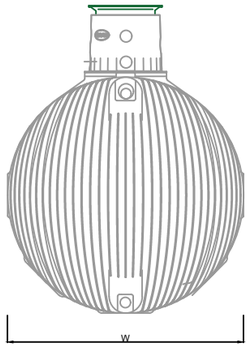
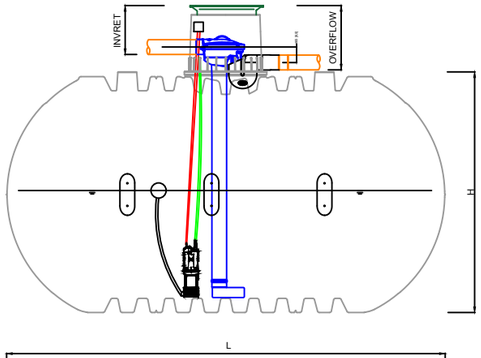
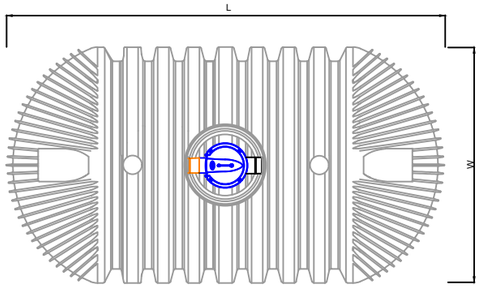
TANK SIZES & DIMENSIONS

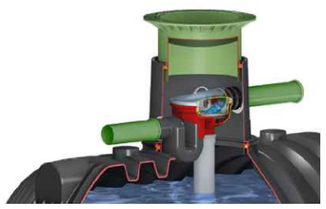




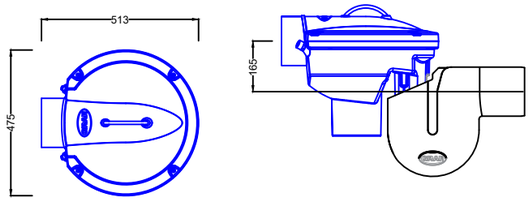


	16,000L	22,000L	26,000L	32,000L	36,000L	42,000L	46,000L	52,000L	56,000L
LENGTH	4590mm	6230mm	7200mm	8440mm	9410mm	10680mm	11650mm	12920mm	13890mm
WIDTH	2500mm	2500mm	2500mm	2500mm	2500mm	2500mm	2500mm	2500mm	2500mm
HEIGHT	2550mm	2550mm	2550mm	2550mm	2550mm	2550mm	2550mm	2550mm	2550mm
INVERT	465-765mm	465-765mm	465-765mm	465-765mm	465-765mm	465-765mm	465-765mm	465-765mm	465-765mm
OVERFLOW	630-930mm	630-930mm	630-930mm	630-930mm	630-930mm	630-930mm	630-930mm	630-930mm	630-930mm

FILTER DETAILS

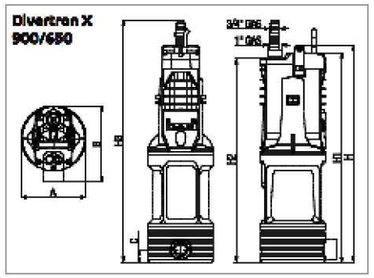


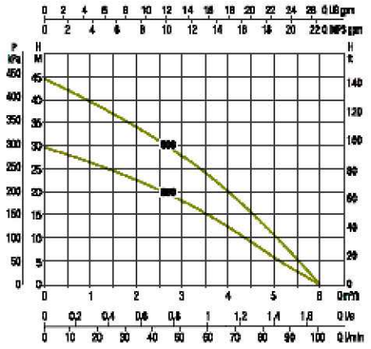
OPTIMAX PRO FILTER



SUBMERSIBLE PUMP DETAILS

DAB DIVERTRON 900X





The performance curves are based on kinetic viscosity vaules = 1 mm²/s
and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

SYSTEM ACCESSORIES

HOSE CONNECTION BOX -EXTERNAL
(OPTIONAL EXTRA)

HOSE CONNECTION BOX - INTERNAL
(OPTIONAL EXTRA)

SPRING WATER SHAFT
(OPTIONAL EXTRA)

INTERNAL CLEANING UNIT
(OPTIONAL EXTRA)

DIGITAL FILL LEVEL SENSOR
(OPTIONAL EXTRA)

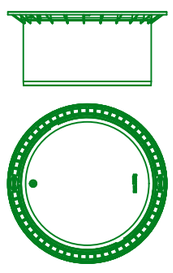
TANK ACCESSORIES

Item	Diameter ø	Min. Height (mm)	Max. Height (mm)	Max. Loading (kg)*
Pedestrian Loading Lid (Mini)	ø 600mm	60mm	360mm	150kg
Pedestrian Loading Lid (Maxi)	ø 600mm	60mm	476mm	150kg
Vehicle Loading Lid	ø 625mm	60mm	476mm	3,500kg
Extension Sleeve (1m)	ø 670mm	500mm	1,000mm	
Extension Sleeve	ø 680mm	250mm		
Tank Dome (Maxi)	ø 650mm	610mm		

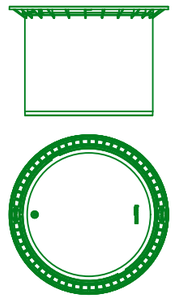
* Loading up to 12,000kg achievable (suitable cover to be provided by others)

** Tank Dome (Maxi) available with DN100 or DN150 connections

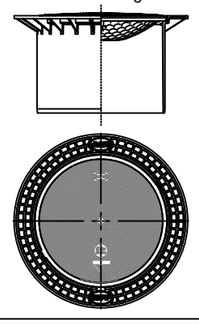
Pedestrian Loading Lid (Mini)



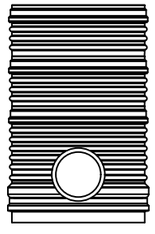
Pedestrian Loading Lid (Maxi)



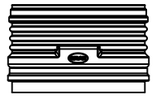
Vehicle Loading Lid



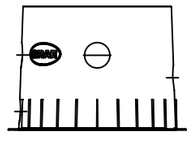
Extension Sleeve (1m)



Extension Sleeve



Tank Dome (Maxi)



NOTE:- Tank accessory suitability may vary depending on project.
Please contact Graf UK for sizing and support.

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HOME INDIRECT CARAT XXL SPECIFICATION

REV.	DESCRIPTION	BY	DATE
P0	LATEST REVISION	KS	27.01.25

GRAF UK Limited
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E: info@grafuk.co.uk www.grafuk.co.uk

DRAWN :	KS	DATE :	27.01.2025
CHECKED :	DS	SCALE :	VARIOUS@A3

PROJECT
GRAF STANDARD DETAILS

DESCRIPTION
HOME INDIRECT RAINWATER HARVESTING SYSTEM CARAT XXL TANK

DRAWING No. HOME_INDIRECT_STANDARD_DETAIL_CARAT_XXL REV. P0

SCOPE OF SUPPLY

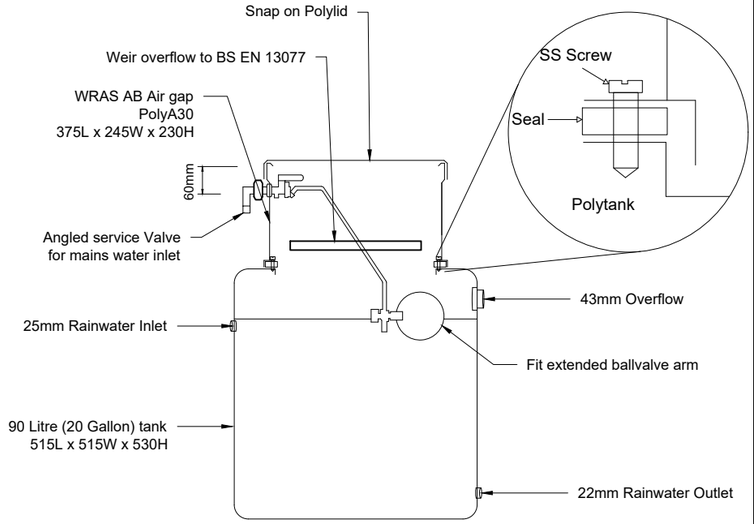
SUPPLIED BY GRAF:

1. Underground tank
2. Telescopic lid
3. Filter
4. Pipe and fixings
5. Float intake & Submersible pump
6. Header Tank

SUPPLIED BY OTHERS:

7. 100mm duct for pump cable
8. 100mm drainage pipe to connect downpipes to inlet (all downpipes to be brought into one single inlet)
9. 100mm pipe for overflow from tank

HEADER TANK SCHEMATIC



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HOME INDIRECT CARAT XXL SCHEMATIC

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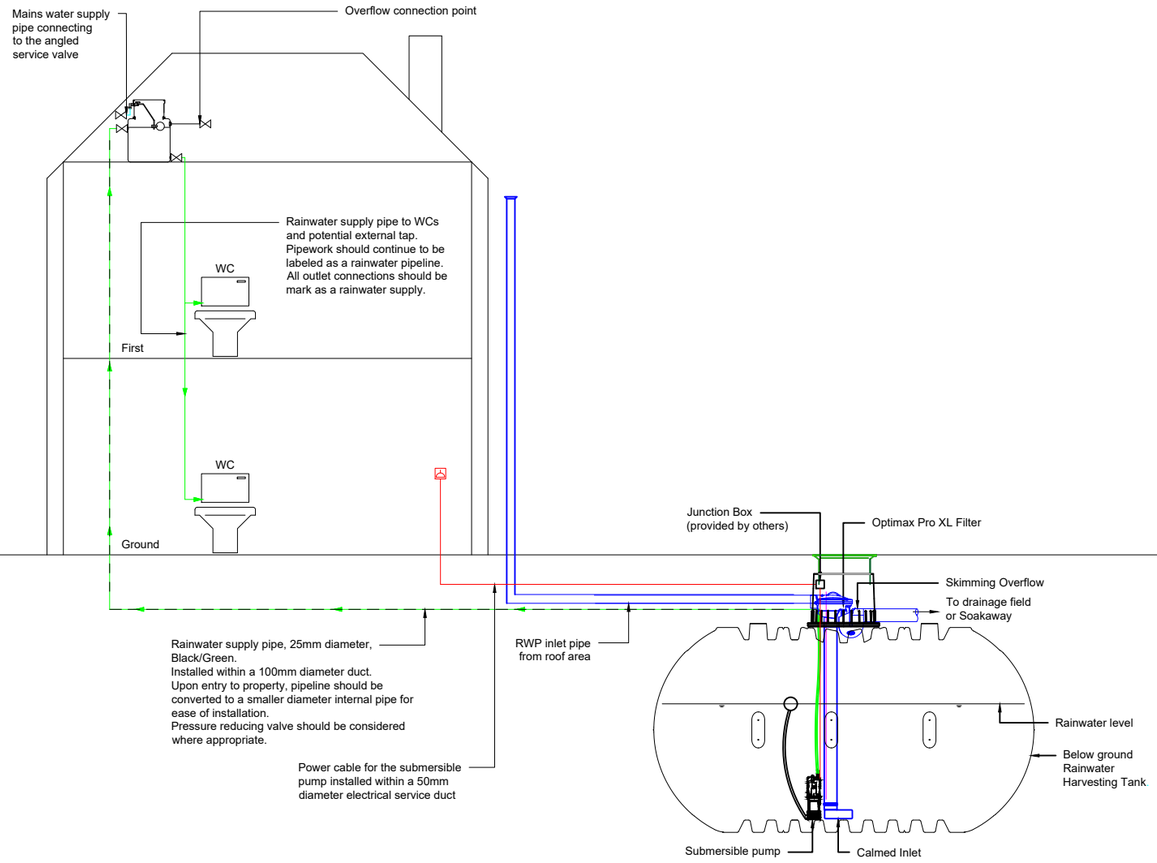
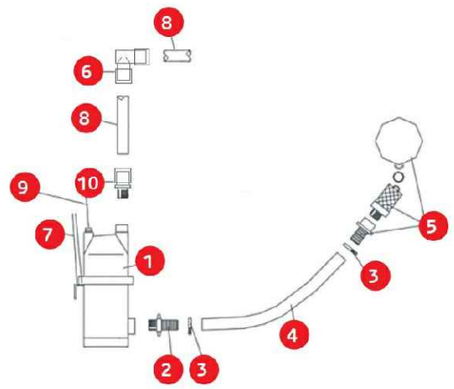


SUBMERSIBLE PUMP AND PIPE ASSEMBLY



1. Submersible pump
2. Brass hose screwing
3. Hose clip
4. Suction hose
5. Floating suction set
6. 25mm compression elbow (optional fitting used for external tap connection)
7. Fixing set for submersible pump
8. Pressure hose, black & green colour, length 25m
9. Electricity supply, length 10m, 3-core cable
10. 25mm compression x 1 " male threaded fitting

NOTE:- Tank accessory suitability may vary depending on project. Please contact Graf UK for sizing and support.

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DRAWN : KS DATE : 27.01.25

CHECKED : DS SCALE : VARIOUS@A3

PROJECT

GRAF STANDARD DETAILS

DESCRIPTION

HOME INDIRECT
RAINWATER HARVESTING SYSTEM
CARAT XXL TANK

DRAWING No. HOME_INDIRECT_STANDARD_DETAIL_CARAT_XXL

REV. P0

TRENCH DETAILS

FOR SUFFICIENT WORKING ROOM, THE BASE AREA OF THE TRENCH MUST EXCEED THE DIMENSIONS OF THE TANK BY 500mm ON ALL SIDES.

MINIMUM DISTANCE FROM SOLID STRUCTURES TO BE 1000mm.

THE TRENCH EMBANKMENT MUST BE DESIGNED SO SLIPPAGE OR COLLAPSE OF THE EMBANKMENT WALL IS NOT TO BE ANTICIPATED.

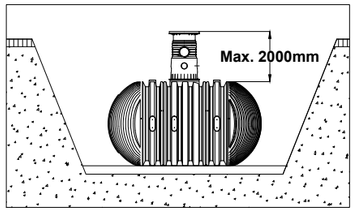
THE CONSTRUCTION SITE MUST BE HORIZONTAL AND PLANE AND MUST GUARANTEE SUFFICIENT LOAD-BEARING CAPACITY.

THE DEPTH OF THE TRENCH MUST BE DIMENSIONED SO THAT THE MAXIMUM COVER ABOVE THE TANK IS NOT EXCEEDED (SEE BELOW DETAILS).

THE TANK AND ANY OTHER COMPONENTS THAT CARRY WATER MUST BE INSTALLED IN A FROST-FREE AREA. THE FROST-FREE DEPTH IS USUALLY APPROX. 600mm-800mm. EXACT DEPTHS CAN BE OBTAINED FROM THE RESPONSIBLY AUTHORITY.

A 150mm-200mm COMPACTED LAYER OF 10-20mm ROUND GRAIN GRAVEL IS INSTALLED AT THE BASE OF THE EXCAVATION.

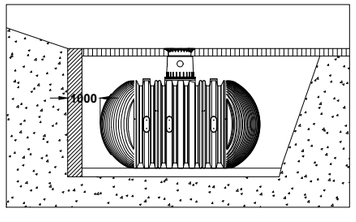
MINIMUM & MAXIMUM COVER



MINIMUM COVER IN A LANDSCAPED AREA TO BE 750mm
FROM SHOULDER OF TANK.

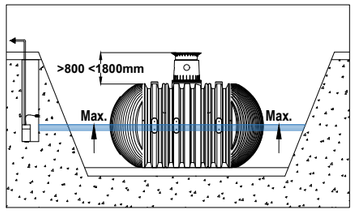
MAXIMUM COVER IN A LANDSCAPED AREA TO BE 1500mm
FROM SHOULDER OF TANK.

SLOPE/EMBANKMENT INSTALLATIONS



IF THE TANK IS TO BE INSTALLED IN THE IMMEDIATE VICINITY (<5m)
OF A SLOPE OR EMBANKMENT, A STATICALLY CALCULATED RETAINING WALL
MUST BE ERECTED TO ABSORB ANY ADDITIONAL LOADING FROM THE SOIL.
THE WALL MUST EXCEED THE DIMENSIONS OF THE TANK BY AT LEAST 500mm
IN ALL DIRECTIONS AND MUST BE LOCATED AT LEAST 1000mm AWAY FROM THE TANK.

GROUNDWATER INSTALLATIONS



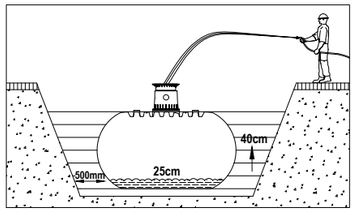
IF IT IS ANTICIPATED THAT THE TANK WILL BE IMMERSED IN GROUNDWATER DEEPER
THAN SHOWN IN THE BELOW TABLE, SUFFICIENT DISSIPATION MUST BE ENSURED.
DISSIPATION OF THE DRAINAGE WATER (E.G. VIA AN ANNULAR DRAINAGE SYSTEM)
IS RECOMMENDED IN CASES OF COHESIVE, WATER-IMPERMEABLE SOIL.

TANK SIZE	16,000L - 56,000L
IMMERSION DEPTH	1250mm

MINIMUM COVER TO BE 800mm FROM SHOULDER OF TANK
IN AREAS WITH GROUNDWATER.

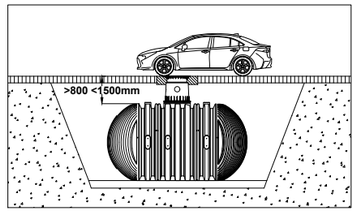
MAXIMUM COVER TO BE 1500mm FROM SHOULDER OF TANK
IN AREAS WITH GROUNDWATER.

INSERTION & FILLING



THE TANK MUST BE INSERTED, IMPACT-FREE, INTO THE PREPARED TRENCH
USING SUITABLE EQUIPMENT.
THE TANK IS FILLED WITH 250mm WATER BEFORE BACKFILLING.
THE 10-20mm ROUND GRAIN GRAVEL IS BACKFILLED IN LAYERS OF MAX. 400mm STEPS
AND IS TO BE WELL COMPACTED WITH A MANUAL TAMPER.
MECHANICAL COMPACTION MACHINES ARE NOT TO BE USED UNDER ANY CIRCUMSTANCES.
SURROUND MUST BE AT LEAST 500mm ON ALL SIDES OF THE TANK.

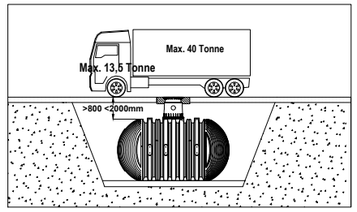
VEHICLE LOADING CONDITIONS



FOR LOADINGS OF UP TO 3,500KG IN TRAFFICKED AREAS WITH NO GROUNDWATER, THERE MUST BE;

MINIMUM COVER OF 800mm FROM THE SHOULDER OF THE TANK, AND

MAXIMUM COVER OF 1500mm FROM THE SHOULDER OF THE TANK.

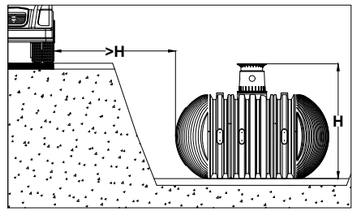


FOR LOADINGS OF MORE THAN 3,500KG AND UP TO 40,000KG IN AREAS OF NO GROUNDWATER, THERE MUST BE;

MINIMUM COVER OF 1000mm FROM THE SHOULDER OF THE TANK,

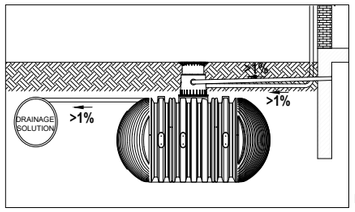
MAXIMUM COVER OF 1500mm FROM THE SHOULDER OF THE TANK, AND

SUITABLE MANHOLE COVER & FRAME (PROVIDED BY OTHERS).



FOR INSTALLATIONS ADJACENT TO SURFACES USED BY VEHICLES OF OVER 3,500KG, THE TANK MUST BE INSTALLED AT A DISTANCE FROM THE ROAD SURFACE THAT IT AT LEAST THE DEPTH OF THE TRENCH.

PIPE CONNECTIONS



ALL PIPE CONNECTIONS MUST BE INSTALLED WITH A FALL OF AT LEAST 1%
IN THE DIRECTION OF FLOW (POSSIBLE, SUBSEQUENT SETTLING MUST BE
TAKEN INTO ACCOUNT).
IF THE TANK OVERFLOW IS CONNECTED TO A PUBLIC SEWER, THIS MUST BE
PROTECTED AGAINST REFLUX BY MEANS OF A LIFTING STATION OR REFLUX
SEAL IN ACCORDANCE WITH DIN 1986.
ALL SUCTION, PRESSURE & CONTROL LINES MUST BE INSTALLED IN AN
EMPTY PIPE / DUCT AND AS STRAIGHT AS POSSIBLE.
ANY NECESSARY BENDS MUST BE FORMED IN 30 DEGREE MOULDED
SECTIONS.
IMPORTANT: THE EMPTY PIPE / DUCT MUST BE CONNECTED TO AN APERTURE
ABOVE THE MAX. WATER LEVEL.

PLEASE REFER TO TANK INSTALLATION GUIDE FOR DETAILS ON; SAFETY, PRODUCT FEATURES, IDENTIFICATION OBLIGATIONS, TECHNICAL DATA, TANK STRUCTURE, TANK ASSEMBLY & SERVICING AND INSPECTION.

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HOME INDIRECT CARAT XXL TANK INSTALLATION

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P0	LATEST REVISION	KS	27.01.2025

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DRAWN : KS DATE : 27.01.2025
CHECKED : DS SCALE : VARIOUS@A3

PROJECT
GRAF STANDARD DETAILS

DESCRIPTION
HOME INDIRECT
RAINWATER HARVESTING SYSTEM
CARAT XXL TANK

DRAWING No. REV.
HOME_INDIRECT_STANDARD_DETAIL_CARAT_XXL P0