

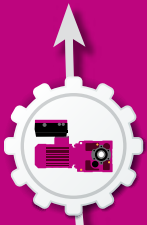


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2017 - Yılmaz Automation

While adding speed control devices to gear unit, Yılmaz Redüktör start to offer complete solutions for customers.



2013 - Electric Motors

In 2013 September Yılmaz Redüktör establishes subsidiary company ELK Motors plant in Çerkezköy Tekirdağ with second plant for MES Electromechanical Casting, which will increase production capacity to 20000 tonnes per year.



2010 - Technological Investments

In 2010 Yılmaz Redüktör invests 30 new CNC Machines, loaded by robots these machines boost production speed and quality.



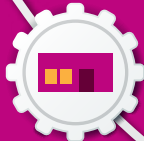
2002 - MES Electromechanical Casting

MES Electromechanical Casting was established with fully automated production lines. MES meets all of Yılmaz Redüktör's cast part needs.



1987 - New Gearbox Facility

Turkey's largest gearbox plant opened in İstanbul - Beylikdüzü with a 23,000 m² floor area.



1970 - First Factory

Yılmaz Redüktör buys building for casting and gearbox production which was our old sales headquarters.



1958 - First Workshop

Yılmaz Redüktör's first workshop established in İstanbul Şişhane.

In 1958 first movement started in a small workshop in İstanbul...

Founded in 1958, Yılmaz Redüktör quickly became Turkey's leading gearbox manufacturer, aided by consistent product quality, work discipline, strategic planning and consistent vision. Today Yılmaz Redüktör remains Turkey's leading gearbox producer and is rapidly becoming well known throughout the world. Yılmaz Redüktör uses its extensive experience to develop new products, uses the latest available production technology and continually invests in engineering to provide its customers with products that fulfil the expectations of the world market. Our products are used in many industries and our customers regard us as trusted partners.

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It is important to choose technically appropriate economical solutions during the desing phase of industrial applications. The selection and sizing of the drive is a critical issue that will directly affect the unplanned downtime of the application. While choosing the product, the applications should be evaluated according to the load types, technical requirements and environmental conditions. This document should be evaluated as a recommendation on general and sector specific applications which Yılmaz Redüktör variable frequency drives can be used. For more technical information and special applications that are not mentioned in the document, please contact Yılmaz Redüktör Automation Department.

Common Applications

Application	Load Type	YB1000	YA2000	YE8000	YP65	YI1000
Conveyor	Constant Torque	●	●	⊙	●	●
Fan/Ventilation (≤7.5kW)	Variable Torque	●	●	⊙	●	●
Fan/Ventilation (>7.5kW)	Variable Torque	○	●	⊙	⊙*1	⊗
Pump	Variable Torque	●	●	⊙	●	●
Hydraulic Pump	Variable Torque	●	●	⊙	●	●
Crane	Constant Torque	⊗	●	●	⊗	⊗
Freight Elevator	Constant Torque	⊗	●	●	⊗	⊗
Bucket Elevator	Constant Torque	⊗	●	●	⊗	⊗
Auger/Screw Conveyor	Constant Torque	⊙	●	●	⊙	⊙
Plastic Extruder	Constant Torque	○	●	●	○	⊗
Mixer/Agitator	Variable Torque	●	●	⊙	●	●
Spindle	Constant Torque	●	●	⊙	○	○
High Freq. Spindle	According to App.	●	●	⊙	○	○
Woodworking	Constant Torque	●	●	⊙	●	●
Band/Circular Saw	Constant Torque	●	●	⊙	●	●
Eccentric Press	Constant Torque	○	●	●	⊗	⊗
Hydraulic Press	Variable Torque	●	●	⊙	●	●
Winder	Constant Torque	⊙	●	●	⊙	⊙
Unwinder	Constant Torque	○	●	●	○	○
Outdoor Usage	According to App.	⊗	⊗	⊙	●	●

● : Usually suggested

⊙ : Suggested/not suggested under some conditions

○ : Not suggested except under special conditions

⊗ : Usually not suggested

*1 : YP65-V model is suggested

Specific Applications

Application	Load Type	YB1000	YA2000	YE8000	YP65	YI1000
Automatic Door	Constant Torque	⊙	●	⊙	⊙	⊙
Screw Compressor	Coonstant Torque	○	●	●	⊙*1	⊙
Multi Pump	Variable Torque	○	○	○	●	○

● : Usually suggested

⊙ : Suggested/not suggested under some conditions

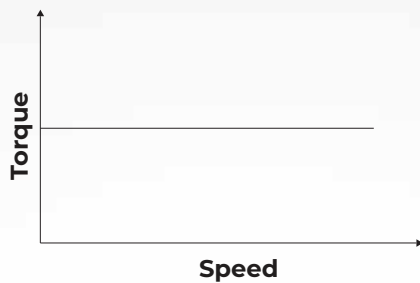
○ : Not suggested except under special conditions

⊗ : Usually not suggested

*1 : YP65-V model is suggested

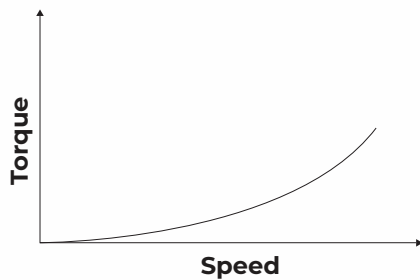
Load Types

Constant Torque

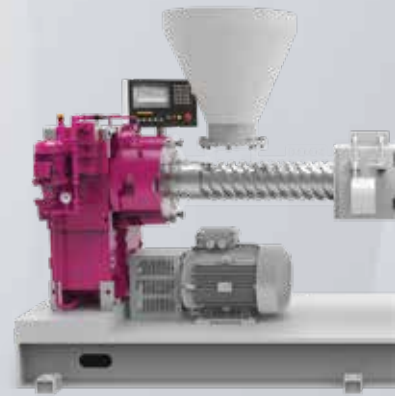
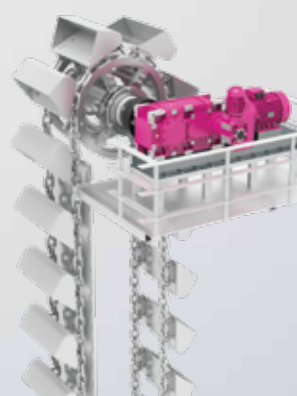
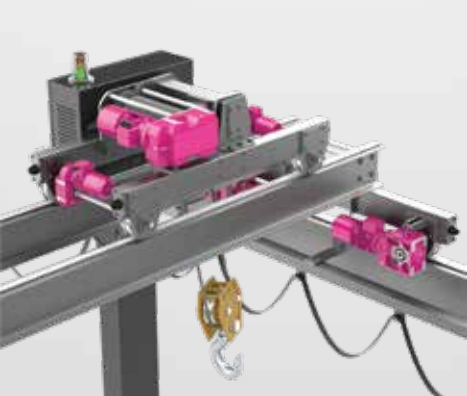


The load torque demand does not change regardless of the running speed. Most friction loads such as conveyors, cranes, saws etc. are good examples of this type.

Variable Torque



The load torque changes by the square of the running speed hence the power demand changes in cube relation to operating speed. Materials running in fluids typically are expected to have this type of load characteristics. Typically fans, pumps, mixers (as all work in either gas/air or liquids/water) are typical candidates of this load type. This characteristic gives huge savings potential if speed is to be reduced lower than the designated operation point. On the contrary, it is almost impossible to run the system above designated operation speed due to the cube-increase of power demand. Therefore, for example using a VSD with a pump in comparison to a constant speed pump with a valve would easily have a double digit percentage of energy saving potential in terms of pressure regulated system requirement.



YB1000 - Basic Series AC VFD



YB1000

Basic Series Variable Frequency Drive

- Small footprint, optimized design
- High speed control performance
- Scalar Control (V/F)
- Heavy duty applications
- Built-in braking chopper [3.7 – 22 kW]
- Torque boost
- Coated PCBs for arsh environments
- Built-in MODBUS communication
- IP20 Protection level
- Wide environmental temperature range (-10...+40°C)

Technical Specifications

Control Method	Scalar Control (V/F)
Output Frequency Range	0.5 – 400.0 Hz
Multifunctional Input Terminals	Digital Inputs: 4 pcs. Analog Inputs: 1 pc. 0 – 10 V or 0 – 20 mA/4 – 20 mA
Multifunctional Output Terminals	Digital Outputs: 1 pc. relay output
Acceleration/Deceleration Time	Adjustable between 0.0 – 999.9 secs. individually Four different ramp settings
Multi Speed Operation	The possibility of switching between 16 different speed setting with cyclic operation function or digital inputs
DC Braking	DC Braking Frequency: Adjustable between 0.1 and 10.0 Hz. DC Braking Time: Adjustable between 0.0 – 25.0 second DC Braking Current: Adjustable between 0.0 – 150.0%
Torque Boost Function	Manual torque increase (adjusted between 0.0 – 20.0%)
Communication	Built-in RS485 port, MODBUS RTU/ASCII protocol
Overload Capacity	150% overload capacity along 60 secs., 180% along 3 secs.
Automatic Voltage Regulation	Built-in AVR function to achieve better performance against low/high mains voltage
Other Protection Function	Output short circuit protection, Over current protection, Parameter lock and so on

YA2000 - Advanced Series AC VFD



YA2000

Advanced Series Variable Frequency Drive

- Small footprint, optimized design
- High speed control performance
- Complete or half separated V/F control
- Sensorless Vector Control (SLVC)
- Heavy duty application
- Built-in braking chopper [0.37 – 37 kW]
- Special Functions for Crane Applications
- Automatic torque boost
- Coated PCBs for harsh environments
- Built-in MODBUS communication
- IP20 Protection level
- Wide environmental temperature range (-10...+40°C)

Technical Specifications

Control Method	Scalar Control (V/F) Sensorless Vector Control (SLVC)
Output Frequency Range	0.5 – 320.0 Hz
Multifunctional Input Terminals	Digital Inputs: 6 pcs. digital input terminals (one of them is high frequency type) Analog Inputs: 2 pcs., 0 – 10 V and/or 0 – 20 mA/4 – 20 mA
Multifunctional Output Terminals	Digital Outputs: 2 pcs., relay and transistor output Analog Outputs: 1 pc. 0 – 10 V or 0 – 20 mA/4 – 20 mA
Acceleration/Deceleration Time	Adjustable between 0.0 – 6500.0 secs. individually Four different ramp settings
Multi Speed Operation	The possibility of switching between 16 different speed setting with cyclic operation function or digital inputs
V/F Separation Operation	Complete separation or half separation between output voltage and frequency
DC Braking	DC Braking Frequency: Adjustable between 0.0 Hz and maximum frequency DC Braking Time: Adjustable between 0.0 – 100.0 sec. DC Braking Current: Adjustable between 0.0 – 100.0%
Torque Boost Function	Automatic torque increase may be adjusted according to the mechanical load Manual torque increase (adjustable between 0.1 – 30.0%)
Startup Torque	G type: 0.5 Hz 150% (SLVC); P type: 0.5 Hz 100%
Communication	Built-in RS485 port, MODBUS RTU/ASCII protocol
Overload Capacity	G type: 150% overload capacity along 60 secs., 180% along 3 secs P type: 120% overload capacity along 60 secs., 150% along 3 secs
Automatic Voltage Regulation	Built-in AVR function to achieve better performance against low/high mains voltage
Other Protection Function	Output short circuit protection, Over current protection, Output phase loss protection, Over heat protection and so on

YE8000 - Expert Series AC VFD



YE8000

Expert Series Variable Frequency Drive

- Small footprint, optimized design
- High speed control performance
- Complete or half separated V/F control
- Sensorless Vector Control (SLVC)
- Closed Loop Vector Control with Encoder (CLVC)
- PM (Permanent Magnet) motor control
- Heavy duty applications
- Built-in braking chopper [0.75 – 30 kW]
- Automatic torque boost
- Coated PCBs for harsh environments
- Built-in MODBUS communication
- IP20 Protection level
- Wide environmental temperature range (-10...+40°C)

Technical Specifications

Control Method	Scalar Control (V/F) Sensorless Vector Control (SLVC) Closed Loop Vector Control with Encoder (CLVC)
Output Frequency Range	0.5 – 320.0 Hz
Multifunctional Input Terminals	Digital Inputs: 8 pcs. digital input terminals (one of them is high frequency type) Analog Inputs: 2 pcs., 0 – 10 V and/or 0 – 20 mA/4 – 20 mA
Multifunctional Output Terminals	Digital Outputs: 3 pcs., 2 relay, 1 transistor output (up to 100kHz high frequency type) Analog Outputs: 1 pcs., 0 – 10 V or 0 – 20 mA/4 – 20 mA
Acceleration/Deceleration Time	Adjusted between 0.0 – 6500.0 secs. individually Four different ramp settings
Multi Speed Operation	The possibility of switching between 16 different speed setting with cyclic operation function or digital inputs
V/F Separation Operation	Complete separation or half separation between output voltage and frequency
DC Braking	DC Braking Frequency: Adjustable between 0.0 Hz and maximum frequency DC Braking Time: Adjustable between 0.0 – 100.0 sec. DC Braking Current: Adjustable between 0.0 – 100.0%
Torque Boost Function	Automatic torque increase may be adjusted according to the mechanical load Manual torque increase (adjustable between 0.1–30.0%)
Startup Torque	G type: 0.0 Hz 180% (CLVC) – G type: 0.5 Hz 150% (SLVC); P type: 0.5 Hz 100%
Communication	Built-in RS485 port, MODBUS RTU/ASCII protocol
Support For Multiple PG Card	Differential output type encoder option board
Overload Capacity	G type: 150% overload capacity along 60 secs., 180% along 3 secs P type: 120% overload capacity along 60 secs., 150% along 3 secs
Automatic Voltage Regulation	Built-in AVR function to achieve better performance against low/high mains voltage
Other Protection Function	Output short circuit protection, Over current protection, Output phase loss protection, Over heat protection and so on

YI1000 - Motor Integrated Series AC VFD



YI1000

Motor Integrated Series Variable Frequency Drive

- No need for electrical cabinet
- High speed control performance
- IP65 High Protection level
- Scalar Control V/F
- Integrated drive train solution
- Coated PCBs for harsh environments
- Built-in MODBUS communication
- Wide environmental temperature range (-10...+40°C)

Technical Specifications

Control Method	Scalar Control (V/F)
Output Frequency Range	0.5 – 400.0 Hz
Multifunctional Input Terminals	Digital Inputs: 3 pcs. Analog Inputs: 1 pc. 0 – 10 V or 0 – 20 mA/4 – 20 mA
Multifunctional Output Terminals	Digital Outputs: 2 pcs. relay output
Acceleration/Deceleration Time	Adjusted between 0.0 – 999.9 secs. individually Three different ramp settings
Multi Speed Operation	The possibility of switching between 8 different speed setting with cyclic operation function or digital inputs
DC Braking	DC Braking Frequency: Adjustable between 0.1 and 10.0 Hz. DC Braking Time: Adjustable between 0.0 – 25.0 second DC Braking Current: Adjustable between 0.0 – 120.0%.
Torque Boost Function	Manual torque increase (adjustable between 0.0 – 20.0%)
Communication	Built-in RS485 port, MODBUS RTU/ASCII protocol
Overload Capacity	150% overload capacity along 60 secs., 180% along 3 secs.
Automatic Voltage Regulation	Built-in AVR function to achieve better performance against low/high mains voltage
Other Protection Function	Output short circuit protection, Over current protection, Parameter lock and so on

YP65 - IP65 Protection Level, Wall Mounted AC VFD



YP65

Wall Mounted Variable Frequency Drive

- Wall mounted installation
- High speed control performance
- Scalar Control V/F
- IP65 High Protection level
- Integrated drive train solution
- Coated PCBs for harsg environments
- Built-in MODBUS communication
- Heavy duty applications
- Wide environmental temperature range (-10...+40°C)
- Multi-Pump Application (up to 6 Pumps)
- Equal Aging Function for Pumps
- Anti-Freeze Function for Pumps

Technical Specifications

Control Method	Scalar Control (V/F)
Output Frequency Range	0.5 – 400.0 Hz
Multifunctional Input Terminals	Digital Inputs: 4 pcs. below 5.5kW, 6 pcs. above 7.5kW Analog Inputs: 1 pc. 0 – 10 V or 0 – 20 mA/4 – 20 mA
Multifunctional Output Terminals	Digital Outputs: 1 pc. relay output and 1 pc. transistor output for 5.5kW and below 1 pc. relay output output for 7.5kW and above
Acceleration/Deceleration Time	Adjustable between 0.0 – 999.9 secs. individually Four different ramp settings
Multi Speed Operation	The possibility of switching between 16 different speed setting with cyclic operation function or digital inputs
DC Braking	DC Braking Frequency: Adjustable between 0.1 and 10.0 Hz. DC Braking Time: Adjustable between 0.0 – 25.0 second DC Braking Current: Adjustable between 0.0 – 150.0%
Torque Boost Function	Manual torque increase (adjustable between 0.0-20.0%)
Communication	Built-in RS485 port, MODBUS RTU/ASCII protocol
Overload Capacity	150% overload capacity along 60 secs., 180% along 3 secs.
Automatic Voltage Regulation	Built-in AVR function to achieve better performance against low/high mains voltage
Other Protection Function	Output short circuit protection, Over current protection, Parameter lock and so on

YP65-V - IP65 Protection Level, Wall Mounted AC VFD



YP65-V

Wall Mounted Variable Frequency Drive

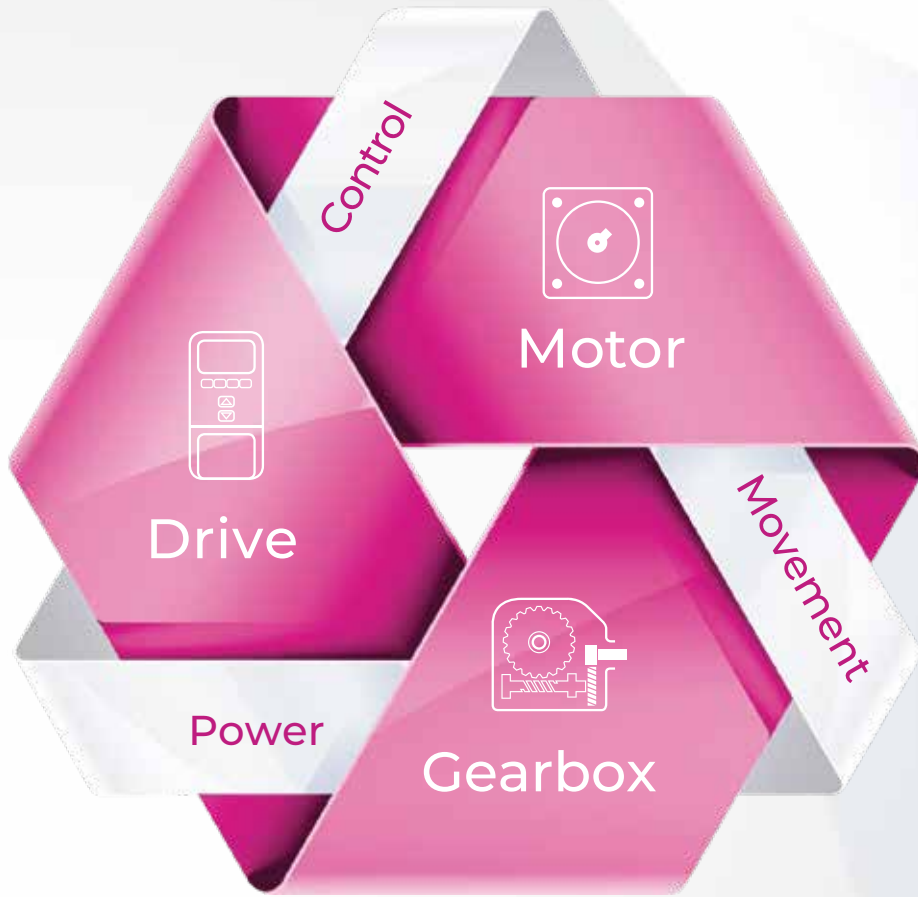
- Wall mounted installation
- High speed control performance
- Scalar Control V/F
- Sensorless Vector Control (SLVC)
- IP65 High Protection level
- Integrated drive train solution
- Coated PCBs for harsh environments
- Built-in MODBUS communication
- Heavy duty applications
- Wide environmental temperature range (-10...+40°C)

Technical Specifications

Control Method	Scalar Control (V/F) Sensorless Vector Control (SLVC)
Output Frequency Range	0.5 – 320.0 Hz
Multifunctional Input Terminals	Digital Inputs: 6 pcs. digital input terminals (one of them is high frequency type) Analog Inputs: 1 pc. 0 – 10 V or 0 – 20 mA/4 – 20 mA
Multifunctional Output Terminals	Digital Outputs: 2 pc. relay output and collector output Analog Outputs: 1 pc. 0 – 10 V and/or 0 – 20 mA/4 – 20 mA
Acceleration/Deceleration Time	Adjustable between 0.0 – 6500.0 secs. individually Four different ramp settings
Multi Speed Operation	The possibility of switching between 16 different speed setting with cyclic operation function or digital inputs
V/F Separation Operation	Complete separation or half separation between output voltage and frequency
DC Braking	DC Braking Frequency: Adjustable between 0.0 Hz and maximum frequency DC Braking Time: Adjustable between 0.0 – 100.0 sec. DC Braking Current: Adjustable between 0.0 – 100.0%
Torque Boost Function	Automatic torque increase may be adjusted according to the mechanical load Manual torque increase (adjustable between 0.1 – 30.0%)
Startup Torque	G type: 0.5 Hz 150% (SLVC); P type: 0.5 Hz 100%
Communication	Built-in RS485 port, MODBUS RTU/ASCII protocol
Overload Capacity	G type: 150% overload capacity along 60 secs., 180% along 3 secs
Automatic Voltage Regulation	Built-in AVR function to achieve better performance against low/high mains voltage
Other Protection Function	Output short circuit protection, Over current protection, Output phase loss protection, Over heat protection and so on

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