



CHEZY HDPE SOCKET FUSION SYSTEM

FITTINGS AND PIPES

PN16 & PN12.5



SPAN APPROVED | COMPLY TO BS EN 12201-3:2011+A1:2012

CHEZY HDPE PIPES (MS 1058-2:2005)

PE 40 - Low pressure piping systems

PE 63 - Medium piping system irrigation system

PE 80 - Natural gas distribution network with pressure up to 4 bar
- Drinking water pipes with pressure up to 16 bar (construction, sewages, industrial pipes)

PE 100 - High demand piping applications

POLYETHYLENE (PE) PRESSURE PIPES EXPLAINED

Polyethylene (PE) has a large number of significant advantages over material like PVC, steel or ductile iron, namely light weight, ability to coil long lengths, high corrosion resistance, ease of jointing, etc.

Before the adoption of international standards, polyethylene was commonly named by their density - LDPE (low density polyethylene), MDPE (medium density polyethylene) and HDPE (High Density polyethylene). The higher the density, the higher the strength of the polyethylene as a pipe material.

International standards were developed and HDPE pipes were then classified by the grade of material used - PE 40, PE 63, PE 80, PE 100 (according to their MRS Values in bar).

The number after PE represents the maximum allowable hoop stress (in bar) for the pipe.

PE 80 VS PE 100

PE 80 stands for polyethylene with a MRS of 80 (hoop stress of 80 bar) and PE 100 with a MRS of 100 (hoop stress of 100 bar) at 20°C and 50 years service according to ISO 4427.

The higher MRS values of PE 100 over PE 80 translates to higher strength and higher toughness for PE 100. These higher values (hoop stress) allow for pipes using PE100 to have a thinner wall thickness than PE80 at a similar pressure. This will result in larger inner bore diameters for PE100 pipes over PE 80 pipes, resulting in higher flow rates.



ADVANTAGES OF HDPE PIPES

FATIGUE RESISTANCE

HDPE pipe is flexible and ductile, not rigid. It has outstanding resistance to fatigue.

CORROSION RESISTANCE

- It is resistance to biological growth. This means an extended service life and long- term cost savings.
- Fewer fittings required due to pipe flexibility. Allowable bending radius of 20 to 25 times outside diameter of pipe.
- Available in a wide range of thicknesses and pressure ratings to create an entire plumbing system.
- The superior chemical resistance and “non-stick” surface combine to eliminate scaling and pitting and preserve the hydraulic characteristics throughout the pipe service life.

PE 100 DIMENSIONS

Nominal (mm)	Outer Diameter (mm)		Wall Thickness (mm) PN 12.5 (SDR13.6)		Wall Thickness (mm) PN 16 (SDR11)	
	Min	Max	Min	Max	Min	Max
20	20.0	20.3	-	-	2.0	2.3
25	25.0	25.3	2.0	2.3	2.3	2.7
32	32.0	32.3	2.4	2.8	3.0	3.4
40	40.0	40.4	3.0	3.5	3.7	4.2
50	50.0	50.4	3.7	4.2	4.6	5.2
63	63.0	63.4	4.7	5.3	5.8	6.5
75	75.0	75.5	5.6	6.3	6.8	7.6
90	90.0	90.6	6.7	7.5	8.2	9.2
110	110.0	110.7	8.1	9.1	10.0	11.1

CHEZY HDPE PIPES (MS 1058-2:2005)

CHEZY HDPE SOCKET FUSION FITTINGS (BS EN 12201-3:2011+A1:2012)

This socket fusion system method is being commonly used in jointing of HDPE pipe size (OD) ranging from 20mm - 110mm.



CHEZY 2-IN-1 PIPE INSERT

Overheating / too much push in force can result in pipe collapsing inwardly and reduce the water flow rate. With CHEZY 2-in1 pipe inserts (PN12.5 and PN16), you go worry free! YES, we have solved it for you. Our pipe inserts provide great internal support during the jointing process, providing a firm opening and resulting in increased water flow rates.

On top of that, CHEZY pipe inserts can be used for both PN16 and PN12.5 HDPE pipes. No two different sizes of inserts, no mistake and no confusion at site, plumber friendly!

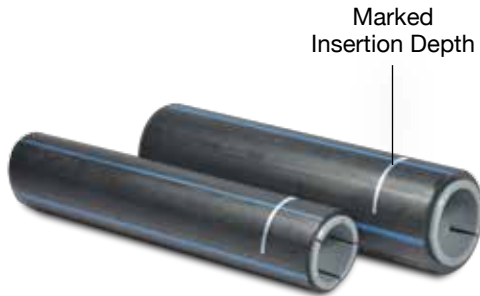


CHEZY HDPE SOCKET FUSION FITTING HEAT & HOLD TIME (Heating Temperature: 230°C - 260°C)

OD (mm)	Insert Depth (mm)	Heat Time, s	Hold Time, s
20	11	7	8
25	13	8	12
32	15	12	12
40	17	17	25
50	20	25	25
63	24	35	35
75	26	48	35
90	28	60	45
110	33	78	60

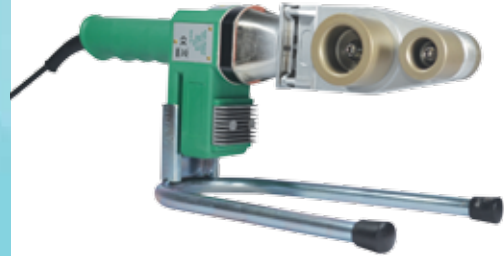
Table 1: Heat and Hold time for CHEZY Socket Fusion Fitting

INSTALLATION METHOD



STEP 1

MARK the insertion depth and PLACE the pipe insert into the pipe.



STEP 2

Using the right size bush, SETUP the welding machine. Wait until the required temperature is reached (230°C-260°C).



STEP 3

PUSH the fitting and pipe into the respective bushes and heat them until the required heat time is reached, refer to Table 1.



STEP 4

Then, pull out the fitting and pipe. Push the pipe into the fitting and hold them in place as stated in Table 1. Leave the joint to cool for 2 minutes.

CHEZY HDPE SOCKET FUSION FITTINGS



REDUCING COUPLING

SRC25.20 | SRC32.20 | SRC32.25 | SRC40.20 | SRC40.25 | SRC40.32 | SRC50.20 | SRC50.25 | SRC50.32 | SRC50.40 | SRC63.20 | SRC63.25 | SRC63.32 | SRC63.40 | SRC63.50 | SRC75.25 | SRC75.32 | SRC75.40 | SRC75.50 | SRC75.63 | SRC90.50 | SRC90.63 | SRC90.75 | SRC110.50 | SRC110.63 | SRC110.75 | SRC110.90



EQUAL COUPLING

SEC20 | SEC25 | SEC32 | SEC40 | SEC50 | SEC63 | SEC75 | SEC90 | SEC110



90° EQUAL ELBOW

90°SEE20 | 90°SEE25 | 90°SEE32 | 90°SEE40 | 90°SEE50 | 90°SEE63 | 90°SEE75 | 90°SEE90 | 90°SEE110



45° EQUAL ELBOW

45°SEE20 | 45°SEE25 | 45°SEE32, 45°SEE40 | 45°SEE50 | 45°SEE63, 45°SEE75 | 45°SEE90 | 45°SEE110



90° REDUCING ELBOW

90°SRE25.20 | 90°SRE32.20 | 90°SRE32.25



EQUAL TEE

SET20 | SET25 | SET32 | SET40 | SET50 | SET63 | SET75 | SET90 | SET110



REDUCING TEE

SRT25.20 | SRT32.20 | SRT32.25 | SRT40.20 | SRT40.25 | SRT40.32 | SRT50.20 | SRT50.25 | SRT50.32 | SRT50.40 | SRT63.20 | SRT63.32 | SRT63.40 | SRT63.50 | SRT75.25 | SRT75.32 | SRT75.40 | SRT75.50 | SRT75.63 | SRT90.32 | SRT90.40 | SRT90.50 | SRT90.63 | SRT90.75 | SRT110.50 | SRT110.63 | SRT110.75 | SRT110.90



FEMALE THREAD ADAPTOR - S

SFTA20.1/2" | SFTA20.3/4" | SFTA25.1/2" | SFTA25.3/4" | SFTA32.1" | SFTA40.1 1/4" | SFTA50.1 1/2" | SFTA63.2" | SFTA75.2 1/2" | SFTA90.3" | SFTA110.4"



FEMALE THREAD ADAPTOR - M

FTA-20.1/2" | FTA-20.3/4" | FTA-25.1/2" | FTA-25.3/4" | FTA-25.1" | FTA-32.3/4" | FTA-32.1"



MALE THREAD ADAPTOR - S

SMTA20.1/2" | SMTA20.3/4" | SMTA25.1/2" | SMTA25.3/4" | SMTA32.1" | SMTA40.1 1/4" | SMTA50.1 1/2" | SMTA63.2" | SMTA75.2 1/2" | SMTA90.3" | SMTA110.4"



MALE THREAD ADAPTOR - M

MTA-20.1/2" | MTA-20.3/4" | MTA-25.1/2" | MTA-25.3/4" | MTA-25.1" | MTA-32.3/4" | MTA-32.1" | MTA-40.1" | MTA-40.1 1/4" | MTA-40.1 1/2"



MALE THREAD ADAPTOR THERMOPLASTIC - S

SMTAT20.1/2" | SMTAT25.1/2"



MALE THREAD TEE - S

SMTT20.1/2" | SMTT25.1/2" | SMTT25.3/4" |
SMTT32.3/4" | SMTT32.1" | SMTT50.1 1/2" |
SMTT63.2"



MALE THREAD TEE - M

MTT-20.1/2" | MTT-20.3/4" | MTT-25.1/2" |
MTT-25.3/4" | MTT-25.1" | MTT-32.3/4" |
MTT-32.1"



MALE THREAD ELBOW - S

SMTE20.1/2" | SMTE20.3/4" | SMTE25.1/2" |
SMTE25.3/4" | SMTE32.3/4" | SMTE32.1"



MALE THREAD ELBOW - M

MTE-20.1/2" | MTE-20.3/4" | MTE-25.1/2" |
MTE-25.3/4" | MTE-25.1" | MTE-32.3/4" |
MTE-32.1"



FEMALE THREAD ELBOW - S

SFTE20.1/2" | SFTE20.3/4" | SFTE25.1/2" |
SFTE25.3/4" | SFTE32.3/4" | SFTE32.1"



FEMALE THREAD ELBOW - M

FTE-20.1/2" | FTE-20.3/4" | FTE-25.1/2" |
FTE-25.3/4" | FTE-25.1" | FTE-32.3/4" |
FTE-32.1"



FEMALE THREAD TEE - S

SFTT20.1/2" | SFTT25.1/2" | SFTT25.3/4" |
SFTT32.3/4" | SFTT32.1" | SFTT50.1/2" |
SFTT63.2"



FEMALE THREAD TEE - M

FTT-20.1/2" | FTT-20.3/4" | FTT-25.1/2" |
FTT-25.3/4" | FTT-25.1" | FTT-32.3/4" | FTT-32.1"



END STOP

SES20 | SES25 | SES32 | SES40 | SES50 |
SES63 | SES75 | SES90 | SES110



FLANGE ADAPTOR (STUB END)

SFA40 | SFA50 | SFA63 | SFA75 | SFA90 |
SFA110



CHEZY PE VALVES

- Metal Sleeve (X) – 1/2" / 15 mm
- Metal Sleeve (X) – 3/4" / 20 mm
- Metal Sleeve (X) – 1" / 25 mm

* Please refer to page 11 for full list of models

ACCESSORIES



EXTENSION PIECE BRASS

EPB - 1/2



EXTENSION PIECE

EP - 1/2



HEATING BUSHES

SHB20 | SHB25 | SHB32 | SHB40 | SHB50 |
SHB63 | SHB75 | SHB90 | SHB110



WELDING MACHINE (FULL SET)

SWM20-40 | SWM20-63 | SWM75-110

CHEZY HDPE SOCKET FUSION STOPVALVES

CHEZY 2-IN-1 PIPE INSERT

The socket fusion technique is a method used for assembling HDPE plastic piping systems. The general operating principles consist of a heating phase and a cooling / welding phase.

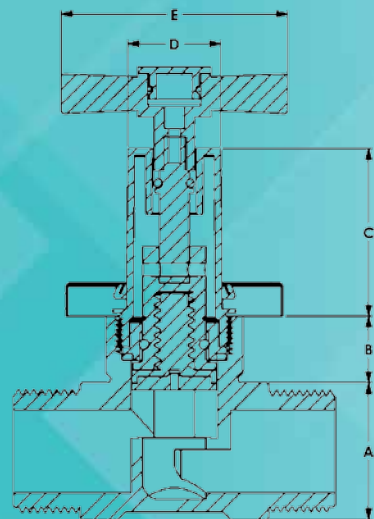
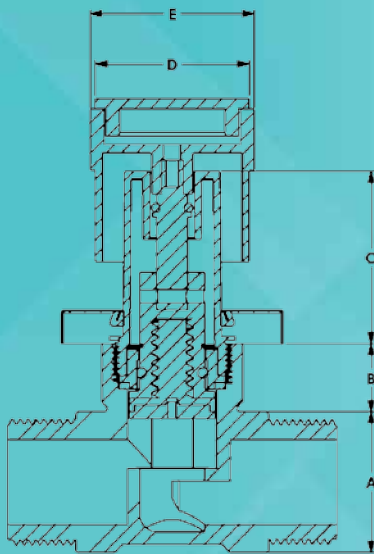
Chezy's patented PE Socket Fusion Stop Valve complies to SIRIM 9 and is the first PE Socket Fusion Valve to be certified to SIRIM 9 Standards.

It is **SPAN APPROVED** for use with portable water and is rated for PN16 use.



Benefits of Chezy PE Socket Fusion Stop Valves :

- Can be used in place of threaded fittings for jointing with HDPE pipes.
- Chezy Socket Fusion Stop Valve need not be bevelled for weld preparation.



Item	Size (mm)	Dimensions				
		A	B	C	D	E
Metal Sleeve (X, T)	1/2" / 15 mm	30	24	51	28	60
	3/4" / 20 mm	37	20	51	28	60
	1" / 25 mm	45	20	51	28	60
Long Metal Sleeve (XL, TL)	1/2" / 15 mm	30	24	76	28	60
	3/4" / 20 mm	37	20	76	28	60
	1" / 25 mm	45	20	76	28	60
Classic Handle	1/2" / 15 mm	30	24	51	28	67
	3/4" / 20 mm	37	20	51	28	67
	1" / 25 mm	45	20	51	28	67
Square Knob Handle	1/2" / 15 mm	30	24	76	28	48
	3/4" / 20 mm	37	20	76	28	48
	1" / 25 mm	5	20	76	28	48
Plastic Black Sleeve (XB, TB)	1/2" / 15 mm	30	24	41	28	55
	3/4" / 20 mm	37	20	41	28	55
	1" / 25 mm	45	20	41	28	55
Long Plastic Black Sleeve (XBL, TBL)	1/2" / 15 mm	30	24	76	28	55
	3/4" / 20 mm	37	20	76	28	55
	1" / 25 mm	45	20	76	28	55
Plastic Chrome Sleeve (XC, TC)	1/2" / 15 mm	30	24	41	28	55
	3/4" / 20 mm	37	20	41	28	55
	1" / 25 mm	45	20	41	28	55
Long Plastic Chrome Sleeve (XCL, TCL)	1/2" / 15 mm	30	24	76	28	55
	3/4" / 20 mm	37	20	76	28	55
	1" / 25 mm	45	20	76	28	55

PIPE INSERT MUST BE USED FOR HDPE PIPES DURING SOCKET FUSION

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