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Mainline Control Systems

Kleiss MCS60-38 System

Kleiss Gastool®
PE Fitting Specifications

PART NUMBERS / FITTING DETAILS

Part Number	Nominal Pipe Diameter (IPS)	Diameter of Cutter Required	Inside Diameter of Connection (BSP)	Outside Diameter of Connection (BSP)	Length of Saddle	Height of Saddle Above Pipeline	Weight
90401010	3”	2-1/2” (56.5 mm)	2”	2-1/2”	6” (155 mm)	3” (78 mm)	4.4 lbs (2 kg)
90401020	4”	2-1/2” (56.5 mm)	2”	2-1/2”	6” (155 mm)	3” (78 mm)	4.4 lbs (2 kg)
90401030	6”	2-1/2” (56.5 mm)	2”	2-1/2”	7” (180 mm)	3” (78 mm)	5.5 lbs (2 kg)
90401040	8”	2-1/2” (56.5 mm)	2”	2-1/2”	7” (180 mm)	3” (78 mm)	5.5 lbs (2 kg)

Use: On pressure pipe and fittings conforming to ASTM F714, D2513, D3035

Electrofusion Pin Size: 0.1575” (4 mm)

Barcode: Universal barcode scan

Resin: PE4710 / PE100 black virgin HDPE
HDB 1600 psi, 73° F (Ref. Std. ASTM D2837)
Cell Classification 445574C (Ref. Std. ASTM D3350)
NSF 61 Listed

Reference Standards:

ASTM D2513 | Standard Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings.
ASTM F1055 | Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and Crosslinked Polyethylene (Pex) Pipe and Tubing.
ASTM D3350 | Standard Specification for Polyethylene Plastics Pipe and Fittings Materials.
AWWA C901 | AWWA Standard for Polyethylene (PE) Pressure Pipe and Tubing, 1/2 In. (13 mm) through 3 In. (76 mm), for Water Service.
FM 1613 | Polyethylene (PE) Pipe and Fittings for Underground Fire Protection.
ANSI/NSF 14 | Plastics Piping System Components and Related.
PPI TR-19 | Chemical Resistance of Thermoplastics Piping Materials.
ASTM F2897 | Standard Specification for Tracking and Traceability Encoding System of Natural Gas Distribution Components (Pipe, Tubing, Fittings, Valves, and Appurtenances)

Pressure Rating: Depends on fluid, SDR, design factor - refer to table

Pressure Rating (psi) at 73° F				
SDR	**Water (0.63 DSF)**	**Water (0.5 DSF)**	**Gas (0.32 DSF)**	**Gas (0.4 DSF)**
11	200	160	100	125
13.5	160	125	80	100
17	125	100	65	80

Maximum Operating Temperature: 140°F, derating factors for pressure must be considered when temperature is above 73°F

Installation: The fittings referred in the present Product Specification are intended to be installed by electrofusion to pipes and fittings. Refer to ASTM F1290 and to Your Company's procedures for installation. Fusion jointing must always be performed by qualified persons, through the use of conforming equipment. Pressure testing after installation must be executed according with ASTM F2164 or Company's procedures.

Weldability fusion range	Electrofusion with PE resins conforming to ASTM D3350 SDR 11 – SDR 17
Reference standards	ASTM F1290 Standard Practice for Electrofusion Joining Polyolefin Pipe and Fittings. ASTM F2164 Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure.

Product Testing:

Characteristic	**Test Method**	**Requirement**
Dimensions, aspect, marking	ASTM D2122	Conformity with ASTM D2513 and F1055
Hydrostatic strength	ASTM D1598	Failure > 170 h, 80°C, 670 psi (hoop stress) Failure > 1000 h, 80°C, 580 psi (hoop stress)
Pressure burst test	ASTM D1599	Failure after 60-70 s, 2520 psi (hoop stress)

Storage: Store in a dry place, away from direct sun exposure and UV rays, with temperature in the range 0°F – 120°F. Avoid shocks and stresses, avoid contamination with water and chemicals. Remove the fitting from packaging immediately before installation.