






# SPECIFICATIONS (European spec)

## Drive Unit

	 PWseries TE	 PWseries ST	 PW-X2
Weight	3.4 kg	3.4 kg	3.1 kg
Rated power	250 W		
Max.Torque	60 Nm	70 Nm	80 Nm (EXPW) 70 Nm (High/STD/Eco/+Eco)
Max support speed	25 km/h		
Support mode	4 modes -HIGH -STD -ECO --+ECO		5 modes -EXPW -HIGH -STD -ECO --+ECO

## Display

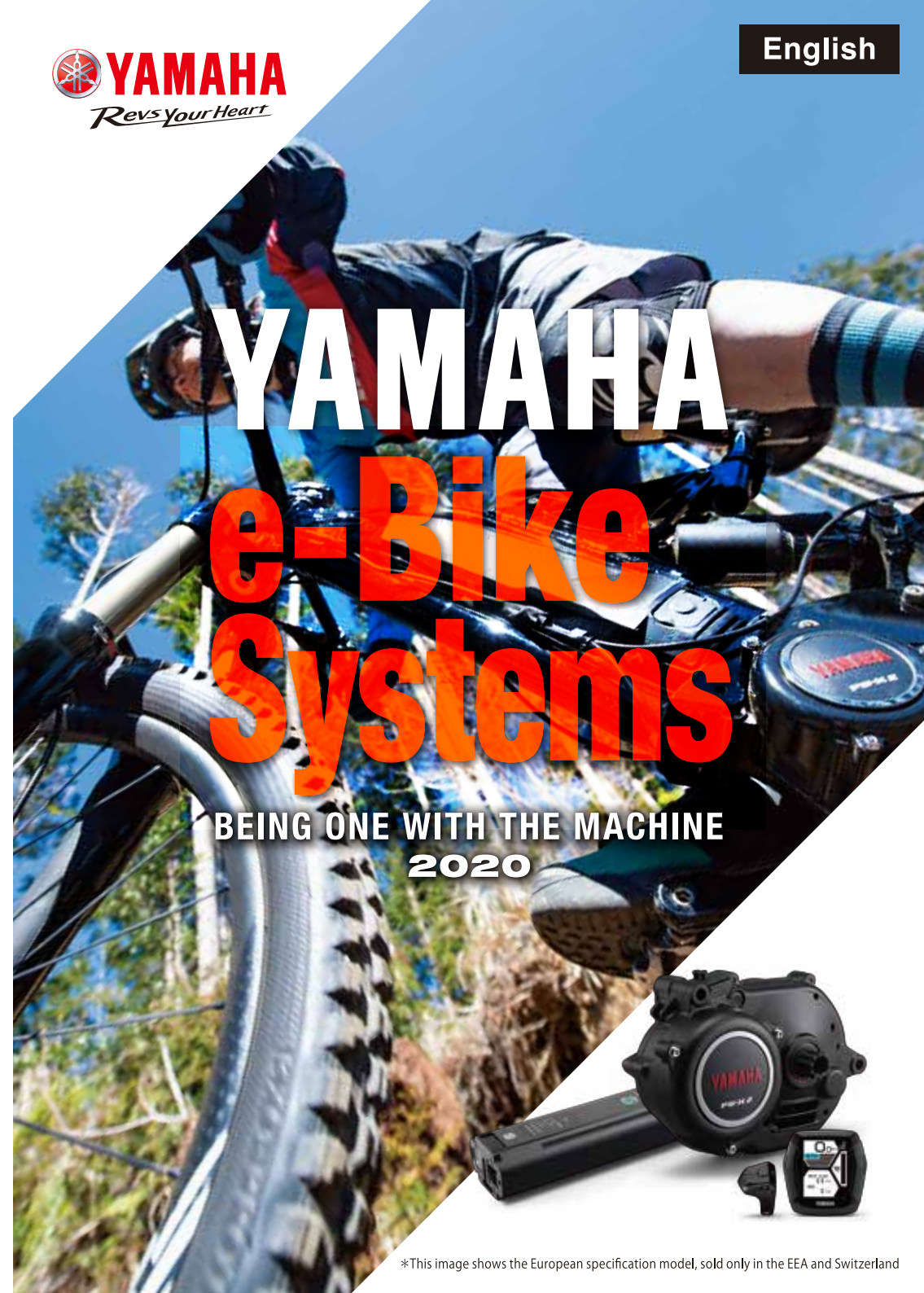
\*For selectable items, infrequently-used functions can be hidden.

	 Display A	 Display C	 Display X	
Drive unit	Displays are interchangeable for all 2019 model year drive systems			
Display size	1,7 inch LCD	2,8 inch TFT Full color	1,8 inch LCD	
Power Supply	N/A	USB power supply (1A)		
Connectivity	N/A Bluetooth® Low Energy Technology			
Functionality	Always-on	-Speed -Battery capacity -Assist mode	-Speed -Battery capacity -Battery capacity (%) -Assist mode -Assist power meter -Clock	-Speed -Battery capacity -Assist mode -Assist power meter
	Selectable	-Trip meter -Odometer -Range	-Average bicycle speed -Maximum bicycle speed -Trip meter -Odometer -Range -Cadence -Calorie Consumption -Navigation: Turn by Turn* -Fitness* -Compass* <small>*Bluetooth® Low Energy Technology connection is necessary</small>	-Average bicycle speed -Maximum bicycle speed -Trip meter -Odometer -Range -Battery capacity (%) -Cadence -Clock -Stopwatch



YAMAHA MOTOR CO.,LTD  
2500 SHINGAI IWATA SHIZUOKA JAPAN

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\*This image shows the European specification model, sold only in the EEA and Switzerland

# BEING ONE WITH THE MACHINE

Bringing rider and machine together as one: that is the long-standing and exclusive development ideal of Yamaha. We are constantly enhancing our systems with the technology necessary to deliver to the user the seductive exhilaration of a flawless ride.

## YAMAHA factory tuned

To achieve the "Being one with the machine" ideal, we have incorporated "Quad Sensor System" and "Automatic Support Mode" technologies to our complete drive unit line up. Our engineers take full advantage of those technologies to fine-tune each system optimally for each underlying riding concept.



Our engineers take advantage of those technologies to fine-tune each system optimally for each underlying riding concept.

YAMAHA  
e-Bike  
Systems

Three drive units for different applications



## The Quad Sensor System

Sensing technology that supports your riding experience

The Quad Sensor System adds an angle sensor to detect the bike's angle of climb or descent, in addition to the existing ride speed, crank rotation, and pedaling torque sensors. The system automatically detects riding conditions, and delivers the appropriate assist power and acceleration.



How "The Quad Sensor System™" works

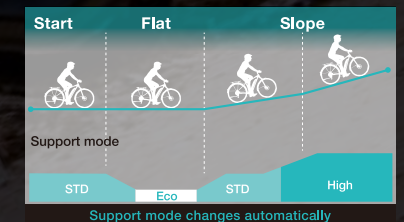
- 1 Torque
- 2 Speed
- 3 Rotation
- 4 Angle

## Automatic Support Mode

The expression of Yamaha's tuning know-how in each riding scenario

Each of the sensors monitors the riding conditions, and algorithms automatically select the appropriate level of pedal assistance. The result is a fine-tuned, user-friendly ride. The algorithms are created individually for each of the drive units on the line-up, creating the experience expected for each riding situation. If you wish to shift between assist modes manually, you can turn the Automatic Support Mode off.

How "Automatic Support Mode™" works



DRIVE UNIT

# High end sport **NEW** PW-X2



## Unparalleled performance

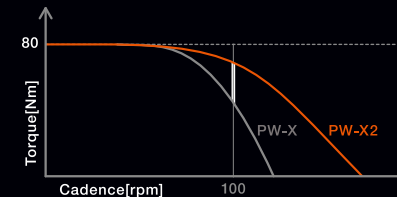
### Pure Ride

Yamaha's worldwide acclaimed flagship model, the PW-X, is reborn as the PW-X2, keeping the original "Pure Ride" concept of powerful and sharp pedaling response, and adding improved power support at the higher cadence range.



### Steady high power at high cadence

The new PW-X2 is even better at delivering the necessary power when the rider needs it the most. At 100rpm, power delivery is up to 50% higher than its predecessor.

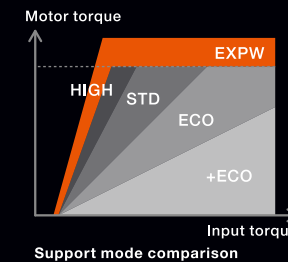


### Automatic Support Mode for E-MTB Ride

The PW-X2's exclusively tuned Automatic Support Mode delivers optimal assist in settings ranging from trail riding to racing by choosing from the bike's three riding modes—Eco, Standard, and High—as conditions demand. The system reduces assist on level roads but boosts power on steep inclines to offer fine-grained assist feel that makes it seem like it's reading the rider's mind.

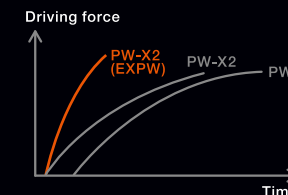
### Extra Power Mode

Extra Power Mode, which features high power and fast response to rider inputs, is back on the PW-X2. When you find yourself facing a real challenge, just turn on the Extra Power! Thanks to improvements in output in the high-cadence region, Extra Power Mode delivers an uniquely powerful feel that you won't find at Standard and lower settings to assist your pedaling in highly demanding settings.



### Quick Response

The reduced backlash of the ratchet mechanism and light-weight designs for major moving parts, such as the axle shaft and reduction gear, contributes to a quicker, more direct response to pedaling.



DRIVE UNIT



NEW

## Multi activity PWseries ST

The PWseries ST takes the functionality of the PWseries SE to a new level while keeping it simple enough to be used by anyone.



The PWseries ST features Yamaha's Quad Sensor System so that it can deliver assist optimized for all conditions despite weighing 100g less than the previous model. The unit also offers a broader assist range that can accommodate high-cadence pedaling.

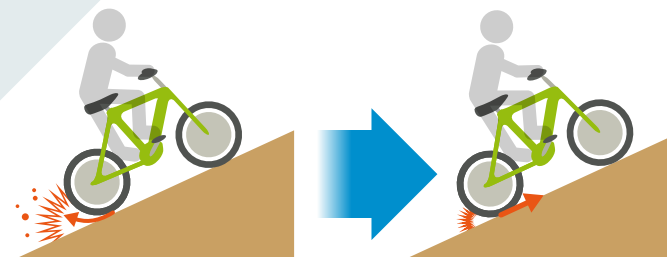
The tuning of the PWseries ST makes this drive unit the perfect all-rounder. Whether you're a newcomer to the sport or a veteran rider, and whether you're on- or off-road, the PWseries ST delivers fun, pleasant assistance for all riders.

### Automatic Support Mode for all-round Sports and Trail

It's no simple feat to shift gears, adjust seat height, and change ride modes at roughly the same time. The new Automatic Support Mode for the PWseries ST selects the right amount of assist based on riding conditions. Whether you're starting from a stop, accelerating, braking, riding on a level surface, or climbing a hill, you can leave ride mode changes to the system and focus on shifting and braking.

### Natural and Powerful Assist Feeling

A powerful ride is the best thing about eMTBs, but a lack of control would leave you prone to wheelies during climbs and spinning tires on poor surfaces. The Yamaha tuning for the PWseries ST allows the drive unit software to handle power control. By combining power with stable control, this technology makes it easier for the rider to start with peace of mind even from half way up the steepest of hills.



Power and grip, the ingredients for a smooth start.

DRIVE UNIT



City commuter  
**PWseries TE**

A drive unit with a focus on providing comfort and a stable ride in urban areas.



**The Pursuit of Comfort**

The PWseries TE drive unit focuses on providing comfort and a stable ride in urban areas, coping effortlessly with riding conditions including steep climbs and rides against strong winds. Thanks to the Quad Sensor Technology, the system automatically detects riding conditions such as hill starts, and delivers the appropriate assist power and smooth acceleration.

**Automatic Support Mode for the ultimate comfort ride**

The Automatic Support Mode exclusively tuned for the PWseries TE provides intelligent and natural power assistance with a lightweight feel, delivering a comfortable and enjoyable riding experience.



**BATTERY**



Yamaha E-Bike Systems offers a full range of "Multi-Location" batteries with a compact, stylish shape that can be easily incorporated into the frame, offering a high degree of design freedom when mounting it inside the frame of a bike. In addition, the 400Wh and 500Wh down tube and rear carrier mount type batteries are other long-selling options in our product line-up.



**Multi Location**  
600



**NEW**

**Multi Location**  
400 / 500



**Down Tube**  
400 / 500



**Rear Carrier**  
400 / 500



# DISPLAY & SWITCHES



## Display A



The Display A was designed for a wide range of uses, from city to trail riding. It features a simplified and easily operable large liquid crystal display, with speed and battery capacity functions. High importance has been placed on visibility while riding in severe environmental conditions. Support mode can be changed at the press of a button as you ride.



## Display X



The concept of the Display X is "Simple and Tough". Toughness means it can withstand hard riding. This also shows in the design of the ergonomic switches which maintain high operability in all types of riding. A LED assist mode indicator lets the rider check the selected mode instantly, even during hard riding, and overall the interface provides low-key yet robust rider support.



## Display C



The large 2.8 inch color dot matrix display provides clear read-outs and control of the connectivity functions. Several display screens are available for different modes. A newly-designed ergonomic remote switch improves ease of operation. By connecting your smartphone with the display you can enjoy extended features via the app. Display C takes enjoyment of your riding lifestyle to a new level.



EXPW mode    HIGH mode    ECO mode    +ECO mode

### Clear information

A large color dot matrix display is used to show information including the battery capacity, riding speed, and time, so that the rider can check all the details at a glance.



## Apps for enhanced functionality

To further enhance your riding lifestyle, the Display C can show additional information by communicating with specific applications. After downloading the app to your smartphone, and going through a simple set-up process, you can enjoy features including ride management, fitness tracking and map-based navigation.



Turn by Turn Navigation  
Different Routing  
Offline Navigation



Target Setting of Output  
Activity Tracking  
Compass

