

POLYTHERM HEATING SYSTEMS LTD.

Presentation on Presstite Multilayer Pipe Systems.

Presentation To:

Presented By:





Presstite Multilayer is a composite pipe system using the advantages of **PE-Xc** technology with the positive features of an **aluminium inner pipe**. This giving a large degree of flexibility and toughness while utilising **high temperatures and pressures**.

Presstite is designed for **potable water, sanitary and heating applications**. With both WRAS and DVGW approval, Presstite is ideally suited for installations on both domestic and commercial applications.

The specially designed press fitting which comprises of a brass body and a stainless steel sleeve ranging from (16mm, 20mm, 26mm, 32mm, 40mm, 50mm & 63mm)

Fittings are compressed onto the pipe using a battery powered press-fit tool. This method of jointing takes a fraction of the time that is generally associated with traditional soldering and compression methods.

Press-fit technology has been widely used in Europe for more than twenty years and is becoming increasingly more popular in Ireland over the past decade.

Applications For

Presstite can be used on potable water, hot and cold water, heating installations and also fan coil units.

It can be installed in domestic applications both in new and existing buildings. Presstite is also ideally suited for apartment blocks and hotels. It can be used in projects where the use of gas is not permitted for brazing such as existing hospital refurbishments or even pharmaceutical applications.

Domestic

Commercial

Industrial

Features and Benefits of



- "Faster installation, small bend radii possible and easy pipe laying
- "Press-fittings require no soldering, welding or thread cutting (no hot works)
- "Reduced jointing with pipe up to 32mm
- "Quick, simple efficient jointing method resulting in installed cost reductions
- "Resistant to temperature and pressure requirements in DHW and Heating applications
- "Hygienic and material neutral
- "Light in weight when compared to screwed steel products."
- "Presstite system material costs far cheaper than a traditional copper system
- "Corrosion-free for long service life
- "Low recyclable value . reduced on site risk of theft

Corrosion of metal-pipes



Example 1 Inside Copper Tube



Example 3 Inside Mild Steel Pipe



Example 2 Inside Copper Tube



Example 4 Inside Mild Steel Pipe

Quality of



The Presstite system is approved by the following regulatory bodies.

ISO 9001 certification all production steps and quality controls are specified precisely according to ISO 9001 so that uniform product quality is ensured.

UK & Ireland WRAS approved

GermanyDVGW approved

The Netherlands KIWA (Complying with ISO21003)









Technical characteristics of



The multilayer pipe is manufactured by Hewing Germany, a global market leader in the production of crosslinked polyethylene pipe (PE-Xc pipes).

Each of the four layers (PE-X/adhesive/adhesive/PE-X coating) of the Multilayer pipe is produced by a separate extruder.

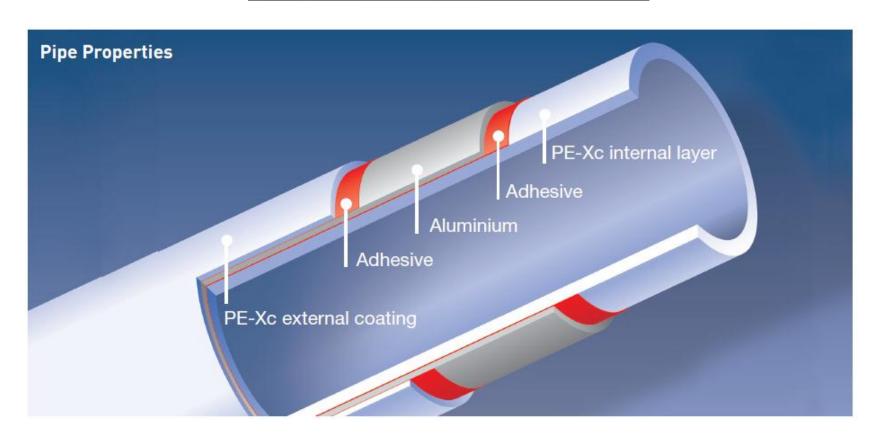
This means that the layer thicknesses of the individual layers can be precisely set and controlled, in contrast to other production processes.

The aluminium pipe embedded in the PE-X layers is formed from an aluminium band using a special roll handling process.

The aluminium layer determines the good form stability and high internal pressure resistance of the multilayer pipe.

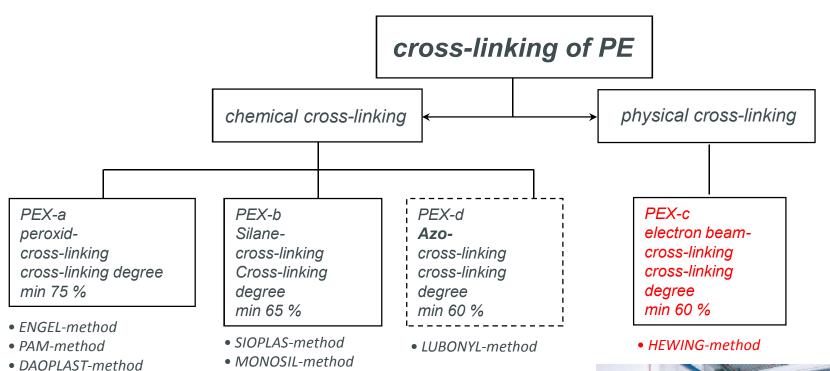
The aluminium layer is butt welded without overlap using the WIG welding process.

Technical characteristics of



Cross-linking process of

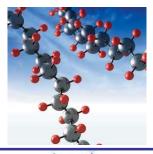


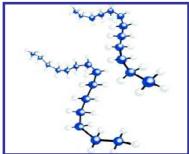




Physical properties of

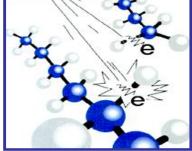
PRESSTITE



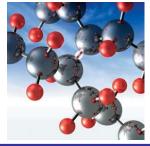


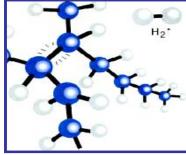
PE Molecules (Mono)
- Blue = Carbon
- Gray = Hydrogen





Electron beams bombard and isolated hydrogen from carbon chains.





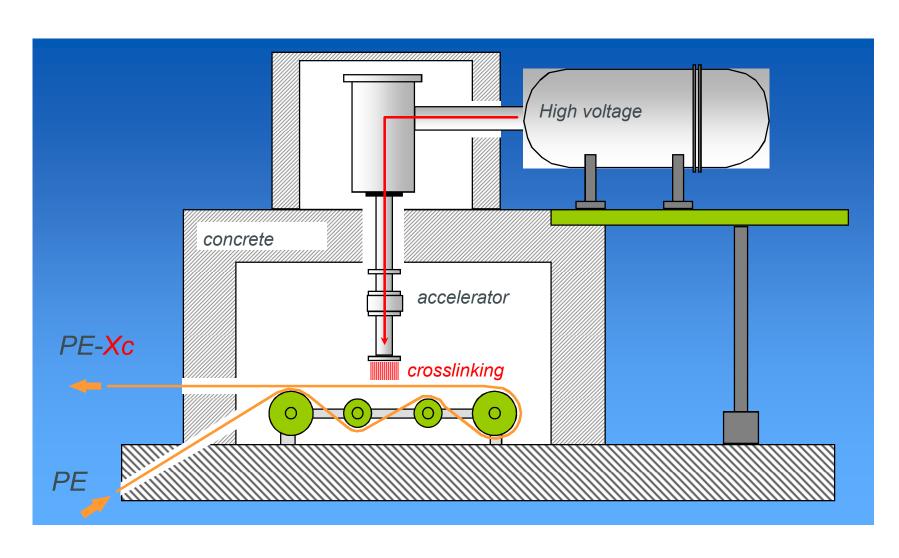
Molecular chains crosslink and join each other forming stonger spacial 3 D structure

Benefits of electron beam cross-linking

- " very high creep resistance
- " very high creep strength
- " for more than 30 years experienced on the market
- " no split-off by-product that might impact the hygiene quality
- " very high homogeneity of cross-linking
- " very high tension crack stability

Electron beam cross-linking of





Polyethylene (PE) v Polyethylene Cross-linked (PEX)



non-crosslinked

ed PE

= polyethylene

PE-RT

LD, MD, HD = specification of the molecule structure resp.

density

HD-PE PE-MD

PEOC

LDPE PE

OC

= other description of MD [HPG]

PE-RT = RT > Raised Temperature

crosslinked

PE-Xc

PE-Xa

PE-Xb

PE-HDX VPE

PE = polyethylene

-X = crosslinked [International description of

crosslinked PE]

MD, HD = specification of moelcule structure resp.

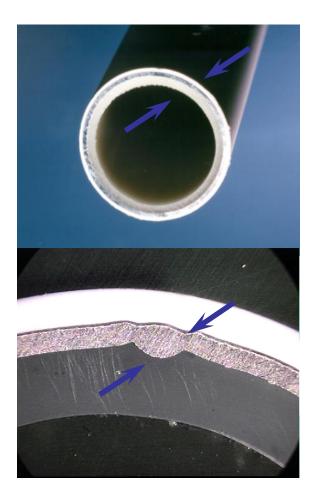
density

a,b,c,d = crosslinking process

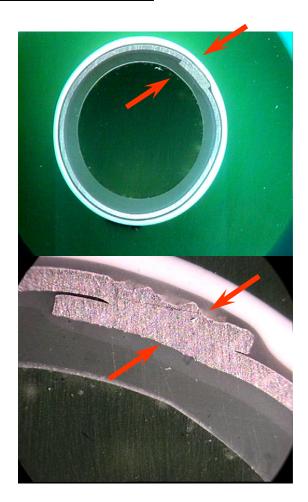
VPE = old description of crosslinked polyethylene

Butt welded versus Overlapped

PRESSTITE



butt welded

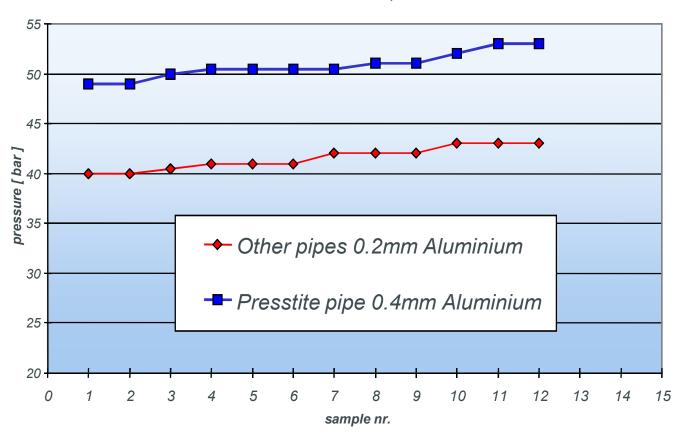


overlapped welded

Aluminium thicknesses of



MT 16 x 2 mm, 90°C



Technical properties of



Pipe dimensions in mm	16 x 2	20 x 2	26 x 3	32 x 3	40 x 3.5	50 x 4	63 x 4.5
Outer diameter Nominal size in mm	16	20	26	32	40	50	63
Wall thickness Nominal size in mm	2	2	3	3	3.5	4	4.5
Inner diameter Nominal size in mm	12	16	20	26	33	42	54
Pipe weight in g/m	125	166	298	393	605	870	1315
Pipe weight with water in g/m	238	358	612	924	1460	2255	3605
Internal volume in I/m	0.113	0.201	0.314	0.531	0.855	1.385	2.290
Heat conductivity in W/m • K ¹⁾	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Coefficient of expansion in mm/m •K	0.024	0.024	0.024	0.024	0.024	0.024	0.024
Surface roughness [internal pipe] in µm	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Oxygen diffusion in mg/l•d	0	0	0	0	0	0	0
max. operating temperature in °C	95	95	95	95	95	95	95
max. operating pressure [at 95°C] in bar	10	10	10	10	10	10	10
Short-term pressure [at 95°C] in bar	15	15	15	15	15	15	15
Bending radius free bending	≥ 5 x D	≥ 5 x D	≥ 5 x D	≥ 5 x D	≥ [5 x D]	≥ [5 x D]	≥ [5 x D]
Bending radius bent with bending die	≥ 1.5 x D*	≥ 3.5 x D					

Technical properties of Copper versus



Press	stite Mulilayer	Sizes
Outside Diameter mm	Wall Thickness mm	Internal Diameter mm
16	2	12
20	2	16
26	3	20
32	3	26
40	3.5	33
50	4	42
63	4.5	54

Fittings for



The press fittings are manufactured by IPA in Austria. The fittings are constructed as radial press connection elements with multiple joints and therefore guarantee a durable and tight connection with the pipes.

The fitting is made of dezincification brass. The press sleeve is made of stainless steel and is equipped with viewing windows to control the depth for tube plug in. This is connected to the fitting by means of an insulated ring.



Fittings Features and Benefits for

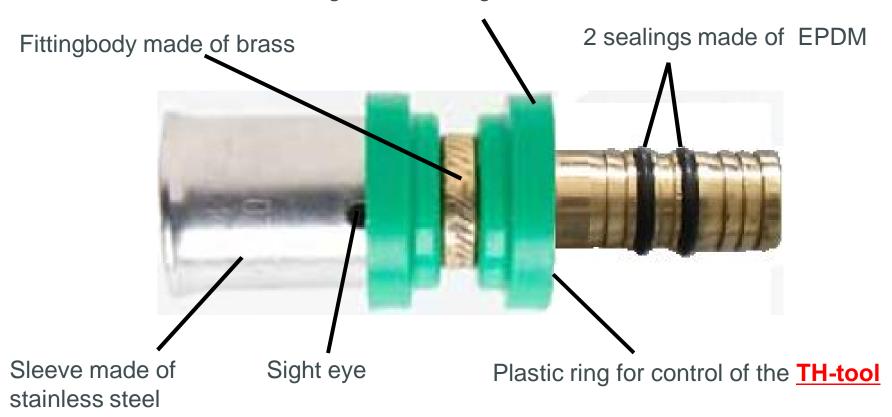


- "The IPA-fitting is certified for the application heating and sanitary with all standardised certification bodies.
- "Press-fittings require no soldering, welding or thread cutting (no hot works)
- "Quick, simple efficient jointing method resulting in installation cost reductions
- "Brass . DZR: CW 602N protects against the chemical attack/reaction of oxygen
- "Permanent tight connection done with 2 sealings of EPDM-X (O-Ring) and a stainless steel sleeve
- "Light in weight when compared to screwed steel products.
- "Various range of fittings from 16mm to 63mm

Physical properties



Protection against elektrogalvanic corosion



Connecting the pipe & fittings of





1. Cut the pipe square using the specially designed Presstite Cutter.



2. Use the correct size Presstite Deburring Tool to chamfer the pipe to create the required bevel for the press fitting to be installed.

Connecting the pipe & fittings of



3. Ensure the fitting is clean and all the components are in correct position. Push pipe into the fitting until it reaches the fitting end. The fitting will show a window and when the pipe is correctly inserted the pressing sleeve is in correct position.

.



4. Close the correctly chosen press-fit jaw tightly around the fitting. Turn on the gun on by pressing the trigger and holding. The pressing process is completed as soon as the pressing jaws are completely closed. When the fitting is complete a change in sound will occur with the press tool. Open the press-fit jaws and remove the pressed fitting

Key points on installation of



"Only Presstite trained personnel to carry out installation of Presstite Multilayer.

"A Presstite joint should only require one attempt.

"The jaws will not release until the required pressure has been applied.

"Press fittings must be free from dirt and damage.

"All Press-tools must be calibrated as per manufactures recommendations.





PRESSTITE

MULTILAYER PIPE PEXo/AL/PEXo (BUTT WELDED) 95°C / 10 BAR



TYPE	ALUMINIUM THICKNESS [MM]	PRODUCT CODE
16 x 2mm (100MT COIL)	0.4	920100002
15 x 2mm (5MT LNS)	0.4	920005002
20 x 2mm (100MT COIL)	0.0	920100003
20 x 2mm (5MT LNS)	0.5	920005003
26 x 3mm (50MT COIL)	0.6	920050004
26 x 3mm (6MT LNS)	0.6	920005004
32 x 3mm (soMT COIL)	0.8	920050005
32 x 3mm (5MT LNS)	0.8	920005005
40 x 3.5mm (5MT LNS)	1.0	920005005
50 x 4mm (5MT LNS)	1.2	920005007
63 x 4.5mm (5MT LNS)	1.5	920005008

MULTILAYER PIPE PEXs/AL/PEXs (OVERLAPPED) 95°C / 18 BAR C/W 18MM INSULATION



TYPE	ALUMINIUM THICKNESS (MM)	PRODUCT CODE
16 x 2mm (SOMT COIL)	0.2	930050002
16 x 2mm (100MT OOIL)	0,2	930100002
20 x 2mm (50MT COIL)	0.25	930050003
26 x 3mm (50MT COIL)	0.3	930050004
32 x 3mm (25MT COIL)	0.4	930025005

MULTILAYER PIPE PEXc/AL/PEXc (BUTT WELDED) 95°C 10 BAR C/W CORRUGATED PROTECTIVE SLEEVE



TYPE	ALUMINIUM THICKNESS (MM)	PRODUCT CODE
16 x 2mm (100MT COIL)	0.4	940100001
20 x 2mm(100MT COIL)	0.5	940100002

MULTILAYER PIPE PE-HD/AL/PE-MD (BUTT WELDED) 70°C / 6 BAR FOR UNDER FLOOR HEATING ONLY



TYPE	ALUMINIUM THICKNESS (MM)	PRODUCT CODE
16 x 2mm (200MT COIL)	0.2	PEALPE 16X200
16 x 2mm (500MT COIL)	0.2	PEALPE 16X500

EBUAL COUPLING



TYPE	PROSUCT COSE	
10 a, 2 - 10 a, 2	9000 (D002	
20 x 2 - 20 x 2	9002110003	
26 x 3 - 26 x 3	900010004	
32 x 3 - 32 x 5	9000100005	
40 x 3,5 - 40 x 3,5	900310006	
50 x 4 - 50 x 4	9000100007	
01×45-01×45	9000100000	

REBUCE



TYPE	PEODOCT GODE	
20×2-96×2	900010002	
26 x 3 - 16 x 2	9000H00H2	
25 x 3 - 20 x J	800010040	
37 x 3 - 15 x 7	900010052	
37 x 3 - 29 x 2	900010000	
38 x 9 - 26 x 1	800010054	
40 x 3,5 - 36 x 3	90001100064	
40 x 3,5 - 32 x 3	900010000	
50 x 4 - 25 x 3	800010074	
50×4-30×3	900210075	
50 x 4 - 40 x 5,5	900010076	
03 x 4,5 - 20 x 3	800010084	
EI x 4,5 - 12 x 3	900310085	
03 x 4,5 - 40 x 3,5	9000+000E	
60 x 4,5 - 50 x 4	900010007	

ALE A BAPTER



TYPE	PRODUCT CODE	
16 x 2 - 10"	900314023	
20 x 2 - 10"	20031000	
20 x 2 - 3/4"	900011254	
35 x 3 - 5/4"	900011004	
26 x 3 - 1*	300311045	
32 x 3 - 1"	900011005	
32 x 3 - 1 //4"	900011056	
40 x 9,5 - 1"	300010005	
40 x 9,5 - 1 1/4"	900311006	
50 x 4 - 1 5/4"	900014076	
50 x 4 - 1 1/2"	\$0001 KD07	
65 x 4,5 - 2"	900311006	

FEMALE ABAPTER



TYPE	FEODOCTOOSE	
10 x 2 - 1/2"	900019020	
20 x 2 - 1/2"	9000100000	
30 x 2 - 3/4"	9000 0004	
26 x 2 - 3/4"	2000152004	

PRESSTITE



TYPE	PRODUCT CODE	
25 x 5 - 1"	800312645	
102 x 2 - 1".	9009-0005	
32 x 12 - 1 194"	800010066	
40 x 3,5 - 1°	9000-0065	
40 x 5,5 - 1 1/4"	9002105005	
50 x 4 - 1 1/4"	8000 0000	
50 x 4 - 1 1/0"	8000-0007	
07 x 4.5 - 2"	80021/2008	

18" EL 80W



TYPE	FEODOCT CODE	
16 X 2	8003/5002	
30 X II	900315003	
36 X S	900315004	
32 X S	8002/5005	
40 X 3.5	9003H500G	
50 X 4	90034500F	
63 X 4.5	90029/5008	

48" ELBOW



TYPE	PERSONNE	
25 : 3	800315104	
32 x 3	900315105	
40 x 3,5	8000151000	
50 x 4	90(0)15/107	
STARS.	9000 5108	

18" ELSOW HALE THEEAS



TYPE	PRODUCT CODE	
15 x 2 - 1/2"	9003160003	
30 x 2 - 10"	8003 (600)	
20 x 2 - 9/4"	800010004	
35 x 3 - 5/4"	903915004	
32 x 3 - 1*	900119095	
40 x 3,5 - 1 5/4"	poxes repoxes	
50 x 4 - 1 5W*	9009 HSD/TS	
50 x 4 - 1 50*	900146017	
MARCH	2003140000	

18" EL BOW PENALE TREEAD



TYPE	PRODUCTIONE	
16 s.2 - 5/2"	900317033	
20 x 2 - 10"	90031(7000	
22 x 2 - 9/4"	9003117034	
25 x 3 - 5/4"	900317004	
32 x 3 - f*.	BOX3117006	
40 x 3,5 + 1 1/4"	90(371/D06)	
50 x 4 - 1 5/47	900317075	
50 x 4 - 1 1/2*	900391/3007	
03 x 4,5 - 2"	900917008	

EBUAL TEES



TYPE	PRODUCT CODE	
16 x 2	800340005	
30 x 2	2002(800)	
25.x3	800218004	
32 x 3	900240005	
40 x 9,5	900310000	
50 x 4	900213007	
63 x 4,5	900240000	

RESOCES BRANCH TEE



TYPE	PERSONTERSE
Mx2-6x2-30x2	800018625
95 x 9 + 45 x 2 - 30 x 9	BD023 (B42)4
25 x 3 - 20 x 2 - 20 x 3	300343434
12 x 2 - 16 x 2 - 12 x 3	90010525
12 x 3 - 20 x 2 - 10 x 11	900316585
Dx3-26x5-12x1	900319545
42 x 3,5 - 25 x 3 - 40 x 3,5	90(0) (96-46
0 x 3,5 - 32 x 1 - 40 x 3,5	900319630
50 x 4 - 26 x 9 - 50 x 4	300319747
10 x 4 - 10 x 3 - 10 x 4	9000/0757
10 x 4 - 40 x 2,5 - 10 x 4	800018797
13 X 4.5 - 40 X 1.5 - 63 X 4.5	900319969
0 X 45 -50 X 4 - 10 X 45	900010870

PRESSTITE

INCREASED BRANCH TEES



TYPE	FEODOCTCODE
15 x 2 - 20 x 2 - 15 x 2	9000100000
$20 \times 2 - 26 \times 1 - 20 \times 2$	9000 HED-HS
36 x 3 - 32 x 5 - 36 x 1	800318454
32 x 3 - 40 x 3,5 - 32 x 3	900016565
40 x 3,5 - 50 x 3,5 - 40 x 3,5	900019676

RESUCING TEES



TYPE	FREEDOCT CODE
20 x 2 - 16 x 2 - 16 x 2	900318262
20 x 2 - 20 x 2 - 16 x 2	900310502
25 x 3 - 15 x 7 - 20 x 2	800319-03
36 x 3 - 30 x 2 - 16 x 2	9/00/21/04/G02
36 x 3 - 20 x 3 - 20 x 3	900219-00
26 x 3 - 26 x 5 - 16 x 2	800310442
26 x 3 - 26 x 3 - 20 x 2	800219449
SF x S - 20 x F - 26 x S	900318534
32 x 3 - 26 x 5 - 26 x 8	000319544
97 x 3 - 97 x 9 - 30 x 2	900018550
52 x 3 - 52 x 5 - 25 x 5	900010554
40 x 9,5 - 92 x 9 - 32 x 9	300019025
42 x 3,5 - 35 x 3 - 32 x 3	900310545
40 ± 3,5 - 40 ± 3,5 - 36 ± 3	100310664
40 x 9,5 - 40 x 9,5 - 92 x 9	800010805
50 x 4 - 40 x 0,5 - 40 x 0,5	900015000
50 x 4 - 32 x 0 - 40 x 0,5	100210756
50 x 4 - 50 x 4 - 32 x 3	900318775
50 x 4 - 50 x 4 - 40 x 3,5	900310775

TEE WITH FEMALE THREAD ON BEAHON



TYPE	FEODOCTCODE	
15 x 2 - 5/2" - 15 x 2	90000000	
20 x 2 - 1/0" + 20 x 2	900000000	
30 x 2 - 3/4" - 20 x 2	DOI:000004	
26 x 3 - 10* - 26 x 3	900000045	
26 x 3 - 3/4" - 26 x 3	900000004	
32 x 3 - 10" - 32 x 3	90000000	
32 x 3 - 3/4" - 32 x 5	900200005-4	
33 x 3 - 4" - 92 x 3	accounted.	

TEE WITH PEHALE TREEAD ON SEARCH CONTINUED



TYPE	PEODUCTOOSE	
32 x 3 - 1 W4" - 32 x 5	8003300056	
40 x 3,5 - 1" - 40 x 3,5	800899005	
40 x 3,5 - 1 t/4" - 40 x 3,5	B0000000E	
50 x 4 - 1 1/5" - 50 x 4	9000000007	
El x 4,5 - 2" - El x 4,5	900000000	

LEVER ACTION SALL VALVE



TYPE	FEODOCTOODE	
Sinn	100346003	
20mm	8002545000	
3Gram	1000340004	

WALL PLATE ELSOW



TYPE	PEOSOCT CODE	
35 x 2 - 4/2*	9009817025	
20 x 2 - 10*	1003117003	
30 x 2 - 5/4"	800307054	
35 x 3 - 3/4"	900907004	

EADIATOR UPSTAND SERNI



TYPE	PEODUCTOOSE	
10 x 2 - 15 mm	90000000	

STAIRLESS STEEL HARIPOLDS / A BA



TYPE	FROSECT COOR	
Prescrite 2 Way Marsholds	8442	
Prescribe 3 Way Wantiskts	D443	
Presentio 4 Way Martholds	5444	
Prescrite 5 Way Martholds:	9445	
Propettie & Way Manifolds	8440	
Proxettio 7 Way Mantholds	9447	
Prescrito & Way Marifolds	9443	
Propertie Staff Volve 1",1"	500000005	
Preservice Staff Volve 17,324"	500000045	
Prescrible Union 15 x 2mm	860078012	
Pressittle Union 20 x 2mm	ascumpes	
Pressitio Swivel Union 15 x 3/4"	BODIDHON	
Characterist Control Character (NY) - 13 (47)	provinced a	





PRESSTITE

BATTERY NY DRABLIC PRESSING TOOL SPHIL



PRODUCT CODE	
800400001	

ACCESSORIES FOR SPHILL



FEODUCTCODE	
\$004(000)	
90040000	
	9004400001 9004400002

PRESSING JAW KSFIT FOR SPHILL



SIZE	FEODUCTOOSE	
New	80042-002	
30mm	900401003	
26mm	900401004	
12mm	800401001	
40mm	900401000	

PRESSING JAW KSP11 POR SPH32



SIZE	FRODUCTIONE	
50mm	900401007	
63mm	800401008	

PRESSTITE MF22 HEDBARIDAL PRESSTORL



SIZE	FE0DUCT CORE	
15-25em	\$6040000	

JAW INSERTS FOR HITZI MEGBARIGAL FRESS TOOL



SIZE	PERRUCTORSE	
10mm	\$00421002	
20mm	800421003	
26mm	900421004	

BATTERY BY BRABLIC PRESSING TOOL HAP I



SIZE	PEODOCT CODE	
46 - 30mm	900410000	
15 - 33/mm Javes included	80040000	

ACCESSORES FOR MAP 1



SIZE	PRODUCT CODE	
Additional Sections	\$60400001	
stat Volt Charge:	900490002	

PERSONO JAW KSPIT FOR HAP I



SIZE	PRODUCT CODE	
†Grant	39004110002	
20vm	900411000	
Minori Minori	3400411004	
What	900411000	

SERVEEIND TOOL



SIZE	PEODOCTCODE	
SiZE Sore	900572002	
20mm	900575000	
20mm	800572004	
32ner	900575005	
40mm	900577006	
50em	800572007	
G2mm	900572008	

OUTER BENDING SPEING



SIZE	PERDUCTORE	
Sint.	800573002	
20mm	900579000	
Zimm	800579004	
32mm	800579005	

INNER BEN BING SPEING



SIZE	PRODUCT COSE
(Emp)	800574002
(Ximm)	900574003
20mm	800524004

PRESSTITE

EASY SEND TOOL



size	FEODUCT CODE	
Same	900400000	
30mm	9/00/400000	

FE CUTTERS



SIZE	PREDUCTORSE	
6 - 6/mm	800440002	
50 - 140mm	800440000	

PIPE SHEAPS



(2)E	FROBUCTCOSE	
- More	H00450007	

PIPE STEAMONTENERS



SIZE	FREEDUCTCOSE	
0 - 25mm	800400001	
Adaptor For Resil	H00400007	

BE-COILE



SIZE	PRODUCT CODE	
4 Arm Pipo Films	800404001	



1028	PRODUCT CODE	
D-25mm	900-600001	

PIPE SHEAR



NZE.	FEGGET CODE	
D - 4Greet	900450001	

PIPE SHEARS



NZE .	PROBUCT CODE	
- Wrom	800450000	

ar - cente



SIZE	PRODUCT CODE
Idom Gal (Wholeski)	900-40-4002
exim Call (Wavelebie)	800-40-4003

PIPE CLIPS



1028	PRODUCT CODE	
sti a žemi Pipa Gilp	900-6760037	
30 x śrem Pipe Dilp	800-693000	
at a trem Pipe City.	800405004	
Sir x Imm Pipe City	800-03005	
ati x Sulimm Pipe (Dig	800-6/5000	
iii s.amn Pipe Olg	800-0100T	
Blix & Street Piges (28g)	900-630000	

SCREWTITE

LING		
20A-01-	size	PROSECTIONS
	1013-1015	\$100 notice
7	30 x 2 - 20 x 2	9400-00000
F	30 x 0 - 20 x 5	810010004
10	M x 0 - 20 x 5	810010005
C	30 X 2 - 16 X 3	9100100W
ASAPTOE		
	SIZE	PRODUCT CODE
-	10/8 3 - 1/5"	BY03YY8323
1000	2013-15"	910511000
	18% 3 - 5/6"	PHINNS
	20 9.2 - 5/6"	210011034
	80 x 5 - 566"	91071004
	28.8.9 - 1"	910071046
	30 x 3 · 1"	91011006
LEABAPTOR		
	SIZE	PRODUCT CODE
	10 x 3 - 15°	#00 das
Con.	30 8 3 - 16"	900-200
P. Comments	10.8.2 - 500	SAUDICANDAN
1000	30 8 2 - 5/6"	Progressiv.
9	30 x 5 - 260°	81011510M
	36 s.5 - 1"	\$100.00 kG
	Man-1"	and upon
.spw		
(r) (link)	SIZE et 2.5	PRODUCT GODE
Barrier .	17.00	BYX016XXX
0	20 K S	andmaterial andmaterial
400	=x>	SPECIALIS.
BOW HALE THE	0.00	
CENCY.	SIZE	PRODUCTODE
	40.0 - 10"	\$100 HB205
16	30 x 9 - 10"	8102185003
6	30.63 - 595	ancomicia.
C	30 x 3 - 556"	910010004
	36 x 9 - 1"	\$101-80.4G
	Brain-7	910014000
SOW PENALE T	1951 Car	
	942E 1883 - 197	PEDSUCT COSE
1	20x 5 - 15°	
		910700
51/0	20% 3 - 5%*	intitr/title
Salar (6)	264 3-14°	910017001a
	204 X - 1" 20 x 2 - 1"	Interviole Interviole
PLATE ELSOW	-2350	
- ALCECTOW	100	PRODUCT CODE
1	1013-15°	91000TEB
1000	30 x 2 - 10°	910007000
01.	- ALL ALL 100	Annual Man

ESSALTEES		
Transfer of the Int	102	PERSUCTORE
	1682	9101600
	2012	\$1031800X
	3593	0×03×8004
	21.3	6rs016006
EEDUCED BEANCE TEES	COLUMN	
	size	PRODUCTCOSE
	1882 \$168 \$200 82	91018203
	109.2 X203.2 X208.2	910318258
	01m2X m1x2X20m2	9-0316223
	25 x 2 X x 2 X 25 x 2	61001E438
	28% 3 X 20 A 2 X 28% 3	91031904
	32 % 3 X 36 % 5 X 50 % 5	9-1316645
TEE WITH HALE THEEAD	ON STANCE	
	SIZE	PERBUCT CODE
	1889-107	010031023
	20 8 2 - 15"	610001000
	20 8 2 - 3/4"	910301004
	369.3 - 3/4"	91001004
	3812-7	\$1000106E
	10 t 3 - Y	9-0301006
TEE WITH FEMALE THRE	AD DE SEANCE	111
	SIZE	PRINCET CODE
	10 1 2 - 107	910000000
	30 x 9 - 1/97	910500000
	20 x 2 - 56"	\$1000000
	36 A S - 364"	910500000
	36.4.5-1"	910000045
	30 x 31 - 1"	910300006
HARIPOLOS		
Que 10	SIZE	PRODUCTOODS
	3-Way Manifold c/W Adapters	910300000
	34Way Mentold c/w Adapters	91/200000
IN THE PERSON	#Wey Manifold c/le Adapters	91000000
-	S/V* Nickle Disnit Cap	91000004
SPARE BIRG		
	SIZE	PRODUCTOOSE
	nt men	91007063000
	25 mm	9105750300
	3d rem	91007900004

