# System Group - Futura S.p.A.

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Pozzetti PE per sistemi di scarico interrati PE manholes for buried sewerage system

BIM Object Guide:

Pozzetti d'ispezione in polietilene (PE) Manholes in polyethylene (PE)

#### Version

Version 1 10/Dic/2018 Pag 1 di 10

## BIM Object Guide Sysmtem Group SPA:

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#### 1.0 Introduction:

This document guides the use of the BIM System Group Catalog objects:

Polypropylene (PP) double layer pipelines for underground buried non pressure sewer, of nominal internal diameter DN/ID and nominal external diameter DN/OD \_\_\_mm, internally smooth of yellow light colour to allow a better visual inspection or when using cameras, externally corrugated of black colour.

Class of ring stiffness SN16 (equal to 16 KN/m<sub>2</sub>) measured according to EN ISO 9969, produced for continuous coextrusion of both layers in conformity with European standards UNI EN 13476 - 3 for structured PP pipes of type B certified by an accreditated certification body.

Produced by company certified under Quality Management according to UNI EN ISO 9001/2008, System of Environmental Management conforming to UNI EN ISO 14001:2004 certificated and marked of conformity product issued by Italian Institute of Plastics (IIP) and Bureau Veritas (BVQI).

The pipes must be composed of welded coupler on the head of the pipe (from ø160 to ø500mm), or composed of inline integrated socket (from ø630 to ø1200mm), or with jointing kit composed of a coupler and elastomeric seals that guarantees tightness made in EPDM conforms to European standard EN 681-1, to be singly positioned on the first groove of corrugation of each pipe head where the coupler would be inserted.

The pipe has to bare on its surface the marking foreseen by UNI EN 13476.

#### 1.1 Denominations

The parameters of the BIM objects are named according to the NBS National BIM Library objects standard to identify their type and configuration.

The fields are aggregated using the underscore character (\_) and the information within the individual field is separated using the "minus" hyphens (-) characters. Field names are abbreviated to reduce the size and the separations are identified by capital letters to help readability.

The file and object names named as:

File name

Field1Author\_Field2 Manufacturer\_Field3 Category\_Field4 Product Range Object

Field1 Author\_ Field2 Manufacturer\_Field3 Category\_Field4 Class Product\_Field5 Variations

### 2.0 Parameters

The parameters included in the BIM:

## 2.1 Pset\_Classification

# Pozzetti in PE formati da tubi con profilo compatto PE manholes formed by pipes with compact profile

#### DN400 / DN500

	DN400	DN500
AccessibilityPerforma		
nce	n/a	n/a
AssetType	Fixed	Fixed
Description	virgin material, with density 0.930 kg/dm3 (ISO 1183), provided by a company certified according to EN ISO 9001/2000.  Maximum height of installation 1,5 m. The structure of the manhole can substain a maximum water pressure of 50 kPa. Monolithic. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals. Other inlets can be positioned on the body of the manhole with a maximum diameter OD160 both with elastomeric seals and hand extrudor welding.  All the welding procedures are carried	Modular polyethylene manhole for sewage applications, made with 100% virgin material, with density 0.930 kg/dm3 (ISO 1183), provided by a company certified according to EN ISO 9001/2000.  Maximum height of installation 5,0 m. The structure of the manhole can substain a maximum water pressure of 50 kPa. Each module has special mounting grooves and can be jointed with an hand extrusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals.  All the welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.
Colour	Black	Black

Polyethylene rotomoulded base DN 500 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD250 mm and one outlet for pipes with maximum outside diameter OD250 mm and one outlet for pipes with maximum outside diameter OD250 mm and one outlet for pipes with maximum outside diameter OD250 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm and one outlet for pipes with an analy extrudor welding or with an hand extrusion open bops of the body of the wall of the with an aximum outside diameter OD200 mm on the body of the wall of the with an hand extrusion observed on the with an hand extrusion open o			
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Features according to ISO-TR 10358 according to ISO-TR 10358 Finish n/a n/a Grade n/a n/a Manufacturer futura@tubi.net futura@tubi.net Material Polyethylene (PE) Polyethylene (PE)  Three inlets base H500:PC 0500B0000002; H750:PC 0400B0000001; H750:PC 0400B0000001; H750:PC 0400B0000002; H1000:PC 0400B0000003; H1250:PC 0400B0000003; H1250:PC 0400B0000004; H1500:PC 0500P0000003; Extension H250: PC 0400B0000004; H1500:PC 0500P0000003; Extension H500: PC 0500P0000003; Extension H1000: PC 0500P0000008. Gasket: 218G30000006  ModelReference Polyethylene manhole DN400 for sewage up to OD200  Polyethylene manhole DN400 for sewage up to OD250  ConnectedStandardP ipe wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD250; Double wall corrugated pipe: up to OD250; Double wall corrugated pipe: up to OD250.  AssembledMinimum		Chemical resistance of the gully	Chemical resistance of the gully
Manufacturer   Manufacturer   Material   Polyethylene (PE)   Polyethylene (PE)	Features	according to ISO-TR 10358	according to ISO-TR 10358
Manufacturer  Material  Polyethylene (PE)  Polyethylene (PE)  Three inlets base H500:PC 0500B0000002; H750:PC 0500B0000009; H1000:PC 0500B0000004; H1250:PC 0400B0000001; H750:PC 0400B0000002; H1000:PC 0400B0000003; H1250:PC 0400B0000003; H1250:PC 0400B0000004; H1500:PC 0500P0000003; Extension H250: PC 0500P0000003; Extension H500: PC 0500P0000004; Extension H1000: PC 0500P0000008. Gasket: 218G30000006  ModelNumber  O400B0000005  ModelReference  In line polyethylene manhole DN400 Polyethylene manhole DN400 for sewage up to OD200  Rotomoulded PE Manhole DN500 Polyethylene manhole DN500 for sewage up to OD250  Single wall HDPE/PP/PVC Pipe; Double ipe wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD250; Double wall corrugated pipe: up to OD250.  AssembledMinimum	Finish	n/a	n/a
Material Polyethylene (PE) Polyethylene (PE) Three inlets base H500:PC 0500B0000002; H750:PC 0500B0000003; H1250:PC 0400B0000001; H750:PC 0400B0000003; H1250:PC 0400B0000003; H1250:PC 0400B0000004; H1500:PC 0400B0000005 O500P0000003; Extension H250: PC 0500P0000003; Extension H500: PC 0500P0000004; Extension H1000: PC 0500P0000004; Extension H1000: PC 0500P0000008. Gasket: 218G30000006  ModelReference Polyethylene manhole DN400 Rotomoulded PE Manhole DN500 Polyethylene manhole DN500 Polyethylene manhole DN500 Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD250; Double wall corrugated pipe: up to OD250.  AssembledMinimum	Grade	n/a	n/a
Three inlets base H500:PC 0500B0000002; H750:PC 0500B00000003; H1000:PC 0400B0000001; H750:PC 0400B0000002; H1000:PC 0400B0000003; H1250:PC 0400B0000003; H1250:PC 0400B0000004; H1500:PC 0400B0000005 0500P0000003; Extension H250: PC 0500P0000003; Extension H500: PC 0500P0000003; Extension H1000: PC 0500P0000004; Extension H1000: PC 0500P0000008. Gasket: 218G30000006  ModelReference  In line polyethylene manhole DN400 Polyethylene manhole DN400 for sewage up to OD200 Polyethylene manhole DN400 for sewage up to OD200 Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200.  Single wall HDPE/PP/PVC Pipe: up to OD250; Double wall corrugated pipe: up to OD250.  AssembledMinimum	Manufacturer	futura@tubi.net	futura@tubi.net
Three inlets base H500:PC  O500B0000009; H1000:PC  O400B0000001; H750:PC  O400B0000001; H750:PC  O400B0000002; H1000:PC  O400B0000002; H1000:PC  O500B0000007; H1500:PC  O500B0000007; H1500:PC  O500B0000007; H1500:PC  O500B0000008. Extension H250: PC  O500P0000003; Extension H500: PC  O500P0000003; Extension H1000: PC  O500P0000008. Gasket: 218G3000006  ModelReference  In line polyethylene manhole DN400  ModelReference  Polyethylene manhole DN400 for sewage up to OD200  ConnectedStandardP ipe  Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP  Single wall HDPE/PP/PVC Pipe: up to OD200  Single wall HDPE/PP/PVC Pipe: up to OD250; Double wall corrugated pipe: up to OD250.  AssembledMinimum	Material	Polyethylene (PE)	Polyethylene (PE)
Three inlets base H500:PC  O400B0000001; H750:PC  O400B0000002; H1000:PC  O400B0000002; H1000:PC  O400B0000003; H1250:PC  O500B0000008. Extension H250: PC  O500P0000003; Extension H500: PC  O500P0000003; Extension H500: PC  O500P0000004; Extension H1000: PC  O500P0000004; Extension H1000: PC  O500P0000008. Gasket: 218G30000006  ModelReference  In line polyethylene manhole DN400 for sewage up to OD200  Polyethylene manhole DN400 for sewage up to OD200  ConnectedStandardP ipe  Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP  Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD250; Double wall corrugated pipe: up to OD250.  AssembledMinimum			Three inlets base H500:PC
Three inlets base H500:PC 0400B0000001; H750:PC 0400B0000002; H1000:PC 0400B0000003; H1250:PC 0400B0000003; H1250:PC 0400B0000003; H1250:PC 0400B0000004; H1500:PC 0500P0000003; Extension H500: PC 0500P0000003; Extension H1000: PC 0500P0000004; Extension H1000: PC 0500P0000008. Gasket: 218G30000006  Rotomoulded PE Manhole DN500 Polyethylene manhole DN500 Polyethylene manhole DN500 Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200.  AssembledMinimum			0500B0000002; H750:PC
O400B0000001; H750:PC O400B0000002; H1000:PC O400B0000003; H1250:PC O400B0000003; H1250:PC O400B0000004; H1500:PC O500P0000003; Extension H250: PC O500P0000003; Extension H500: PC O500P0000004; Extension H1000: PC O500P0000004; Extension H1000: PC O500P0000008. Gasket: 218G30000006  ModelReference  In line polyethylene manhole DN400 Polyethylene manhole DN400 for sewage up to OD200 ConnectedStandardP ipe Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200.  AssembledMinimum			0500B0000009; H1000:PC
O400B0000002; H1000:PC O400B0000003; H1250:PC O400B0000004; H1500:PC O500P0000003; Extension H250: PC O500P0000003; Extension H500: PC O500P0000004; Extension H1000: PC O500P0000004; Extension H1000: PC O500P0000008. Gasket: 218G30000006  In line polyethylene manhole DN400 Rotomoulded PE Manhole DN500 Polyethylene manhole DN400 for sewage up to OD200 ConnectedStandardP ipe Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD250; Double wall corrugated pipe: up to OD250; Double wall corrugated pipe: up to OD250.  AssembledMinimum		Three inlets base H500:PC	0500B0000004; H1250:PC
O400B0000003; H1250:PC O400B0000004; H1500:PC O500P0000004; Extension H500: PC O500P0000004; Extension H1000: PC O500P0000004; Extension H1000: PC O500P0000008. Gasket: 218G30000006  In line polyethylene manhole DN400 Rotomoulded PE Manhole DN500 Polyethylene manhole DN400 for sewage up to OD200 ConnectedStandardP ipe Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200; Double wall corrugated pipe: up to OD250; Double wall corrugated pipe: up to OD250.  AssembledMinimum		0400B0000001; H750:PC	0500B0000007; H1500:PC
ModelNumber  O400B0000005  O500P0000004; Extension H1000: PC O500P0000008. Gasket: 218G30000006  ModelReference  In line polyethylene manhole DN400 Polyethylene manhole DN400 for sewage up to OD200  ConnectedStandardP ipe Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200.  AssembledMinimum  O500P0000004; Extension H1000: PC O500P00000004; Extension H1000: PC O500P00000008. Gasket: 218G300000006  Rotomoulded PE Manhole DN500 Polyethylene manhole DN500 Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD250; Double wall corrugated pipe: up to OD250.		0400B0000002; H1000:PC	0500B0000008. Extension H250: PC
ModelNumber  O400B0000005  O500P0000004; Extension H1000: PC O500P0000008. Gasket: 218G30000006  ModelReference  In line polyethylene manhole DN400 Polyethylene manhole DN400 for sewage up to OD200  ConnectedStandardP ipe Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200.  AssembledMinimum  O500P0000004; Extension H1000: PC O500P00000004; Extension H1000: PC O500P00000008. Gasket: 218G300000006  Rotomoulded PE Manhole DN500 Polyethylene manhole DN500 Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD250; Double wall corrugated pipe: up to OD250.		0400B0000003; H1250:PC	0500P0000003; Extension H500: PC
ModelNumber0400B00000050500P0000008. Gasket: 218G30000006ModelReferenceIn line polyethylene manhole DN400Rotomoulded PE Manhole DN500Polyethylene manhole DN400 for sewage up to OD200Polyethylene manhole DN500 for sewage up to OD250ConnectedStandardP ipeSingle wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PPSingle wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200; Double wall corrugated pipe: up to OD250.AssembledMinimumAssembledMinimum		0400B0000004; H1500:PC	0500P0000004; Extension H1000: PC
ModelReference Polyethylene manhole DN400 for sewage up to OD200 Polyethylene manhole DN500 for sewage up to OD250  ConnectedStandardP ipe Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200.  AssembledMinimum  Rotomoulded PE Manhole DN500 Polyethylene manhole DN500 for sewage up to OD250 Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP Single wall HDPE/PP/PVC Pipe: up to OD250; Double wall corrugated pipe: up to OD250.	ModelNumber	i i	
Polyethylene manhole DN400 for sewage up to OD200  ConnectedStandardP ipe  Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP  Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200; Double wall corrugated pipe: up to OD200.  AssembledMinimum  Polyethylene manhole DN500 for sewage up to OD250  Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP  Single wall HDPE/PP/PVC Pipe: up to OD250; Double wall corrugated pipe: up to OD250.	M 1 10 C	In line polyethylene manhole DN400	
Name  Sewage up to OD200  Sewage up to OD250  ConnectedStandardP ipe  Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP  Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200.  AssembledMinimum  Single wall HDPE/PP/PVC Pipe: up to OD250; Double wall corrugated pipe: up to OD250.	ModelReference	D	
ConnectedStandardP   Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP   Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200.   Single wall HDPE/PP/PVC Pipe: up to OD250; Double wall corrugated pipe: up to OD250.   Single wall HDPE/PP/PVC Pipe:			, ,
ipe wall corrugated pipe PE/PP wall corrugated pipe PE/PP  Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD250; Double wall corrugated pipe: up to OD250.  AssembledMinimum			÷ ,
Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD250; Double wall corrugated pipe: up to OD250.  AssembledMinimum  Single wall HDPE/PP/PVC Pipe: up to OD250; Double wall corrugated pipe: up to OD250.			
OD200; Double wall corrugated pipe: up to OD200.  OD250; Double wall corrugated pipe: up to OD250.  AssembledMinimum	ipe	•	
PipeOD to OD200. to OD250.  AssembledMinimum			
AssembledMinimum to OD250.			
	•	TO UD200.	to OD250.
Height 500 mm 500 mm			
	Height	500 mm	500 mm

AssembledMaximum		
Heigh	1500 mm	5000 mm
		500 mm; 750 mm; 1000 mm; 1250 mm;
BaseHeight	500 mm	1500 mm
Extension Height	-	250 mm; 500 mm; 1000 mm
Cone Height	-	-
NominalLength	560 mm	625 mm
NominalWidth	-	-
TotalWeigh	-	-
ReplacementCost	n/a	n/a
Shape	n/a	n/a
Size	DN400	DN500
SustainabilityPerform		
ance	100% ricyclable	100% ricyclable
WarrantyDescription	manufacturing defects	manufacturing defects
WarrantyDurationLab	2	
our		2
WarrantyDurationPar	2	
ts		2
WarrantyDurationUni	year	
t		year
WarrantyGuarantorLa	futura@tubi.net	
bour		futura@tubi.net
WarrantyGuarantorP	futura@tubi.net	
arts		futura@tubi.net
AssetIdentifier	n/a	n/a
BarCode	no	no
InstallationDate	n/a	n/a
SerialNumber	n/a	n/a
TagNumber	n/a	n/a
WarrantyStartDate	Delivery date	Delivery date

### DN600 / DN800 / DN1000

	DN600	DN800	DN1000
AccessibilityPerforma			
nce	n/a	n/a	n/a
AssetType	Fixed	Fixed	Fisso

Modular polyethylene manhole for sewage applications, made with 100% virgin material, with 2000 virgin material, with 2000 virgin material, with 2000 virgin				
applications, made with 100% virgin material, with 4 density 0.930 kg/m3 (ISO 1183), provided by a company certified according to EN ISO 9001/2000.  Maximum height of installation 5,0 m. The structure of the manhole can substain a maximum water pressure of 50 kPa. Each module has special mounting grooves and can substain a maximum water pressure of 50 kPa. Each module has special an EPDM elastomeric seal. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals. All the welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.  Colour Black  Polyethylene rotomoulded base DN 600 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm. Polyethylene circular extensions DN 600 height extensions D		Modular polyethylene	Modular polyethylene	Modular polyethylene
100% virgin material, with density 0.930 kg/dm3 (ISO density 0.930 kg/		manhole for sewage	manhole for sewage	manhole for sewage
100% virgin material, with density 0.930 kg/dm3 (ISO density 0.930 kg/		applications, made with	applications, made with	applications, made with
density 0.930 kg/dm3 (ISO 1183), provided by a 1183, provided by		100% virgin material, with	100% virgin material, with	100% virgin material, with
1183), provided by a company certified company certified according to EN ISO 9001/2000.  Maximum height of installation 5,0 m. The structure of the manhole can substain a maximum water pressure of 50 kPa.  Each module has special mounting grooves and can be jointed with an hand extrusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding process or by hand extrudor welding process or by hand extrudor welding with DVS 2212 Part. 2.  Eolour  1183), provided by a 1818), provided by a 2 cording to EN ISO 9001/2000.  Maximum height of Maximum height of Installation 5,0 m. The structure of the manhole can substain a maximum water pressure of 50 kPa.  Each module has special mounting grooves and can be jointed with an hand extrusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals.  All the welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.  Eolour  Black  Polyethylene rotomoulded base DN 600 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD316 mm, provided with structured for pipes with maximum outside diameter OD300 mm, provided with structured one outlet for pipes with maximum outside annohoring ribs for maximum outside diameter OD500 mm.		_	_	_
company certified according to EN ISO 9001/2000.  Maximum height of installation 5,0 m. The structure of the manhole can substain a maximum water pressure of 50 kPa.  Each module has special mounting grooves and can be jointed with an hand extrusion welding or using an EPDM elastomeric seal.  The connections on the bottom of the manhole should be realized during the moulding processor by hand extrudor welding or with elastomeric seals.  All the welding procedures are carried out by licensed professionals according with DVS 2212 Part 2.  Colour  Black  Polyethylene rotomoulded base DN 600 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding or prosessor by hand extrudor welding or with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm. Polyethylene circular extensions DN 600 height external reinforcing and anchoring ribs for and provided with structured external reinforcing and anchoring ribs for and provided with structured external reinforcing and anchoring ribs for and provided with structured provided with a structure of the manhole structure of the manhole can substain a maximum height of installation 5,0 m. The in		· ·	, , , , , , , , , , , , , , , , , , , ,	,
according to EN ISO 9001/2000.  Maximum height of installation 5,0 m. The structure of the manhole can substain a maximum water pressure of 50 kPa.  Each module has special mounting grooves and can be jointed with an hand extrusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals.  All the welding process or by hand extrudor welding or with elastomeric seals.  All the welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.  Colour  Black Polyethylene rotomoulded base DN 600 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD315 mm. Polyethylene circular extensions DN 600 height anchoring ribs for and provided with structured external reinforcing and anchoring ribs for and extrudered external reinforcing and anchoring ribs for according installation 5,0 m. The installation 5,0 m. The structure of the manhole can substain a maximum height of installation 5,0 m. The instructure of the manhole can substain a maximum height of installation 5,0 m. The structure of the manhole can substain a maximum height of installation 5,0 m. The structure of the manhole can substain a maximum height of installation 5,0 m. The structure of the manhole can substain a maximum height of installation 5,0 m. The structure of the manhole can substain a maximum height of installation 5,0 m. The structure of the manhole can substain a maximum water pressure of 50 kPa. Each module has special mounting grooves and can be jointed with an hand extrusion welding or using extrusion welding o		1 ' '	, ,	
9001/2000.  Maximum height of installation 5,0 m. The structure of the manhole can substain a maximum water pressure of 50 kPa. Each module has special mounting grooves and can be jointed with an hand extrusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals. All the welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.  Colour  Polyethylene rotomoulded base DN 600 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD315 mm. Polyethylene circular Polyet		· ·	· '	' '
Maximum height of installation 5,0 m. The structure of the manhole can substain a maximum water pressure of 50 kPa. Each module has special mounting grooves and can be jointed with an hand extrusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals. All the welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.  Colour  Polyethylene rotomoulded base DN 600 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm, roloyethylene circular extensions DN 600 height external reinforcing and anchoring ribs for all results and substain a maximum outside can substain a maximum water cure fithe manhole structure of the manhole can substain a maximum water of 50 kPa. Each module has special mounting grooves and can be jointed with an hand extrusion welding groves and can be jointed with an hand extrusion welding groves and can be jointed with an hand extrusion welding ror using extrusion welding or using extrusion welding sextrusion welding or using extrusion welding or using extrusion welding process or by hand extrudor welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.  Black  Polyethylene rotomoulded base DN 800 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD315 mm. However, and the provided with structured provided with structured external reinforcing and anchoring ribs for maximum outside diameter OD315 mm.		according to EN ISO	according to EN ISO	
installation 5,0 m. The structure of the manhole can substain a maximum water pressure of 50 kPa.  Each module has special mounting grooves and can be jointed with an hand extrusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals. All the welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.  Colour Black Polyethylene rotomoulded base DN 600 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD315 mm. Polyethylene circular extensions DN 600 height 250/500/1000 mm, provided with structured external reinforcing and can substain a maximum water pressure of 50 kPa. Structure of the manhole substain a maximum water pressure of 50 kPa. Each module has special mounting grooves and can be jointed with an hand be jointed with an hand be circular obtained profession with elastomeric seal. The connections on the bottom of the manhole strusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole strusion welding process or by hand extrudor welding for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OB500 mm. Polyethylene circular extensions DN 800 height 250/500/1000 mm, provided with structured external reinforcing and anchoring ribs for anchoring ribs for maximum outside the processor of 50 kP		9001/2000.	9001/2000.	9001/2000.
structure of the manhole can substain a maximum water pressure of 50 kPa. Each module has special mounting grooves and can be jointed with an hand extrusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding process or by hand extrudor welding process or by hand extrudor welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.  Colour Black Polyethylene rotomoulded base DN 600 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum provided with structured external reinforcing and anchoring ribs for answinum avater pressure of 50 kPa. Each module has special mounting grooves and can be jointed with an hand be jointed with a		Maximum height of	Maximum height of	Maximum height of
can substain a maximum water pressure of 50 kPa. Each module has special mounting grooves and can be jointed with an hand extrusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals. All the welding process or by hand extrudor welding or with elastomeric seals. All the welding process or by hand extrudor welding or with elastomeric seals. All the welding process or by hand extrudor welding or with elastomeric seals. All the welding process or by hand extrudor welding or with elastomeric seals. All the welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.  Colour Black Polyethylene rotomoulded base DN 600 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm. Polyethylene circular extensions DN 600 height 250/500/1000 mm, provided with structured external reinforcing and anchoring ribs for and provided with structured external reinforcing and anchoring ribs for and provided with structured external reinforcing and anchoring ribs for and pointed with an hand extrusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole bottom of the manhole bottom of the manhole with an hand extrusion welding or using an EPDM elastomeric seal. The connections on the bottom of the manhole should be realized during the moulding process or by the welding processor by th		installation 5,0 m. The	installation 5,0 m. The	installation 5,0 m. The
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diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm. Polyethylene circular extensions DN 600 height 250/500/1000 mm, provided with structured external reinforcing and anchoring ribs for anchoring ribs for anchoring ribs for anchoring ribs done outlet for pipes with one outlet for pipes with maximum outside diameter OD500 mm. diameter OD800 mm and outlet for pipes with maximum outside diameter OD800 mm, outliet for pipes with maximum outside diameter OD800 mm, provided with structured external reinforcing and one outlet for pipes with maximum outside diameter OD800 mm outliet for pipes		welding for pipes with	welding for pipes with	welding for pipes with
one outlet for pipes with maximum outside diameter OD315 mm. Polyethylene circular extensions DN 600 height provided with structured external reinforcing and anchoring ribs for outside one outlet for pipes with outlet for pipes with maximum outside diameter OD500 mm. diameter OD800 mm, coutside diameter OD800 mm, diameter OD800 mm, poutside diameter OD800 mm, band extrudor welding for provided with structured pipes with maximum outside diameter OD800 mm, hand extrudor welding for provided with structured pipes with maximum outside diameter OD500 mm, hand extrudor welding for provided with structured pipes with maximum outside diameter OD500 mm, hand extrudor welding for provided with structured pipes with maximum outside diameter OD500 mm, hand extrudor welding for provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circula		maximum outside	maximum outside	maximum outside
one outlet for pipes with maximum outside diameter OD315 mm. Polyethylene circular extensions DN 600 height provided with structured external reinforcing and anchoring ribs for outside one outlet for pipes with outlet for pipes with maximum outside diameter OD500 mm. diameter OD800 mm, coutside diameter OD800 mm, diameter OD800 mm, poutside diameter OD800 mm, band extrudor welding for provided with structured pipes with maximum outside diameter OD800 mm, hand extrudor welding for provided with structured pipes with maximum outside diameter OD500 mm, hand extrudor welding for provided with structured pipes with maximum outside diameter OD500 mm, hand extrudor welding for provided with structured pipes with maximum outside diameter OD500 mm, hand extrudor welding for provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circular up to three inlet with socket or spigot, joined by provided with structured pipes with maximum outside diameter OD800 mm; or polyethylene circula		diameter OD315 mm and	diameter OD400 mm and	diameter OD800 mm and
maximum outside diameter OD315 mm. diameter OD500 mm. Polyethylene circular extensions DN 600 height 250/500/1000 mm, provided with structured external reinforcing and anchoring ribs for maximum outside maximum outside diameter OD800 mm. Polyethylene circular extensions DN 800 height socket or spigot, joined by hand extrudor welding for provided with structured external reinforcing and anchoring ribs for mm and one outlet for				
diameter OD315 mm. diameter OD500 mm. diameter OD800 mm; or Polyethylene circular extensions DN 600 height 250/500/1000 mm, provided with structured external reinforcing and anchoring ribs for anchoring ribs for mm. diameter OD800 mm. diameter OD800 mm; or up to three inlet with socket or spigot, joined by 250/500/1000 mm, hand extrudor welding for provided with structured pipes with maximum outside diameter OD500 mm and one outlet for		' '		
Polyethylene circular extensions DN 600 height 250/500/1000 mm, provided with structured external reinforcing and anchoring ribs for polyethylene circular extensions DN 800 height socket or spigot, joined by 250/500/1000 mm, hand extrudor welding for pipes with maximum outside diameter OD500 mm and one outlet for				
extensions DN 600 height 250/500/1000 mm, 250/500/1000 mm, provided with structured external reinforcing and anchoring ribs for extensions DN 800 height socket or spigot, joined by 250/500/1000 mm, hand extrudor welding for provided with structured pipes with maximum outside diameter OD500 mm and one outlet for				·
250/500/1000 mm, 250/500/1000 mm, hand extrudor welding for provided with structured external reinforcing and anchoring ribs for anchoring ribs for mm and one outlet for		' '	' '	'
provided with structured provided with structured pipes with maximum external reinforcing and anchoring ribs for anchoring ribs for mm and one outlet for		_	_	, , , ,
external reinforcing and external reinforcing and outside diameter OD500 anchoring ribs for mm and one outlet for				_
anchoring ribs for anchoring ribs for mm and one outlet for		provided with structured	provided with structured	pipes with maximum
		external reinforcing and	external reinforcing and	outside diameter OD500
Constituents underground installation. underground installation. pipes with maximum		_	_	

Each module has special The seal. Other inlets can be molding manhole with hand and welding.

extension can mounting grooves and can equipped with aluminum mm; or up to five inlet with be jointed both with an steps with a square profile socket or spigot, joined by hand extrusion welding or completely covered with hand extrudor welding for with an EPDM elastomeric polyethylene during the pipes phase, positioned on the body of inside the manhole at a mm and one outlet for a distance of 250 mm, with pipes maximum diameter OD160 non-slip elements. Other outside diameter OD315 both with elastomeric seals inlets can be positioned on mm. Polyethylene circular extrudor the body of the manhole extensions DN 1000 height with a maximum diameter 250/500/1000 OD160 both elastomeric seals and hand external reinforcing and extrudor Polyethylene cone DN 800 reduced to The extension internal diameter 625 mm equipped with aluminum (according to DIN4034 T1), steps with a square profile with circular section, 800 completely covered with mm height. The cone can polyethylene during the be adjusted in default up molding to the road surface of 250 inside the manhole at a mm, provided structured reinforcing and anchoring inlets can be positioned on ribs installation. The reduced with a maximum diameter cone can be equipped with OD160 aluminum steps with a elastomeric seals and hand square profile completely extrudor covered with polyethylene Polyethylene during the molding phase, cone DN 1000 reduced to placed inside the manhole internal diameter 625 mm at a distance of 250 mm, (according to DIN4034 T1), with non-slip elements. Each module has special cone can be adjusted in mounting grooves and can default up to the road be jointed both with an surface of 250 mm and it is hand extrusion welding or provided with structured with an EPDM elastomeric external reinforcing and seal.

be outside diameter OD500 maximum with placed outside diameter OD315 with maximum mm, with provided with structured welding. anchoring ribs for concentric underground installation. can phase, placed with distance of 250 mm, with external non-slip elements. Other underground the body of the manhole both with welding. concentric with circular section. The anchoring ribs for underground installation. The reduced cone can be equipped with aluminum steps with a square profile completely covered with polyethylene during the

DurationUnit	years	years	molding phase, placed inside the manhole at a distance of 250 mm, with non-slip elements.  Each module has special mounting grooves and can be jointed both with an hand extrusion welding or with an EPDM elastomeric seal.
ExpectedLife	50	50	50
ExpectedLife	Chemical resistance of the	Chemical resistance of the	Chemical resistance of the
Features	gully according to ISO-TR 10358	gully according to ISO-TR 10358	gully according to ISO-TR 10358
Finish	n/a	n/a	n/a
Grade	n/a	n/a	n/a
Manufacturer	futura@tubi.net	futura@tubi.net	futura@tubi.net
Material	Polyethylene (PE)	Polyethylene (PE). Aluminum	Polyethylene (PE). Aluminum
ModelNumber  ModelReference	In line base H500: PC 0600B0000025. Three inlets base H750:PC 0600B0000008; H1000:PC 0600B0000003; H1500:PC 0600B0000005. Spherical base: PC 0600B1000003. Extension H250: PC 0600P0000002; Extension H500: PC 0600P0000003; Extension H1000: PC 0600P0000001. Gasket: 218G3000001 Rotomoulded PE manhole DN600 Polyethylene manhole	In line base: PC 0800B0000013. Three inlets base: PC 0800B00000008. Three inlet reduced base: PC 0800B0000008. Spherical base: PC0800B1000004. Extension H250: PC 0800P0000006; Extension H500: PC 0800P0000004; Extension H1000: PC 0800P0000002. Concentric cone reduced H450: PC 0800C0000009; Concentric cone reduced H800: PC 0800C0000006. Gasket: 218G3000002 Rotomoulded PE manhole DN800 Polyethylene manhole	diameter connections: PC01000B0000088. In line base for big diameter connections: PC01000B0000089. Three inlets base: PC1000B0000066. Five inlets base: PC1000B0000076. Spherical base: PC1000B1000016. Base DN1200 reduced to DN1000: PC1000B0000018. Extension H250: PC 1000P0000014; Extension H500: PC 1000P0000017; Extension H1000: PC 1000P0000011. Cone H650: PC 1000C0000016; Cone H900: PC 1000C0000020. Gasket: 218G3000003 Pozzetto stampato in PE DN1000 Pozzetto in PE DN1000 per
Name	DN600 for sewage up to	DN800 for sewage, inlets	tubi fino a DE800
	J 1 **	J , 111	

	OD400	up to OD400, outlet up to OD500	
ConnectedStandardP	Single wall HDPE/PP/PVC Pipe; Double wall	Single wall HDPE/PP/PVC Pipe; Double wall	Single wall HDPE/PP/PVC Pipe; Double wall
ipe	corrugated pipe PE/PP	corrugated pipe PE/PP	corrugated pipe PE/PP
	Single wall HDPE/PP/PVC	Single wall HDPE/PP/PVC	Single wall HDPE/PP/PVC
	Pipe: up to OD315; Double	Pipe: up to OD400; Double	Pipe: up to OD630; Double
	wall corrugated pipe: up to	wall corrugated pipe: up to	wall corrugated pipe: up to
PipeOD	OD400.	OD400.	OD800.
AssembledMinimum			
Height	500 mm	1300 mm	1200mm
AssembledMaximum			
Heigh	5000 mm	4800 mm	5000mm
	500 mm; 600 mm; 750	450 mm; 500 mm; 800	500mm; 550mm; 600mm;
BaseHeight	mm; 1000 mm; 1500 mm	mm; 1000 mm; 1400 mm	650; 800; 1300mm
	250 mm; 500 mm; 1000	250 mm; 500 mm; 1000	250 mm; 500 mm; 1000
Extension Height	mm	mm	mm
Cone Height	-	450 mm; 800 mm	650mm; 900mm
			1020mm; 1080mm;
		820mm; 1020mm;	1260mm; 1280mm;
NominalLength	800 mm; 1150 mm	1090mm	1590mm; 1200mm
NominalWidth	-	-	-
TotalWeigh	-	-	-
ReplacementCost	n/a	n/a	n/a
Shape	n/a	n/a	n/a
Size	DN600	DN800	DN1000
SustainabilityPerform			
ance	100% ricyclable	100% ricyclable	100% ricyclable
WarrantyDescription	manufacturing defects	manufacturing defects	manufacturing defects
WarrantyDurationLab			
our	2	2	2
WarrantyDurationPar	_	_	_
ts	2	2	2
WarrantyDurationUni			
t	year	year	year
WarrantyGuarantorLa	,	,	,
bour	futura@tubi.net	futura@tubi.net	futura@tubi.net
WarrantyGuarantorP			
arts	futura@tubi.net	futura@tubi.net	futura@tubi.net
AssetIdentifier	n/a	n/a	n/a
BarCode	no	no	no
InstallationDate	n/a	n/a	n/a
SerialNumber	n/a	n/a	n/a
TagNumber	n/a	n/a	n/a
WarrantyStartDate	Delivery date	Delivery date	Delivery date

# Pozzetti in PE formati da tubi strutturati tipo corrugato PE manholes formed by structured corrugated types of pipes

#### DN400 / DN500

	DN400	DN500
AccessibilityPerforma		
nce	n/a	n/a
AssetType	Fixed	Fixed
Description	Modular polyethylene manhole for sewage applications, roto-moulded base made with 100% virgin material, with density 0.930 kg/dm3 (ISO 1183), extension made with double wall pipe smooth internally and corrugated externally, with ring stiffness tested according to the standard ISO 9969, produced in conformity with EN 13476-3, type B, provided by a company certified according to EN ISO 9001/2000.  Maximum height of installation 1,5 m. The structure of the manhole can substain a maximum water pressure of 50 kPa. The base and the extension can be jointed together with an elastomeric gasket or by an hand extrudor welding. The connections on the bottom of the manhole should be realized during the	Modular polyethylene manhole for sewage applications, roto-moulded base made with 100% virgin material, with density 0.930 kg/dm3 (ISO 1183), extension made with double wall pipe smooth internally and corrugated externally, with ring stiffness tested according to the standard ISO 9969, produced in conformity with EN 13476-3, type B, provided by a company certified according to EN ISO 9001/2000.  Maximum height of installation 5 m. The structure of the manhole can substain a maximum water pressure of 50 kPa. The base and the extension can be jointed together with an elastomeric gasket or by an hand extrudor welding. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals.  All the welding procedures are carried
Colour	Black	Black

	for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD200 mm and one outlet for pipes with maximum outside diameter OD200 mm. Extension made with HDPE corrugated pipe OD400, double wall conforms with the standard EN 13476-3, connected to the base with an elastomeric gasket or by an hand extrudor welding. Other inlets with a maximum diameter OD200 can	Polyethylene rotomoulded base DN 500 for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD250 mm and one outlet for pipes with maximum outside diameter OD250 mm. Extension made with HDPE corrugated pipe OD500, double wall conforms with the standard EN 13476-3, connected to the base with an elastomeric gasket or by an hand extrudor welding. Other inlets with a maximum diameter OD250 can be positioned on the extension of the
	'	manhole both with elastomeric seals
Constituents	and hand extrudor welding.	and hand extrudor welding.
DurationUnit	years	years
ExpectedLife	50	50
Expectedence	Chemical resistance of the gully	Chemical resistance of the gully
Features	according to ISO-TR 10358	according to ISO-TR 10358
Finish	n/a	n/a
Grade	n/a	n/a
Manufacturer	futura@tubi.net	futura@tubi.net
Material	Polyethylene (PE)	Polyethylene (PE)
ModelNumber	Three inlets socket base H500:PC 0400B0000009. Gasket: 218G60000007	Three inlets socket base H800:PC0500B0000010; Gasket: 218G60000008
	Rotomoulded PE manhole DN400 with	Rotomoulded PE manhole DN500 with
ModelReference	corrugated pipe extension	corrugated pipe extension
	Polyethylene socket manhole DN400 for	Polyethylene socket manhole DN500 for
Name	sewage up to OD200	sewage up to OD250
ConnectedStandardP ipe	Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP	Single wall HDPE/PP/PVC Pipe; Double wall corrugated pipe PE/PP
PipeOD	Single wall HDPE/PP/PVC Pipe: up to OD200; Double wall corrugated pipe: up to OD200.	Single wall HDPE/PP/PVC Pipe: up to OD250; Double wall corrugated pipe: up to OD250.
AssembledMinimum		
Height	500 mm	800 mm
AssembledMaximum		
Heigh	5000 mm	5000 mm
BaseHeight	500 mm	800 mm
Useful BaseHeight	330 mm	620 mm
Extension Type	Corrugated pipe Magnum OD400	Corrugated pipe Magnum OD500
Cone Height	-	-
Useful Cone Height	-	
NominalLength	560 mm	625 mm

-	-
-	-
n/a	n/a
n/a	n/a
OD400	OD500
100% ricyclable	100% ricyclable
manufacturing defects	manufacturing defects
2	2
2	2
year	year
futura@tubi.net	futura@tubi.net
futura@tubi.net	futura@tubi.net
n/a	n/a
no	no
n/a	n/a
n/a	n/a
n/a	n/a
Delivery date	Delivery date
	n/a OD400  100% ricyclable manufacturing defects 2  year  futura@tubi.net  futura@tubi.net  n/a no n/a n/a n/a n/a n/a n/a

# DN600 / DN800

	DN600	DN800
AccessibilityPerforma		
nce	n/a	n/a
AssetType	Fixed	Fixed
	Modular polyethylene manhole for	Modular polyethylene manhole for
	sewage applications, roto-moulded	sewage applications, roto-moulded
	base made with 100% virgin material,	base made with 100% virgin material,
	with density 0.930 kg/dm3 (ISO 1183),	with density 0.930 kg/dm3 (ISO 1183),
	extension made with double wall pipe	extension made with double wall pipe
	smooth internally and corrugated	smooth internally and corrugated
	externally, with ring stiffness tested	externally, with ring stiffness tested
Description	according to the standard ISO 9969,	according to the standard ISO 9969,
Descripcion	produced in conformity with EN	produced in conformity with EN
	13476-3, type B, provided by a	13476-3, type B, provided by a
	company certified according to EN ISO	company certified according to EN ISO
	9001/2000.	9001/2000.
	Maximum height of installation 5 m.	Maximum height of installation 5 m.
	The structure of the manhole can	The structure of the manhole can
	substain a maximum water pressure of	substain a maximum water pressure of
	50 kPa. The base and the extension can	50 kPa. The base and the extension can

	gasket or by an hand extrudor welding. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals. All the welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.	The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals.  All the welding procedures are carried out by licensed professionals according with DVS 2212 Part. 2.
Colour	Black	Black
	for sewage manhole, with up to three inlets with socket or spigot, joined by hand extrudor welding for pipes with maximum outside diameter OD315 mm and one outlet for pipes with maximum outside diameter OD315 mm. Extension made with HDPE corrugated pipe OD630, double wall conforms with the standard EN 13476-3, connected to the base with an elastomeric gasket or by an hand extrudor welding. Other inlets	manhole with elastomeric seals or hand extrudor welding. Polyethylene concentric cone DN 800 reduced to internal diameter 625 mm (according to DIN4034 T1), with circular section, 800 mm height. The cone can be adjusted in default up to the road surface of 250 mm and it is provided with structured external reinforcing and anchoring ribs for underground installation. The cone has a socket to connect to the
	manhole both with elastomeric seals	elastomeric EPDM seal or an hand
Constituents	and hand extrudor welding.	extrudor welding.
DurationUnit	years	years
ExpectedLife	50	50
Features	Chemical resistance of the gully according to ISO-TR 10358	Chemical resistance of the gully according to ISO-TR 10358
Finish	n/a	n/a
Grade	n/a	n/a
Manufacturer	futura@tubi.net	futura@tubi.net
Material	Polyethylene (PE)	Polyethylene (PE)

	In line secket hase HOOD	In line socket base H=900: PC0800B00000019. Three inlets socket
	In line socket base H920:	
	PC0600B0000028. Three inlets socket	base H=950: PC0800B0000010. Cone
ModelNumber	base H1000:PC0600B0000002; Gasket: 218G60000009	H650: PC0800C0000008. Gasket: 218G60000010
Modelivallibei	Rotomoulded PE manhole DN600 with	Rotomoulded PE manhole DN800 with
ModelReference		
Moderkererence	corrugated pipe extension	corrugated pipe extension
	Polyethylene socket manhole DN600 for	Polyethylene socket manhole DN800 for
Name	' '	sewage inlet up to OD400 and outlet up to OD500
ConnectedStandardP	sewage up to OD400 Single wall HDPE/PP/PVC Pipe; Double	Single wall HDPE/PP/PVC Pipe; Double
	wall corrugated pipe PE/PP	wall corrugated pipe PE/PP
ipe	Single wall HDPE/PP/PVC Pipe: up to	Single wall HDPE/PP/PVC Pipe: up to
	OD315; Double wall corrugated pipe: up	OD400; Double wall corrugated pipe: up
PipeOD	to OD400.	to OD400.
AssembledMinimum		
Height	920mm; 1000 mm	900 mm; 950 mm
AssembledMaximum	, 2000	,.,
Heigh	5000 mm	5000 mm
BaseHeight	920 mm; 1000 mm	900 mm, 950 mm
Useful BaseHeight	700 mm; 800 mm	650mm
Extension Type	Corrugated pipe Magnum OD630	Corrugated pipe Magnum OD800
Cone Height	-	450mm
Useful Cone Height		650mm
NominalLength	800 mm; 1150 mm	820mm; 1020mm; 1090mm
NominalWidth	800 11111, 1130 111111	82011111, 1020111111, 1090111111
TotalWeigh	-	-
ReplacementCost	-	/-
<u>'</u>	n/a	n/a
Shape Si-	n/a	n/a
Size	OD630	OD800
SustainabilityPerform	1004	1000/ 1 111
ance	100% ricyclable	100% ricyclable
WarrantyDescription	manufacturing defects	manufacturing defects
WarrantyDurationLab	2	2
our		
WarrantyDurationPar	2	2
ts		
WarrantyDurationUni	year	year
t		
WarrantyGuarantorLa	futura@tubi.net	futura@tubi.net
bour		
WarrantyGuarantorP	futura@tubi.net	futura@tubi.net
arts		
AssetIdentifier	n/a	n/a
BarCode	no	no
InstallationDate	n/a	n/a
SerialNumber	n/a	n/a
	<u> </u>	<u> </u>

TagNumber	n/a	n/a
WarrantyStartDate	Delivery date	Delivery date

## DN100 / DN1200

	DN1000	DN1200
AccessibilityPerforma		
nce	n/a	n/a
AssetType	Fixed	Fixed
Description	Modular polyethylene manhole for sewage applications, roto-moulded base made with 100% virgin material, with density 0.930 kg/dm3 (ISO 1183), extension made with double wall pipe smooth internally and corrugated externally, with ring stiffness tested according to the standard ISO 9969, produced in conformity with EN 13476-3, type B, provided by a company certified according to EN ISO 9001/2000.  Maximum height of installation 5 m. The structure of the manhole can	Modular polyethylene manhole for sewage applications, roto-moulded base made with 100% virgin material, with density 0.930 kg/dm3 (ISO 1183), extension made with double wall pipe smooth internally and corrugated externally, with ring stiffness tested according to the standard ISO 9969, produced in conformity with EN 13476-3, type B, provided by a company certified according to EN ISO 9001/2000.  Maximum height of installation 5 m. The structure of the manhole can substain a maximum water pressure of 50 kPa. The base and the extension can be jointed together with an elastomeric gasket or by an hand extrudor welding. The connections on the bottom of the manhole should be realized during the moulding process or by hand extrudor welding or with elastomeric seals.  All the welding procedures are carried
Colour	Black	Black

Polyethylene rotomoulded base Polyethylene rotomoulded DN1000 for sewage manhole, with DN1200 for sewage manhole, with single inlet with socket or spigot, joined single inlet with socket or spigot, joined by hand extrudor welding for pipes with by hand extrudor welding for pipes with maximum outside diameter OD800 mm | maximum outside diameter OD800 mm | and outlet for pipes with maximum and outlet for pipes with maximum outside diameter OD800 mm; or up to outside diameter OD800 mm. Extension three inlets with socket or spigot, joined made with HDPE corrugated pipe by hand extrudor welding for pipes with OD1200, double wall conforms with the maximum outside diameter OD500 mm standard EN 13476-3, connected to the and one outlet for pipes with maximum base with an elastomeric gasket or by outside diameter OD500 mm; or up to an hand extrudor welding. Other inlets five inlets with socket or spigot, joined with a maximum diameter OD250 can by hand extrudor welding for pipes with be positioned on the extension of the maximum outside diameter OD315 mm manhole with elastomeric seals or hand and one outlet for pipes with maximum extrudor welding. Polyethylene outside diameter OD315 mm. Extension eccentric cone DN 1200 reduced to made with HDPE corrugated pipe internal diameter 625 mm (according to OD1000, double wall conforms with the DIN4034 T1), with circular section, 450 standard EN 13476-3, connected to the mm net height. The cone can be base with an elastomeric gasket or by adjusted in default up to the road an hand extrudor welding. Other inlets surface of 250 mm and it is provided with a maximum diameter OD250 can with structured external reinforcing and be positioned on the extension of the anchoring ribs underground manhole with elastomeric seals or hand installation. The cone has a socket to Polyethylene connect to the corrugated pipe extrudor welding. concentric cone DN 1000 reduced to extension by an elastomeric EPDM seal internal diameter 625 mm (according to or an hand extrudor welding. DIN4034 T1), with circular section, 450 mm net height. The cone can be adjusted in default up to the road surface of 250 mm and it is provided with structured external reinforcing and anchoring ribs for underground installation. The cone has a socket to connect to the corrugated extension by an elastomeric EPDM seal Constituents or an hand extrudor welding. DurationUnit years years 50 ExpectedLife 50 Chemical resistance of the gully Chemical resistance of the gully according to ISO-TR 10358 according to ISO-TR 10358 **Features** n/a n/a Finish n/a n/a Grade Manufacturer futura@tubi.net futura@tubi.net Polyethylene (PE) Polyethylene (PE) Material

	In line socket base for small diameter	
	connections: H=: PC01000B0000405. In	
	line socket base for big diameter	
	connections: H=: PC01000B0000406.	
	Three inlets socket base H=970:	
	PC1000B0000043. Five inlets socket	In line socket base: H=:
	base H=830: PC1000B0000056. Socket	PC1200B0000003. Socket Cone H650:
	Cone H700: PC 1000C0000009. Gasket:	PC 1200C0000002. Gasket:
ModelNumber	218G60000011	218G60000012
	Rotomoulded PE manhole DN1000 with	Rotomoulded PE manhole DN1200 with
ModelReference	corrugated pipe extension	corrugated pipe extension
	Polyethylene socket manhole DN1000	Polyethylene socket manhole DN1200
Name	for sewage up to OD800	for sewage up to OD800
ConnectedStandardP	Single wall HDPE/PP/PVC Pipe; Double	Single wall HDPE/PP/PVC Pipe; Double
ipe	wall corrugated pipe PE/PP	wall corrugated pipe PE/PP
	Single wall HDPE/PP/PVC Pipe: up to	Single wall HDPE/PP/PVC Pipe: up to
D: O.D.	OD630; Double wall corrugated pipe: up	OD800; Double wall corrugated pipe: up
PipeOD	to OD800.	to OD800.
AssembledMinimum		
Height	830 mm; 970 mm; 1100 mm; 1300 mm	1330 mm
AssembledMaximum		
Heigh	5000 mm	5000 mm
BaseHeight	830 mm; 970 mm; 1100 mm; 1300 mm	1330 mm
Useful BaseHeight	550 mm; 670 mm; 850 mm; 1050 mm	1000 mm
Extension Type	Corrugated pipe Magnum OD1000	Corrugated pipe Magnum OD1200
Cone Height	450mm	450mm
Useful Cone Height	700 mm	650 mm
	1020mm; 1080mm; 1260mm; 1280mm;	
NominalLength	1590mm	1200 mm
NominalWidth	-	-
TotalWeigh	-	-
ReplacementCost	n/a	n/a
Shape	n/a	n/a
Size	OD1000	OD1200
SustainabilityPerform		
ance	100% ricyclable	100% ricyclable
WarrantyDescription	manufacturing defects	manufacturing defects
WarrantyDurationLab	2	2
OUL		
WarrantyDurationPar	2	2
ts		
WarrantyDurationUni	year	year
t	,	,
WarrantyGuarantorLa	futura@tubi.net	futura@tubi.net
bour		
WarrantyGuarantorP	futura@tubi.net	futura@tubi.net
arts		.3.3.3.3.1.10.
ui C3	<u> </u>	

AssetIdentifier	n/a	n/a
BarCode	no	no
InstallationDate	n/a	n/a
SerialNumber	n/a	n/a
TagNumber	n/a	n/a
WarrantyStartDate	Delivery date	Delivery date

#### 3 - Load the IFC (INDUSTRY FOUNDATION CLASS) -BIM object

IFC is a neutral, open, non-proprietary file format and not controlled by a single or group of software producers. The file format is an object oriented parametric developed by BuildingSMART to facilitate interoperability in the field of architecture, engineering and construction. IFC is the collaboration format commonly used in BIM projects. The specification of the IFC model is open and available. In theory, it should allow the exchange and use of relevant data and information between different BIM software.

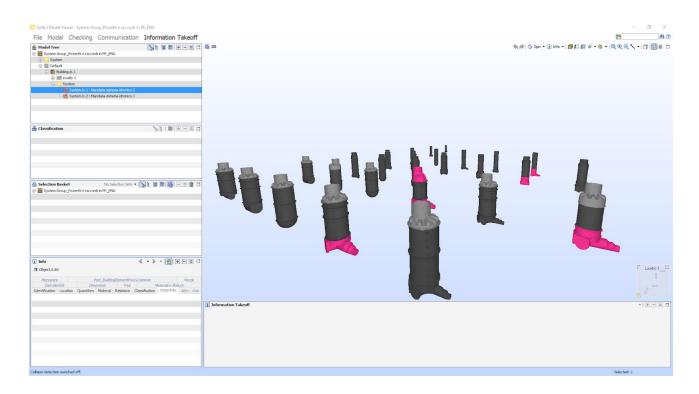
The IFC file is in IFC2x3 format. The new IFC4 scheme is announced soon, but the currently "certified" format is IFC2X3, which is preferred because it allows greater compatibility with the available BIM applications.

In the old versions of Autodesk Revit (example Revit 2013) the export function to the IFC format is done through the use of a specific plugin. IFC is a rapidly developing scheme and new versions of the IFC plugin are often available within the same version of the Revit software. If export is requested in IFC format, we recommend updating the IFC plugin to the latest version.

see http://apps.exchange.autodesk.com/RVT/en/Home/Index

Please note that System Group assumes no responsibility for the supply of IFC and RVT files, its accuracy, reliability and accuracy, nor for any damages, losses, lost profits, etc. as a result of its use.

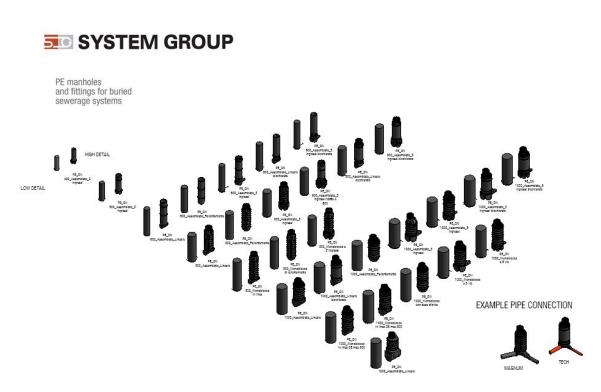
For information on the IFC Industry Foundation Class, visit the buildingSMART site information page at http://www.buildingsmart-tech.org/specifications/ifc-overview



#### 4 - Load the BIM object in Autodesk Revit

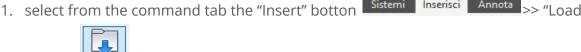
The BIM object "SystemGroup\_Hydro 16" is intended, to be added to the project, as a system <family>. The object is presented in a Revit .rte template file from which it is easy to extract the object in .rfa format.

The typical method for adding a BIM object to the project with the extension .rfa (Revit Family) is as follows:



You can add **"System Group\_Pozzetti e raccordi in PE\_ITA.rte"** as a loadable family. The object is contained in a revit template file .rte from which it is possible to extract the .rfa object.

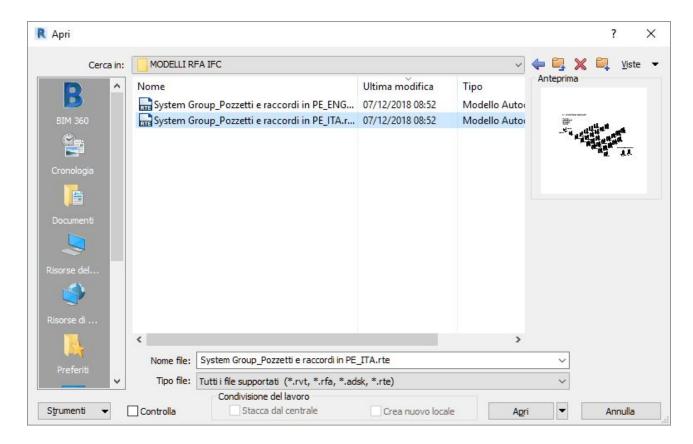
You can add the object following the instructions below:



Carica famiglia



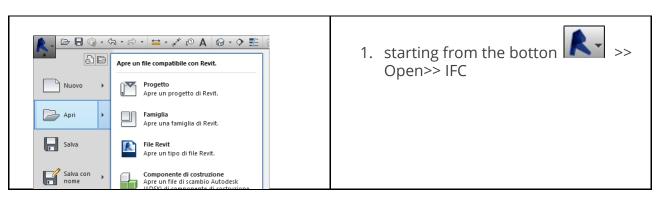
2. select the downloaded SystemGroup file path>> Open



3. the object is now contained in the family list inside the RVT project



You can add a BIM object in an .ifc extension to the project following this method:



2. a file selection window will appear. Select the System Group IFC file path

3. Select the object and copy it (Ctrl + C from the keyboard or use the Edit tab on the bar and select the copy to Clipboard command).



4. Now, in the target window, paste the Bim object file (Ctrl + V from the keyboard) or use the Edit and Paste command tab.



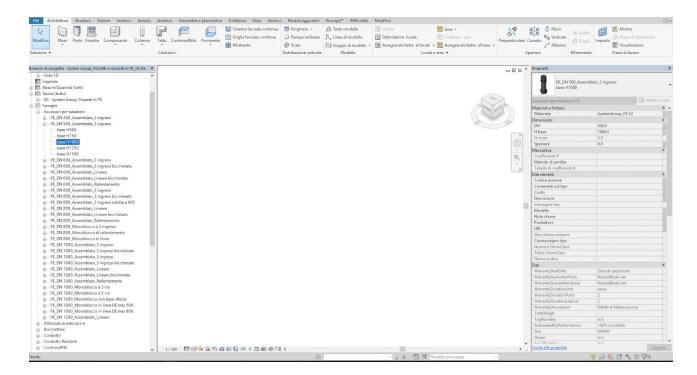
This adds a new family type to the family type list. The Bim object is now available for use in the project file.

## 5 - Using BIM object "SystemGroup\_Pozzetti\_PE"

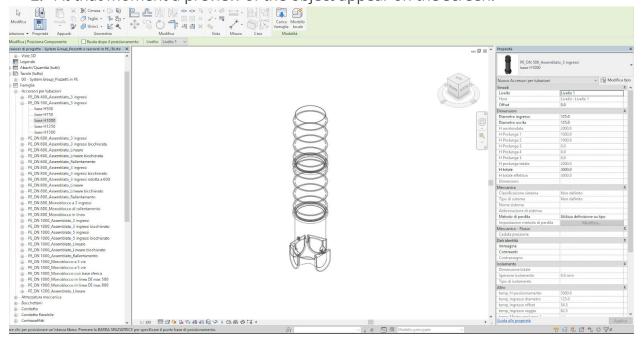
The loaded object in the project is contained in the "Pipe Accessory" category and for this reason it can be combined with pipe elements inside a project.

You can insert the object in the project work area by a 3D view or by a plan view. We will show a 3D insert method for a better comprehension.

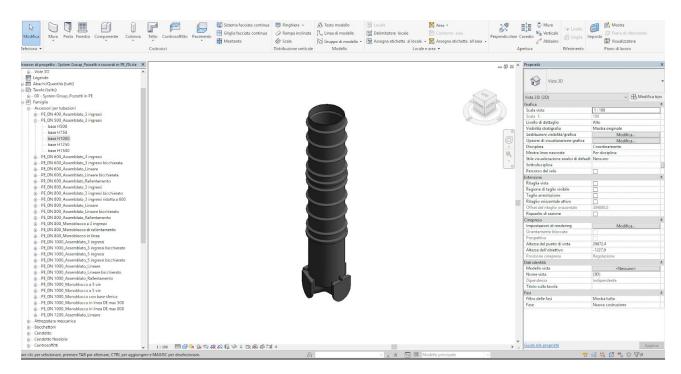
1. In order to use the object inside the model, you have to select the object in the families list in your project browser on the left of your revit windows and drag it to the work area.



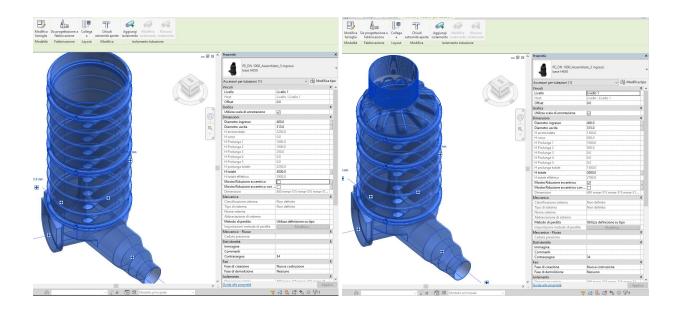
2. At that moment a preview of the object appear on the screen.



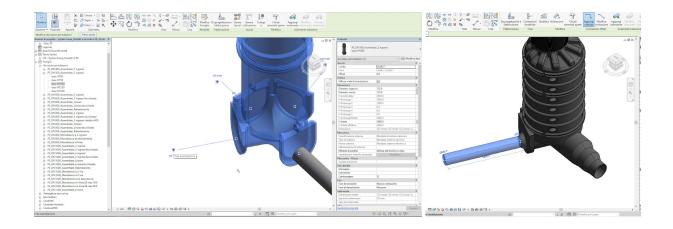
3. Now you have to drop the object to the placement spot desired



4. Once placed the object, you can edit the custom parameters as, for examples, the manhole base type ora top enclosure part by selecting the assigned field on the properties tab.



5. Then, starting from the placed manhole it is possible to create pipe elements in order to create, or connect to, the piping system.



### 6- Supply conditions

The service is offered by System Group SPA "as is", in good faith in the substantial respect of the rules, and no responsibility can be accepted for any damages deriving from use, losses, lost profits, etc. suffered as a result of use.

For more information on the IFC (Industry Foundation Class), visit the BuildingSmart website at http://www.buildingsmart-tech.org/specifications/ifc-overview

#### 7 - Contacts

System Group technical division is at your disposal for informations about the right application of the products according to the best practices of use.

SYSTEM GROUP TECHNICAL DIVISION

tecnico@tubi.net

Please come back to:

www.tubi.net