

Stainless steel submersible pumps for waste water containing solids. Spherical clearance 35-65 mm.

TCV, TCM

Application

HOMA TCV and TCM series pumps are suitable for pumping drainage water and waste water. With 35 up to 65 mm spherical clearance they are able to pump liquids with larger suspended solids like fibres, textiles etc. They are used for various applications in public and private sector, trade and industry.

Installation: Permanent or transportable. Models with float switch control for automatic pump operation, depending on medium level in the sump.

Pumped medium: Clear water and drainage water, sewage containing soft solids. Max. medium temperature: 35°C short term up to 60°C.

Operation: Intermittent.

Design

Fully submersible, compact integrated motor-pump unit consisting of:

Pump: Single stage centrifugal pump with horizontal discharge.

Impellers: Model TCV with vortex impeller for liquids containing a high level of impurities or fibrous matter and containing gas. Spherical clearance 35 up to 65 mm.

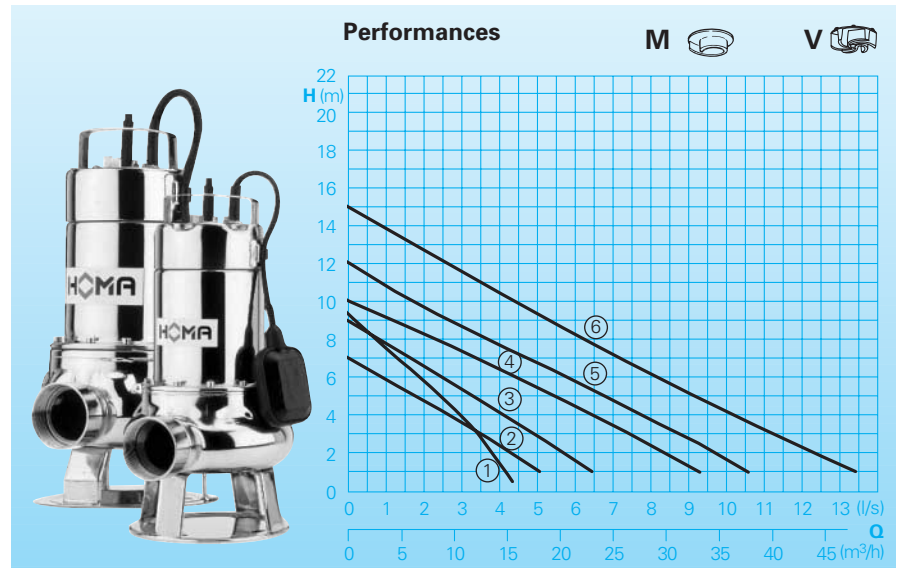
Model TCM with open single channel impeller for liquids containing impurities and sludge with solid particles. Spherical clearance 65 mm.

Motor: Fully submersible, pressure tight electric motor. Insulation class F. Motor protection IP 68. Single phase motors 230-240 V with thermal sensors embedded in the winding.

Cable: H07 RN - F4 G 1,5.

Shaft/Bearing: Large diameter stainless steel rotor shaft, pre-lubricated bearings.

Seals: Combination of mechanical seal and lip seal in a separate oil chamber. TCV 407 with triple radial seal.



Technical Data

Curve No.	Pump type	Motor input P ₁ (kW)	Motor output P ₂ (kW)	Voltage 50 Hz (V)	Nominal current (A)	Discharge	Spherical clearance (mm)	Weight (kg)
①	TCV 407 WA	1,0	0,7	230/1Ph	4,8	BSP 1 1/4" F	35	8,6
②	TCV 409 W(A)	0,9	0,6	230/1Ph	3,9	BSP 2" F	40	10
③	TCV 514 W(A)	1,4	0,75	230/1Ph	6,0	BSP 2" F	50	11
④	TCV 621 W(A)	2,1	1,1	230/1Ph	9,0	BSP 2 1/2" F	65	22
③	TCV 513 D	1,3	0,75	400/3Ph	2,2	BSP 2" F	50	11
④	TCV 620 D	2,0	1,1	400/3Ph	3,0	BSP 2 1/2" F	65	22
⑤	TCM 616 W(A)	1,6	1,0	230/1Ph	8,0	BSP 2 1/2" F	65	21
⑤	TCM 616 D	1,6	1,0	400/3Ph	2,8	BSP 2 1/2" F	65	21
⑥	TCM 622 D	2,2	1,5	400/3Ph	3,7	BSP 2 1/2" F	65	22

Impeller: TCV = Vortex impeller

TCM = Open single channel impeller

Speed: 2900 rpm

Model A: With automatic level control HOMA-Nivomatik

Materials:

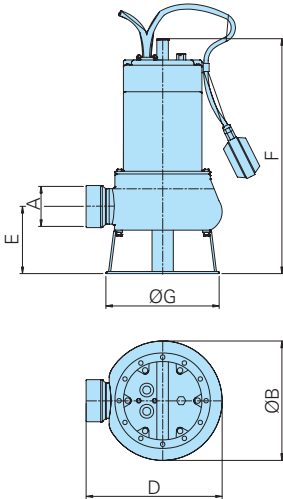
Motor housing, pump housing, impeller	Stainless steel AISI 304
Rotor shaft	Stainless steel AISI 303
Mechanical seal	Carbon-graphit/chrome steel
Elastomere	NBR

Equipment supplied

Pump with base stand, without auto-coupling (see accessories):
Model WA (230-240 V/1 Ph): With automatic level control, 10 m of cable.
Model D (400-415 V/3Ph): 10 m of cable.

Installations and dimensions

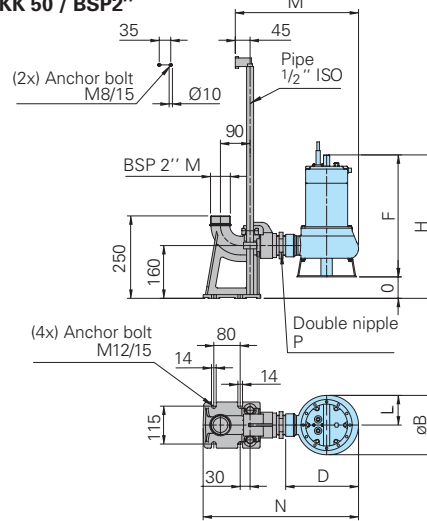
Free standing pump with base stand



Pump type	A	ØB	D	E	F	ØG
TCV 407 WA	BSP1 1/4" F	170	186	81	380	184
TCV 4..., TCV 5...	BSP2" F	180	221	95	370	180
TCV 6..., TCM 6...	BSP2 1/2" F	220	260	125	440	210

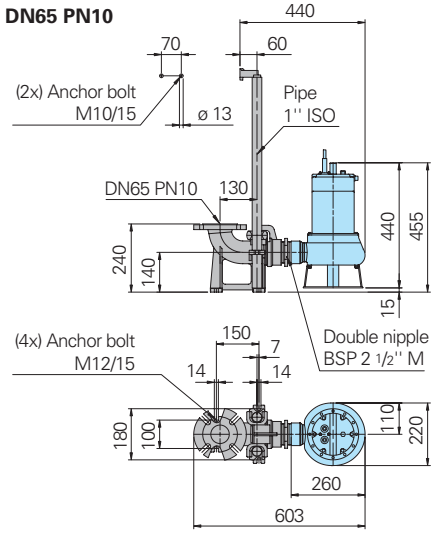
Wet well installation with auto-coupling system

KK 50 / BSP2"



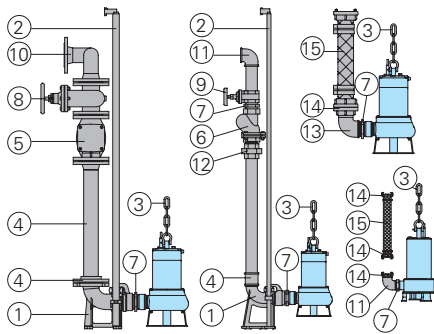
Pump type	ØB	D	F	H	L	M	N	O	P
TCV 407 WA	170	205	380	459	85	330	427	79	BSP1 1/4"/2" M
TCV 409 W(A)									
TCV 514 W(A)									
TCV 513 D	180	221	370	435	90	374	471	65	BSP2" M

DN65 PN10



all dimensions in mm

Zubehör



Part Description	Dimension	Part No.
① Auto-coupling system type KK50/R 2" with: - Cast iron auto-coupling with flange and thread - Cast iron flanged pump coupling - Cast iron upper slide rail bracker	BSP 2" BSP 2" F	8604005
Auto-coupling system type KK65/R 2 1/2" with: - Cast iron auto-coupling with flange and thread - Cast iron flanged pump coupling - Cast iron upper slide rail bracker	BSP 2 1/2" BSP 2 1/2" F	8604015
② Steel galvanized guide rails, pair, per m	BSP 1/2" BSP 1"	2190085 2190135
③ Steel galvanized lifting chain	5 mm dia. 8 mm dia.	2800350 2800380
Steel galvanized shackle	Size 5/16 Size 1	2801450 2801380

Part Description	Dimension	Part No.	Part Description	Dimension	Part No.
④ Threaded flange	DN 65/ BSP 2 1/2" F	2215060	⑭ STORZ fixed coupling	BSP2" F BSP2 1/2" F	2010204 2010502
Flanged pipe	DN 65	On request	Brass hose coupling	BSP 1 1/4"	2003413
Galvanized double nipple	BSP 2" F BSP 2 1/2" M/ BSP 1 1/2" F	2109102 2102210	STORZ-hose coupling	C-52 mm Ø B-75 mm Ø	2013003 2013502
⑤ Cast iron swing check valve	DN 65	2212805	STA-tube coupling, bronze	BSP 1 1/2" F	2001513
⑥ Cast iron swing check valve	BSP 1 1/2" F BSP 2" F BSP 2 1/2" F	2212902 2212903 2211513	⑮ Synthetic pressure hose with rubber lining and couplings, C-52 mm Ø	length 10 m length 15 m length 20 m length 30 m	2611310 2611315 2611320 2611330
⑦ Galvanized double nipple	BSP 1 1/2" M BSP 2" M BSP 2 1/2" M BSP 1 1/4" M BSP 2" M / BSP 1 1/4" M	2009020 2009018 2009025 2009011 2101950	B-75 mm Ø	length 10 m length 15 m length 20 m length 30 m	2611210 2611215 2611220 2611230
⑧ Cast iron gate valve	DN 65	2216065	Reinforced hose, per m	1 1/4" Ø 50 mm Ø 75 mm Ø	2632030 2632050 2632075
⑨ Cast iron gate valve	BSP 1 1/2" F BSP 2" F BSP 2 1/2" F	2216015 2216020 2216025	PVC-tube, per m	1 1/4" Ø 1 1/2"	2621200 2621500
⑩ 90° flanged elbow	DN 65	2153301	Hose bands	1 1/4" 1 1/2" 2" 85/20	2303252 2304854 2306009 2308520
Flanged Y-piece for twin-pump arrangement	3 x DN 65 DN 65/65/80	2160002 2160004	○ Control box for pumps with overload protection, on-off switch for 3 Ph-pumps - for manual operation Nominal current - for automatic operation Nominal current	1,7-2,4 A 2,5-4,0 A 1,7-2,4 A 2,5-4,0 A	1926015 1926020 1926305 1926310
⑪ 90° galvanized elbow	BSP 1 1/4" F BSP 1 1/2" F BSP 2" F BSP 2 1/2" F	2113604 2113605 2113606 2113610	○ Control panel for single or twin pump stations for automatic operation	On request	
T-piece for twin-pump arrangement	BSP 1 1/2" F BSP 2" F BSP 2 1/2" F	2114302 2114306 2114308			
⑫ Galvanized pipe union	BSP 1 1/4" M/F BSP 2" M/F	2114305 2114311			
⑬ 90° galvanized elbow	BSP 1 1/2" F/M BSP 2" F/M BSP 2 1/2" F/M	2111505 2111506 2111705			
⑭ STORZ-fixed coupling	BSP 2" F BSP 2 1/2" F	2010204 2010502			



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