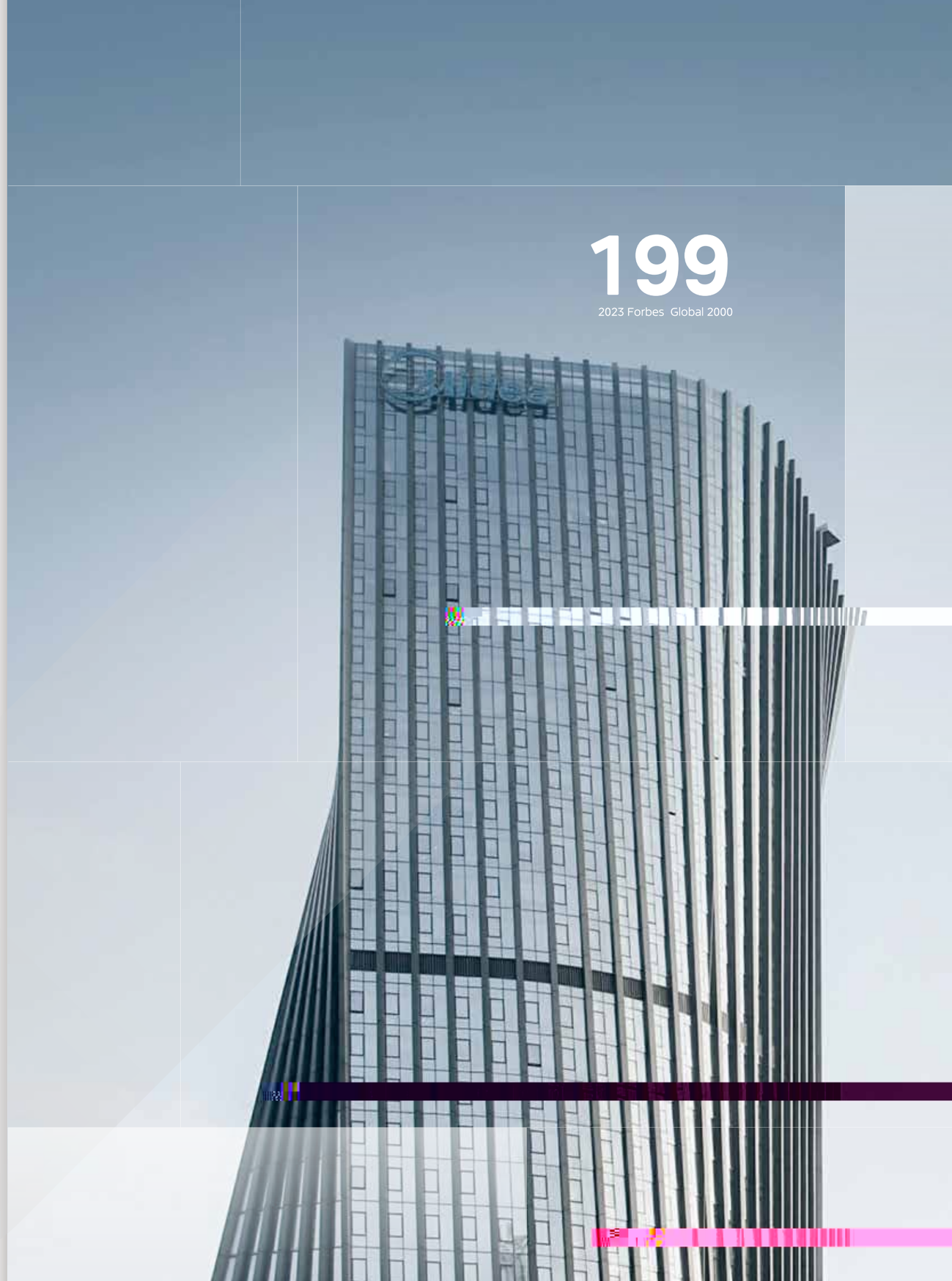
# 199

2023 Forbes Global 2000



# Business Group

Midea's Industrial Technology Business Group is one of the five business segments of Midea Group. It aggregates core scientific and technological strengths in four major fields: intelligent transportation, industrial automation, green energy, and consumer appliances.

Its product range includes high-precision core components such as compressors, motors, chips, automotive components, electronic expansion valves, inverters, servo and motion control systems, gearboxes, and heat dissipation components.

| Intelligent transportation | Industrial automation | Green energy | Consumer appliances |
|---|---|---|---|

Welling

MOTINOVA

SERVOTRO

CLOU

Its products benefit nearly 3 billion consumers worldwide, with 70% of its business focused on green and sustainable products.

27
R&D & testing centers

5600+
Licensed Patents

51%
Research talents

70
Drafted & participated in the release of standards

**2005**
Expansion of
overseas market

**2003**

shr
Hic

## NO.1
in the industry to conduct
the mechanical back-to-back test
Real load testing

## 10+10
Test platform and ageing platform

## Advanced technology
High-performance external
water circulation

## 45 days
Shortest lead time

## 100,000 level
Dust free plant





# Manufacturing Quality

# Products at a Glance

## Power

Powder DischargeFans，Condensate pump，
Compressor，etc.

## Mining

Mud pumps, belt conveyors, counter cyclones，etc.

## Petrochemical

Pressurized fans, feed pumps,
oil transfer pumps, compressors，etc.

## Cement

Kiln induced draft fan, dedusting fan, rotary kiln
drive coal mills，etc.

## Municipal

Hot water circulation pumps, sewage pumps,
gas fans，etc.

## Metallurgy

Dedusters, Blast Furnace Blowers,
Slagging Pumps, Oxygen ompressors，etc.

## Light Industry

Soft water pumps, cleaning pumps, pulverisers,
beaters，etc.

## Other Industry

# Air-Cooled VFD Solution

## High Performance

- Single control board: simplified control system
- Efficient response speed
- High-speed optical fiber communication

## Compact Design

- Cabinet high integration design
- High efficiency heat dissipation design
- High power density unit design

## Flexibility

- Bypass optional function
- Sync transfer system
- **Multi-bus module design:** MODBUS, ProfiBus, Ethernet, etc
- **Front side operation :** Support wall container placement, for more complex site environments

## Reliability

- Better than IEEE519
- Lower harmonic
- Carrier phase-shifting algorithm

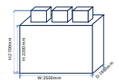
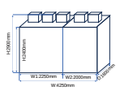
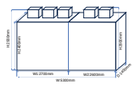
## Intelligence

- Integrated digital cloud platform, digital O&M
- Fault classification and storage for accurate location
- Real-time monitoring of key device temperature
- Fault diagnosis and prediction in advance

# Air-Cooled VFD Solution

## 5th Generation Double Side Operation

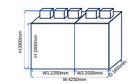
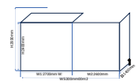
6kV

| | Power | Capacity | Model | Weight (kg) | Dimensionn (W x D x H (mm) ) |
|---|---|---|---|---|---|
| MA1.1 | 200 | 250 | HC1000-060/00250 | 1919 | |
| | 250 | 315 | HC1000-060/00315 | 1969 | |
| | 315 | 400 | HC1000-060/00400 | 2094 | |
| | 400 | 500 | HC1000-060/00500 | 2154 | |
| | 450 | 560 | HC1000-060/00560 | 2269 | |
| | 500 | 630 | HC1000-060/00630 | 2349 | |
| | 560 | 700 | HC1000-060/00700 | 2424 | |
| | 630 | 800 | HC1000-060/00800 | 2464 | |
| MA2.1 | 710 | 900 | HC1000-060/00900 | 3550 |  |
| | 800 | 1000 | HC1000-060/01000 | 3678 | |
| | 900 | 1150 | HC1000-060/01150 | 3758 | |
| | 1000 | 1250 | HC1000-060/01250 | 3880 | |
| | 1120 | 1400 | HC1000-060/01400 | 4084 | |
| | 1250 | 1600 | HC1000-060/01600 | 4396 | |
| MA3.1 | 1400 | 1800 | HC1000-060/01800 | 5595 |  |
| | 1600 | 2000 | HC1000-060/02000 | 5755 | |
| | 1800 | 2250 | HC1000-060/02250 | 5975 | |
| | 2000 | 2500 | HC1000-060/02500 | 6140 | |
| MA4.1 | 2250 | 2800 | HC1000-060/02800 | 8358 |  |
| | 2500 | 3200 | HC1000-060/03200 | 8958 | |
| | 2800 | 3500 | HC1000-060/03500 | 9858 | |
| | 3150 | 4000 | HC1000-060/04000 | 10758 | |



## 5th Generation Double Side Operation

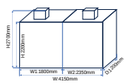
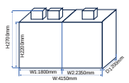
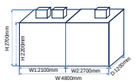
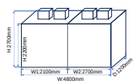
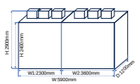
10kV

| | Power | Capacity | Model | Weight (kg) | Dimensionn (W x D x H (mm) ) |
|---|---|---|---|---|---|
| ML1.1 | 220 | 275 | HC1000-100/00275 | 2240 | |
| | 250 | 320 | HC1000-100/00320 | 2260 | |
| | 280 | 350 | HC1000-100/00350 | 2286 | |
| | 315 | 400 | HC1000-100/00400 | 2316 | |
| | 355 | 450 | HC1000-100/00450 | 2346 | |
| | 400 | 500 | HC1000-100/00500 | 2383 | |
| | 450 | 560 | HC1000-100/00560 | 2433 | |
| | 500 | 630 | HC1000-100/00630 | 2483 | |
| | 560 | 700 | HC1000-100/00700 | 2593 | |
| | 630 | 800 | HC1000-100/00800 | 2719 | |
| | 710 | 900 | HC1000-100/00900 | 2875 | |
| | 800 | 1000 | HC1000-100/01000 | 3062 | |
| | 900 | 1150 | HC1000-100/01150 | 3192 | |
| | 1000 | 1250 | HC1000-100/01250 | 3258 | |
| | 1120 | 1400 | HC1000-100/01400 | 3409 | |
| ML2.1 | 1250 | 1600 | HC1000-100/01600 | 4390 | |
| | 1400 | 1800 | HC1000-100/01800 | 4648 | |
| | 1600 | 2000 | HC1000-100/02000 | 4948 | |
| | 1800 | 2250 | HC1000-100/02250 | 5270 | |
| | 2000 | 2500 | HC1000-100/02500 | 5604 | |
| | 2250 | 2800 | HC1000-100/02800 | 5916 | |
| ML3.1 | 2500 | 3150 | HC1000-100/03150 | 7678 | |
| | 2800 | 3500 | HC1000-100/03500 | 8188 |  |
| | 3150 | 4000 | HC1000-100/04000 | 8958 | |
| | 3550 | 4500 | HC1000-100/04500 | 9308 | |
| ML4.1 | 4000 | 5000 | HC1000-100/05000 | 11358 | |
| | 4500 | 5650 | HC1000-100/05650 | 11958 |  |
| | 5000 | 6300 | HC1000-100/06300 | 12858 | |
| | 5600 | 7000 | HC1000-100/07000 | 13758 | |

# Air-Cooled VFD Solution

## 5th Generation Front Side Operation

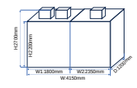
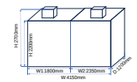
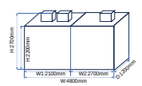
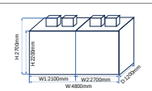
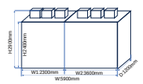
### 10kV

| | Power | Capacity | Model | Weight (kg) | Dimensionn (W x D x H (mm) ) |
|---|---|---|---|---|---|
| ML1.1S | 220 | 275 | HC1000-100/00275 | 3263 |  |
| | 250 | 320 | HC1000-100/00320 | 3313 | |
| | 280 | 350 | HC1000-100/00350 | 3363 | |
| | 315 | 400 | HC1000-100/00400 | 3413 | |
| | 355 | 450 | HC1000-100/00450 | 3463 | |
| | 400 | 500 | HC1000-100/00500 | 3513 | |
| | 450 | 560 | HC1000-100/00560 | 3563 | |
| | 500 | 630 | HC1000-100/00630 | 3663 | |
| | 560 | 700 | HC1000-100/00700 | 3713 | |
| | 630 | 800 | HC1000-100/00800 | 3813 | |
| | 710 | 900 | HC1000-100/00900 | 3913 | |
| | 800 | 1000 | HC1000-100/01000 | 4013 |  |
| | 900 | 1150 | HC1000-100/01150 | 4163 | |
| | 1000 | 1250 | HC1000-100/01250 | 4313 | |
| | 1120 | 1400 | HC1000-100/01400 | 4513 | |
| ML2.1S | 1250 | 1600 | HC1000-100/01600 | 4923 |  |
| | 1400 | 1800 | HC1000-100/01800 | 5033 | |
| | 1600 | 2000 | HC1000-100/02000 | 5352 | |
| | 1800 | 2250 | HC1000-100/02250 | 5662 | |
| | 2000 | 2500 | HC1000-100/02500 | 5986 | |
| | 2250 | 2800 | HC1000-100/02800 | 6291 |  |
| ML3.1S | 2500 | 3150 | HC1000-100/03150 | 7513 |  |
| | 2800 | 3500 | HC1000-100/03500 | 7913 | |
| | 3150 | 4000 | HC1000-100/04000 | 8413 | |
| | 3550 | 4500 | HC1000-100/04500 | 8913 | |

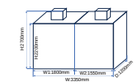
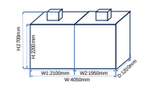
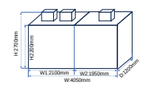
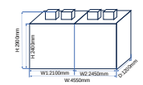


## 5th Generation Front Side Operation

### 11kV

| | Power | Capacity | Model | Weight (kg) | Dimensionn (W x D x H (mm) ) |
|---|---|---|---|---|---|
| MB1.1S | 540 | 670 | HC1000-110/00670 | 3639 |  |
| | 690 | 860 | HC1000-110/00860- | 3839 | |
| | 830 | 1030 | HC1000-110/01030 | 4089 | |
| | 950 | 1190 | HC1000-110/01190 | 4239 |  |
| | 1100 | 1380 | HC1000-110/01380 | 4539 | |
| | 1240 | 1550 | HC1000-110/01550 | 4689 | |
| MB2.1S | 1390 | 1740 | HC1000-110/01740 | 5024 |  |
| | 1640 | 2040 | HC1000-110/02040 | 5274 | |
| | 1770 | 2220 | HC1000-110/02220 | 5445 | |
| | 2060 | 2580 | HC1000-110/02580 | 5806 | |
| | 2340 | 2920 | HC1000-110/02920 | 6198 |  |
| MB3.1S | 2750 | 3430 | HC1000-110/03430 | 7866 |  |
| | 3080 | 3850 | HC1000-110/03850 | 8266 | |
| | 3510 | 4390 | HC1000-110/04390 | 8916 | |
| | 3700 | 4650 | HC1000-110/04650 | 9166 | |

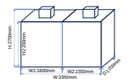
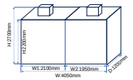
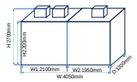
### 6kV

| | Power | Capacity | Model | Weight (kg) | Dimensionn (W x D x H (mm) ) |
|---|---|---|---|---|---|
| MA1.1S | 200 | 250 | HC1000-060/00250 | 2567 |  |
| | 250 | 315 | HC1000-060/00315 | 2667 | |
| | 315 | 400 | HC1000-060/00400 | 2767 | |
| | 400 | 500 | HC1000-060/00500 | 2867 | |
| | 450 | 560 | HC1000-060/00560 | 2917 | |
| | 500 | 630 | HC1000-060/00630 | 3067 | |
| | 560 | 700 | HC1000-060/00700 | 3117 | |
| | 630 | 800 | HC1000-060/00800 | 3217 | |
| MA2.1S | 710 | 900 | HC1000-060/00900 | 3611 |  |
| | 800 | 1000 | HC1000-060/01000 | 3713 | |
| | 900 | 1150 | HC1000-060/01150 | 3917 | |
| | 1000 | 1250 | HC1000-060/01250 | 4019 |  |
| | 1120 | 1400 | HC1000-060/01400 | 4219 | |
| | 1250 | 1600 | HC1000-060/01600 | 4424 | |
| MA3.1S | 1400 | 1800 | HC1000-060/01800 | 4880 |  |
| | 1600 | 2000 | HC1000-060/02000 | 5080 | |
| | 1800 | 2250 | HC1000-060/02250 | 5280 | |
| | 2000 | 2500 | HC1000-060/02500 | 5580 | |

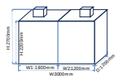
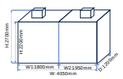
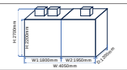
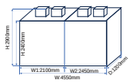
# Air-Cooled VFD Solution

## 5th Generation Front Side Operation

### 6.6kV

| | Power | Capacity | Model | Weight (kg) | Dimensionn (W x D x H (mm) ) |
|---|---|---|---|---|---|
| MC1.1S | 330 | 410 | HC1000-066/00410 | 2792 |  |
| | 420 | 520 | HC1000-066/00520 | 2892 | |
| | 500 | 620 | HC1000-066/00620 | 3042 | |
| | 570 | 710 | HC1000-066/00710 | 3142 | |
| | 660 | 830 | HC1000-066/00830 | 3192 | |
| | 750 | 930 | HC1000-066/00930 | 3292 | |
| MC2.1S | 840 | 1050 | HC1000-066/01050 | 3508 |  |
| | 980 | 1230 | HC1000-066/01230 | 3861 |  |
| | 1070 | 1330 | HC1000-066/01330 | 3915 | |
| | 1240 | 1550 | HC1000-066/01550 | 4018 | |
| | 1400 | 1750 | HC1000-066/01750 | 4224 | |
| | 1500 | 1870 | HC1000-066/01870 | 4425 | |
| MC3.1S | 1650 | 2060 | HC1000-066/02060 | 5280 | |
| | 1850 | 2310 | HC1000-066/02310 | 5580 | |
| | 2110 | 2630 | HC1000-066/02630 | 5940 | |
| | 2250 | 2800 | HC1000-066/02800 | 5991 | |

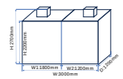
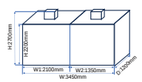
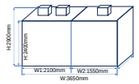
### 4.16kV

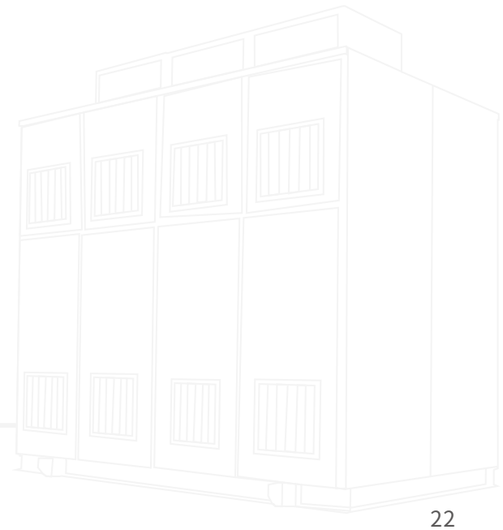
| | Power | Capacity | Model | Weight (kg) | Dimensionn (W x D x H (mm) ) |
|---|---|---|---|---|---|
| MJ1.1S | 210 | 260 | HC1000-416/00260 | 2331 |  |
| | 260 | 330 | HC1000-416/00330 | 2411 | |
| | 320 | 390 | HC1000-416/00390 | 2511 | |
| | 360 | 450 | HC1000-416/00450 | 2581 | |
| | 420 | 520 | HC1000-416/00520 | 2611 | |
| | 470 | 590 | HC1000-416/00590 | 2661 | |
| MJ2.1S | 530 | 660 | HC1000-416/00660 | 2952 |  |
| | 620 | 780 | HC1000-416/00780 | 3084 | |
| | 670 | 840 | HC1000-416/00840 | 3187 | |
| | 780 | 980 | HC1000-416/00980 | 3228 | |
| | 890 | 1110 | HC1000-416/01110 | 3392 |  |
| | 940 | 1180 | HC1000-416/01180 | 3493 | |
| MJ3.1S | 1040 | 1300 | HC1000-416/01300 | 4080 |  |
| | 1170 | 1460 | HC1000-416/01460 | 4280 | |
| | 1330 | 1660 | HC1000-416/01660 | 4430 | |
| | 1490 | 1860 | HC1000-416/01860 | 4630 | |



## 5th Generation Front Side Operation

### 3.3kV

| | Power | Capacity | Model | Weight (kg) | Dimensionn (W x D x H (mm) ) |
|---|---|---|---|---|---|
| MD1.1S | 170 | 210 | HC1000-033/00210 | 2236 |  |
| | 210 | 260 | HC1000-033/00260 | 2286 | |
| | 250 | 310 | HC1000-033/00310 | 2386 | |
| | 290 | 360 | HC1000-033/00360 | 2456 | |
| | 330 | 420 | HC1000-033/00420 | 2486 | |
| | 380 | 470 | HC1000-033/00470 | 2556 | |
| MD2.1S | 420 | 530 | HC1000-033/00530 | 3114 |  |
| | 490 | 620 | HC1000-033/00620 | 3186 | |
| | 540 | 670 | HC1000-033/00670 | 3228 | |
| | 620 | 780 | HC1000-033/00780 | 3439 | |
| | 700 | 880 | HC1000-033/00880 | 3472 | |
| | 750 | 940 | HC1000-033/00940 | 3543 | |
| MD3.1S | 830 | 1030 | HC1000-033/01030 | 3580 |  |
| | 930 | 1160 | HC1000-033/01160 | 3730 | |
| | 1060 | 1320 | HC1000-033/01320 | 3930 | |
| | 1180 | 1480 | HC1000-033/01480 | 3980 | |



# Water-cooled VFD Solution

## 4th Generation Double Side Operation

1600

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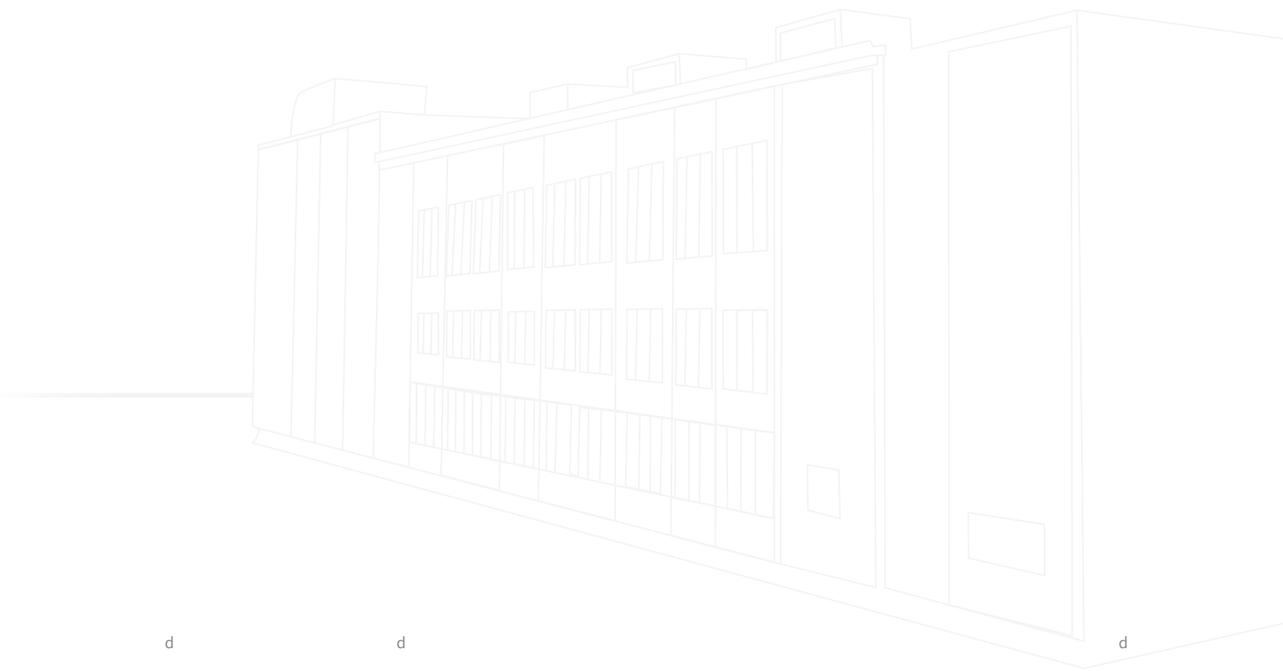

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5000kW Application in the Arctic Oil Field

UK CLH pipeline system company pump station frequency conversion retrofit