



# MX Series

MULTI-PURPOSE ENGINES









# MX TECHNOLOGY

MZ heavyduty toughness features have been inherited and plus convenient & powerful MX technology into

## HEAVY DUTY COMPONENTS

- Forged & microwave harden crankshaft
- Dual ball bearing supported crankshaft
- Forged & microwave harden camshaft
- Stellite® coated exhaust valve face
- Tuffride® treated exhaust valve
- Spiny cast iron cylinder liner
- Dual large oil gauge on both right / left sides
- Dual large drain on both right / left sides
- Upper mount dual filtration air cleaner

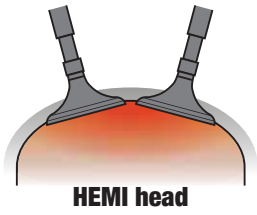
## OPTIONAL SELECTION

- P. T. O. shaft
- Air cleaner
- Muffler
- Alternator coil
- Rectifier-regulator
- Low speed governor
- Emission regulation application



## MAJOR FEATURES

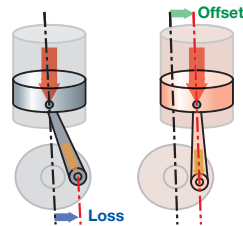
### HEMI-head



Optimum combustion chamber shape & valve layout in the model.

MX175 / MX200	MX250 / MX300	MX360 / MX400
—	●	●

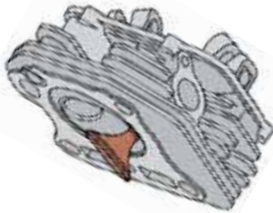
### Offset cylinder



To be pushed the crank down directly, the cylinder arranged off from the crankshaft center.

MX175 / MX200	MX250 / MX300	MX360 / MX400
—	—	●

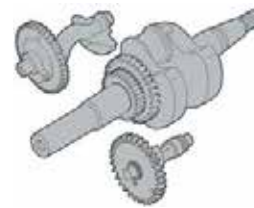
### High-tech exhaust valve



Stellite® coated and Tuffride® finished high heat resistant exhaust valve.

MX175 / MX200	MX250 / MX300	MX360 / MX400
●	●	●

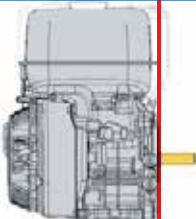
### Toughness crankshaft



Drop forged and microwave harden crankshaft & camshaft ensure long life.

MX175 / MX200	MX250 / MX300	MX360 / MX400
●	●	●

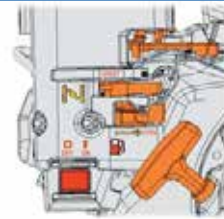
### Clean P.T.O.



No projection upper and lower side of the shaft. Wide range applications fitting easier.

MX175 / MX200	MX250 / MX300	MX360 / MX400
●	●	●

### Concentrated control



Fuel cock, Choke lever, throttle lever, Engine ON / OFF switch and starter grip are concentrated for easier operation.

MX175 / MX200	MX250 / MX300	MX360 / MX400
●	●	●

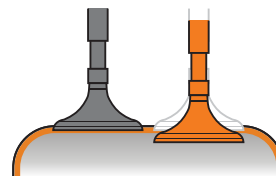
### Upper mount air-cleaner



Newly designed dual filtration system mounted upper level to taking cleaner air.

MX175 / MX200	MX250 / MX300	MX360 / MX400
●	●	●

### Auto decompression



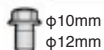
Unique automatic decompression system incorporated for light & soft starting.

MX175 / MX200	MX250 / MX300	MX360 / MX400
●	●	●

### Dual & large drain oil

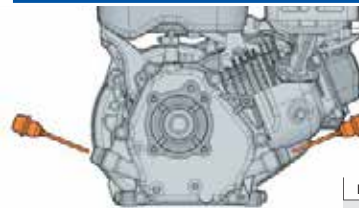


Both sides accessible large bolt ease of service, large drain hole allows quicker draining.



MX175 / MX200	MX250 / MX300	MX360 / MX400
φ10mm	φ12mm	φ12mm

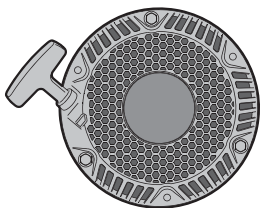
### Dual oil gauge



Both sides accessible oil gauge allows oil level inspection easily.

MX175 / MX200	MX250 / MX300	MX360 / MX400
●	●	●

### Advanced recoil starter



Rust/corrosion free durable polymer starter case. Adjustable starter knob position by 45 / 60 degrees step.

MX175 / MX200	MX250 / MX300	MX360 / MX400
45 degrees	60 degrees	60 degrees

### Large fuel tank



Large capacity, compact & lighter fuel tank allows longer hours of operation.

MX175 / MX200	MX250 / MX300	MX360 / MX400
3.9 L	5.5 L	6.1 L

- Please read the owner's manual carefully before operating, and be sure to operate the machine properly.
- Regularly inspect the engine and perform maintenance when necessary. Keep the machine in good operating condition at all times.
- Turn the engine off and keep away from open flames whenever refueling the machine. Also, immediately wipe up any spilled fuel.
- Operate the engine only in a well-ventilated area.
- Do not touch the engine and muffler during operation or shortly after stopping.
- Specifications are subject to change without notice.





**MX175**

**MX200**

- Offers an Optimized Layout for High Reliability, Durability, Usability and Mountability
- Complies with LEMA Phase 3 Voluntary emission regulations, US EPA Phase3, CARB Tier3 regulations, and EC Stage2 regulations



**US EPA PhaseIII**

**CARB TierIII**

**EC StageII**

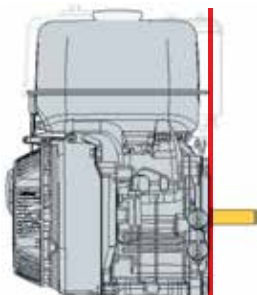
**LEMA PhaseIII**



Optional color

**Clean P.T.O. face**

The clean P.T.O. mounting face without exhaust components improves mountability to machinery.



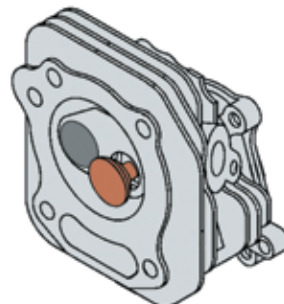
**Large fuel tank**

The large capacity, compact and lighter fuel tank (3,9 liters) offers increased autonomy.



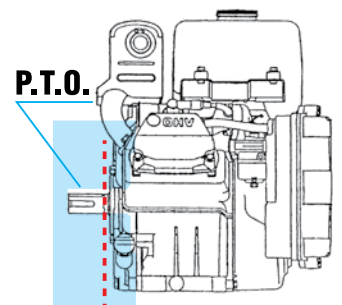
**High-tech exhaust valve**

Stellite® coated and tuffride® finished exhaust valve resists very high temperature.



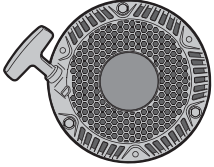
**Clean P.T.O. face**

The clean P.T.O. mounting face without exhaust components improves mountability to machinery.



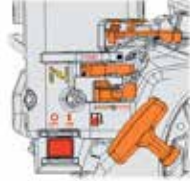
### Advanced recoil starter

Rust/corrosion free durable polymer starter case. Adjustable starter knob position by 45 / 60 degrees step.



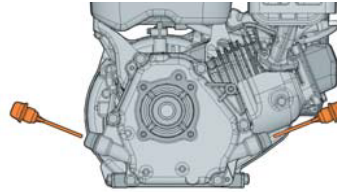
### Concentrated control

Fuel cock, Choke lever, throttle lever, Engine ON / OFF switch and starter grip are concentrated for easier operation.



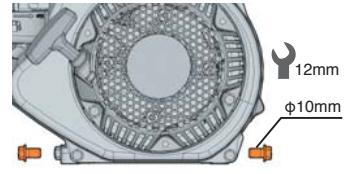
### Dual oil gauge

Both side accessible oil gauge allows oil level inspection easily

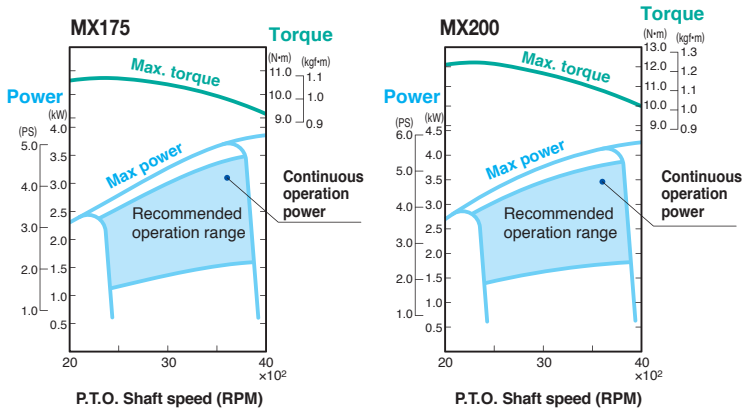


### Dual & large drain oil

Both sides accessible large bolt ease of service, large drain hole allows quicker draining.



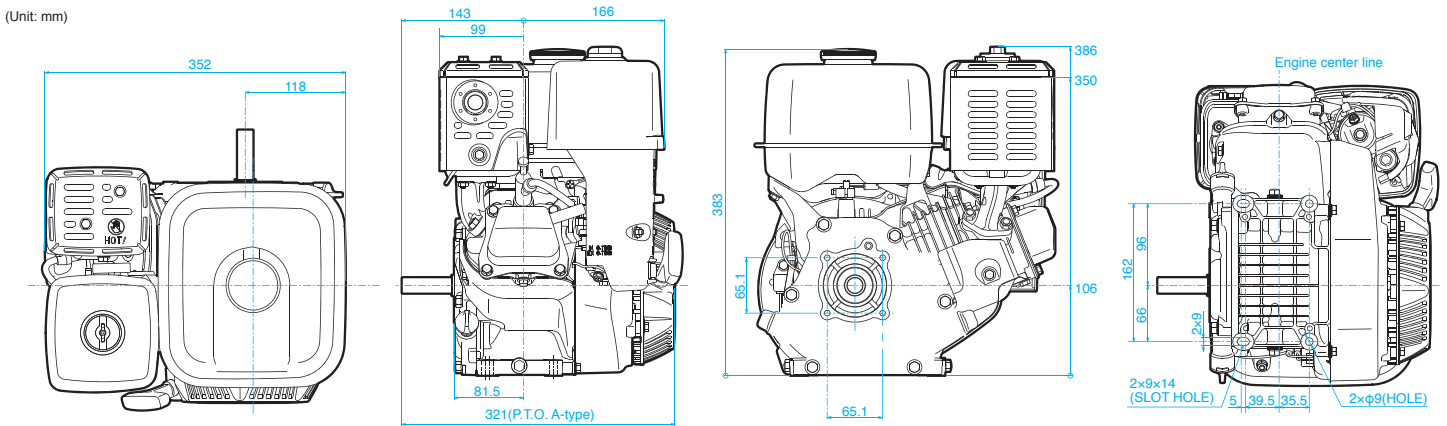
## PERFORMANCE CURVE



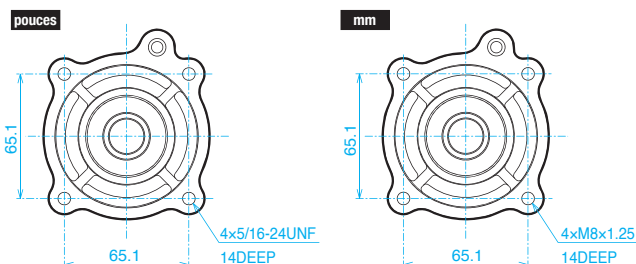
## SPECIFICATIONS

Model Name	MX175	MX200
Bore x Stroke	66 x 50 mm	70 x 50 mm
Displacement	171 cm <sup>3</sup>	192 cm <sup>3</sup>
Compression ratio	8,5	
Max output	3,6 kW (4,9 PS) à 3600 RPM	4,2 kW (5,7 ps) à 3600 RPM
Rated output	3,0 kW (4,1 PS) à 3600 RPM	3,5 kW (4,7 ps) à 3600 RPM
Max torque	10,5 N-m (1,1 kgf-m) à 2400 RPM	12,3 N-m (1,25kgf-m) à 2400 RPM
Fuel	Gasoline	
Fuel tank capacity	3,9 L	
Ignition system	Allumage contrôlé par transistor (TCI)	
Spark plug	NGK BPR4ES	
Lubrication system	Mechanical splash	
Oil pan capacity	0,6 L	
Dry weight	18,0 kg	
Dimensions (LxLxH)	321 x 352 x 386 mm	

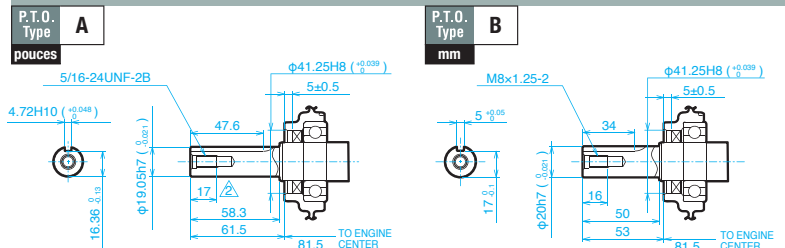
## DIMENSIONS (MX175/MX200 P.T.O. de type A)



## Mounting Face Dimensions



## P.T.O. Shaft Dimensions







**MX250**

**MX300**

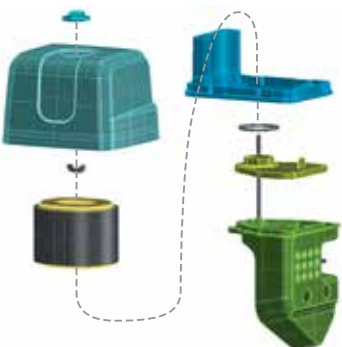


**US EPA PhaseIII**  
**CARB TierIII**  
**EC StageII**  
**LEMA PhaseIII**

- **Delivers High Power and Excellent Fuel Efficiency through Advanced Engine Technologies**
- **Offers an Optimized Layout for High Reliability, Durability, Usability and Mountability**

**Upper mounted air-cleaner**

Newly designed dual filtration system mounted upper level to taking cleaner air.



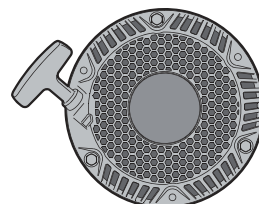
**Large fuel tank**

The large capacity, compact and lighter fuel tank (5.5 liters) offers increased autonomy.



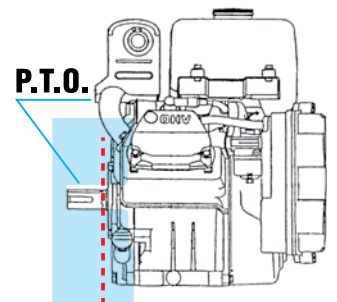
**Fine starter case**

Rust free Honey-comb faced starter cover re-arrangeable its angle by each 45 degrees.



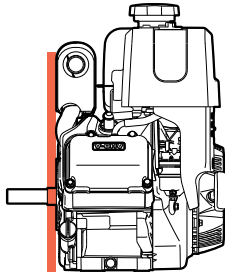
**Clean P.T.O. face**

The clean P.T.O. mounting face without exhaust components improves mountability to machinery.



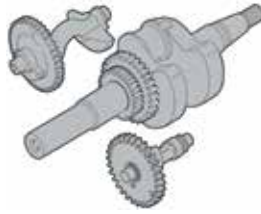
### Flush faced "Clean PTO"

Flush faced clean PTO accepts several application easily.



### Toughness moving parts

Microwave harden Crankshaft, Camshaft and optional Balancer shaft with dual bearing support provide extremely long life.

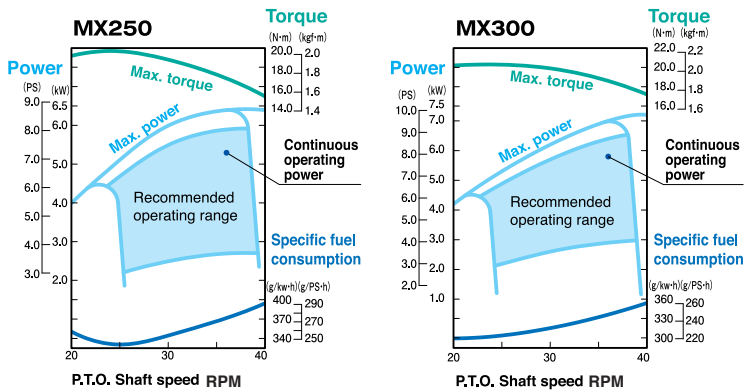


### High-tech exhaust valve

Stellite® coated and tuffride® finished exhaust valve resists very high temperature.



### PERFORMANCE CURVE

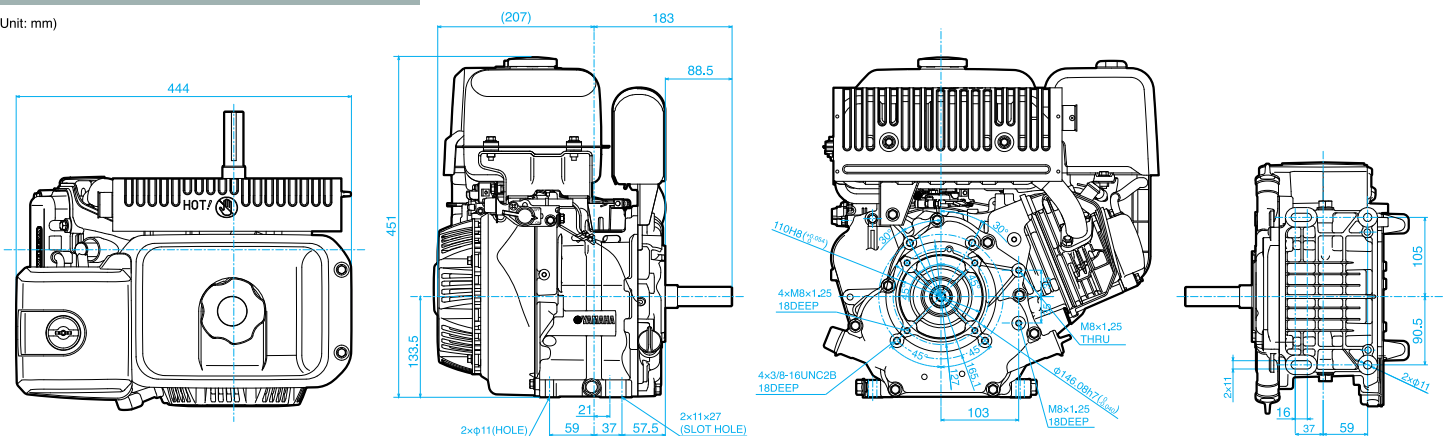


### SPECIFICATIONS

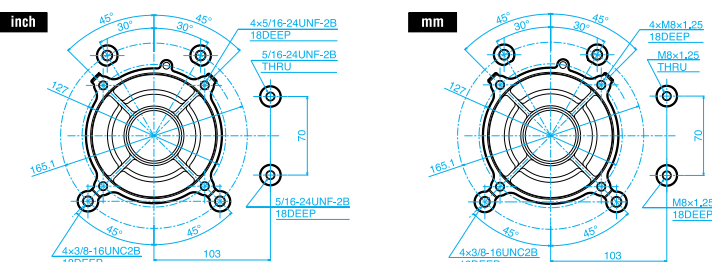
Model name	MX250	MX300
Type	Hemi-head OHV	
Bore x Stroke	80 x 59 mm	
Displacement	296 cm <sup>3</sup>	
Compression ratio	8.4	
Max output	6.4 kW @3600 RPM	7.0 kW @3600 RPM
Rated output	5.3 kW @3600 RPM	5.8 kW @3600 RPM
Max torque	19.7 Nm @2400 RPM	20.3 Nm @2400 RPM
Fuel consumption ratio	324 g/kW-h (238 g/PS-h)	307 g/kW-h (225 g/PS-h)
Fuel	Gasoline	
Fuel tank capacity	5.5 L	
Ignition system	T.C.I.	
Spark plug	NGK BPR4ES	
Lubrication system	Mechanical splash	
Oil pan capacity	1.0 L	
Dry weight	26.5 kg (Note: P.T.O. A Type)	
Dimension LxWxH	A2E: 390 x 444 x 451 mm	

### DIMENSIONS (MX250/MX300 P.T.O. A Type)

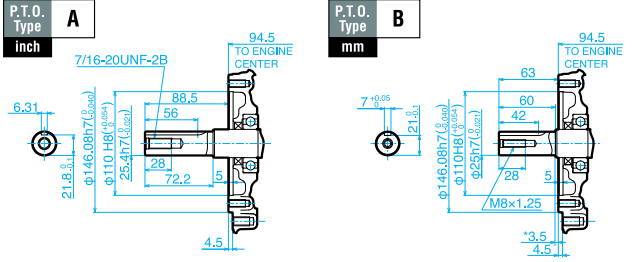
(Unit: mm)



### Mounting Face Dimensions



### P.T.O. Shaft Dimensions







### MX360

### MX400

- **Delivers High Power and Excellent Fuel Efficiency through Advanced Engine Technologies**
- **Offers an Optimized Layout for High Reliability, Durability, Usability and Mountability**
- **Complies with LEMA Phase 3 Voluntary emission regulations, US EPA Phase3, CARB Tier3 regulations, and EC Stage2 regulations**



**US EPA PhaseIII**

**CARB TierIII**

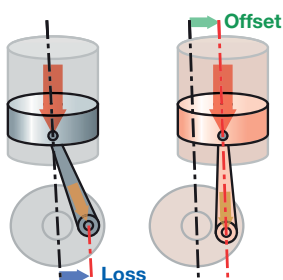
**EC StageII**

**LEMA PhaseIII**

#### Offset cylinder

The new MX achieves a significant reduction in friction loss and higher engine output through the use of an offset cylinder.

The lightweight piston reduces power loss, vibration and noise.



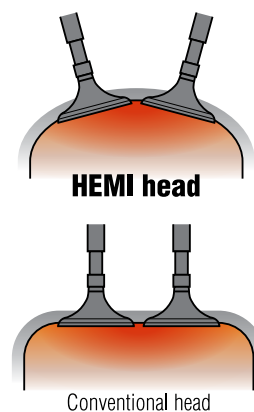
#### Large fuel tank

The large capacity, compact and lighter fuel tank (6.1 liters) offers increased autonomy.



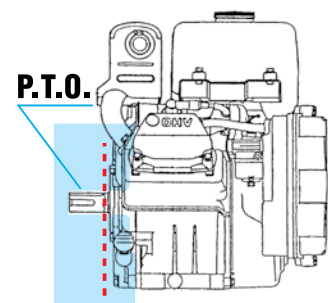
#### HEMI head

Optimum combustion chamber shape & valve layout in the model.



#### Clean P.T.O. face

The clean P.T.O. mounting face without exhaust components improves mountability to machinery.



## Performance comparison

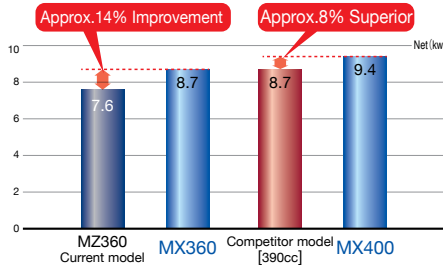
\*As of February 1, 2016

The MX engine series realizes a higher maximum output than the MZ engine series and the same-sized engines of other companies.

The minimum fuel consumption rate in the MX engine series achieves better fuel efficiency than the MZ engine series and the same-sized engines of other companies.

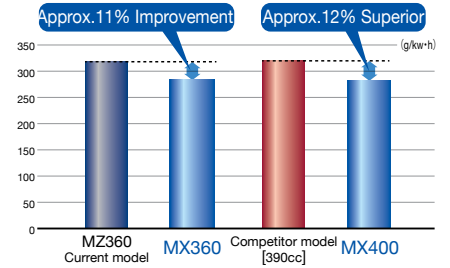
### MAXIMUM OUTPUT RATING

\*Engine Output described above is representative net output measured at 3600rpm.

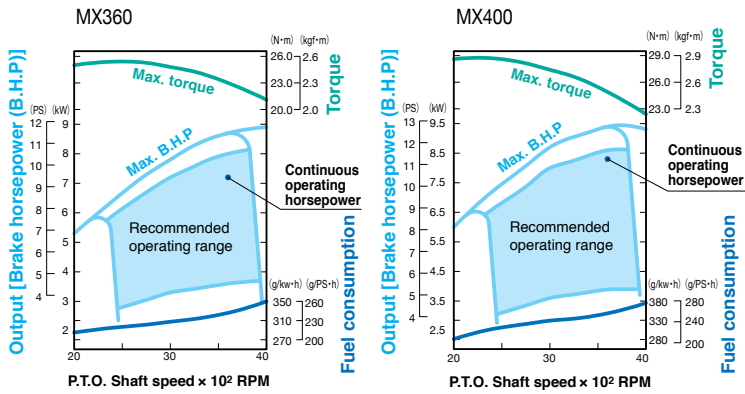


### FUEL CONSUMPTION RATE COMPARISON

\*According to Yamaha survey (minimum fuel consumption rate)



## PERFORMANCE CURVE

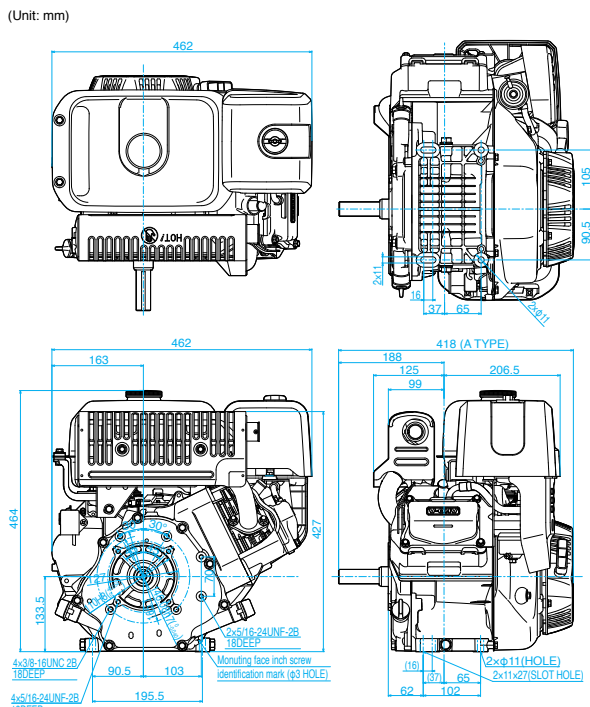


## SPECIFICATIONS

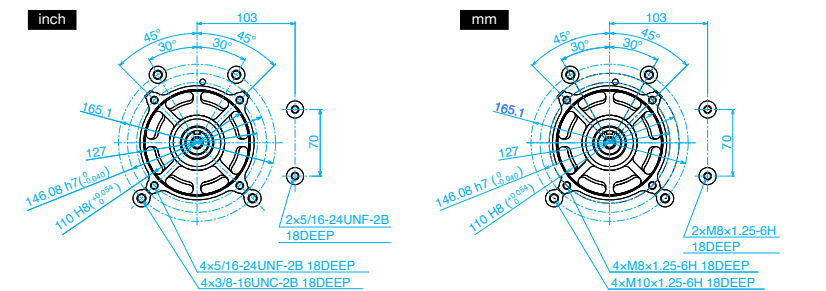
Model name	MX360	MX400
Bore x Stroke	85 x 63.2 mm	85 x 71 mm
Displacement	358 cm <sup>3</sup>	402 cm <sup>3</sup>
Compression Ratio	8.2	
Max Power (Net)	8.7 kW (11.8 PS) / 3600 RPM	9.4 kW (12.8 PS) / 3600 RPM
Rated Power (Net)	7.3 kW (9.9 PS) / 3600 RPM	7.8 kW (10.6 PS) / 3600 RPM
Max Torque (Net)	25.4 N-m (2.6 kgf-m) / 2400 RPM	28.7 N-m (2.9 kgf-m) / 2400 RPM
Fuel Consumption	283 g/kW-h (208 g/PS-h)	281 g/kW-h (207 g/PS-h)
Fuel	GASOLINE	
Fuel Tank Capacity	6.1 L	
Ignition System	T.C.I	
Spark Plug	NGK BPR4ES	
Lubrication System	Mechanical Splashing	
Oil Capacity	1.1 L	
Dry Weight	33 kg (Note: P.T.O. A Type)	
Dimensions(LxWxH)	418 x 462 x 464 mm	

\*Engine Output described above is representative net output measured at 3600rpm.

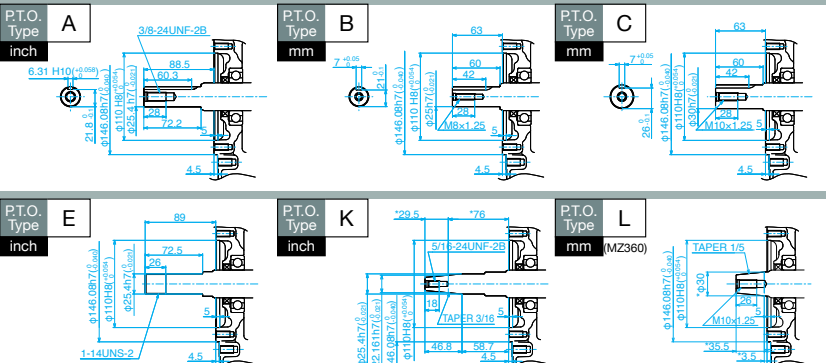
## DIMENSIONS (MX360/MX400 P.T.O. A Type)



## Mounting Face Dimensions



## P.T.O. Shaft Dimensions







# HISTORY OF INNOVATION FUTURE OF EXCELLENCE



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