

# DTS

Dosing Tank Stations



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**GRUNDFOS** 

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## 1. General data

DTS dosing tank stations are available in 6 tank sizes: 60 l, 100 l, 200 l, 300 l, 500 l and 1000 l.

The following dosing pump types can be installed:

- DDA, DDE, DDC for up to 30 l/h
- DMX 221 for up to 50 l/h
- DDI 60-10.

### Features at a glance

DTS dosing tank stations are intended for storing and dosing liquids. Many different configurations can be selected flexibly to fulfil various dosing tasks. Due to the use of high-quality materials, DTS dosing tank stations can be employed universally for diverse dosing liquids. The selection of materials can be adapted via the configuration.

### Components and features

- Chemically resistant tank made of UV-stabilised, semitransparent or black polyethylene, in 6 sizes from 60 to 1000 litres, with embossed litre scale and PE screw cover
- Optional PE collecting tray
- Optional handheld mixer or electric stirrer with level switch for dry-running protection. Electric stirrers have single-phase motors with 230 V 50 Hz
- Rigid suction lance or foot valve made of PE, with 2-step level switch for dry-running protection, suction line to the dosing pump
- PVC or PP injection unit with G 1/2 process connection
- 10 m of PE or PVC discharge line
- Optional drain valve
- Filling armature with ball valve (for all tank sizes) or dissolving hopper (from 200 l)
- Optional tank inlet valve or dissolving hopper
- Multi-function valve
- Prepared for the installation of a dosing pump DDA, DDC, DDE, DMX 221 or DDI 60-10 including necessary assembly material (connectors, click-plate and screws depending on pump type).

Note: Dosing pumps are not comprised in a standard delivery. They have to be ordered separately.

### Applications

- Dosing of biocides and inhibitors into cooling water
- Dosing of lyes and acids for pH regulation
- Dosing of coagulants, (such as ferric (II/III) chloride), for waste water treatment
- Dosing of hypochlorite
- Dosing of cleaning agents and disinfectants (CIP, cleaning machines).

## 2. Identification

### Type key

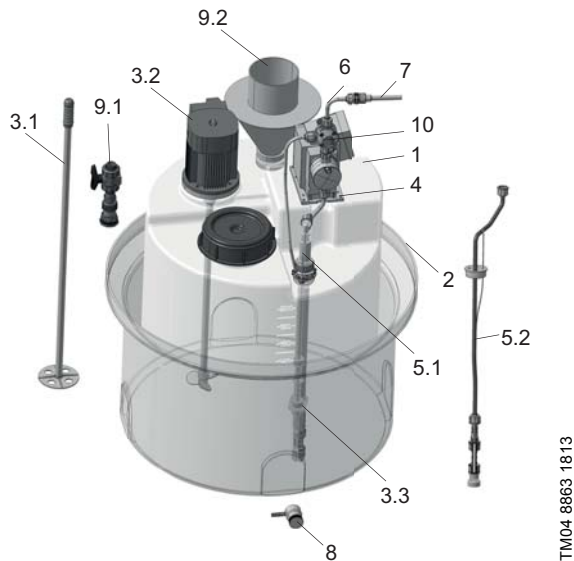
Example	DTS	100	T	1	0	3	4	RE	E	4	A	1	H
<b>Product type</b>	DTS Dosing tank station												
<b>Tank size</b>													
60	60 litres												
100	100 litres												
200	200 litres												
300	300 litres												
500	500 litres												
1000	1000 litres												
<b>Tank colour</b>													
T	Transparent												
B	Black												
<b>Collecting tray</b>													
0	Without												
1	Collecting tray												
<b>Screw cover</b>													
0	Black screw cover without lock												
<b>Mixer or stirrer</b>													
0	Without												
1	Handheld mixer, PE												
2	Electric stirrer, stainless steel												
3	Electric stirrer, PP, with sealing flange												
<b>Preparation for dosing pump</b>													
0	Without												
1	Preparation for DMX 221 up to 50 l/h												
3	Preparation for DDI 60-10												
4	Preparation for DDA, DDC, DDE												
<b>Multi-function valve</b>													
A	Without												
G	Multi-function valve PV/V												
H	Multi-function valve PV/E												
I	Multi-function valve PV/T												
<b>Filling device</b>													
0	Without												
1	Filling armature PVC/E with ball valve												
2	Dissolving hopper												
<b>Drain valve</b>													
A	Without												
B	Drain valve PVC/E												
<b>Injection unit (G 1/2 process connection)</b>													
0	Without												
1	Injection unit PVC/V/C												
2	Injection unit PP/V/C												
3	Injection unit PVC/E/C												
4	Injection unit PP/E/C												
5	Injection unit PVC/T/C												
<b>Discharge line</b>													
A	Without												
B	10 m of PE hose 4/6 mm (up to 7.5 l/h)												
C	10 m of braided PVC hose 6/12 mm (up to 30 l/h)												
D	10 m of PE hose 9/12 mm (up to 60 l/h)												
E	10 m of PE hose 6/9 mm (up to 30 l/h)												
<b>Suction line</b>													
WO	Without												
RV	Rigid suction lance PE/V												
RE	Rigid suction lance PE/E												
RT	Rigid suction lance PE/T												
FV	Flexible suction line with foot valve PE/V												
FE	Flexible suction line with foot valve PE/E												
FT	Flexible suction line with foot valve PE/T												

### Material key

Code	Description
PVC	Polyvinyl chloride
PP	Polypropylene
PE	Polyethylene
V	FKM
E	EPDM
T	PTFE
C	Ceramic
PV	PVDF

## 3. Components

### Overview of components



**Fig. 1** Components of a DTS dosing tank station

Pos.	Description
1	Dosing tank
2	Collecting tray
3	Mixer or stirrer
3.1	Handheld mixer
3.2	Electric stirrer
3.3	Level switch for electric stirrer
4	Installation material
5	Suction line
5.1	Rigid suction lance with suction line
5.2	Foot valve with suction line
6	Discharge line
7	Injection unit
8	Drain valve
9	Filling device
9.1	Filling armature with ball valve
9.2	Dissolving hopper
10	Multi-function valve

### Cylindrical tank

Cylindrical tanks are available transparent or black. They have a litre scale and a black screw cap.

- Tank material: LLDPE, UV-stabilised
- Liquid temperature: -20 °C to +45 °C.

All cylindrical tanks are prepared for a G 3/4 opening for a drain valve, and have a screw plug (PE/EPDM). The cylindrical tanks with volumes of 60, 100, 200, 300 and 500 litres include additionally:

- Threaded M 6 inserts for the assembly of a SMART Digital, a DDI or a DMX model 221 dosing pump.
- A G 2 opening for a suction lance or a foot valve, closed with a screw plug.
- A flange for an electric stirrer with threaded inserts.
- Threaded M 6 inserts at the bottom part for floor mounting with a set of floor-mounting brackets.



**Fig. 2** Cylindrical tank, 60 litres

Material	Volume [l]	Tank colour	Type key
PE	60	Transparent	...60T...
		Black	...60B...
	100	Transparent	...100T...
		Black	...100B...
	200	Transparent	...200T...
		Black	...200B...
	300	Transparent	...300T...
		Black	...300B...
	500	Transparent	...500T...
		Black	...500B...
1000	Transparent	...1000T...	
	Black	...1000B...	

## Collecting tray

The collecting tray is available in several sizes to suit the respective dosing tank size. It collects chemicals that might leak out of the tank, and protects the environment.

- Material: PE
- Colour: transparent.

Note: The collecting tray cannot be ordered in combination with the drain valve!



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Fig. 3 Collecting tray

Material	Volume [l]	Tank size [l]	Type key
PE	80	60	...60...1...
	120	100	...100...1...
	210	200	...200...1...
	400	300	...300...1...
	500	500	...500...1...
	1000	1000	...1000...1...

## Mixers and stirrers

### Handheld mixer

The shaft length of the handheld mixer can be adapted to suit the selected tank. The handheld mixer is fixed with a DN 15 through-bolt on top of the tank. The liquid in the tank is mixed by moving the stamping plate up and down.



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Fig. 4 Handheld mixer

Material of shaft	Type key
PE	...1...

## Electric stirrer

Electric stirrers are intended for the mixing and dissolving of non-abrasive, non-inflammable and non-explosive liquids. They ensure that the liquid in the dosing tank is mixed constantly. Electric stirrers generally have single-phase motors. With a frequency of 50 Hz they run at 1500 rpm, and are suitable for liquids with low to medium viscosity.

Different versions of electric stirrers are available:

- Stainless-steel version
- PP version with sealing flange.

All stirrers are equipped with PP propellers.



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Fig. 5 Electric stirrer

Material of shaft	Motor power [kW]	Tank size [l]	Voltage [V]	Frequency [Hz]	Type key
SS	0.09	60	220-240	50/60	...60...2...
		100			...100...2...
	0.25	200	230	50	...200...2...
		300			...300...2...
		500			...500...2...
	0.55	1000	230	50	...1000...2...
PP	0.09	60	220-240	50/60	...60...3...
		100			...100...3...
	0.25	200	230	50	...200...3...
		300			...300...3...
		500			...500...3...
	0.55	1000	230	50	...1000...3...

## Level-control unit

If an electric stirrer is selected, a level-control unit is generally included. The level-control unit is clipped to the rigid suction lance and connected to the electronic control on site. The contact signal provided by the level control unit is used to protect the stirrer from dry-running.

The level-control unit includes:

- Reed switch unit with one floater
- 5 metres of cable with PE jacket
- Clip for the rigid suction lance
- Cable gland mounted in the tank top to lead the cable through.

The switch mode is factory-set to NO. It can be set to NC by turning the floater upside down.

### Electrical data:

- Max. voltage: 48 V
- Max. current: 0.5 A
- Max. load: 10 VA.

## Preparation for dosing pump

The preparation for dosing pump includes all installation material to fit a dosing pump on the tank and to connect it with the other parts of the DTS dosing tank station.

The installation material differs depending on the selected pump type and material combination.

Installation material	Pump type	Material	Type key
4 screws, 4 washers, mounting plate	DDA, DDC, DDE	-	...4...
4 screws, 4 washers, 2 connection kits	DMX, DDI	PP	...1..., ...3...
		PVC	
2 connection kits	Without pump	PP	...0...
		PVC	

## Suction lines

### Rigid suction lance

Rigid suction lances are installed in the tank and connected to the pump via the suction hose. They are available with low-level and empty-tank indication. Their immersion depth is selected to suit the tank size.

Rigid suction lines include:

- Strainer (mesh size approx. 0.8 mm)
- Non-return valve
- Suction hose PE-6/9 mm (9/12 mm for DDI 60-10) with connection for the suction side of the pump
- Adjustable tank connection with holes for relief line
- Reed-switch unit with 2 floaters
- 5 metres of cable with PE jacket
- M 12 plug to connect DDA, DDC, DDE or DDI dosing pump
- The switch mode of the low-level and empty-tank indication is factory-set to NO. The switch mode can be set to NC by turning the floaters upside down.

### Electrical data:

- Max. voltage: 48 V
- Max. current: 0.5 A
- Max. load: 10 VA.



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Fig. 6 Suction lance

Material	Gasket	Pump type	Type key
	FKM	DDA, DDC, DDE, DMX	...RV...
		DDI	...3RV...
PE	EPDM	DDA, DDC, DDE, DMX	...RE...
		DDI	...3RE...
	PTFE	DDA, DDC, DDE, DMX	...RT...
		DDI	...3RT...

## Foot valve

Foot valves are installed at the lower end of the suction hose. They are available with low-level end empty-tank indication.

Foot valves include:

- Weight
- Strainer (mesh size approx. 0.8 mm)
- Non-return valve
- Suction hose PE-6/9 mm (9/12 mm for DDI 60-10) with included connection for the suction side of the pump. The length of the hose is prepared to suit the tank size.
- Reed-switch unit with two floaters
- 5 metres of cable with PE jacket
- M 12 plug to connect DDA, DDC, DDE or DDI dosing pump
- PE cap Ø58 mm, for assembly in tank.

The switch mode of the low-level and empty-tank indication is factory-set NO. The switch mode can be set to NC by turning the floaters upside down.

### Electrical data:

- Max. voltage: 48 V
- Max. current: 0.5 A
- Max. load: 10 VA.



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Fig. 7 Foot valve

Material	Type	Gasket	Pump type	Type key
PE	With rigid suction lance	FKM	DDA, DDC, DDE, DMX	...RV...
			DDI	...3RV...
		EPDM	DDA, DDC, DDE, DMX	...RE...
	DDI		...3RE...	
	PTFE	DDA, DDC, DDE, DMX	...RT...	
			DDI	...3RT...
With flexible suction line		FKM	DDA, DDC, DDE, DMX	...FV...
	DDI		...3FV...	
	EPDM	DDA, DDC, DDE, DMX	...FE...	
DDI		...3FE...		
PTFE	DDA, DDC, DDE, DMX	...FT...		
		DDI	...3FT...	

## Discharge line

The discharge line leads the liquid from the pump or the multi-function valve to the injection unit.

Different types of discharge lines can be selected according to the max. flow rate of the pump and the required pressure range.

The length of the discharge line included in a DTS dosing tank station is generally 10 m.



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Fig. 8 Discharge line

Material	Dimension	Max. flow rate	Max. pressure	Type key
	[mm]	[l/h]	[bar]	
PE	4/6	7.5	13	...B...
	6/9	30	12	...E...
	9/12	60	9	...D...
PVC	6/12	30	23	...C...

## Injection unit

Injection units connect the dosing line with the process line. They ensure a minimum counterpressure of 0.7 bar, and avoid backflow of the dosing liquid.

An injection unit includes:

- Injection pipe, 100 mm max. immersion depth, can be shortened to suit the water process line diameter.
- Spring-loaded non-return valve with Tantal spring.
- Process connection G 1/2.



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Fig. 9 Injection unit

Ball material	Body material	Gasket material	Type key
Ceramic	PVC	FKM	...1...
		EPDM	...3...
	PP	PTFE	...5...
		FKM	...2...
		EPDM	...4...



### Drain valve

The drain valve is installed in the threaded sleeve at the bottom of the dosing tank.

Note: The drain valve cannot be ordered in combination with the collecting tray!



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Fig. 10 Drain valve

Description	Type key
Drain valve, PVC, R 3/4", gasket EPDM	...B...

### Filling devices

#### Filling armature

The filling armature is pre-installed at the top of the tank with DN 15 through bolt. It is connected to the water supply on site with a hose or a pipe.

A filing armature includes:

- G 1 (DN 15) connection
- Cementing inlay for PVC pipe Ø20 mm
- Ball valve.



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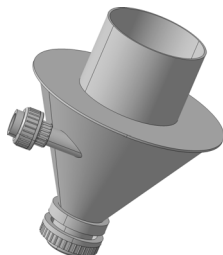
Fig. 11 Filling armature

#### Dissolving hopper

The dissolving hopper is pre-installed at the top of the tank with a DN 40 through-bolt. The dissolving hopper is intended for washing powders into the dosing tank. It is available for dosing tanks of 200 l, 300 l, 500 l and 1000 l.

A dissolving hopper includes:

- G 5/4 (DN 20) hose connection
- Cementing inlay for PVC pipe Ø25 mm.



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Fig. 12 Dissolving hopper

Type of filling device	Suitable tank sizes	Type key
	[1]	
Filling armature	all	...1...
Dissolving hopper	200, 300, 500, 1000	...2...

### Multi-function valve

Multi-function valves combine the functions of pressure relief valves and pressure loading valves. In addition, they allow deaeration of the pump and emptying of the discharge line for maintenance.

Pressure relief valves, or safety valves, protect the pump and the discharge installations against excessive pressure. All pressurised dosing installations should include a pressure relief valve.

Pressure loading valves maintain a certain counterpressure for the pump. They are used in applications with too low counterpressure or no counterpressure at all. Pressure loading valves are also used to prevent syphoning, when the admission pressure is higher than the counterpressure.

They provide a constant counterpressure for the dosing pump when the system pressure is fluctuating.



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Fig. 13 Multi-function valve

A multi-function valve is mounted directly on the pump discharge side, the top connection is for the discharge line, the side connection leads the relief liquid back into the tank.

- Loading pressure, adjustable from 1 to 4 bar, is factory-set to 3 bar
- Relief pressure, adjustable from 7 to 16 bar, is factory-set to 10 bar
- Maximum system pressure 16 bar
- Preassembled relief line back into the tank.

Body material	Gasket	Type key
PVDF	FKM	...G
	EPDM	...H
	PTFE	...I

## 4. Construction

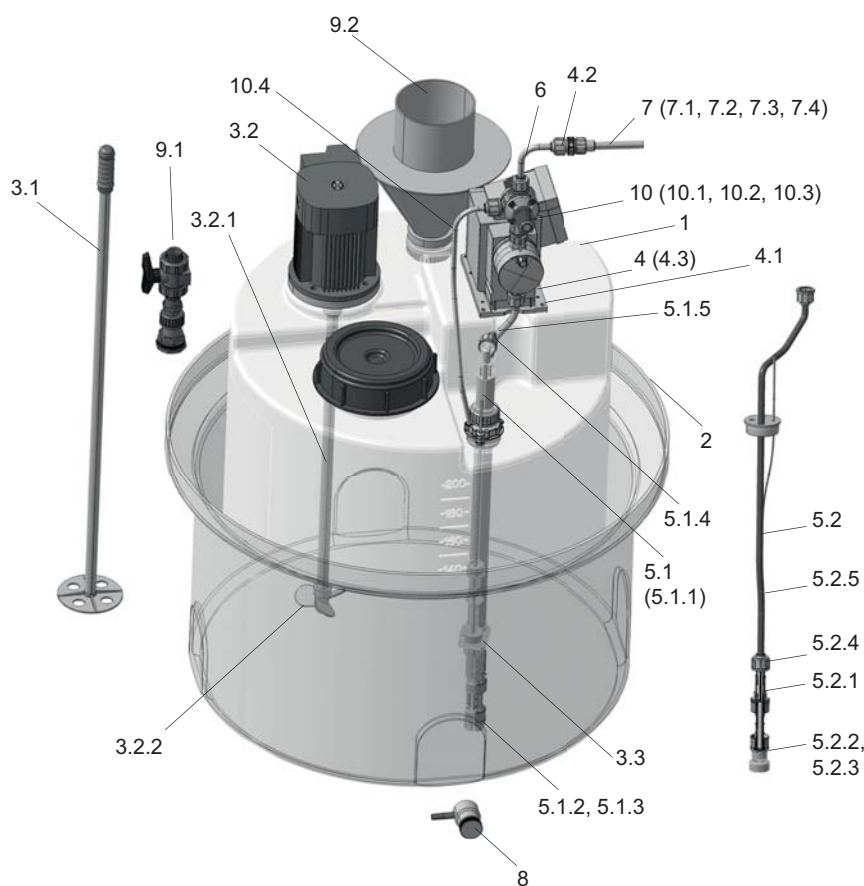


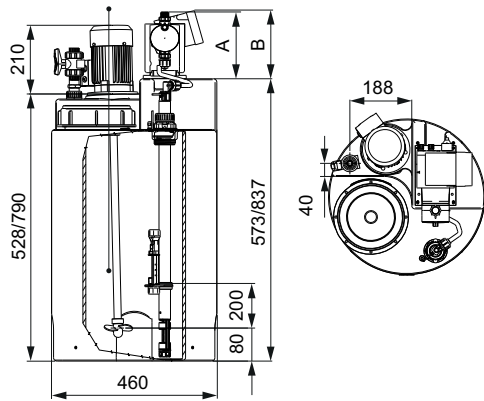
Fig. 14 Components of a DTS dosing tank station

Pos.	Description	Material options
1	Dosing tank	PE
2	Collecting tray	PE
3	Mixer or stirrer	
3.1	Handheld mixer	PE
3.2	Electric stirrer	
3.2.1	Shaft	SS 1.4571, PP
3.2.2	Propeller	PP
3.3	Level switch for electric stirrer	PE
4	Installation material	
4.1	Screws and washers	Tank sizes 60-500 l: • SS 1.4541 (screws) • SS 1.4301 (washers) Tank size 1000 l: PP
4.2	Connection kits (only DDI and DMX)	PP, PVC
4.3	Mounting plate (only DDA, DDC, DDE)	PPO/PS 20 % GF
5	Suction line	
5.1	Rigid suction lance and suction line	
5.1.1	Rigid suction lance	PE
5.1.2	Valve ball	Ceramic Al <sub>2</sub> O <sub>3</sub> 99.5 %
5.1.3	Valve seat	PTFE
5.1.4	Gasket	FKM, EPDM or PTFE
5.1.5	Suction line	PE
5.2	Foot valve with suction line	
5.2.1	Foot valve	PE
5.2.2	Valve ball	Ceramic Al <sub>2</sub> O <sub>3</sub> 99.5 %
5.2.3	Valve seat	PTFE
5.2.4	Gasket	FKM, EPDM or PTFE
5.2.5	Suction line	PE

Pos.	Description	Material options
6	Discharge line	PE or braided PVC
7	Injection unit	
7.1	Body	PVC or PP
7.2	Gaskets	FKM, EPDM or PTFE
7.3	Spring	Tantal
7.4	Ball	Ceramic Al <sub>2</sub> O <sub>3</sub> 99.5 %
8	Drain valve	PVC/EPDM
9	Filling device	
9.1	Filling armature with ball valve	PVC/EPDM
9.2	Dissolving hopper	PVC/EPDM
10	Multi-function valve	
10.1	Body	PVDF
10.2	Gaskets	FKM, EPDM or PTFE
10.3	Diaphragm	PTFE
10.4	Relief line	PE

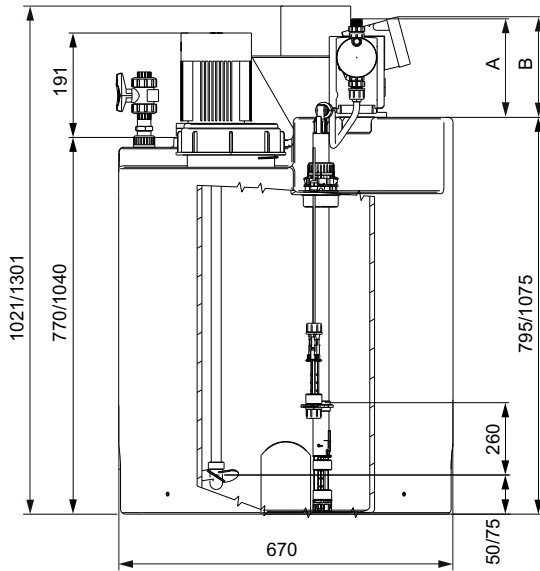
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# 5. Dimensions



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Fig. 15 DTS dosing tank station, 60 and 100 litres



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Fig. 16 DTS dosing tank station, 200 and 300 litres

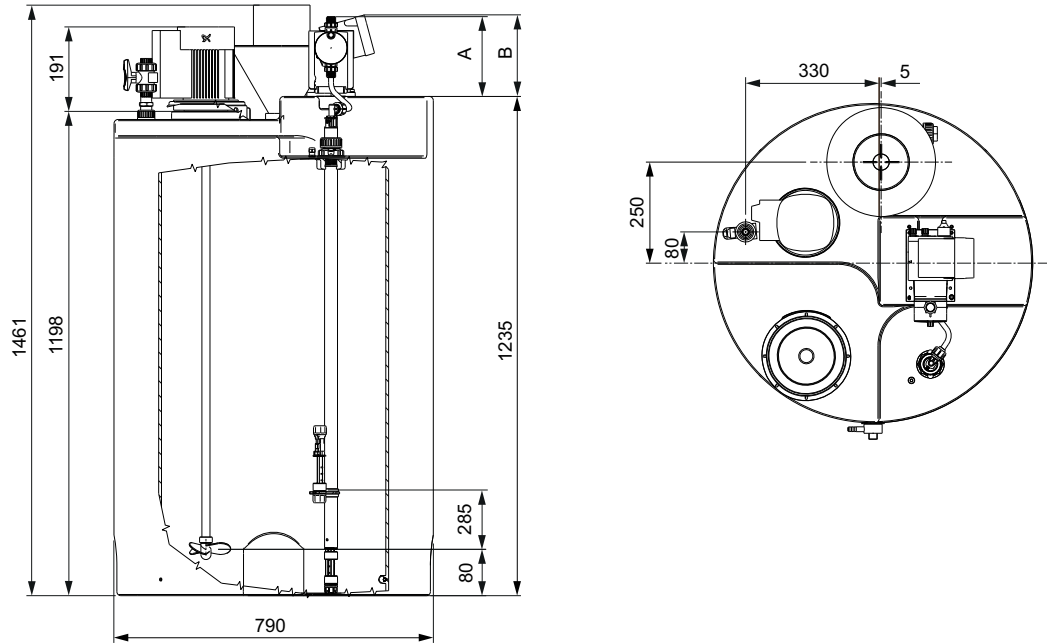


Fig. 17 DTS dosing tank station, 500 litres

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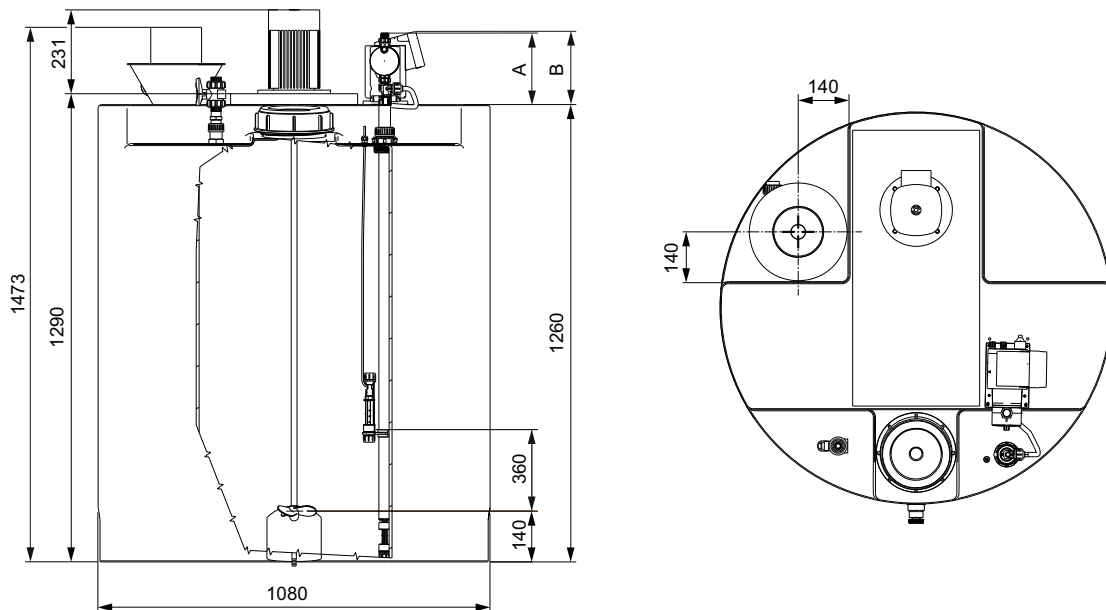


Fig. 18 DTS dosing tank station, 1000 litres

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Pos.	Description
A	Pump height up to discharge connection
B	Pump housing / motor height

Pump type	A [mm]	B [mm]
DDA 7.5-16, DDC 6-10, DDC 9-7	196	200.8
DDE 6-10	196	161.5
DDA 12-10, DDA 17-7, DDC 15-4	200.5	200.8
DDE 15-4	200.5	161.5
DDA 30-4	204.5	200.8
DMX 221, up to DMX 50-10	179	319
DDI 60-10	252	230

## 6. Technical data

Data	Tank size					
	60 l, 100 l	200 l, 300 l, 500 l	1000 l			
Mechanical data	Liquid temperature:	[°C]	0-45			
	Ambient temperature:	[°C]	0-40			
	Max. liquid viscosity	Without electric stirrer	[mPas]	please refer to the installation and operating instructions of the pump		
		With electric stirrer	[mPas]	250		
Electrical data	Level switches	Max. voltage	[V]	48		
		Max. current	[A]	0.5		
		Max. load	[VA]	10		
	Electric stirrers	Voltage	[V]	220-240	230	
Frequency		[Hz]	50/60	50		
Enclosure class			IP65	IP55		
Insulation class			F	F		
Nominal current		[A]	0.91	1.86	3.7	
	Starting current	[%]	182	230	320	
Approvals	Approval only applies to versions with electric stirrer		CE			

## Weights

Component		Tank size					
		60 l	100 l	200 l	300 l	500 l	1000 l
Tank and installation material	[kg]	5.5	7.5	11.5	13	28	40
Catchment tank	[kg]	4.5	4.5	7.5	15	13.5	40
Handheld mixer	[kg]	0.27	0.27	0.27	0.27	0.27	0.27
Electric stirrer, SS	[kg]	6	6.3	8.5	8.9	9.1	12
Electric stirrer, PP	[kg]	6.55	6.85	9.05	9.45	9.65	12.55
Level switch	[kg]	0.27	0.27	0.27	0.27	0.27	0.27
Rigid suction lance and suction line	[kg]	0.35	0.43	0.43	0.51	0.54	0.56
Foot valve and flexible suction line	[kg]	0.3	0.3	0.3	0.3	0.3	0.3
Injection unit	[kg]	0.1	0.1	0.1	0.1	0.1	0.1
Discharge line, PE 4/6 mm	[kg]	0.14	0.14	0.14	0.14	0.14	0.14
Discharge line, PE 6/9 mm	[kg]	0.15	0.15	0.15	0.15	0.15	0.15
Discharge line, PE 9/12 mm	[kg]	0.3	0.3	0.3	0.3	0.3	0.3
Discharge line, PVC 6/12 mm	[kg]	0.3	0.3	0.3	0.3	0.3	0.3
Drain valve	[kg]	0.32	0.32	0.32	0.32	0.32	0.32
Filling armature	[kg]	0.22	0.22	0.22	0.22	0.22	0.22
Dissolving hopper	[kg]	1.17	1.17	1.17	1.17	1.17	1.17
Multi-function valve	[kg]	0.51	0.51	0.51	0.51	0.51	0.51

## 7. Selection of a DTS dosing tank station

### Standard range

All standard DTS dosing tank stations include:

- Transparent tank, PE, prepared for mounting the pump on top
- Rigid suction lance, preassembled for direct hydraulic and electric connection to the pump
- Multi-function valve, PVDF, with relief line back into the tank
- 10 m PE discharge hose (6/9 mm)
- Standard injection unit: process connection G 1/2, immersion depth 100 mm.

For pump type	Material*			Product number		
	Body	Gaskets	[l]	Without	With handheld mixer	With electric stirrer, PP, with sealing flange**
Smart Digital DDA, DDC, DDE (all sizes)	PP	FKM	60	98382305	98382325	98382345
			100	98382309	98382329	98382349
			200	98382313	98382333	98382353
			300	98382317	98382337	98382357
			500	98382321	98382341	98382361
			60	98382306	98382326	98382346
	EPDM	100	98382310	98382330	98382350	
		200	98382314	98382334	98382354	
		300	98382318	98382338	98382358	
		500	98382322	98382342	98382362	
		60	98382307	98382327	98382347	
		100	98382311	98382331	98382351	
	PVC	FKM	200	98382315	98382335	98382355
			300	98382319	98382339	98382359
			500	98382323	98382343	98382363
		EPDM	60	98382308	98382328	98382348
			100	98382312	98382332	98382352
			200	98382316	98382336	98382356
DDI 60-10	PP	FKM	300	98382320	98382340	98382360
			500	98382324	98382344	98382364
			60	98382365	98382385	98382405
			100	98382369	98382389	98382409
			200	98382373	98382393	98382413
			300	98382377	98382397	98382417
	EPDM	500	98382381	98382401	98382421	
		60	98382366	98382386	98382406	
		100	98382370	98382390	98382410	
		200	98382374	98382394	98382414	
		300	98382378	98382398	98382418	
		500	98382382	98382402	98382422	
	PVC	FKM	60	98382367	98382387	98382407
			100	98382371	98382391	98382411
			200	98382375	98382395	98382415
		EPDM	300	98382379	98382399	98382419
			500	98382383	98382403	98382423
			60	98382368	98382388	98382408
EPDM	100	98382372	98382392	98382412		
	200	98382376	98382396	98382416		
	300	98382380	98382400	98382420		
	500	98382384	98382404	98382424		

\* The pump for the DTS must have the same material combination.

\*\* Electrical data for 60 and 100 l tanks: single-phase 220-240 V 50/60 Hz. Electrical data for 200, 300 and 500 l tanks: single-phase 230 V 50 Hz.

## Non-standard range

<b>Tank size</b>	60 l, 100 l, 200 l, 300 l, 500 l, 1000 l	
<b>Tank colour</b>	T	Transparent
	B	Black
<b>Collecting tray</b>	0	Without
	1	Collecting tray
<b>Screw cover</b>	0	Black screw cover without lock
<b>Mixer or stirrer</b>	0	Without
	1	Handheld mixer, PE
	2	Electric stirrer, stainless steel
	3	Electric stirrer, PP, with sealing flange
<b>Preparation for dosing pump</b>	0	Without
	1	Preparation for DMX 221 up to 50 l/h
	3	Preparation for DDI 60-10
	4	Preparation for DDA, DDC, DDE
<b>Suction line</b>	WO	Without
	RV	Rigid suction lance PE/V
	RE	Rigid suction lance PE/E
	RT	Rigid suction lance PE/T
	FV	Flexible suction line with foot valve PE/V
	FE	Flexible suction line with foot valve PE/E
	FT	Flexible suction line with foot valve PE/T
<b>Discharge line</b>	A	Without
	B	10 m PE hose 4/6 mm (up to 7.5 l/h)
	C	10 m braided PVC hose 6/12 mm (up to 30 l/h)
	D	10 m PE hose 9/12 mm (up to 60 l/h)
	E	10 m PE hose 6/9 mm (up to 30 l/h)
<b>Injection unit (G 1/2 process connection)</b>	0	Without
	1	Injection unit PVC/V/C
	2	Injection unit PP/V/C
	3	Injection unit PVC/E/C
	4	Injection unit PP/E/C
	5	Injection unit PVC/T/C
<b>Drain valve</b>	A	Without
	B	Drain valve PVC/E
<b>Filling device</b>	0	Without
	1	Filling armature PVC/E with ball valve
	2	Dissolving hopper
<b>Multi-function valve</b>	A	Without
	G	Multi-function valve PV/V
	H	Multi-function valve PV/E
	I	Multi-function valve PV/T

### Observe when selecting:

Pump material combination		Possible selection		
Body	Gasket	Suction line	Injection unit	Multi-function valve
PP	V	WO, RV, FV	0, 2	A, G
	E	WO, RE, FE	0, 4	A, H
PVC	V	WO, RV, FV	0, 1	A, G
	E	WO, RE, FE	0, 3	A, H
	T	WO, RT, FT	0, 5	A, I

The selection of stirrer or mixer depends on the suction device:

Suction line	Possible selection
WO	0, 1
FV, FE, FT	0, 1
RV, RE, RT	0, 1, 2, 3

Collecting tray and drain valve cannot be selected together:

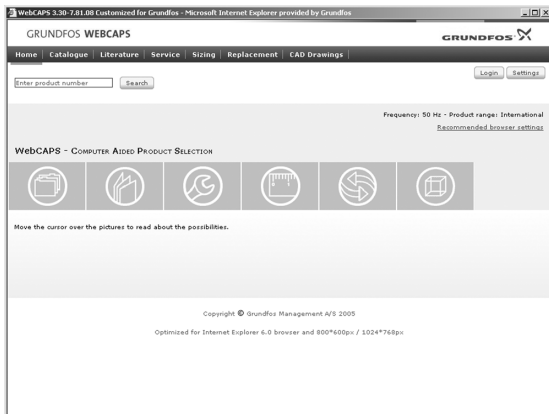
Collecting tray	Drain valve
0	A, B
1	A

The filling device options depend on the tank size:

Tank size	Possible filling armature selection [I]
60, 100	0, 1
200, 300, 500, 1000	0, 1, 2

# 8. Further product information

## WebCAPS

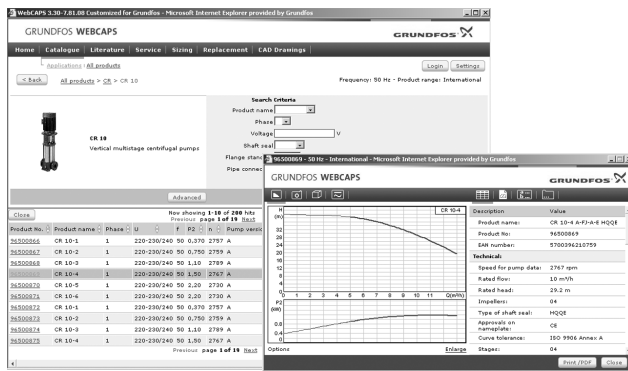


WebCAPS is a **Web-based Computer Aided Product Selection** program available on [www.grundfos.com](http://www.grundfos.com).

WebCAPS contains detailed information on more than 220,000 Grundfos products in more than 30 languages.

Information in WebCAPS is divided into six sections:

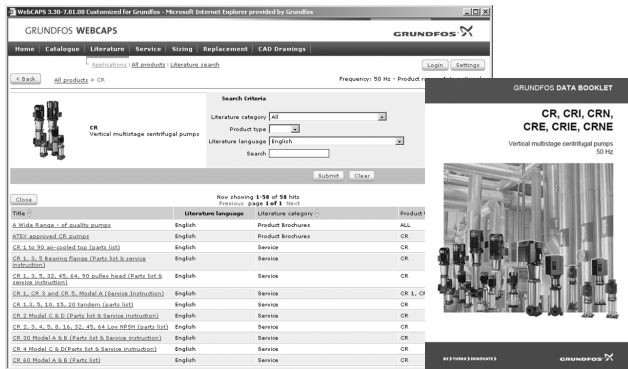
- Catalogue
- Literature
- Service
- Sizing
- Replacement
- CAD drawings.



### Catalogue

Based on fields of application and pump types, this section contains the following:

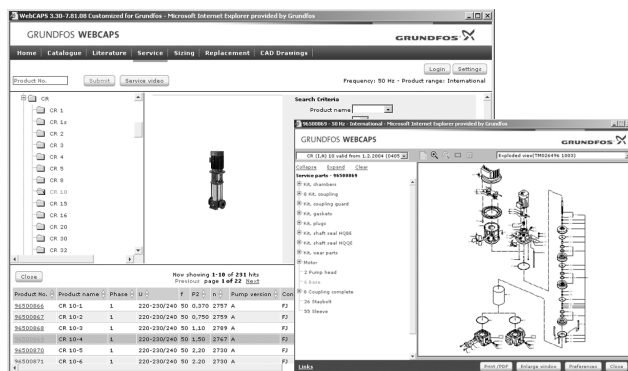
- technical data
- curves (QH, Eta, P1, P2, etc.) which can be adapted to the density and viscosity of the pumped liquid and show the number of pumps in operation
- product photos
- dimensional drawings
- wiring diagrams
- quotation texts, etc.



### Literature

This section contains all the latest documents of a given pump, such as

- data booklets
- installation and operating instructions
- service documentation, such as Service kit catalogue and Service kit instructions
- quick guides
- product brochures.



### Service

This section contains an easy-to-use interactive service catalogue. Here you can find and identify service parts of both existing and discontinued Grundfos pumps.

Furthermore, the section contains service videos showing you how to replace service parts.

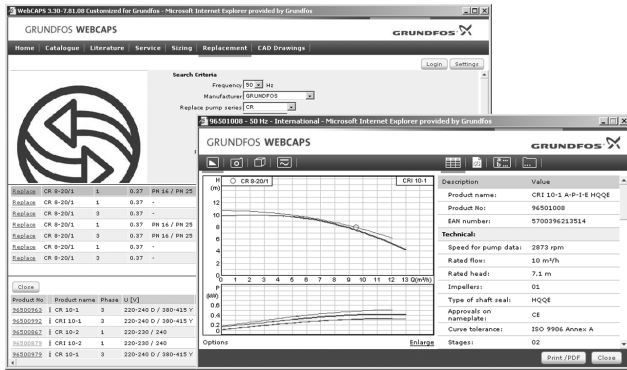




**Sizing**

This section is based on different fields of application and installation examples and gives easy step-by-step instructions in how to size a product:

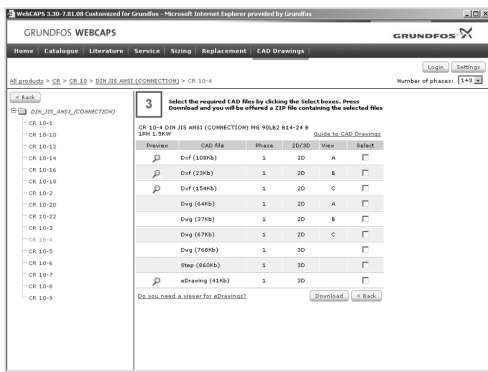
- Select the most suitable and efficient pump for your installation.
- Carry out advanced calculations based on energy, consumption, payback periods, load profiles, life cycle costs, etc.
- Analyse your selected pump via the built-in life cycle cost tool.
- Determine the flow velocity in wastewater applications, etc.



**Replacement**

In this section you find a guide to selecting and comparing replacement data of an installed pump in order to replace the pump with a more efficient Grundfos pump. The section contains replacement data of a wide range of pumps produced by other manufacturers than Grundfos.

Based on an easy step-by-step guide, you can compare Grundfos pumps with the one you have installed on your site. When you have specified the installed pump, the guide will suggest a number of Grundfos pumps which can improve both comfort and efficiency.



**CAD drawings**

In this section, it is possible to download 2-dimensional (2D) and 3-dimensional (3D) CAD drawings of most Grundfos pumps.

These formats are available in WebCAPS:

- 2-dimensional drawings:**
- .dxf, wireframe drawings
  - .dwg, wireframe drawings.
- 3-dimensional drawings:**
- .dwg, wireframe drawings (without surfaces)
  - .stp, solid drawings (with surfaces)
  - .eprt, E-drawings.



**WinCAPS**



Fig. 19 WinCAPS DVD

WinCAPS is a **Windows-based Computer Aided Product Selection** program containing detailed information on more than 220,000 Grundfos products in more than 30 languages.

The program contains the same features and functions as WebCAPS, but is an ideal solution if no internet connection is available.

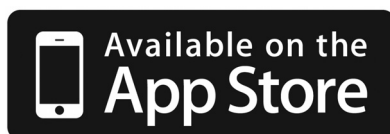
WinCAPS is available on DVD and updated once a year.

## GO CAPS

Mobile solution for professionals on the GO!



CAPS functionality on the mobile workplace.



Subject to alterations.



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