

MULTICUT SEWAGE PUMPS

- Reliable solids transport due to improved cutting technology
- External adjustable cutting mechanism
- Controllable oil chamber
- SiC mechanical seal independent of sense of rotation
- Moisture-sealed cable inlet with plug-in cable connection
- Installed motor protection



DESCRIPTION

Centrifugal submersible sewage pumps fitted with the MultiCut cutting system are used as stationary appliances in pressurised drainage systems for discharge in sparsely populated areas or of detached houses. They are suitable for pumping domestic wastewater with the usual additions (as specified in German standard DIN 1986, Part 3).

For pumping from ducts which are connected to the public sewer system, explosion-proof submersible pumps of the UFK series have to be used. On account of the upstream cutting system, the pressurised line as from DN 32 - as from DN 80 minimum without cutting system - may be routed parallel to the terrain.

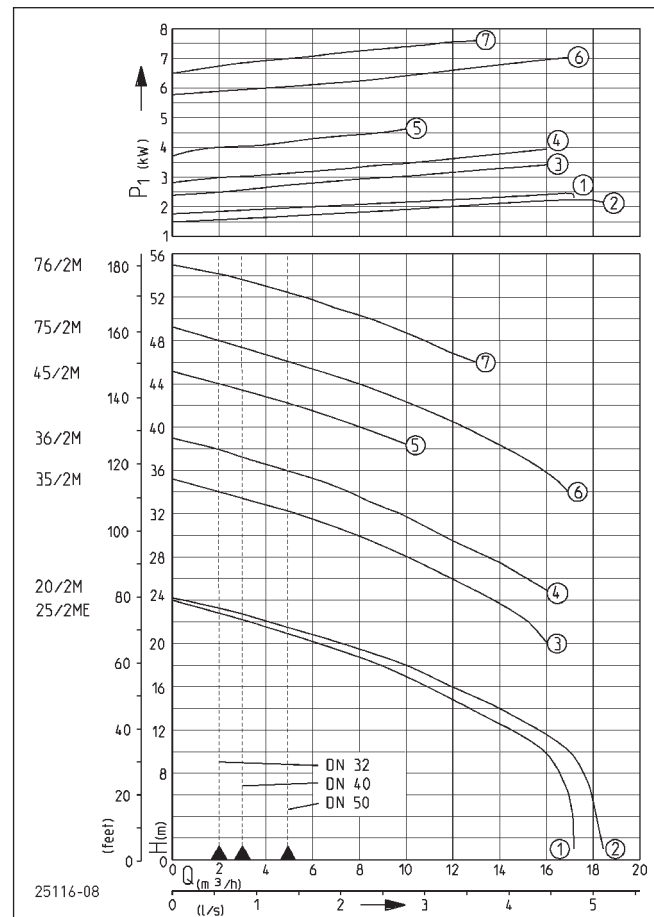
Operating conditions up to a temperature of the material to be transported of 40° Celsius

Submerged motor: Continuous operation (S1)

Emerged motor: Intermittent operation (S3) (e.g. 20% = 2 min. operation, 8 min. break)

The unique MultiCut cutting system ensures a maximum of operational safety at outstanding delivery characteristics. Fitted with a cutter plate made of hardened stainless steel and a three-bladed knife, it disintegrates coarse additions in the wastewater with more than 200,000 cutting processes per minute before they can get into the pump hydraulics. Solids which cannot be transported are rejected outside of the pump by the cutting rotor as the cutting system is located upstream from the pump hydraulics. Specifically arranged grooves on the cutter plate ensure additional safety as the cutting unit is permanently cleaned automatically during the delivery.

PERFORMANCE



| Type | Delivery head H [m] | 6 | 9 | 12 | 15 | 18 | 21 | 25 | 28 | 32 | 34 | 36 | 38 | 40 | 44 | 46 | 48 | 50 | 52 | 54 |
|-------------|---------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 20/2 M plus | Flow rate Q [m³/h] | 18 | 17 | 16 | 13 | 10 | 6 | | | | | | | | | | | | | |
| 25/2 ME | | 17 | 16 | 15 | 12 | 9 | 5 | | | | | | | | | | | | | |
| 35/2 M | | | | | | | 16 | 13 | 10 | 5 | | | | | | | | | | |
| 36/2 M | | | | | | | | 16 | 14 | 10 | 7 | 5 | 2 | | | | | | | |
| 45/2 M | | | | | | | | | | | | | 10 | 8 | 2 | | | | | |
| 75/2 M | | | | | | | | | | | 17 | 16 | 15 | 13 | 8 | 5 | 2 | | | |
| 76/2 M | | | | | | | | | | | | | | | | 13 | 11 | 9 | 6 | 3 |

We reserve the right to change specifications without notice. Pump performance is subject to ISO 9906 tolerances

The minimum flow velocity in the pressure piping must be 0.7 m/s according to EN 12056. This data is represented in the performance curve as a limit of application.



MULTICUT

SEWAGE PUMPS

SCOPE OF SUPPLY

Sewage pump with or without explosion-proof in keeping with German/European standard EN 12050 with 10 m cable, without plug, without base.

Ex II 2 G Ex d IIB T4

(20/2 M: Ex II 2 G Ex d IIB T4 Gb)

Special technical note for 25/2 ME:

As the rated output of the motor exceeds 1.4 kW, the permission of the local power supply organisation has to be obtained prior to ordering and commissioning.

A soft starting device (starting current approx. 33A) can only be installed in the contro unit AD 12 ExME if a new order is placed in the factory.

MECHANICAL DATA

| | | | |
|---------------------|---|--------------------|--|
| Pump | Vertical single-stage | Run dry protection | Yes |
| Bearing | Ball bearings, grease-lubricated | Impeller | Vortex impeller, grey cast iron 20/2 M: GFK |
| Seal on motor side | Duplex shaft seal, from 75/2M: mechanical seal | Motor housing | Grey cast iron |
| Oil chamber | Yes | Pump housing | Grey cast iron |
| Seal on medium side | SiC mechanical seal | Submersible | Yes |
| | | Pressure outlet | DN 32 |

ELECTRICAL DATA

| | | | |
|-------------------|----------------------|--------------------|------------|
| Power line | 10m H07RN-F | Insulation class | F |
| Wires | 6G1,5 (ab 55 10G2,5) | Winding thermostat | Yes |
| Type of enclosure | IP 68 | Motor protection | Thermostat |

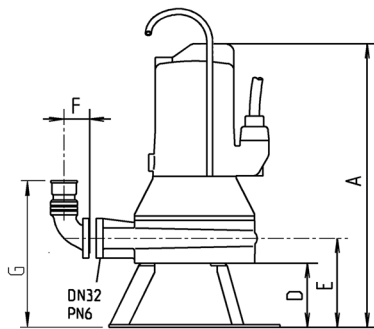
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| Type | Code No. | Voltage | Motor rating | | Current | Fuse | S3 | Weight |
|-------------------------|----------|----------------|--------------|---------|--------------|------|------|---------|
| | | | P1 | P2 | | | | |
| Without ex-proof | | | | | | | | |
| 20/2 M plus | JP50350 | 3/PE~400 V | 2.40 kW | 1.91 kW | 4.0 A | 10 A | 25 % | 29.0 kg |
| 25/2 ME | JP50356 | 1/N/PE~230 V | 2.70 kW | 2.04 kW | 12.0 A | 16 A | 35 % | 38.0 kg |
| 35/2 M | JP50357 | 3/PE~400 V | 3.70 kW | 3.04 kW | 6.6 A | 10 A | 40 % | 40.5 kg |
| 36/2 M | JP50363 | 3/PE~400 V | 4.20 kW | 3.42 kW | 7.3 A | 10 A | 30 % | 40.5 kg |
| 45/2 M | JP50369 | 3/PE~400 V | 4.84 kW | 3.93 kW | 7.9 A | 10 A | 25 % | 42.0 kg |
| 75/2 M | JP50375 | 3/PE~400/690 V | 7.70 kW | 6.60 kW | 13.2 A/7.7 A | 20 A | 30 % | 90.0 kg |
| 76/2 M | JP50377 | 3/PE~400/690 V | 7.70 kW | 6.60 kW | 13.2 A/7.7 A | 20 A | 30 % | 90.0 kg |
| With ex-proof | | | | | | | | |
| 20/2 M plus, Ex | JP50352 | 3/PE~400 V | 2.40 kW | 1.91 kW | 4.0 A | 10 A | 25 % | 29.0 kg |
| 25/2 ME, Ex | JP50355 | 1/N/PE~230 V | 2.70 kW | 2.04 kW | 12.0 A | 16 A | 35 % | 38.0 kg |
| 35/2 M, Ex | JP50359 | 3/PE~400 V | 3.70 kW | 3.04 kW | 6.6 A | 10 A | 40 % | 40.5 kg |
| 36/2 M, Ex | JP50365 | 3/PE~400 V | 4.20 kW | 3.42 kW | 7.3 A | 10 A | 30 % | 40.5 kg |
| 45/2 M, Ex | JP50371 | 3/PE~400 V | 4.84 kW | 3.93 kW | 7.9 A | 10 A | 25 % | 42.0 kg |
| 75/2 M, Ex | JP50376 | 3/PE~400/690 V | 7.70 kW | 6.60 kW | 13.2 A/7.7 A | 20 A | 30 % | 90.0 kg |
| 76/2 M, Ex | JP50378 | 3/PE~400/690 V | 7.70 kW | 6.60 kW | 13.2 A/7.7 A | 20 A | 30 % | 90.0 kg |

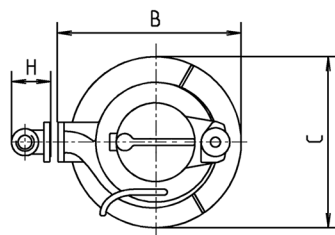
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SEWAGE PUMPS

Dimensions pump base (mm)



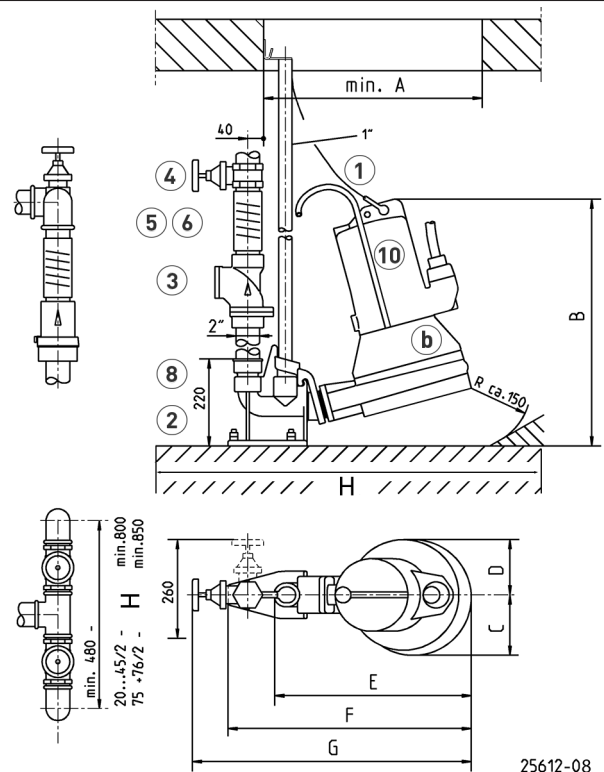
1 1/4"
1 1/4"-1 1/2"



| Typ | A | B | C | D | E | F | G | H |
|-------------|-----|-----|-----|-----|-----|----|-----|----|
| 20/2M | 440 | 290 | 230 | 100 | 140 | 60 | 230 | 90 |
| 25/2ME | 520 | 330 | 250 | 140 | 180 | 60 | 270 | 90 |
| 35/2M+36/2M | 520 | 330 | 250 | 140 | 180 | 60 | 270 | 90 |
| 45/2M | 520 | 330 | 255 | 140 | 180 | 60 | 270 | 90 |
| 75/2M+76/2M | 665 | 430 | 400 | 150 | 210 | 60 | 300 | 90 |

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Example of guide rail installation (mm)



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| | A | B | C | D | E | F | G | H | min. |
|--------------|-----|-----|-----|-----|-----|-----|-----|-------------|------|
| 20/2M plus | 430 | 450 | 110 | 110 | 380 | 500 | 585 | 400 x 700mm | |
| 25/2ME-36/2M | 470 | 490 | 125 | 125 | 420 | 540 | 635 | 400 x 700mm | |
| 45/2M | 470 | 490 | 130 | 125 | 420 | 540 | 635 | 400 x 700mm | |
| 75/2M+76/2M | 545 | 625 | 155 | 140 | 500 | 615 | 705 | 400 x 800mm | |














MECHANICAL ACCESSORY

| | | | Code No. |
|--|--|---|----------------|
| | 1 Chain certified, 2.5 m, 320 kg, 5 rings (EN 818 mod.) certified, 5.0 m, 320 kg, 8 rings (EN 818 mod.) certified, 7.5 m, 320 kg, 11 rings (EN 818 mod.) Shackle, certified, 630 kg, stainless steel Pump hanging (08 Ex - 100...) | | JP45901 |
| | | | JP45902 |
| | | | JP47365 |
| | | | JP45904 |
| | | | JP45925 |
| | 2 Guide rail system GR 35 Guide rail 1" Guide rail 1" Guide rail 1" Guide rail 1" | 1 1/2" female thread for MultiCut pumps | JP14094 |
| | | 1500 mm | JP48937 |
| | | 2000 mm | JP48938 |
| | | 2500 mm | JP48939 |
| | | 3000 mm | JP48940 |

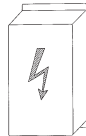

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MECHANICAL ACCESSORY

| | | | | Code No. | |
|---|---|-------------------------------|--|-----------------|---------|
|  | ③ | Swing-type check valve | | | |
| | | R40 EN 12050-4 | 1½" (DN 40), PN 4 | 150x120 (HxB) | JP00317 |
|  | | R50 EN 12050-4 | 2" (DN 50), PN 4 | 150x120 (HxB) | JP00326 |
| | | Ball-type check valve | | | |
|  | | KE40 EN 12050-4 | 1½" (DN 40), PN 6 | 170x125 (HxB) | JP47974 |
| | | K50 EN 12050-4 | 2" (DN 50), PN 6 | 185x155 (HxB) | JP44782 |
|  | ④ | Stop valve | | | |
| | | | brass, 1½" (DN 40), PN 16 | 125x60 (HxB) | JP44786 |
| | | | stainless steel, 1½" (DN 40), PN 16 | 125x80 (HxB) | JP48403 |
|  | ⑤ | Elastic connection | | | |
| | | | brass, 2" (DN 50), PN 16 | 140x70 (HxB) | JP44787 |
|  | ⑥ | Hose band clamp | | | |
| | | | 1½" | 120x50 (HxD) | JP44777 |
|  | ⑦ | Pump base | | | |
| | | | 2" | 150x63 (HxD) | JP44775 |
|  | ⑧ | Retaining plate | | | |
| | | | 1½" | 125x60 (HxB) | JP44763 |
| | | | 2" | 125x80 (HxB) | JP44764 |
| | | | 20/2M | 125x60 (HxB) | JP44759 |
|  | ⑧ | Reducing socket | | | |
| | | | M | 25/2ME - 45/2M | JP20980 |
| | | | M 220 | 75/2M - 76/2M | JP22302 |
|  | ⑨ | Pipe connection | | | |
| | | | in connection with startic-air level control | JP23100 | |
| | | | 1¼"-1½" | 125x60 (HxB) | JP44769 |
|  | ⑩ | Flushing tube | | | |
| | | | 1¼"-2" | 125x80 (HxB) | JP44772 |
| | | | 1 1/2"-2" for guide rail system GR 35 | 125x80 (HxB) | JP44776 |
|  | ⑨ | Pipe connection | | | |
| | | | 1 1/4" (female thread) | 125x80 (HxB) | JP16870 |
| | | | 1 1/4" (female thread) | 125x80 (HxB) | JP16870 |
|  | ⑩ | Flushing tube | | | |
| | | | Type 0 | 08 Ex, 20/2 | JP45408 |
| | | | Type I | 10/... - 45/... | JP28221 |
| | | Type II | 55/... - 100/... | JP28222 | |


ELECTRICAL ACCESSORY

| | | | | Code No. | |
|---|---|---------------------------------|---------------------------------|-----------------------------|---------|
|  | a | Control for single units | | | |
| | | | Control unit AD 12 ExME, TLS | 25/2 ME | JP43163 |
| | | | soft starting device | | JP24138 |
| | | | Control unit AD 46 ExM, TLS | 20/2 M | JP43160 |
| | | | Control unit HIGHLOGO 1-46 LC | | JP47985 |
| | | | Control unit AD 610 ExM, TLS | 35/2 M - 45/2 M | JP43161 |
| | | | Control unit HIGHLOGO 1-610 LC | | JP47986 |
| | | | Control for duplex units | | |
| | | | Control unit BD 46 ExM, TLS | 20/2 M | JP43166 |
| | | | Control unit HIGHLOGO 2-46 LC | | JP47994 |
|  | | | Control unit BD 610 ExM, TLS | 35/2 M - 45/2 M | JP43167 |
| | | | Control unit HIGHLOGO 2-610 LC | | JP47995 |
| | | | Rechargeable battery | for mains independent alarm | JP44850 |

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ELECTRICAL ACCESSORY

| | | | Code No. |
|---|-----------------------------|----------------------------------|----------|
|  | b Seal leak detector | DKG | JP44900 |
| | | DKG Ex for explosion-proof pumps | JP00249 |
| | Smart Home | FTJP radio transmitter | JP47209 |

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