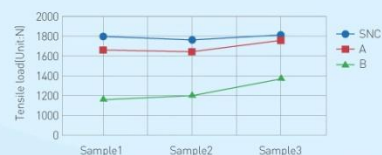
Twistloc® fittings should be in the 'unlocked' position, this is shown by colored line which a small gap between the screw cap and the body.

Ensure that there are kept free from scratches, gouges, dirt and debris or any form of damage on the circumference of all fittings.



When cutting tubing, ensure that the ends are cut square and are free of burrs.

Tensile Strength Test.



The graph above shows the results of a tensile strength test conducted independently by the Korean Government Laboratory and shows conclusive prove that Twistloc fittings outperform our competitors.

Maximum Torque Figures.

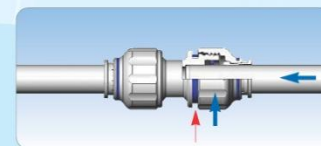
Maximum Torque Values
The Maximum torque values for threads used on twistloc products are as follows:

Thread	Size	Maximum Troque
	1/2"	3.5Nm
Plastic	3/4"	4Nm
	1"	5Nm

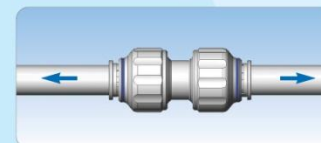
To Lock The Pipe Connection



Ensure that the tubing is pushed into the fitting fully past both the collets (gripper) and the 'O' ring and is engaged properly in accordance with the manufacturer's instructions.



Twist the screw cap until colored line is no longer visible. This confirms a proper, secure fit. This locks the pipe into position and increases pressure on the 'O' ring seal around the pipe for greater security.



Pull to check it is secure. It is good practice to test the system prior to leaving the site or before use.

If PEX tubing is used, then a tube insert must be used also. The tube insert acts as an internal support for the end of the tubing.

Ensure no scratches, gouges or any form of damage on the circumference of the tubing within one (1) inch (25.4mm) of the cut end. Damage in this area may cause leakage problem.

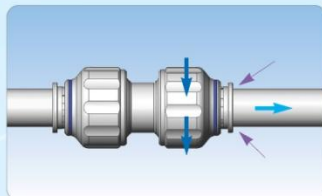
Check **Twistloc®** fittings for any signs of damage or foreign objects.

When **Twistloc®** fittings have to be disassembled and then reused, ensure that the tubing was removed from the joint has no damage on the circumference with one(1) inch [25.4mm] of the end. Inspect the tube and fitting for any signs of damage and ensure they are free of foreign materials. **Twistloc®** fittings can then be reassembled.

Ensure **Twistloc®** fittings and pipes are kept clean at all times by keeping them in the bags and boxes provided. Do not empty **Twistloc®** Products onto the floor area.

www.twistloc.com 15::

To Separate the Pipe Connection



Check if the pressure inside the system is released.

Unlock fitting by twisting until colored line is visible and clicking sound is heard.

Press collets squarely against the face of the fitting. With collets depressed, pull tubing to remove from fitting. Fitting may be reused.

Stop End

If necessary, the SNC Stop End not only provides the permanent leak-prevention sealing effects but also enables immediate removal and system extension for re-work. In particular, this is a Push-in design for easy use.

The Stop End is also useful in system pressure testing prior to connection works.



To assemble fully push in the pipe and pull on pipe to ensure security.

To remove simply push the collet into the body and pull to release the pipe.

Mini Manifold

For maximum flexibility, **Twistloc®** fittings can be combined to provide multiple functions.



CAUTION

Do not insert fingers into **Twistloc®** fittings as the stainless steel teeth may cause injury.

Twistloc® fittings should not be used for gas, fuel oil or compressed air applications.

DO NOT allow contact with any chemical or foreign substance; paint strippers, solder flux, Acid based descalents or chemical. The additive customer should be consulted.

Twistloc® fittings are not suitable for buried installation

All **Twistloc®** fittings and related products should be selected, installed, used and maintained in accordance with these Technical Specifications.

Do not use a damaged or scored pipe.



Do not use a hacksaw to cut a pipe. Do not leave burrs on the pipe.

If the pipe is not fully inserted, the connection cannot be properly sealed even the fitting is coupled.

You must push in the pipe passing the collets (gripper) and the O-ring inside the fitting.

Condition of Sales

These conditions of sale override any clause in the buyer's orders in any other communication if in conflict therewith.

PRICES

All prices are ex-works quoted unless specifically agreed otherwise in writing. SNC KOREA already (herein after called SNC) reserves the right to alter prices or terms offered to any buyer without notice. Prices and terms shall be those ruling at the date of despatch.

VALUE ADDED TAX

VAT if not included in the quotation shall be added and payable where and at the rate applicable.

MINIMUM ORDER VALUE

Minimum order value may be applied at the sole discretion of SNC.

PAYMENT TERMS

The company's standard terms of payment are net 30 days. Overdue invoices may be subject to interest charges.

FREIGHT TERMS

Time for delivery is given as accurately as possible. The customer shall have no rights to damages or to cancel the order for failure, for any cause to meet any delivery time stated or agreed either verbally or in writing. Shortage and damages to be notified in writing within 3 days of receipt of goods or no claims will be allowed. Claims for non receipt of goods must be made within 7 days of the date of despatch or no claim will be allowed.

CANCELLATION

Cancellation of an order will not normally be accepted by SNC. However, SNC may at it's

discretion agree to cancellation on the strict condition that all costs and expenses incurred by SNC up to the time of cancellation and all loss of profits and other loss or damages resulting to SNC by reason of such cancellation will be reimbursed by the customer to SNC forthwith. Cancellation must be confirmed in writing.

WARRANTY AND PERFORMANCES

SNC warrants that the good shall, at the time of delivery, correspond to its suppliers specifications when used for purposes for which goods of that type are ordinarily used.

No liability is accepted for failure to attain any manufacturers performance figures quoted unless SNC shall have specifically guaranteed them with an agreed sum as liquidated damages and the buyer has suffered loss by reason of the failure to attain the figures specifically quoted and agreed.

Any particulars of weights and measurements or performances relating to the goods and like matters furnished by SNC to the buyer in any catalogues, literature or otherwise are approximate and are intended to present a general idea of the goods and unless previously and specifically agreed in writing shall not form part of any contract.

Where products are sourced and supplied to buyer specific designs and/or specifications, provided that the goods conform in all respects, no liability whatsoever shall be accepted for the fitness for purpose and approval for use will be solely at the buyer's risk.

Where products are sourced and supplied to an agreed specification for a specific application, it is the buyer's responsibility to prove the product in the application and in which case no liability whatsoever will be accepted for defects which are caused by use in the buyer's application unless specifically agreed otherwise in writing prior to use in that application.