

## **MITSUBISHI S6A3-PTAA**

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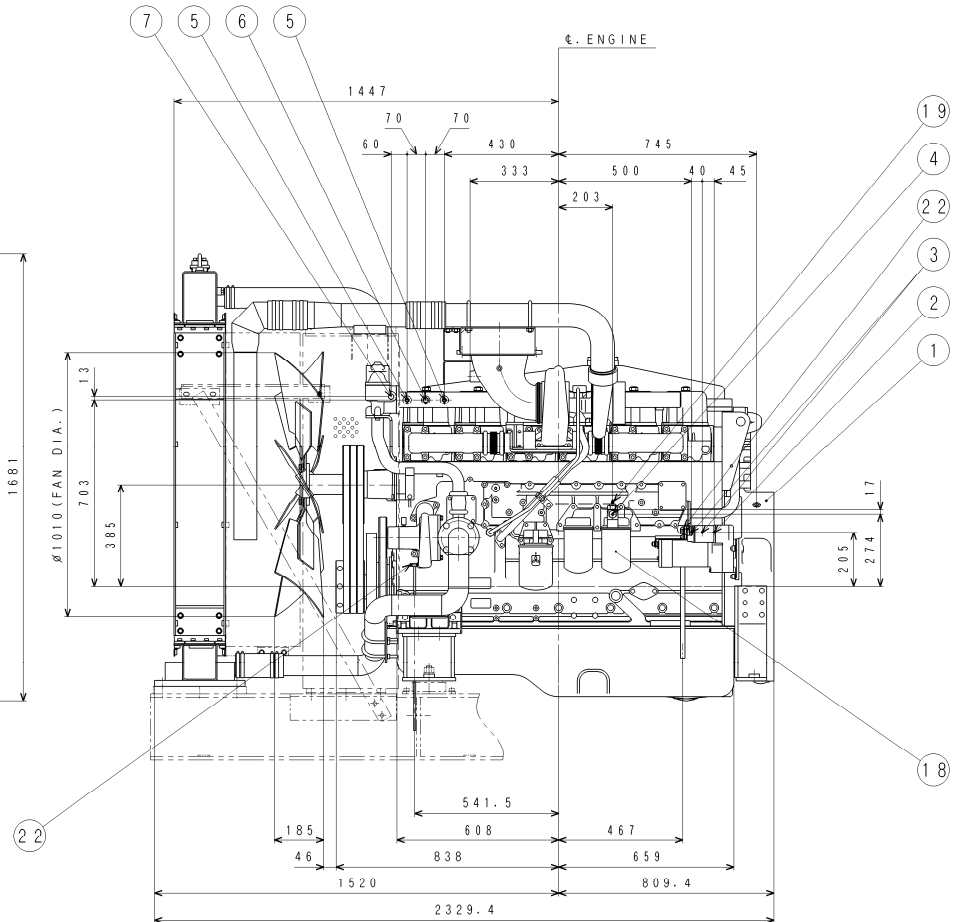
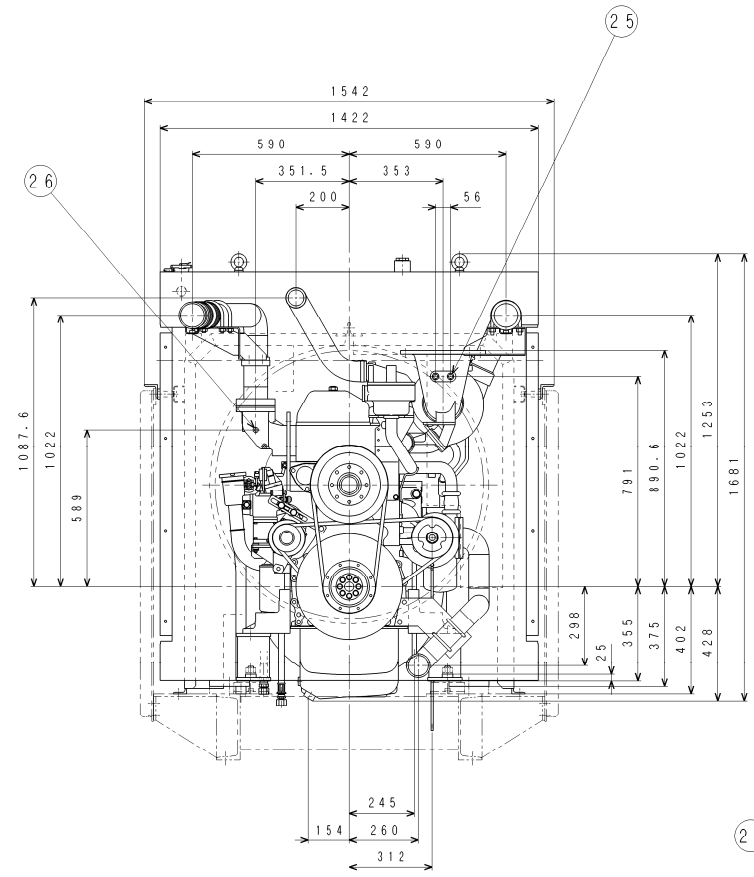
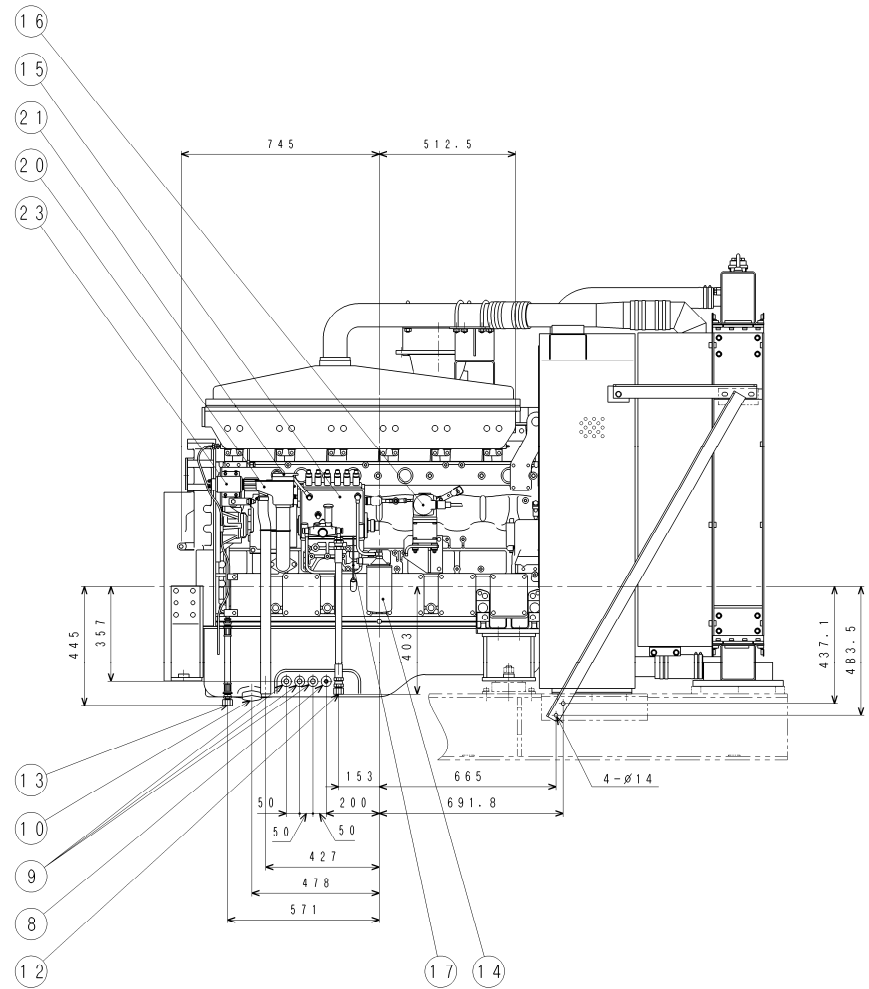
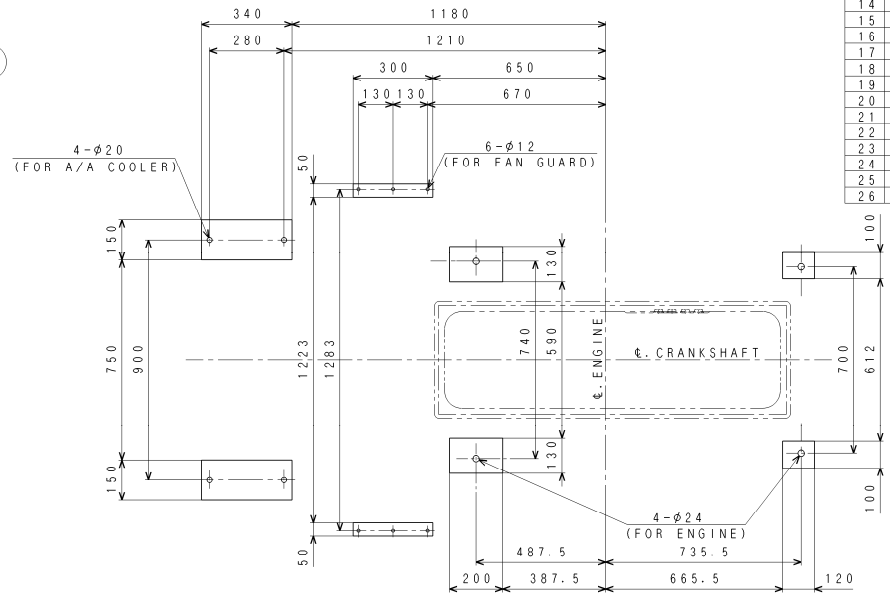
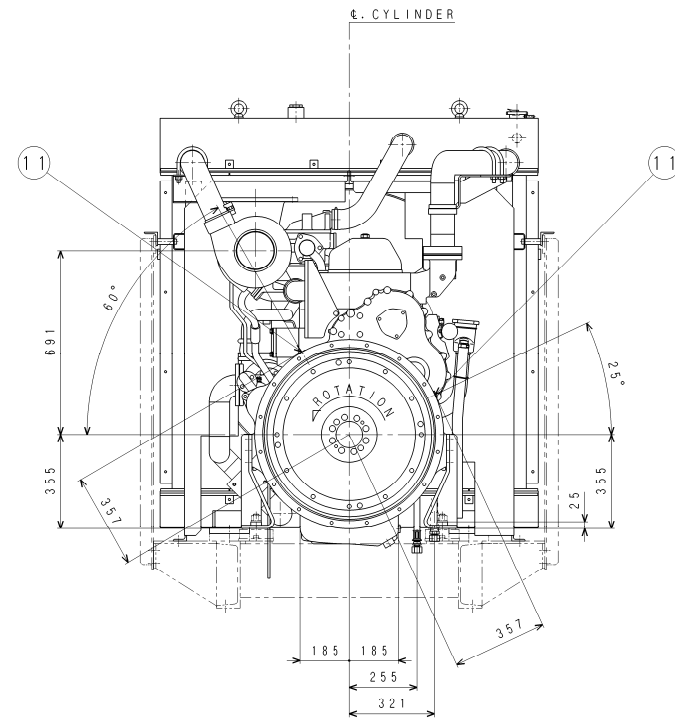
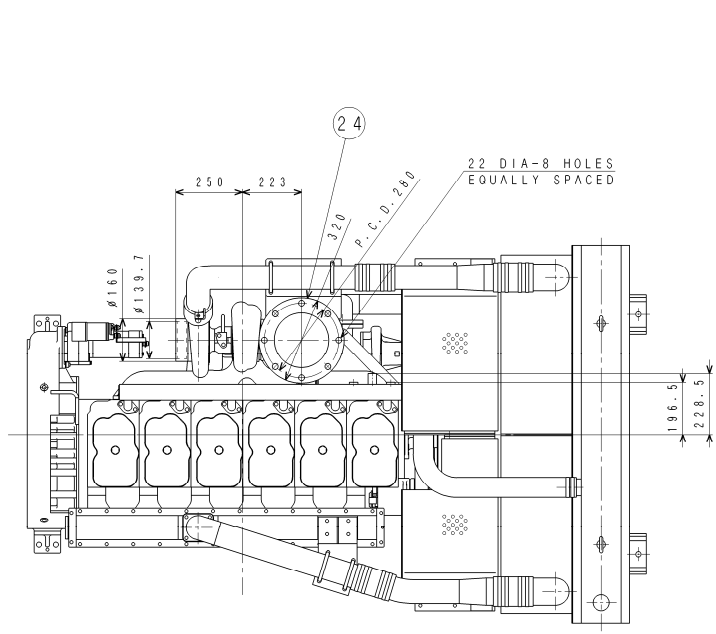
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| NO. | PARTS NAME                 | SIZE      | REFERENCE   |
|-----|----------------------------|-----------|-------------|
| 1   | FLYWHEEL & HOUSING         |           | 35A96-21001 |
| 2   | OIL PRESS. GAGE UNIT JOINT | Rc1/8     | 35A96-01021 |
| 3   | OIL PRESS. SWITCH JOINT    | Rc1/8     |             |
| 4   | OIL PRESS. SWITCH JOINT    | Rc1/8     |             |
| 5   | THERMOSWITCH JOINT         | M16x1.5   |             |
| 6   | THERMOSWITCH JOINT         | Rc1/2     |             |
| 7   | THERMOMETER UNIT JOINT     | Rc1/2     |             |
| 8   | OIL PAN (A) JOINT          | M16x1.5   |             |
| 9   | OIL PAN (B) JOINT          | M20x1.5   |             |
| 10  | OIL PAN (C) JOINT          |           |             |
| 11  | PICKUP JOINT               | UNF5/8-18 |             |
| 12  | FUEL INLET PIPE JOINT      | Rc1/2     |             |
| 13  | FUEL RETURN PIPE JOINT     | Rc1/2     | 35A96-01021 |
| 14  | FUEL FILTER                |           |             |
| 15  | FUEL INJECTION PUMP        |           |             |
| 16  | GOVERNOR                   |           |             |
| 17  | OIL LEVEL GAGE             |           |             |
| 18  | OIL FILTER                 |           |             |
| 19  | OIL BY-PASS ALARM SWITCH   |           | 35A96-01021 |
| 20  | BREATHER                   |           |             |
| 21  | OIL FILLER                 |           |             |
| 22  | WATER DRAIN COCK           |           |             |
| 23  | STOP SOLENOID              |           |             |
| 24  | EXHAUST FLANGE             | 200A      |             |
| 25  | THERMOMETER, EX. JOINT     | G3/4      | 35A96-01021 |
| 26  | AIR PRESS. GAGE JOINT      | Rc1/8     | 35A96-01021 |



NOTES (2) THE GOVERNOR ON THIS DRAWING IS ELECTRIC GOVERNOR.  
 (1) THIS ENGINE WEARS TD13L43QRC40/1500RPM, TD13L45QRC47/1800RPM TURBO CHARGER.  
 注記 (2) 本図のガバナは、電子ガバナ仕様である。  
 (1) 三菱TD13L43QRC40/1500RPM, TD13L45QRC47/1800RPM2-仕様書。

|                  |             |             |           |       |      |
|------------------|-------------|-------------|-----------|-------|------|
| 製図<br>APPD       | 検出<br>CHK   | 承認<br>DANK  | DATE      | SCALE | 1:10 |
| 小<br>尾<br>谷<br>倉 | 尾<br>谷<br>倉 | 尾<br>谷<br>倉 | 1998.11.6 |       |      |

S6A3-PTAA  
DIESEL ENGINE  
三機重工業株式会社相模原製作所  
SAGAMIHARA MACHINERY WORKS, WITSDOSHI HEAVY INDUSTRIES, LTD.  
図面番号 35A96-00401  
DRAWING NO. 35A96-00401  
1998.11.6

出図  
相製  
1998  
11.11

FULL-CAO



**MITSUBISHI DIESEL ENGINE  
TECHNICAL INFORMATION**

ITEM NO.

T0212-0002E Rev.1 (1/4)

DATE

February, 2014

Specification Sheets of S6A3-PTAA Engine

Specification Sheets of S6A3-PTAA Engine are enclosed herein.

|          |  |  |            |            |
|----------|--|--|------------|------------|
| Revision | First Edition : Mar., 2013((T13-0351-E Feb. '00) | Engine Engineering Department<br>High Speed Engine Designing Section |            |            |
|          | Rev.1 : Feb., 2014                               |  |            |            |
|          |  | Approved by  | Checked by | Drawn by   |
|          |  | T.HASHIGUCHI   | T.OGURA    | K.NAKAMURA |
|          |  |  |            |            |

## GENERAL ENGINE DATA

|                                      |  |        |
|--------------------------------------|--|--------|
| Type                                 | ----- 4-Cycle, Water Cooled            |        |
| Aspiration                           | ----- Turbo-Charged, Air to Air Cooler |        |
| Cylinder Arrangement                 | ----- Inline                           |        |
| No. of Cylinders                     | ----- 6                                |        |
| Bore mm(in.)                         | ----- 150                              | (5.91) |
| Stroke mm(in.)                       | ----- 175                              | (6.89) |
| Displacement liter(in <sup>3</sup> ) | ----- 18.56                            | (1133) |
| Compression Ratio                    | ----- 14.5:1                           |        |
| Dry Weight - Engine only - kg(lb)    | ----- 1800                             | (3969) |
| - Radiator & Piping - kg(lb)         | ----- 320                              | (706)  |
| Wet Weight - Engine only - kg(lb)    | ----- 1910                             | (4212) |
| - Radiator & Piping - kg(lb)         | ----- 390                              | (860)  |

## PERFORMANCE DATA

|  |       |                 |
|--|-------|-----------------|
| Steady State Speed Stability Band at any Constant Load                               |       |                 |
| Mechanical - %   | ----- | ±0.5            |
| Hydraulic (std.) or Electric Governor - %  | ----- | ±0.25 or better |
| Maximum Overspeed Capacity - rpm   | ----- | 2300            |
| Moment of inertia of Rotating Components - kgf·m <sup>2</sup> (lbf·ft <sup>2</sup> ) | ----- | 32.09 (761.6)   |
| (Includes Std. Flywheel)   |       |                 |
| Cyclic Speed Variation with Flywheel at 1800rpm                                      | ----- | 1/178           |
| 1500rpm  | ----- | 1/112           |

## ENGINE MOUNTING

|   |       |            |
|---|-------|------------|
| Maximum Bending Moment at Rear Face of Flywheel Housing - kgf·m(lbf·ft) | ----- | 200 (1447) |
|---|-------|------------|

## AIR INLET SYSTEM

|  |       |            |
|--|-------|------------|
| Maximum Intake Air Restriction (Includes piping)                       |       |            |
| With Clean Filter Element - mm H <sub>2</sub> O (in. H <sub>2</sub> O) | ----- | 400 (15.7) |
| With Dirty Filter Element - mm H <sub>2</sub> O (in. H <sub>2</sub> O) | ----- | 635 (25.0) |

## EXHAUST SYSTEM

|  |       |            |
|--|-------|------------|
| Maximum Allowable Back Pressure - mm H <sub>2</sub> O (in. H <sub>2</sub> O) | ----- | 600 (23.6) |
|--|-------|------------|

## LUBRICATION SYSTEM

|  |       |             |
|--|-------|-------------|
| Oil Pressure at Idle - kgf/cm <sup>2</sup> (psi)               | ----- | 2~3 (29~43) |
| at Rate Speed - kgf/cm <sup>2</sup> (psi)                      | ----- | 5~6 (71~86) |
| Maximum Oil Temperature - °C(°F)                               | ----- | 110 (230)   |
| Oil Capacity of Standard Pan High - liter (U.S. gal)           | ----- | 70 (18.5)   |
| Low - liter (U.S. gal)   | ----- | 50 (13.2)   |
| Total System Capacity (Includes Oil Filter) - liter (U.S. gal) | ----- | 80 (21.1)   |
| Maximum Angle of Installation (Std. Pan) Front Down            | ----- | 10°         |
| (Engine Only) Front Up   | ----- | 12°         |
| Side to Side   | ----- | 22.5°       |

## COOLING SYSTEM

|   |       |                 |
|---|-------|-----------------|
| Coolant Capacity - Engine - liter (U.S. gal)  | ----- | 45 (11.9)       |
| - Radiator & Piping - liter (U.S. gal)  | ----- | 70 (18.5)       |
| Maximum External Friction Head at Engine Outlet - kgf/cm <sup>2</sup> (psi)                             | ----- | 0.35 (5.0)      |
| Maximum Static Head of Coolant above Crankshaft Center - m(ft)  | ----- | 10 (32.8)       |
| Maximum Outlet Pressure of Engine Water Pump - kgf/cm <sup>2</sup> (psi)                                | ----- | 1.7 (24.3)      |
| Standard Thermostat (modulating) Range- °C(°F)  | ----- | 65~85 (149~185) |
| Maximum Coolant Temperature at Engine Outlet- °C(°F)  | ----- | 98 (208)        |
| Minimum Coolant Expansion Space - % of System Capacity  | ----- | 10              |
| Maximum cooling Air Temperature at Air to Air cooler Inlet, TAA type- °C(°F)                            | ----- | 40 (104)        |
| Maximum Air Restriction on Discharge Side of Radiator and Fan-mm H <sub>2</sub> O(in. H <sub>2</sub> O) | ----- | 10 (0.4)        |

The specifications are subject to change without notice.

APPLICATION : GENERATOR

Pub. No. T0212-0002E 2/4

**FUEL SYSTEM**

|   |                  |
|---|------------------|
| Fuel Injector .....   | Bosch P Type × 1 |
| Maximum Suction Head of Feed Pump - mm Hg (in. Hg) .....        | 75 (3.0)         |
| Maximum Static Head of Return & Leak Pipe - mm Hg (in.Hg) ..... | 150 (5.9)        |

**STARTING SYSTEM**

|  |        |
|--|--------|
| Battery Charging Alternator - V-Ah .....                     | 24-30  |
| Starting Motor Capacity - V -kW .....                        | 24-6.0 |
| Maximum Allowable Resistance of Cranking Circuit - m Ω ..... | 2.5    |
| Recommended Minimum Battery Capacity                         |        |
| At 5°C(41°F) and above - Ah .....                            | 200    |
| Below 5°C(41°F) through - 5°C(23°F) .....                    | 400    |

The specifications are subject to change without notice.

**APPLICATION : GENERATOR**

Pub. No. T0212-0002E 3/4

**ENGINE RATING**

All data represent net performance with standard accessories such as air cleaner, inlet /exhaust manifolds, fuel oil system, L.O. pump, etc. under the condition of 100kPa(29.6inHg) barometric pressure, 77°F(25°C) ambient temperature and 30% relative humidity.

| ITEM  | UNIT                         | STAND-BY POWER    |                   |  | PRIME POWER       |                   |  |
|---|------------------------------|-------------------|-------------------|--|-------------------|-------------------|--|
|   |                              | 60Hz              | 50Hz              |  | 60Hz              | 50Hz              |  |
| Engine Speed  | rpm                          | 1800              | 1500              |  | 1800              | 1500              |  |
| No. of Cylinders  |                              | 6                 |                   |  |                   |                   |  |
| Bore  | mm<br>(in.)                  | 150<br>(5.91)     |                   |  |                   |                   |  |
| Stroke  | mm<br>(in.)                  | 175<br>(6.89)     |                   |  |                   |                   |  |
| Displacement  | liter<br>(in. <sup>3</sup> ) | 18.56<br>(1133)   |                   |  |                   |                   |  |
| Brake Horse power with Fan  | HP<br>(kW)                   | 692<br>(516)      | 634<br>(473)      |  | 617<br>(460)      | 577<br>(430)      |  |
| Brake Mean Effective Pressure with Fan                                  | kgf/cm <sup>2</sup><br>(psi) | 18.9<br>(269)     | 20.8<br>(296)     |  | 16.9<br>(240)     | 18.9<br>(269)     |  |
| Mean Piston Speed   | m/s<br>(ft/min)              | 10.5<br>(2067)    | 8.8<br>(1732)     |  | 10.5<br>(2067)    | 8.8<br>(1732)     |  |
| Maximum Regenerative Power<br>Absorption Capacity without Fan           | HP<br>(kW)                   | 73<br>(54)        | 53<br>(40)        |  | 73<br>(54)        | 53<br>(40)        |  |
| Intake Air flow   | m <sup>3</sup> /min<br>(CFM) | 46<br>(1624)      | 40<br>(1412)      |  | 41<br>(1448)      | 37<br>(1306)      |  |
| Exhaust Gas Flow  | m <sup>3</sup> /min<br>(CFM) | 121<br>(4273)     | 107<br>(3778)     |  | 107<br>(3778)     | 97<br>(3425)      |  |
| Coolant Flow  | liter/min<br>(U.S. GPM)      | 650<br>(172)      | 580<br>(153)      |  | 650<br>(172)      | 580<br>(153)      |  |
| Cooling Air Flow  | m <sup>3</sup> /min<br>(CFM) | 553<br>(19526)    | 431<br>(15219)    |  | 553<br>(19526)    | 431<br>(15219)    |  |
| Fan Loss Horse Power  | HP<br>(kW)                   | 27<br>(20)        | 14<br>(10)        |  | 27<br>(20)        | 14<br>(10)        |  |
| Radiated Heat to Ambient  | kcal/hr<br>(BTU/min)         | 34304<br>(2269)   | 30459<br>(2015)   |  | 30586<br>(2023)   | 27720<br>(1833)   |  |
| Heat Rejection to Coolant   | kcal/hr<br>(BTU/min)         | 148650<br>(9832)  | 131987<br>(8729)  |  | 132539<br>(8766)  | 120121<br>(7945)  |  |
| Heat Rejection to Air to Air Cooler                                     | kcal/hr<br>(BTU/min)         | 137215<br>(9075)  | 121835<br>(8058)  |  | 122344<br>(8092)  | 110881<br>(7334)  |  |
| Heat Rejection to Exhaust   | kcal/hr<br>(BTU/min)         | 379420<br>(25094) | 324338<br>(21451) |  | 338297<br>(22375) | 295178<br>(19523) |  |
| Noise Level (1 m height & distance)<br>(excludes, Intake,Exhaust & Fan) | dB(A)                        | TBD               | TBD               |  | TBD               | TBD               |  |

The specifications are subject to change without notice.

APPLICATION : GENERATOR

Pub. No. T0212-0002E 4/4



**MITSUBISHI DIESEL ENGINE  
TECHNICAL INFORMATION**

ITEM NO.

T0307-0003E (1/2)

DATE

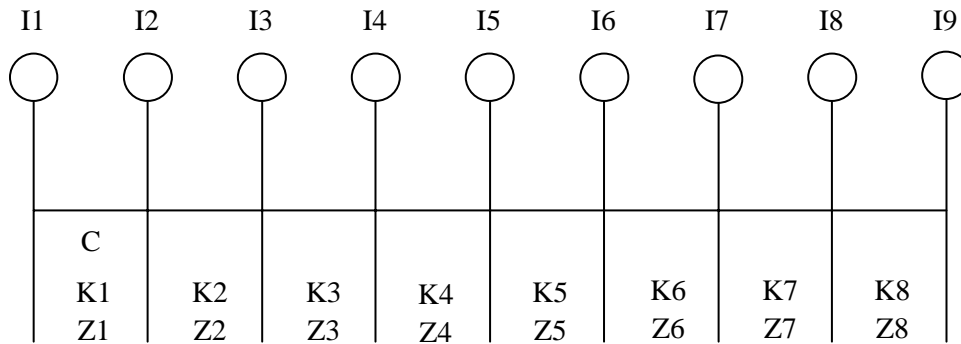
July, 2006

Elastic data of S6A3 Engine

Elastic data of S6A3 Engine are enclosed herein.

|          |   |  |              |          |
|----------|---|--|--------------|----------|
| Revision | First Edition : July, 2006<br>(Refer to ELASTIC-S6A3-PTA Oct.,2003, S6A3.0) | Engine Engineering Department<br>Large Engine Design Section |              |          |
|          |   | Approved by  | Checked by   | Drawn by |
|          |   | S.MATSUSHITA   | T.HASHIGUCHI | T.H.     |
|          |   |  |              |          |



**S6A3-PTA ELASTIC DATA**

|    | Moment of inertia<br>J kg.m <sup>2</sup> | Damping coefficient<br>Nm/rad/s | Spring const. x10 <sup>7</sup><br>Nm/rad | Tensile strength<br>N/mm <sup>2</sup> | Section modulus<br>cm <sup>3</sup> |
|----|--|---------------------------------|--|---------------------------------------|------------------------------------|
| I1 | DAMPER                                   | 0.412                           | C=392.3                                  | K1=0                                  | Z1 =0.0                            |
| I2 | PULLEY                                   | 0.331                           | —  | K2=0.907                              | Z2 =209.5                          |
| I3 | No.1 CRANK                               | 0.331                           | —  | K3=0.505                              | Z3 =209.5                          |
| I4 | No.2 CRANK                               | 0.217                           | —  | K4=0.505                              | Z4 =209.5                          |
| I5 | No.3 CRANK                               | 0.331                           | —  | K5=0.505                              | Z5 =209.5                          |
| I6 | No.4 CRANK                               | 0.331                           | —  | K6=0.505                              | Z6 =209.5                          |
| I7 | No.5 CRANK                               | 0.217                           | —  | K7=0.505                              | Z7 =209.5                          |
| I8 | No.6 CRANK                               | 0.331                           | —  | K8=0.876                              | Z8 =209.5                          |
| I9 | FLYWHEEL 18in<br>14in                    | 5.93<br>1.99                    | —  |                                       |                                    |

Hysteresis constant:170 No. of Cylinder: 6 Bore:150mm Stroke:175mm

Length of Con-Rod: 290mm Weight of Reciprocating Parts: 8.649 kg

Firing order:1-5-3-6-2-4

Firing interval:0-120-240-360-480-600

APPLICATION : LAND USE

The data is subject to change without notice.



**MITSUBISHI HEAVY INDUSTRIES, LTD.**  
GENERAL MACHINERY & SPECIAL VEHICLE





**MITSUBISHI DIESEL ENGINE  
TECHNICAL INFORMATION**

ITEM NO.

T0402-0001E Rev.1 (1/2)

DATE

May, 2008

**Exhaust Gas Emission Data**

Exhaust Gas Emission Data is enclosed herein.

These data are subject to change without notice.

|          |                           |  |            |          |
|----------|---------------------------|--|------------|----------|
| Revision | First Edition : May, 2008 | Engine Engineering Department<br>Engine System Designing Section |            |          |
|          | Rev.1: February, 2013     |  |            |          |
|          |                           | Approved by  | Checked by | Drawn by |
|          |                           | T.HASHIGUCHI   | T.OGURA    | K.N.     |
|          |                           |  |            |          |

**EXHAUST GAS EMISSION DATA OF DIESEL ENGINE FOR GENERATOR**  
For Reference

| MODEL   | S6A3-P TA    |              | S12A2-P TA   |              | S12H-P TA    |               | S6R-P TA     |              | S12R-P TA     |               | S12R-P TA2    |               | S12R-PTAA2 (W/FAN) |               | S16R-P TA     |               | S16R-P TA2    |               | S16R-PTAA2 (W/FAN) |               | S16R2-PTAW       |  |
|---|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|---------------|---------------|--------------------|---------------|------------------|--|
|   | 400/<br>1500 | 480/<br>1800 | 679/<br>1500 | 761/<br>1800 | 930/<br>1500 | 1020/<br>1800 | 515/<br>1500 | 595/<br>1800 | 1110/<br>1500 | 1190/<br>1800 | 1195/<br>1500 | 1340/<br>1800 | 1277/<br>1500      | 1387/<br>1800 | 1480/<br>1500 | 1590/<br>1800 | 1630/<br>1500 | 1775/<br>1800 | 1684/<br>1500      | 1895/<br>1800 | 2167/<br>1500 *1 |  |
| Prime Rating<br>kW/min <sup>-1</sup><br>(without fan) | 900          | 890          | 852          | 825          | 935          | 877           | 901          | 940          | 852           | 940           | 950           | 852           | 940                | 779           | 925           | 852           | 950           | 852           | 828                | 754           | 659              |  |
| NOx<br>g/Nm <sup>3</sup>                              | 3.7          | 3.7          | 3.5          | 3.4          | 3.8          | 3.6           | 3.7          | 3.5          | 3.7           | 3.5           | 3.9           | 3.7           | 3.5                | 3.2           | 3.8           | 3.7           | 3.9           | 3.4           | 3.1                | 3.6           |                  |  |
| g/AW·h  | 8.6          | 8.6          | 7.7          | 7.7          | 8.8          | 8.2           | 8.4          | 8.4          | 7.7           | 8.4           | 8.8           | 7.7           | 8.4                | 7.3           | 8.7           | 7.7           | 8.8           | 7.7           | 7.1                | 5.8           |                  |  |
| CO<br>PPM   | (220)        | (210)        | (220)        | (210)        | (310)        | (210)         | 310          | 210          | (310)         | (210)         | (310)         | (210)         | (320)              | (200)         | (310)         | (210)         | (210)         | (320)         | (200)              | 119           |                  |  |
| g/Nm <sup>3</sup>                                     | (0.44)       | (0.45)       | (0.44)       | (0.45)       | (0.59)       | (0.43)        | 0.52         | 0.39         | (0.59)        | (0.43)        | (0.59)        | (0.43)        | (0.55)             | (0.42)        | (0.56)        | (0.43)        | (0.43)        | (0.55)        | (0.42)             | 0.4           |                  |  |
| g/AW·h  | (1.2)        | 1.4          | (1.2)        | 1.4          | (1.8)        | (1.4)         | 1.5          | 1.2          | (1.8)         | (1.4)         | (1.8)         | (1.2)         | (1.5)              | (1.2)         | (1.6)         | (1.4)         | (1.8)         | (1.5)         | (1.2)              | 0.5           |                  |  |
| HC<br>PPM   | (50)         | (50)         | (50)         | (50)         | (110)        | (120)         | 110          | 120          | (110)         | (120)         | (110)         | (120)         | (110)              | (120)         | (110)         | (120)         | (110)         | (120)         | (120)              | 35            |                  |  |
| g/Nm <sup>3</sup>                                     | (0.05)       | (0.06)       | (0.05)       | (0.06)       | (0.11)       | (0.13)        | 0.09         | 0.11         | (0.11)        | (0.13)        | (0.11)        | (0.13)        | (0.10)             | (0.13)        | (0.10)        | (0.13)        | (0.11)        | (0.10)        | (0.13)             | 0.19          |                  |  |
| g/AW·h  | (0.15)       | (0.18)       | (0.15)       | (0.18)       | (0.31)       | (0.38)        | 0.27         | 0.34         | (0.31)        | (0.38)        | (0.31)        | (0.35)        | (0.29)             | (0.38)        | (0.29)        | (0.38)        | (0.31)        | (0.29)        | (0.38)             | 0.10          |                  |  |
| CO <sub>2</sub><br>%                                  | 6.7          | 6.2          | 6.7          | 6.2          | 6.9          | 6.5           | 8.0          | 7.1          | 6.9           | 6.5           | 6.7           | 6.5           | 6.7                | 6.5           | 6.7           | 6.5           | 6.7           | 6.5           | 6.5                | 8.0           |                  |  |
| g/AW·h  | 619          | 646          | 619          | 646          | 619          | 625           | 598          | 619          | 619           | 625           | 620           | 613           | 619                | 612           | 619           | 612           | 620           | 613           | 619                | 612           |                  |  |
| PM<br>g/Nm <sup>3</sup>                               | 0.12         | 0.12         | 0.12         | 0.11         | 0.12         | 0.11          | 0.10         | 0.12         | 0.12          | 0.11          | 0.10          | 0.09          | 0.09               | 0.08          | 0.11          | 0.12          | 0.11          | 0.12          | 0.09               | 0.07          |                  |  |
| g/AW·h  | 0.37         | 0.37         | 0.38         | 0.37         | 0.38         | 0.37          | 0.34         | 0.35         | 0.35          | 0.37          | 0.34          | 0.33          | 0.33               | 0.31          | 0.33          | 0.33          | 0.33          | 0.33          | 0.31               | 0.31          |                  |  |

## Notes

- Allowance: +25%
- Condition: 100kPa(750mmHg) barometric pressure, 298K(25°C) ambient temperature and 30% relative humidity.
- NOx, CO, HC[PPM]: with 13% O<sub>2</sub> Level.
- NOx, CO, HC, Particulates[g/Nm<sup>3</sup>]: with 5% O<sub>2</sub> Level.
- NOx, CO, HC, Particulates[g/PS·h]: with 13% O<sub>2</sub> Level.
- CO<sub>2</sub>[%]: Calculated Data.
- ( ): Estimated Data.
- \*1: Standby Rating
- These data are subject to change without notice.





**MITSUBISHI DIESEL ENGINE  
TECHNICAL INFORMATION**

ITEM NO.

T33-0100-E

DATE

Jun. 1999

**FUEL CONSUMPTION**

(SB, SA, SH, SR SERIES ENGINES FOR GENERATOR DRIVE)

| ENGINE MODEL    | ENGINE rpm | REMARKS        |
|-----------------|------------|----------------|
| S6B-PTA, PTK    | 1500       | W/Fan, W/O Fan |
|                 | 1800       |                |
| S6B3-PTA, PTK   | 1200       | W/Fan, W/O Fan |
|                 | 1500       |                |
| S6A3-PTA, PTK   | 1200       | W/Fan, W/O Fan |
|                 | 1500       |                |
| S12A2-PTA, PTK  | 1200       | W/Fan, W/O Fan |
|                 | 1500       |                |
| S12H-PTA        | 1500       | W/Fan, W/O Fan |
|                 | 1800       |                |
| S6R-PTA, PTK    | 1200       | W/Fan, W/O Fan |
|                 | 1500       |                |
| S6R2-PTA, PTK   | 1800       | W/Fan, W/O Fan |
|                 | 1000       |                |
| S12R-PTA, PTK   | 1200       | W/Fan, W/O Fan |
|                 | 1500       |                |
| S12R-PTA2, PTK2 | 1800       | W/Fan, W/O Fan |
|                 | 1500       |                |
| S16R-PTA, PTK   | 1200       | W/Fan, W/O Fan |
|                 | 1500       |                |
| S16R-PTA2, PTK2 | 1800       | W/Fan, W/O Fan |
|                 | 1500       |                |
| S6A3-PTAA       | 1500       | W/Fan          |
|                 | 1800       |                |
| S6R2-PTAA       | 1500       | W/Fan          |
| S12R-PTAA2      | 1500       | W/Fan          |
|                 | 1800       |                |
| S16R-PTAA2      | 1500       | W/Fan          |
|                 | 1800       |                |

First Edition : Jun. 1999

Engine Engineering Department  
Large Engine Design Section

Revision

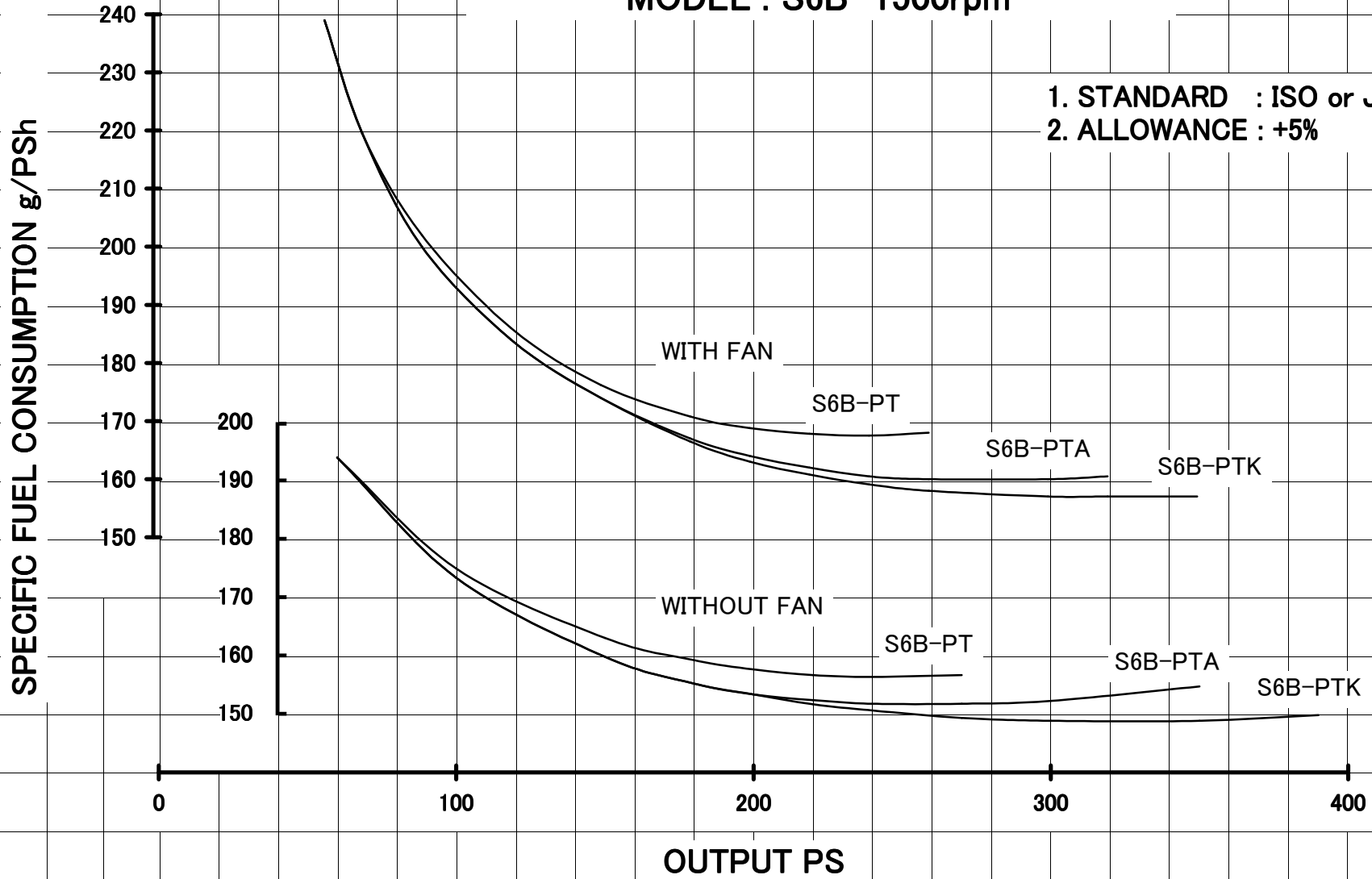
Approved by

Checked by

Drawn by

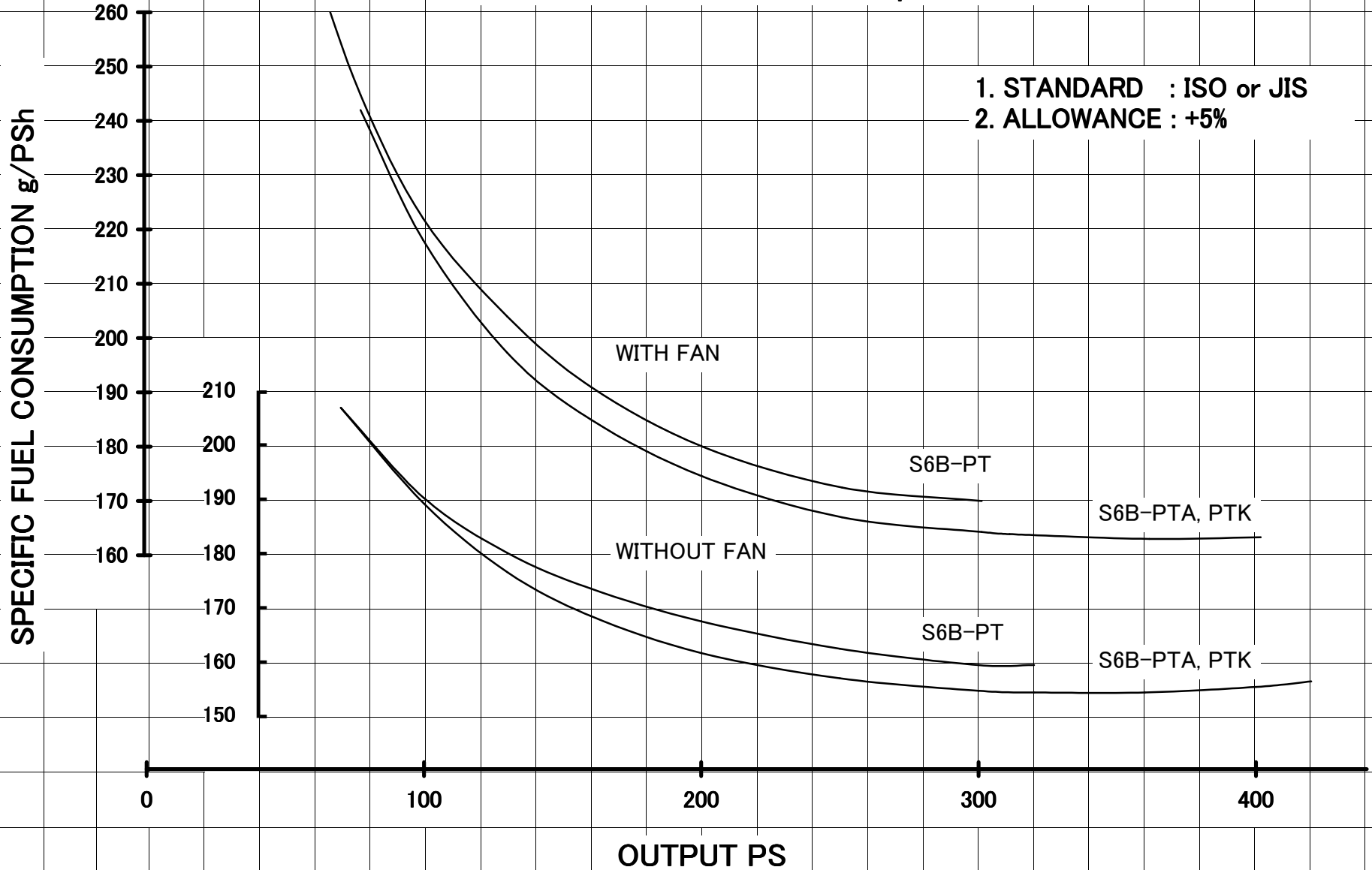
# SPECIFIC FUEL CONSUMPTION MODEL : S6B 1500rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

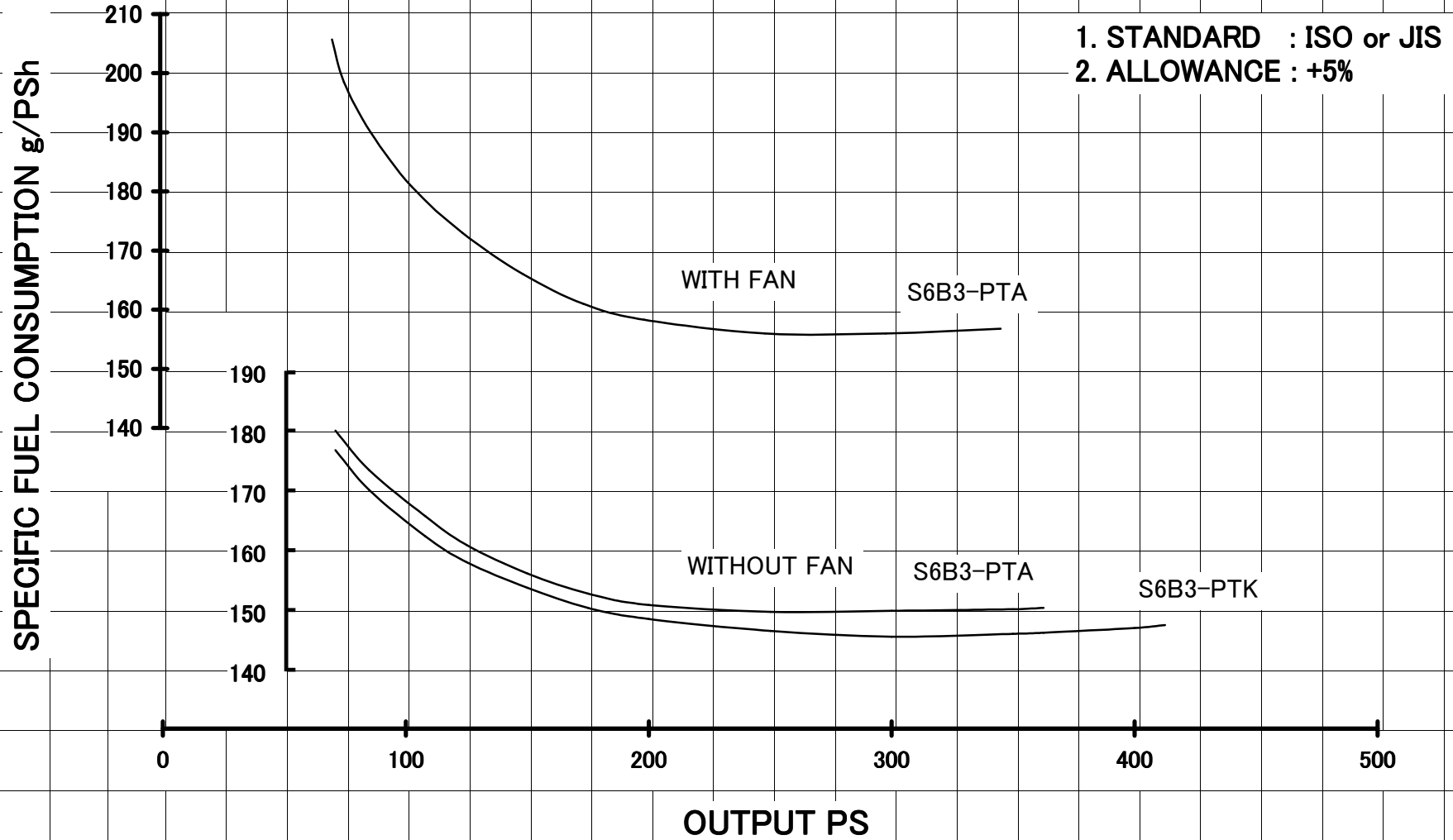


# SPECIFIC FUEL CONSUMPTION MODEL : S6B 1800rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%



# SPECIFIC FUEL CONSUMPTION MODEL : S6B3 1200rpm

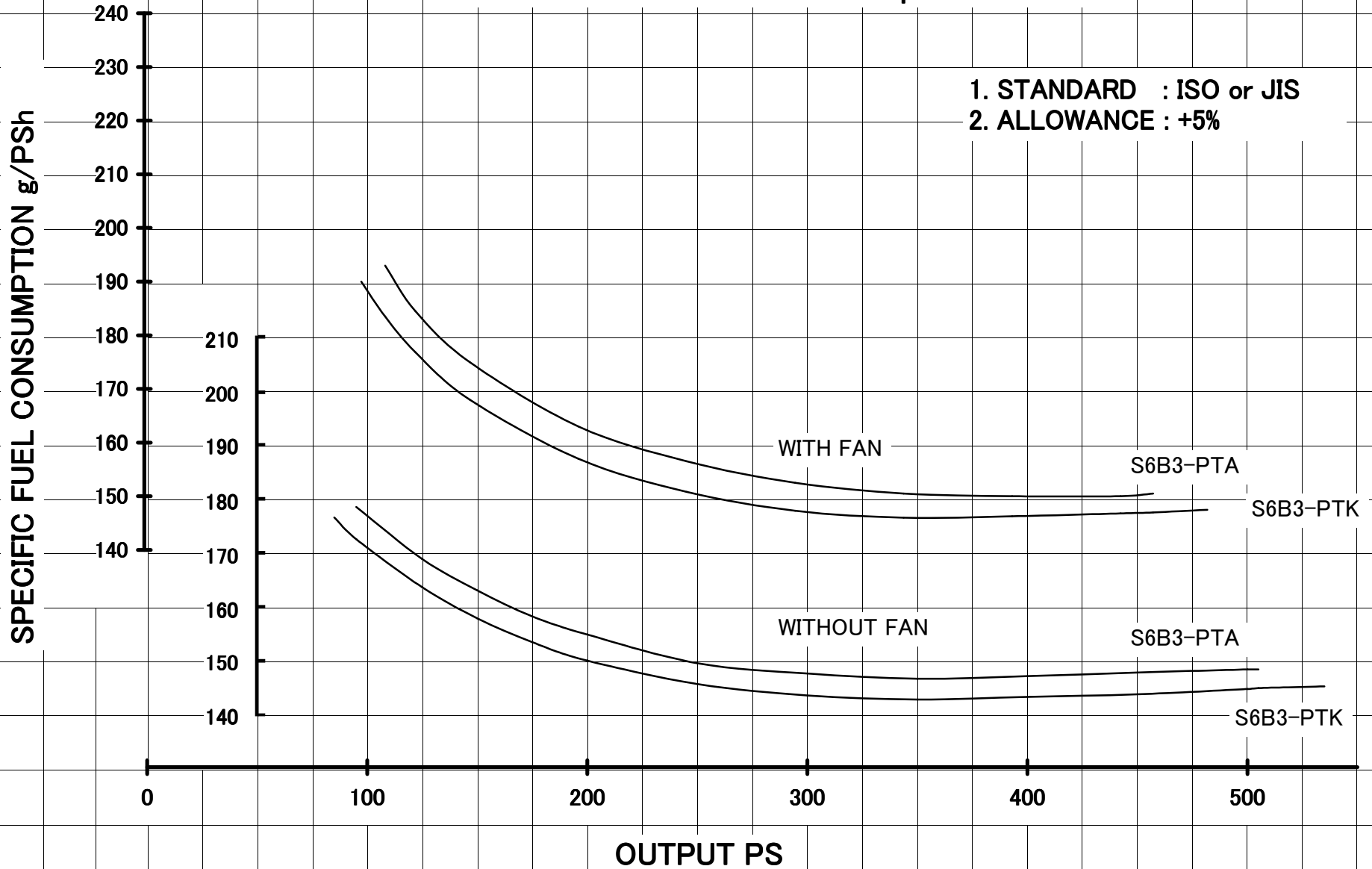


# SPECIFIC FUEL CONSUMPTION

MODEL : S6B3 1500rpm

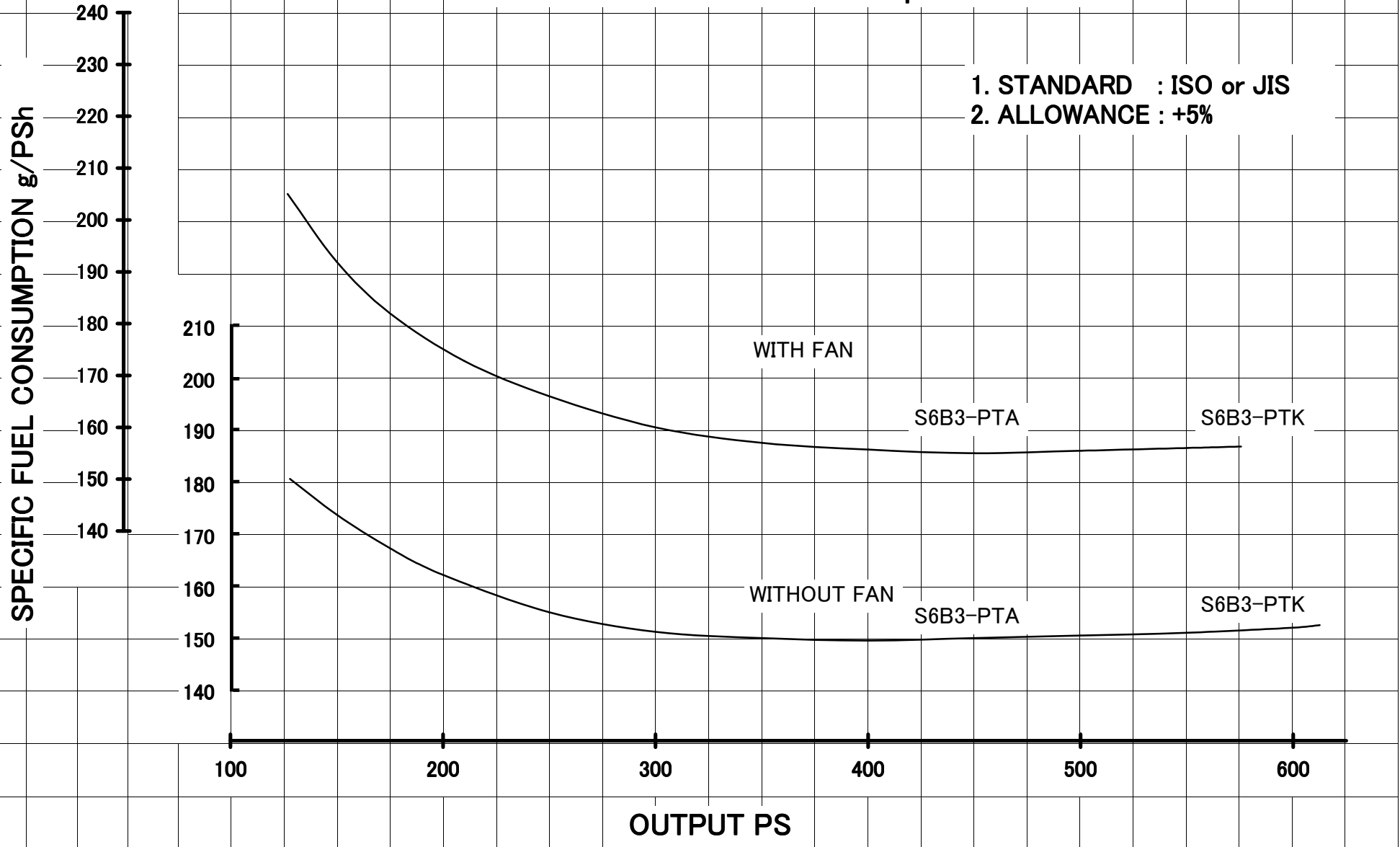
1. STANDARD : ISO or JIS

2. ALLOWANCE : +5%



# SPECIFIC FUEL CONSUMPTION MODEL : S6B3 1800rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%





**SPECIFIC FUEL CONSUMPTION  
MODEL : S6A3 1200rpm**

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

**SPECIFIC FUEL CONSUMPTION g/PS<sub>h</sub>**

210  
200  
190  
180  
170  
160  
150  
140

190  
180  
170  
160  
150  
140

WITH FAN

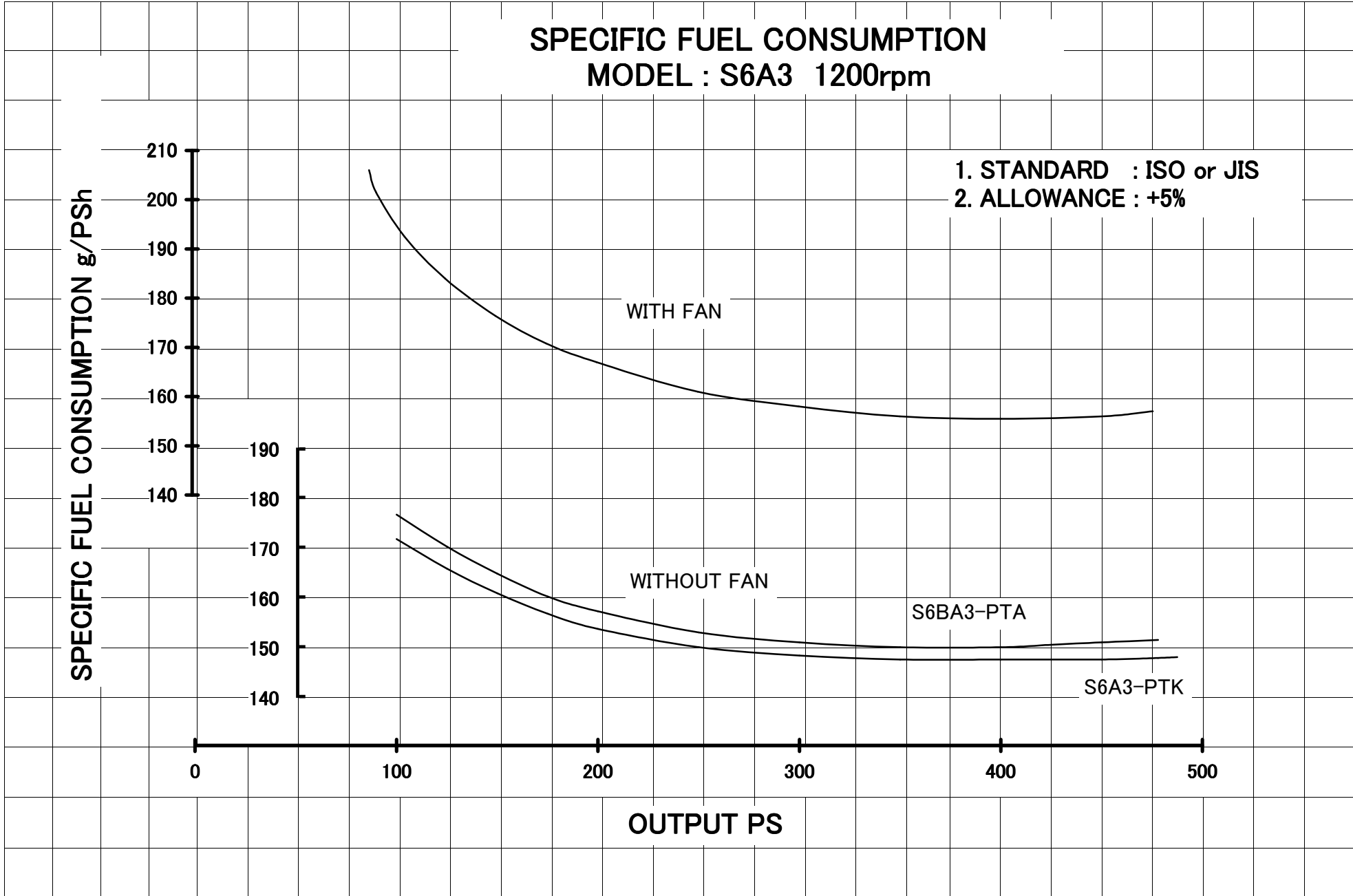
WITHOUT FAN

S6BA3-PTA

S6A3-PTK

0 100 200 300 400 500

**OUTPUT PS**



# SPECIFIC FUEL CONSUMPTION MODEL : S6A3 1500rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

SPECIFIC FUEL CONSUMPTION g/PS<sub>h</sub>

220  
210  
200  
190  
180  
170  
160  
150  
140

210  
200  
190  
180  
170  
160  
150  
140

WITH FAN

S6A3-PTA

S6A3-PTK

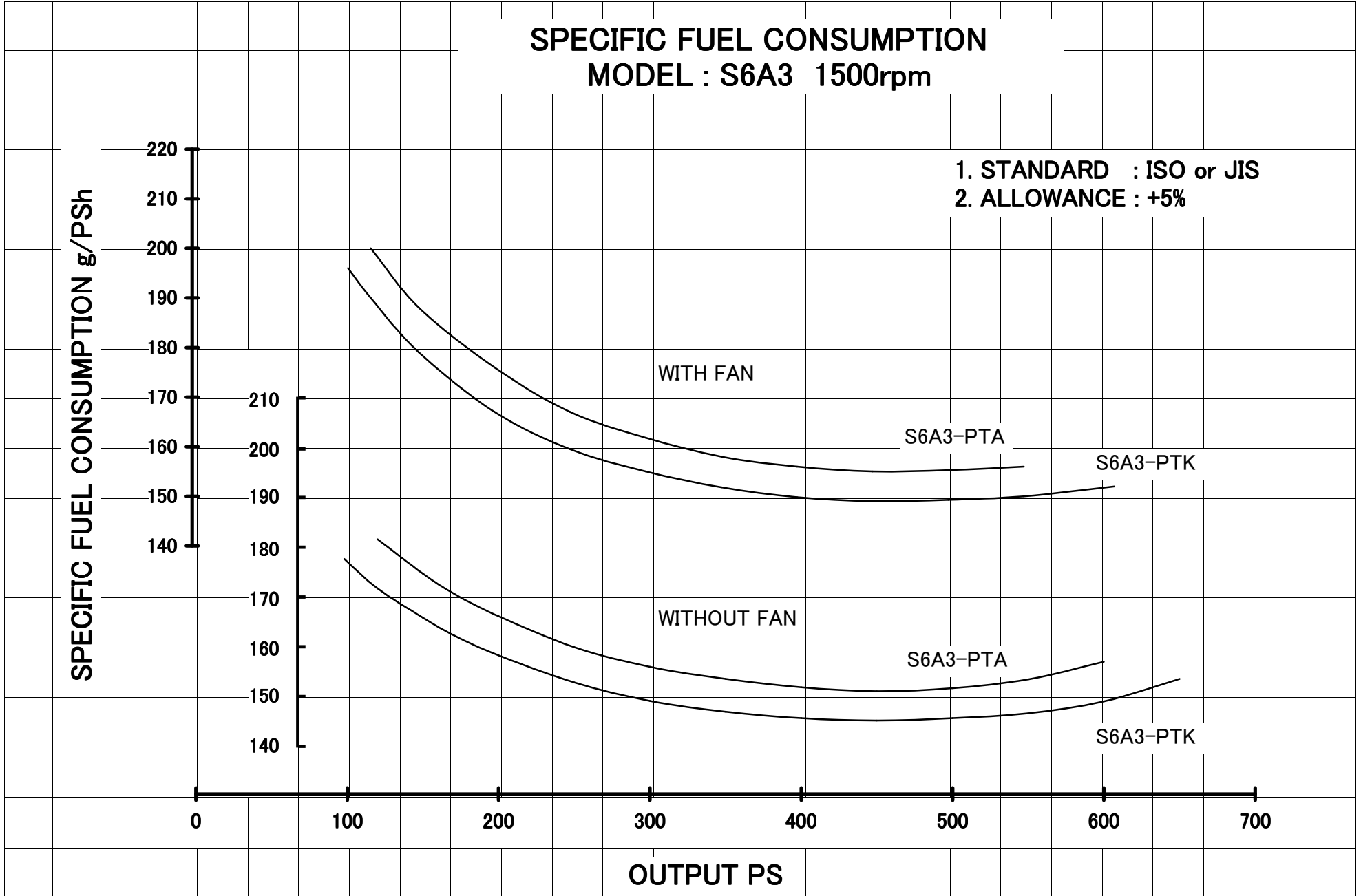
WITHOUT FAN

S6A3-PTA

S6A3-PTK

0 100 200 300 400 500 600 700

OUTPUT PS



# SPECIFIC FUEL CONSUMPTION

MODEL : S6A3 1800rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

SPECIFIC FUEL CONSUMPTION g/PS<sub>h</sub>

230  
220  
210  
200  
190  
180  
170  
160  
150

210  
200  
190  
180  
170  
160  
150

WITH FAN

S6A3-PTA

S6A3-PTK

WITHOUT FAN

S6A3-PTA

S6A3-PTK

0

100

200

300

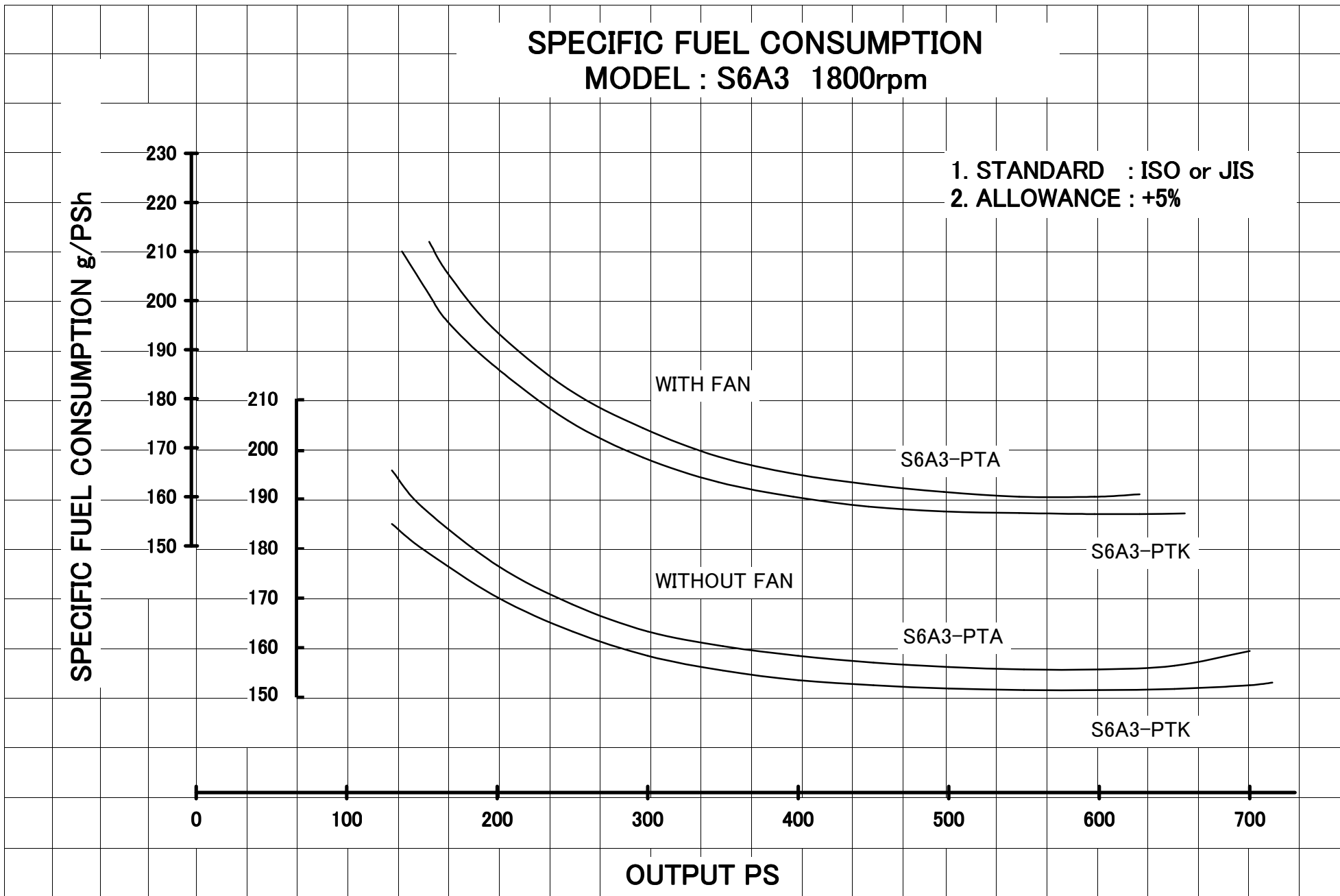
400

500

600

700

OUTPUT PS



# SPECIFIC FUEL CONSUMPTION MODEL : S12A2 1200rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

SPECIFIC FUEL CONSUMPTION g/PS<sub>h</sub>

190  
180  
170  
160  
150

180  
170  
160  
150

0

200

400

600

800

OUTPUT PS

WITH FAN

S12A2-PT

S12A2-PTA

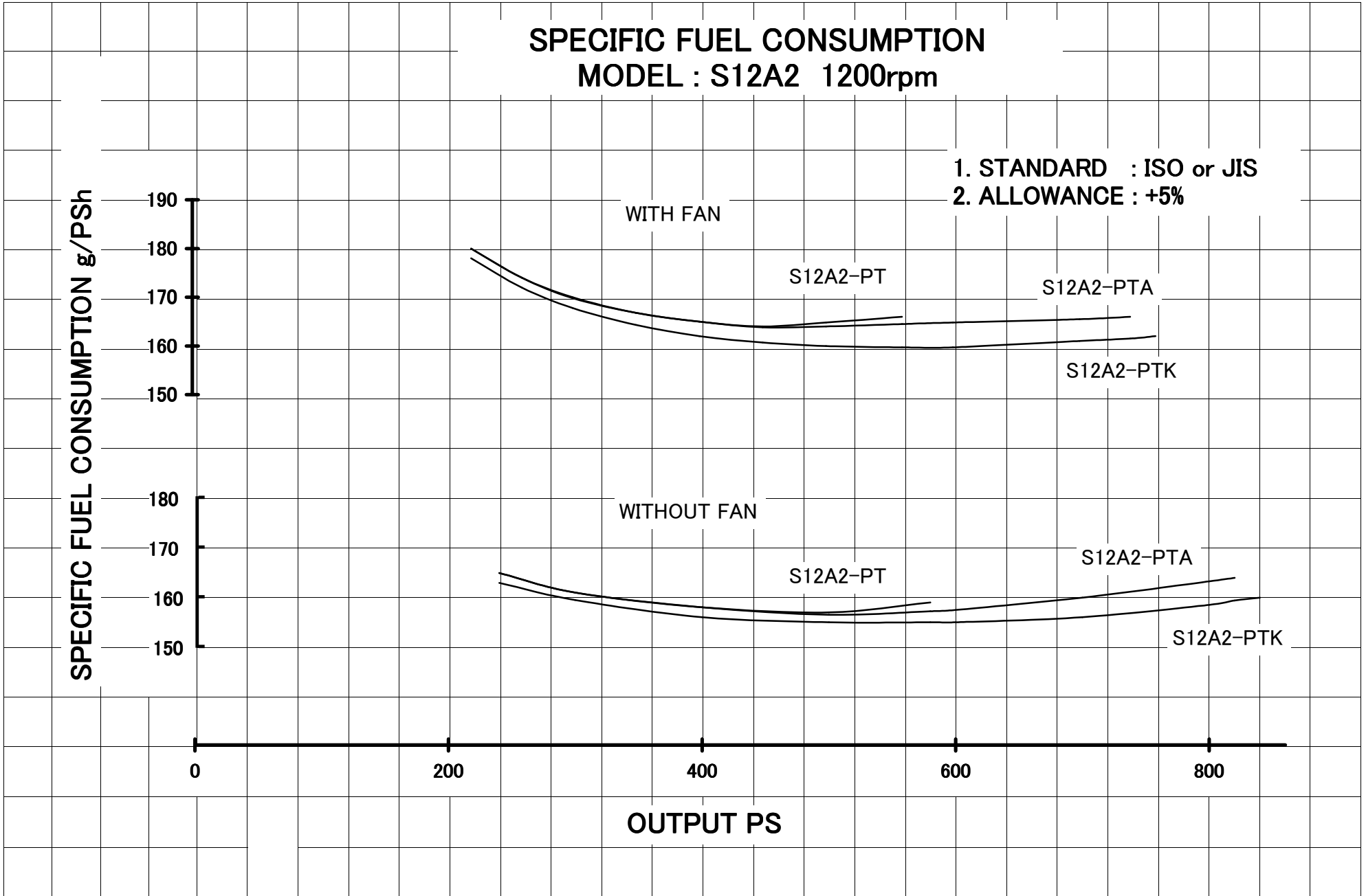
S12A2-PTK

WITHOUT FAN

S12A2-PT

S12A2-PTA

S12A2-PTK



# SPECIFIC FUEL CONSUMPTION MODEL : S12A2 1500rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

SPECIFIC FUEL CONSUMPTION g/PS<sub>h</sub>

190  
180  
170  
160  
150

190  
180  
170  
160  
150  
140

0

200

400

600

800

1000

OUTPUT PS

WITH FAN

S12A2-PT

S12A2-PTA

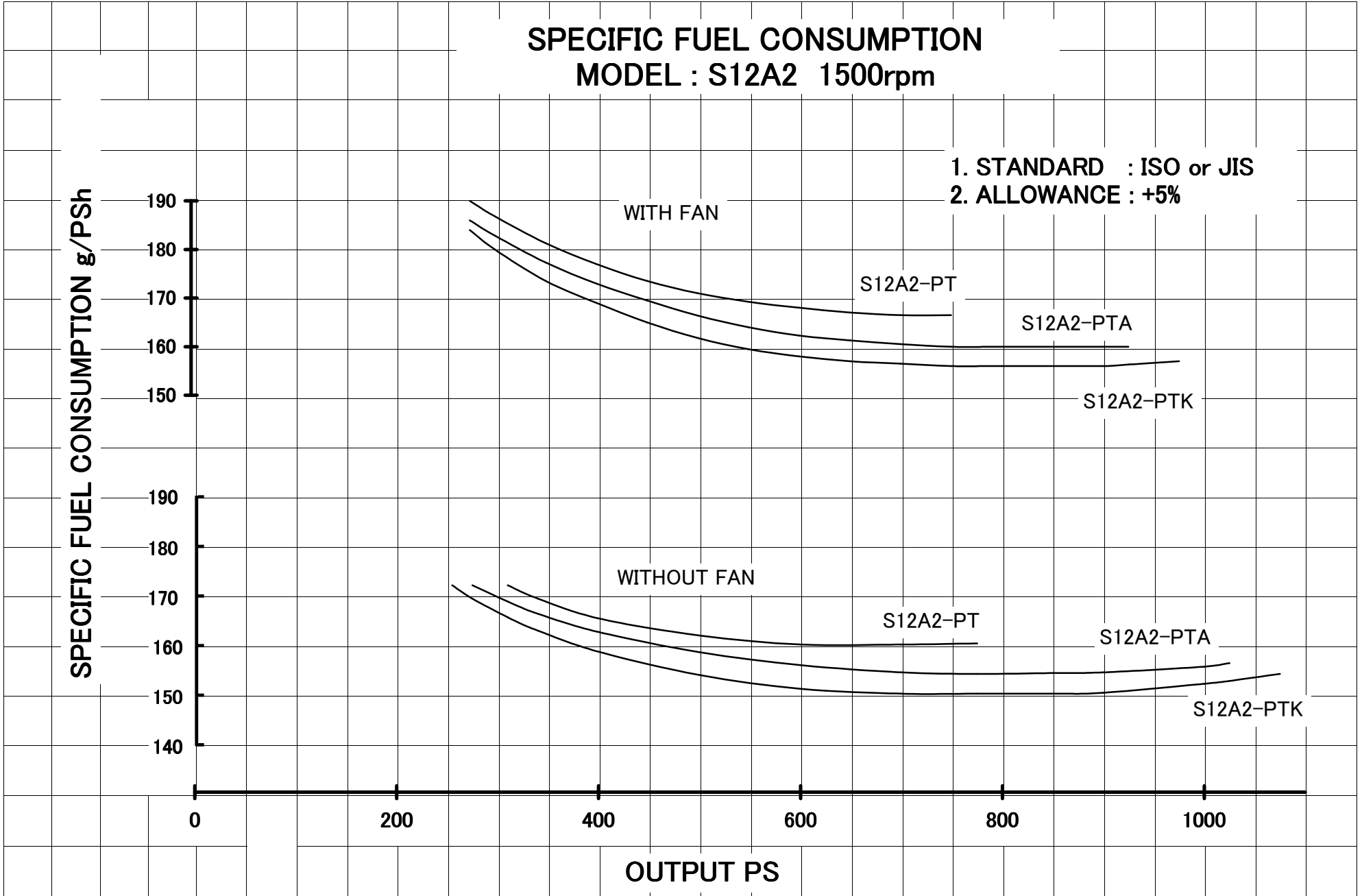
S12A2-PTK

WITHOUT FAN

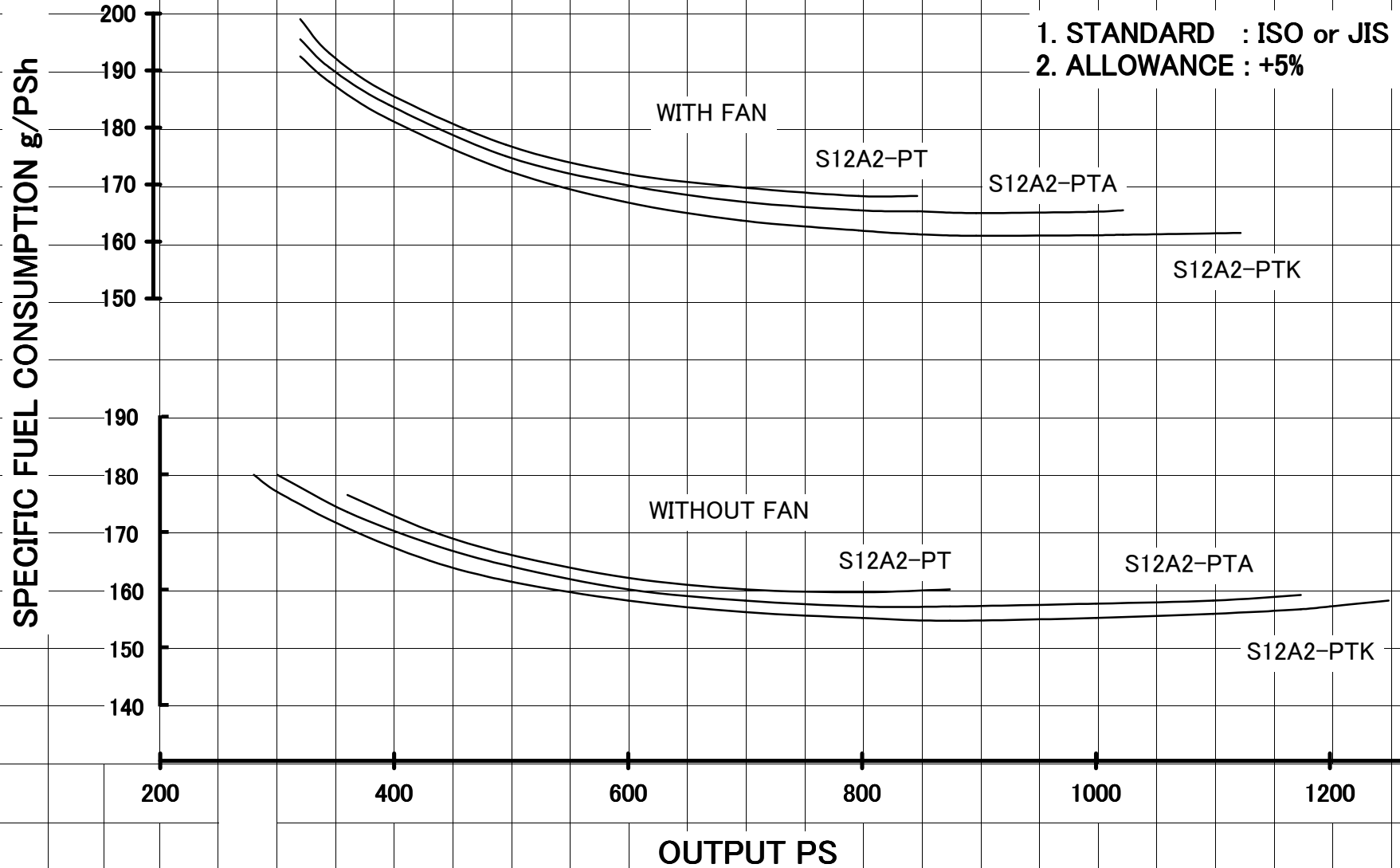
S12A2-PT

S12A2-PTA

S12A2-PTK

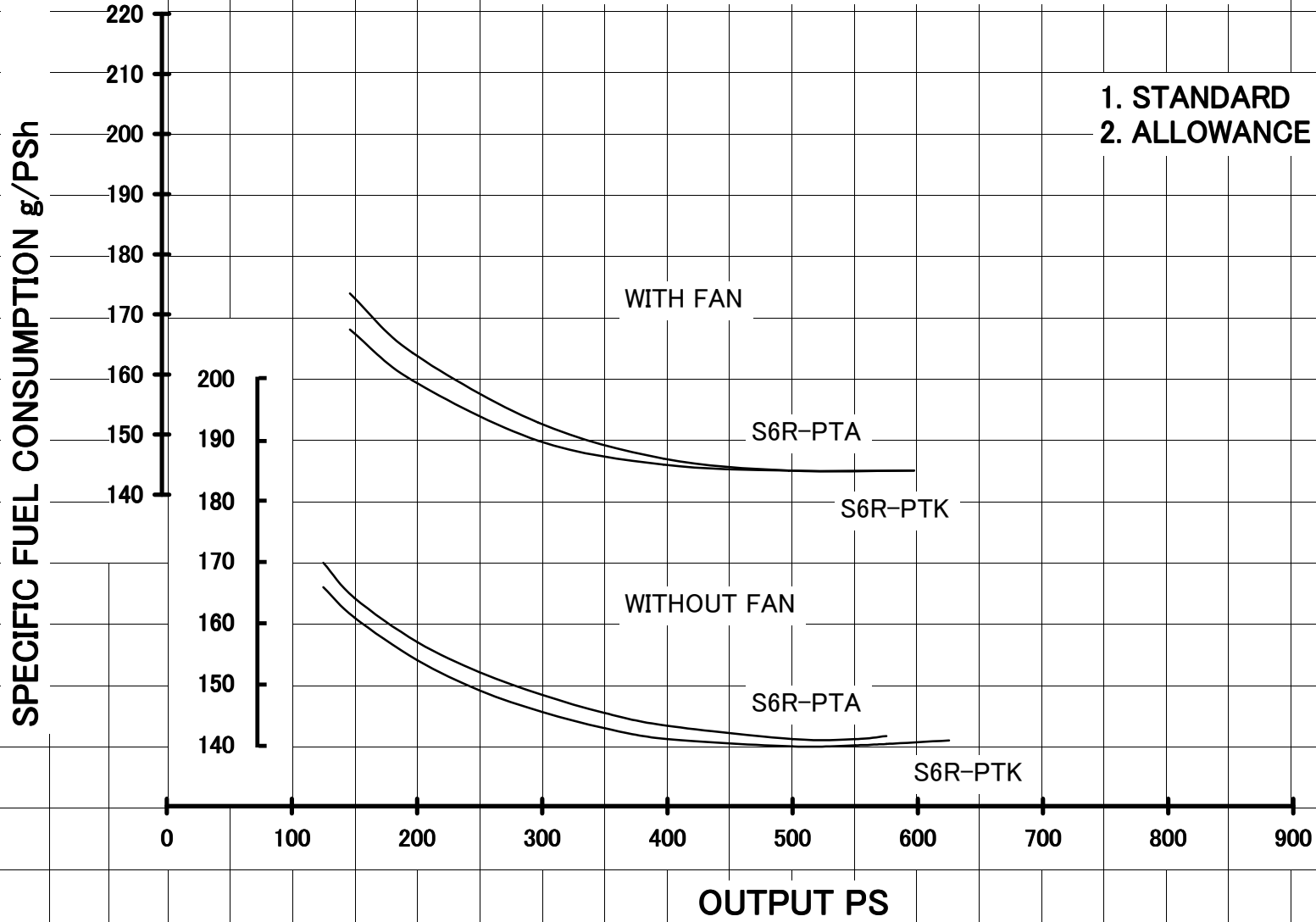


# SPECIFIC FUEL CONSUMPTION MODEL : S12A2 1800rpm



# SPECIFIC FUEL CONSUMPTION MODEL : S6R 1200rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

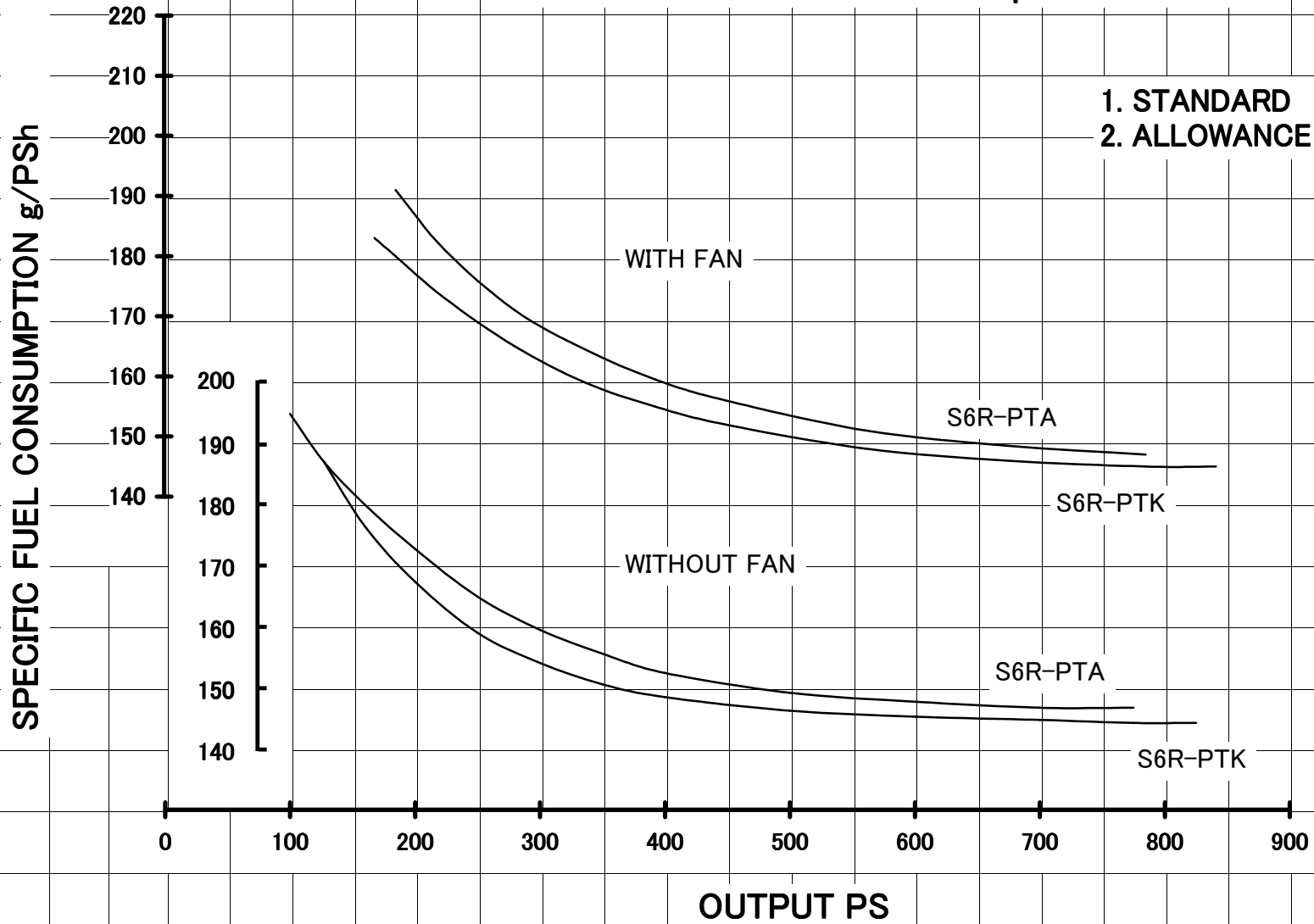


# SPECIFIC FUEL CONSUMPTION

MODEL : S6R 1500rpm

1. STANDARD : ISO or JIS

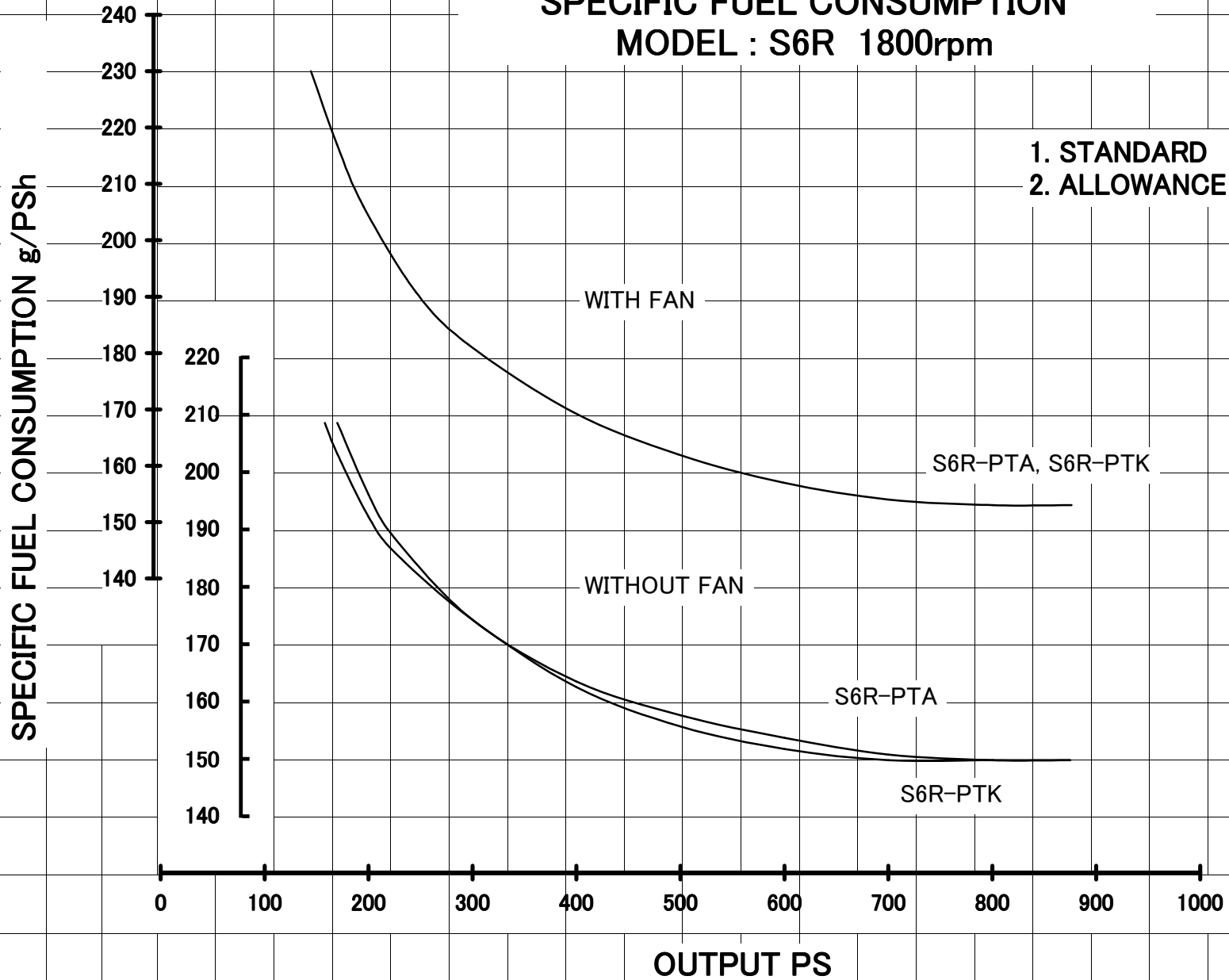
2. ALLOWANCE : +5%





# SPECIFIC FUEL CONSUMPTION MODEL : S6R 1800rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

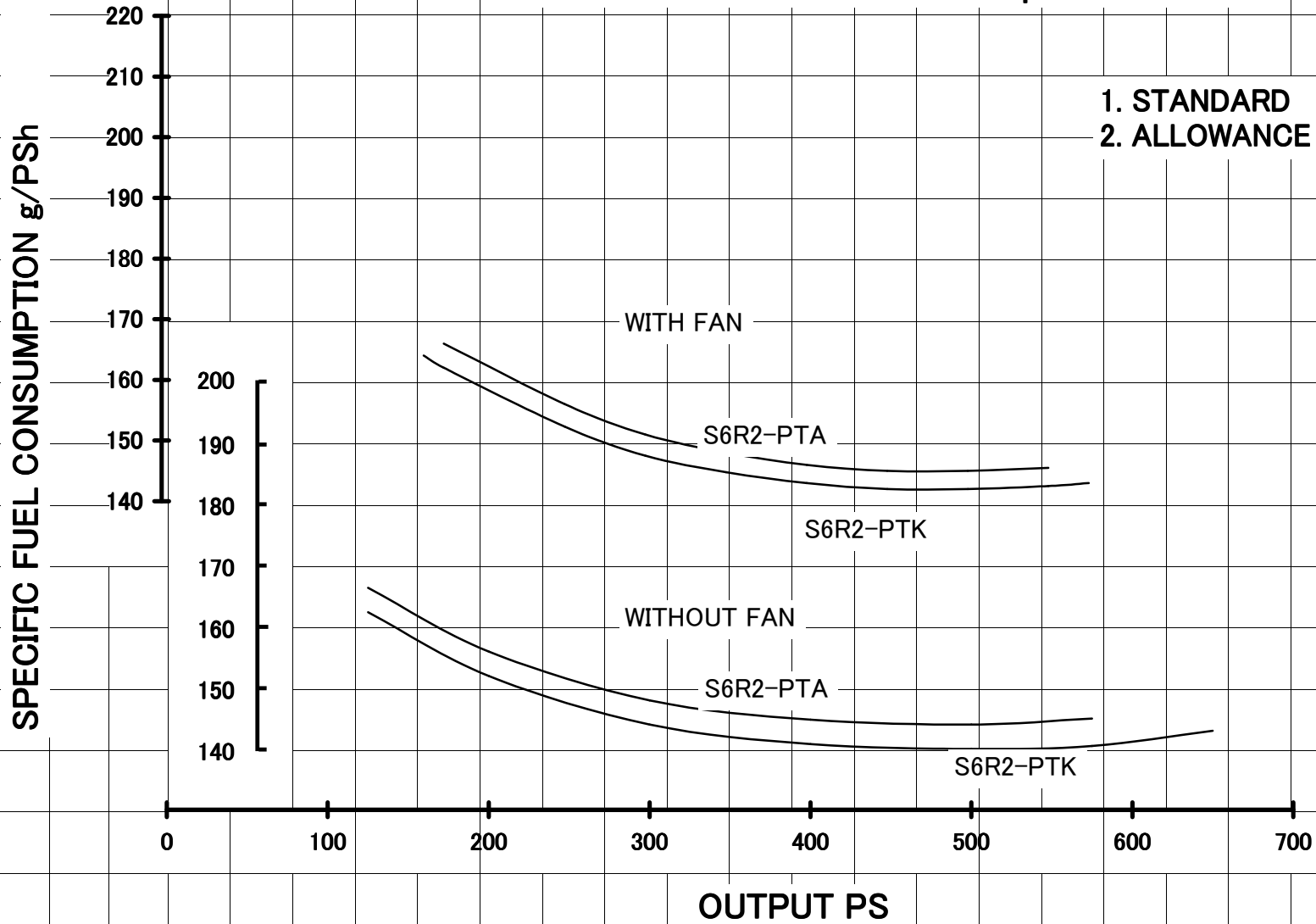


# SPECIFIC FUEL CONSUMPTION

MODEL : S6R2 1000rpm

1. STANDARD : ISO or JIS

2. ALLOWANCE : +5%

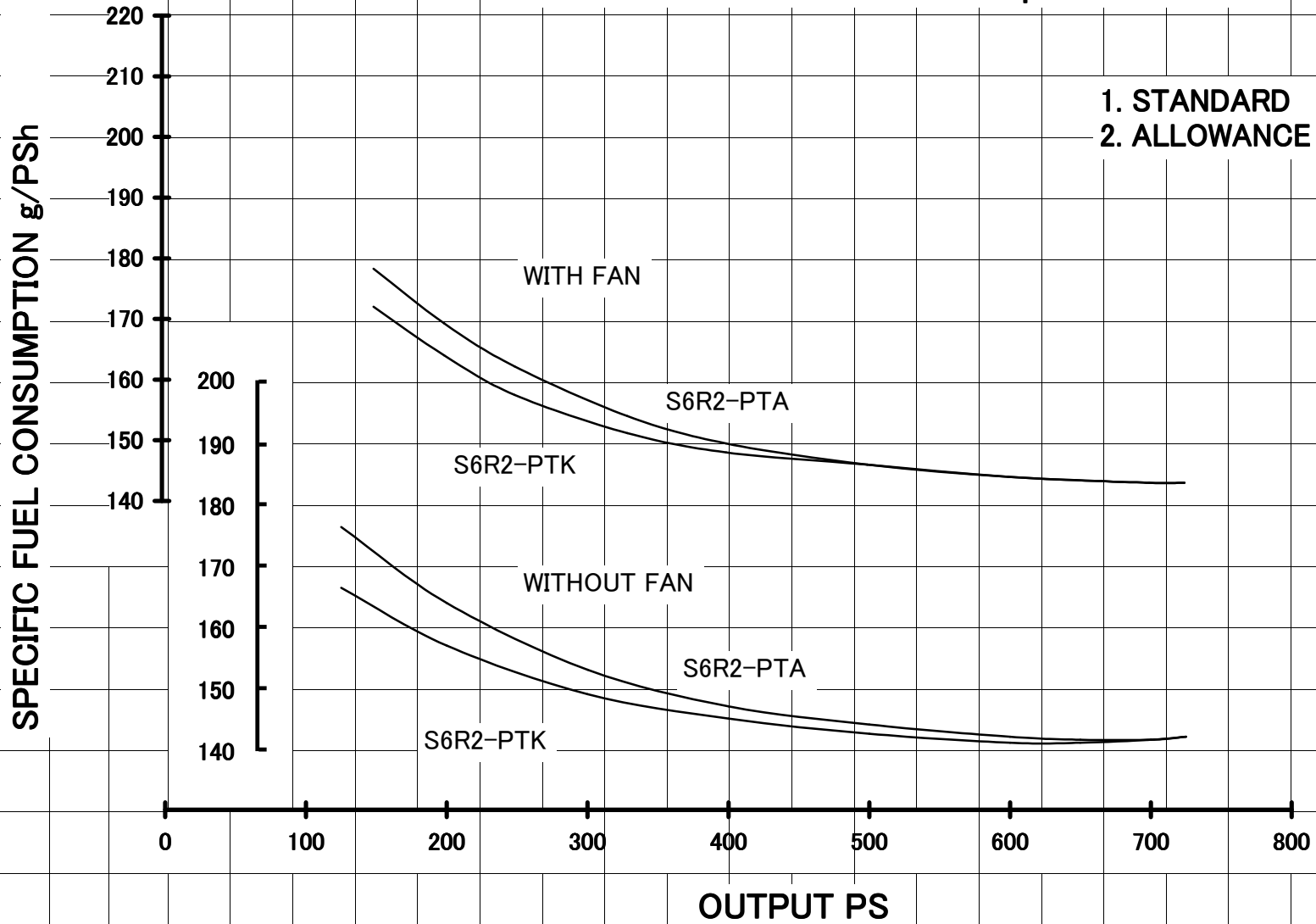


# SPECIFIC FUEL CONSUMPTION

MODEL : S6R2 1200rpm

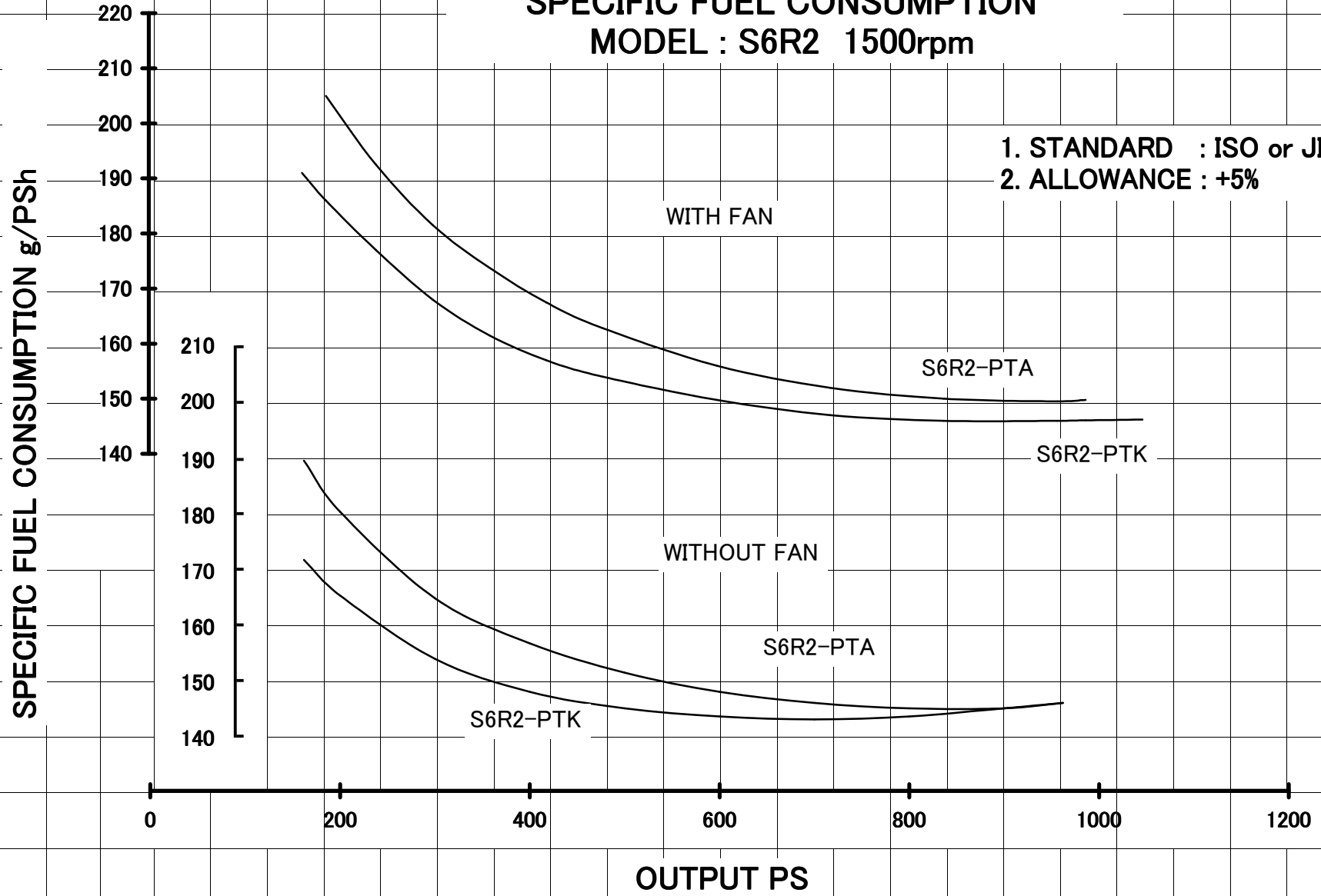
1. STANDARD : ISO or JIS

2. ALLOWANCE : +5%



# SPECIFIC FUEL CONSUMPTION MODEL : S6R2 1500rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

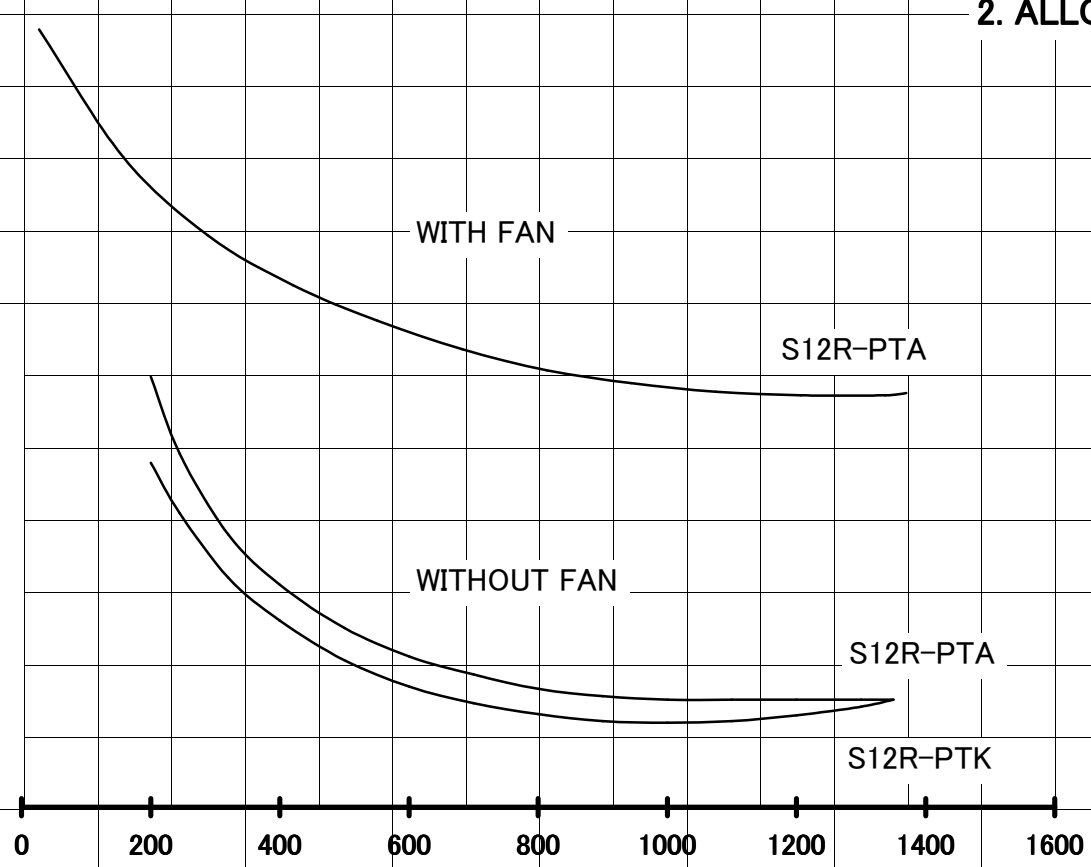


# SPECIFIC FUEL CONSUMPTION MODEL : S12R 1200rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

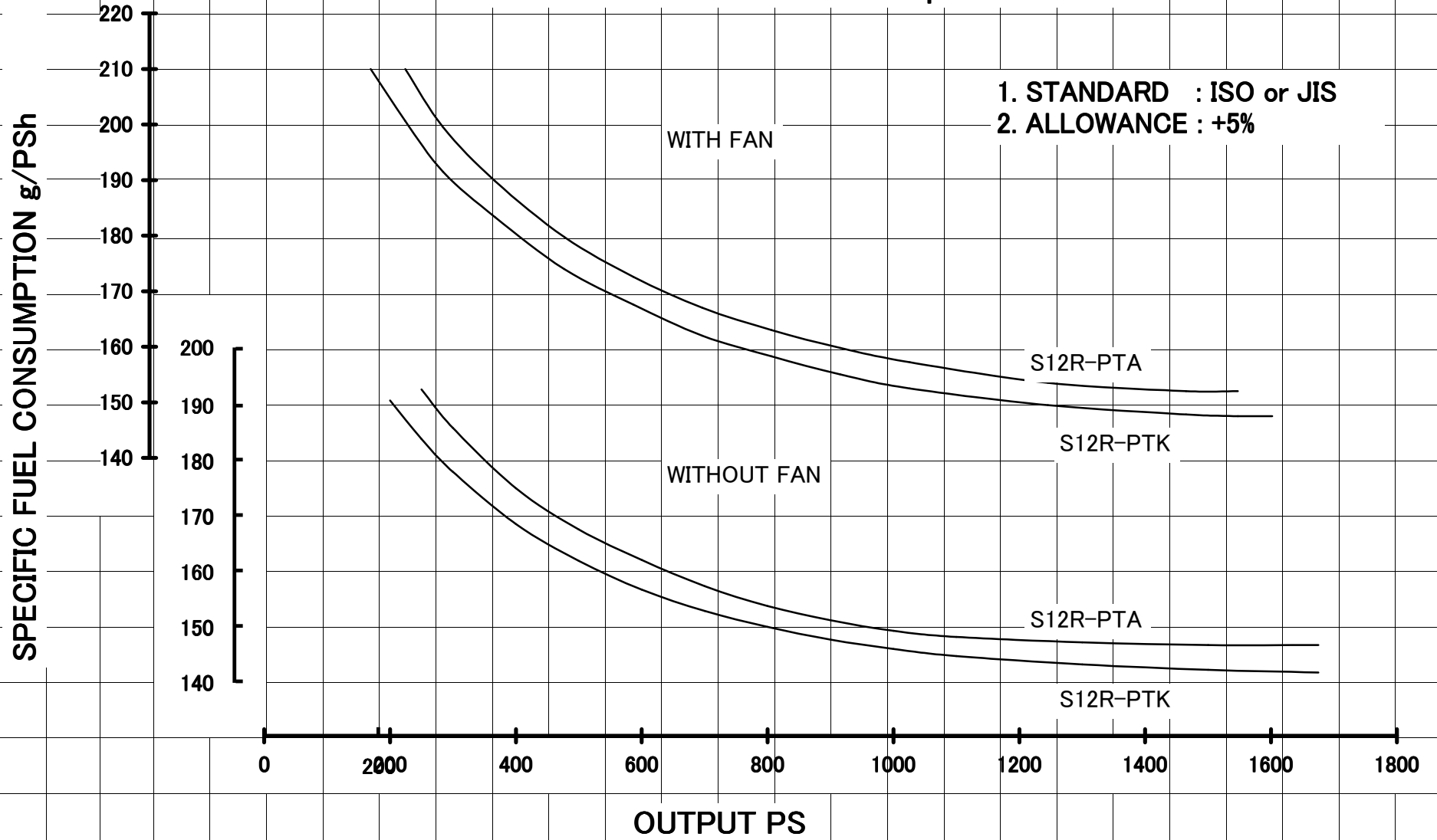
SPECIFIC FUEL CONSUMPTION g/PS<sub>h</sub>

200  
190  
180  
170  
160  
150  
140  
190  
180  
170  
160  
150  
140

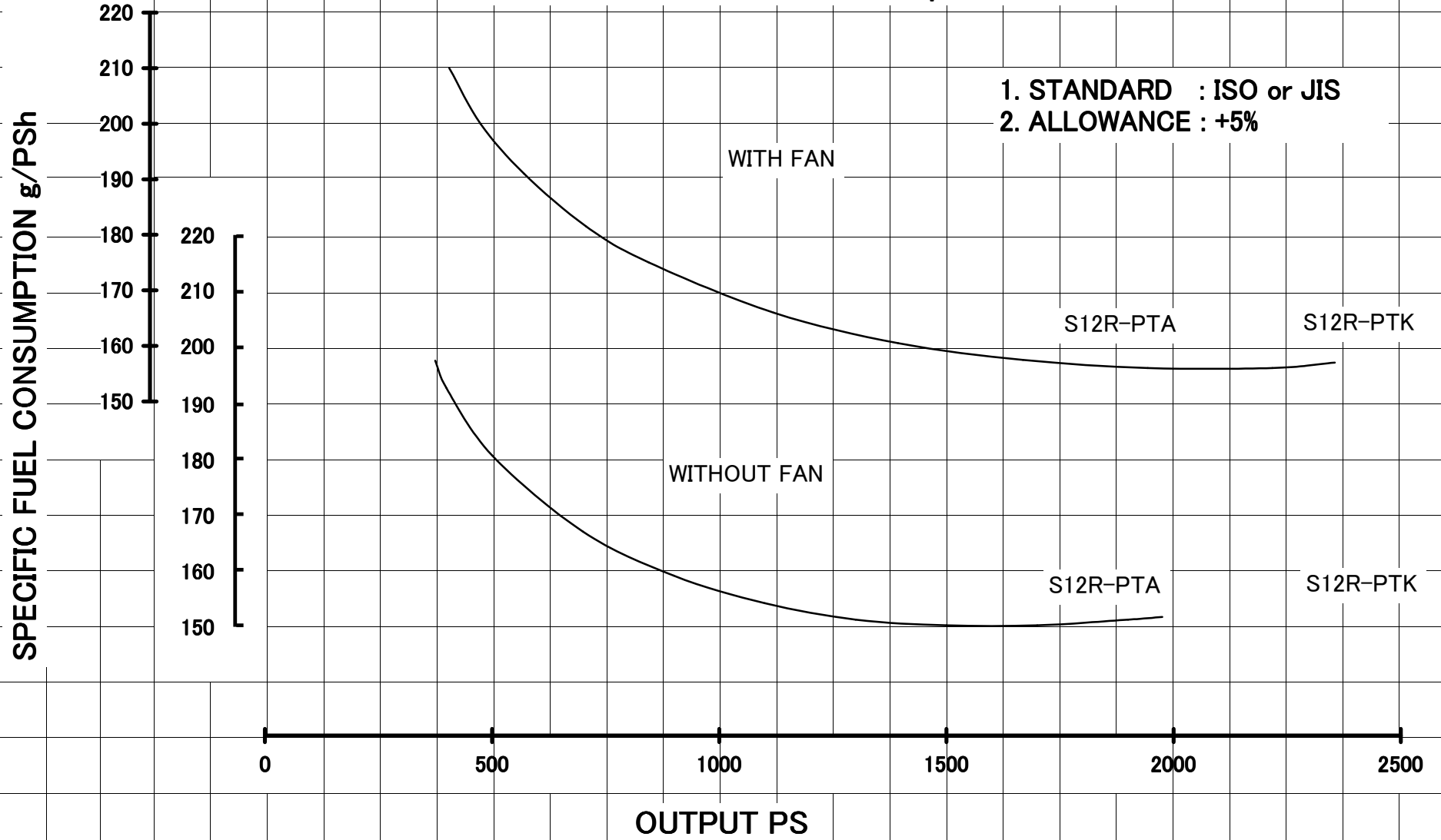


OUTPUT PS

# SPECIFIC FUEL CONSUMPTION MODEL : S12R 1500rpm

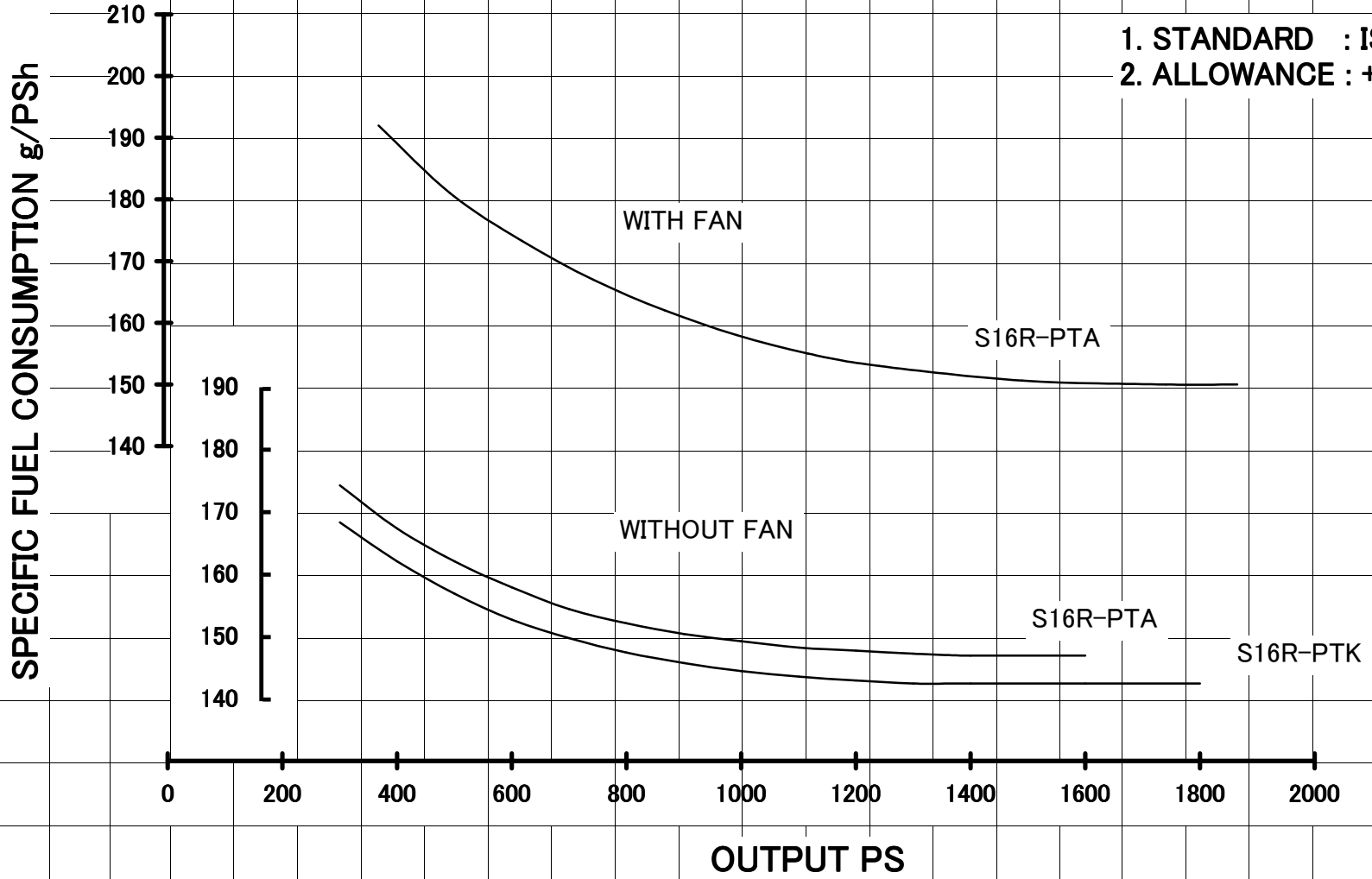


# SPECIFIC FUEL CONSUMPTION MODEL : S12R 1800rpm



# SPECIFIC FUEL CONSUMPTION MODEL : S16R 1200rpm

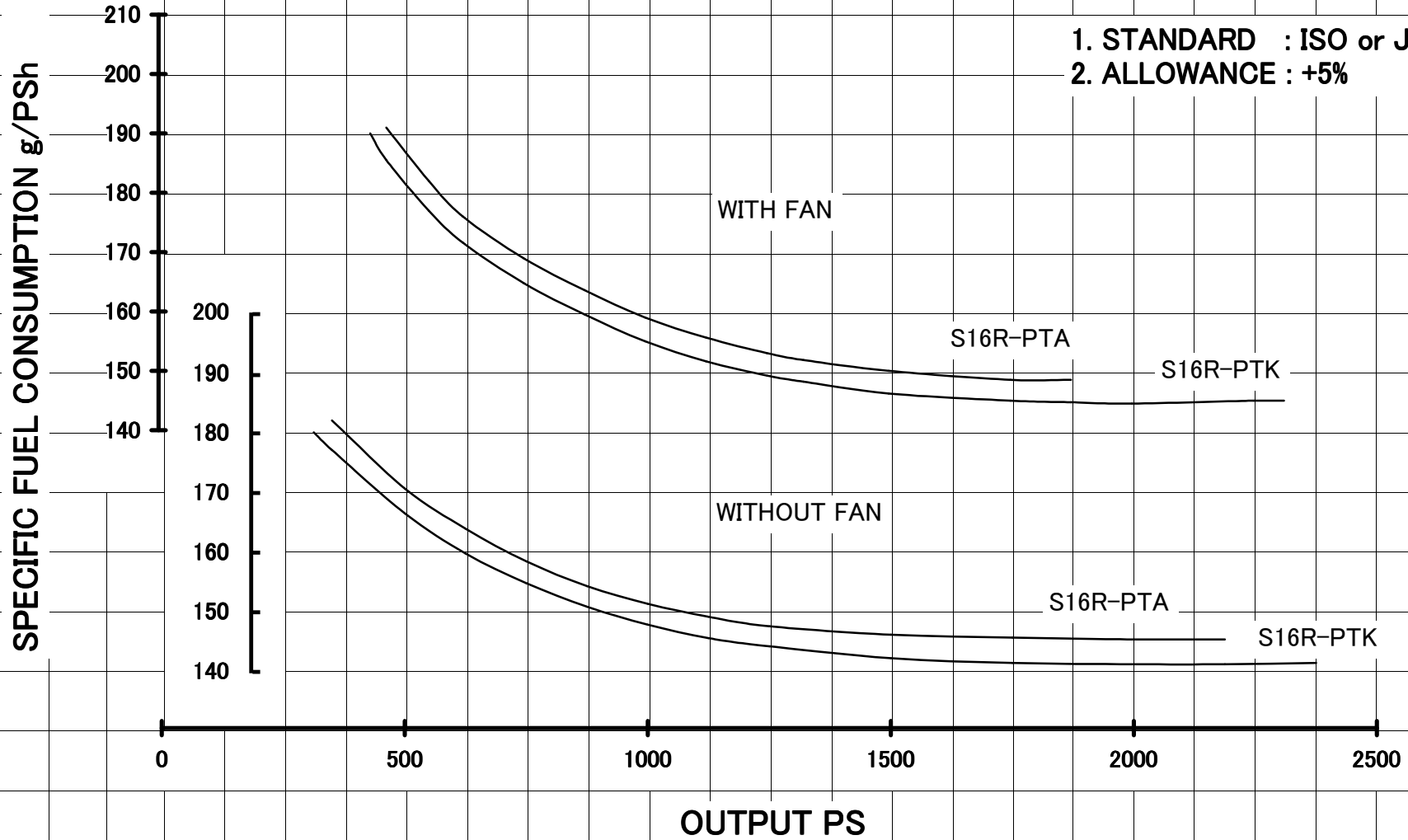
- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%





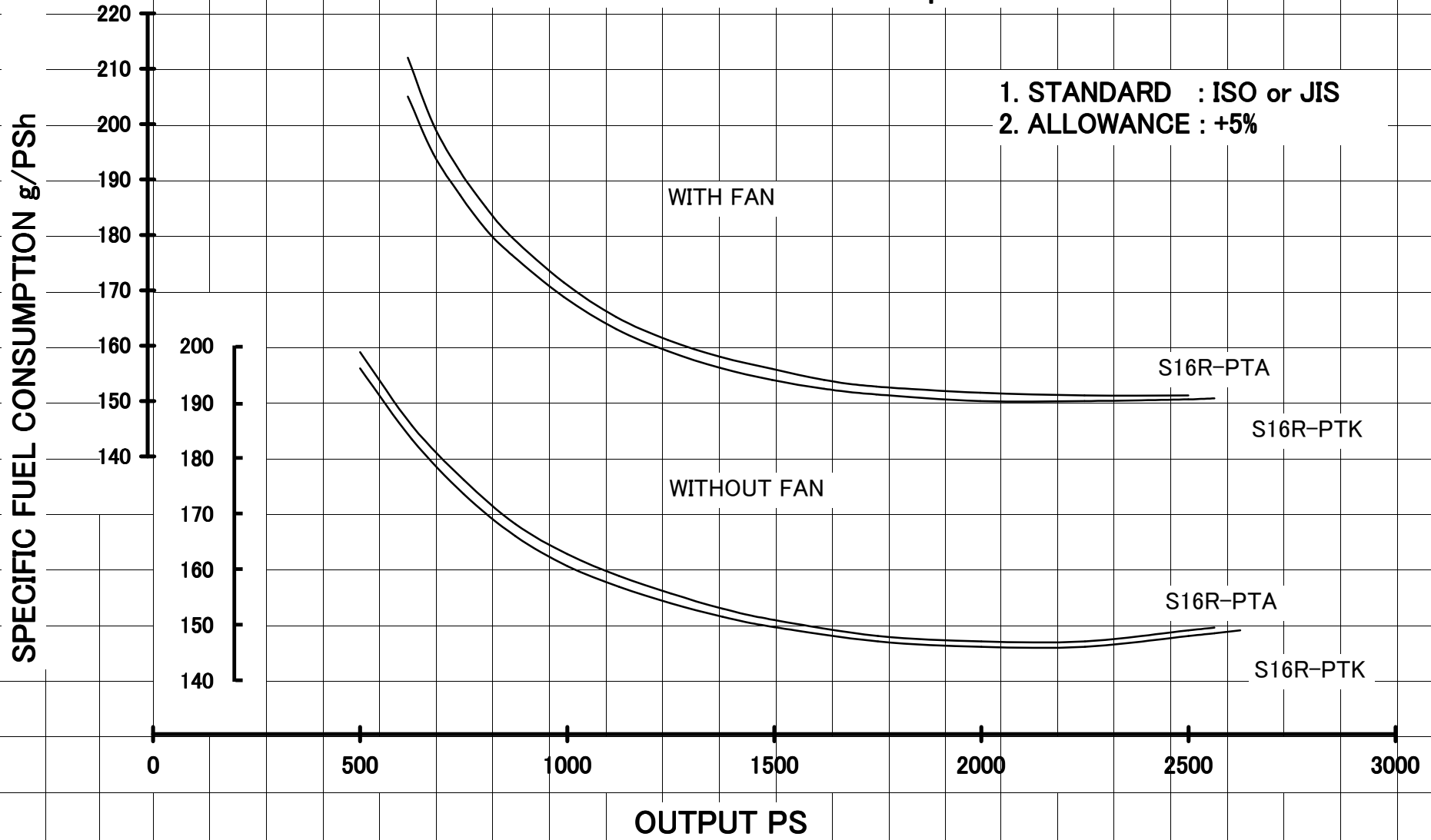
# SPECIFIC FUEL CONSUMPTION MODEL : S16R 1500rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%



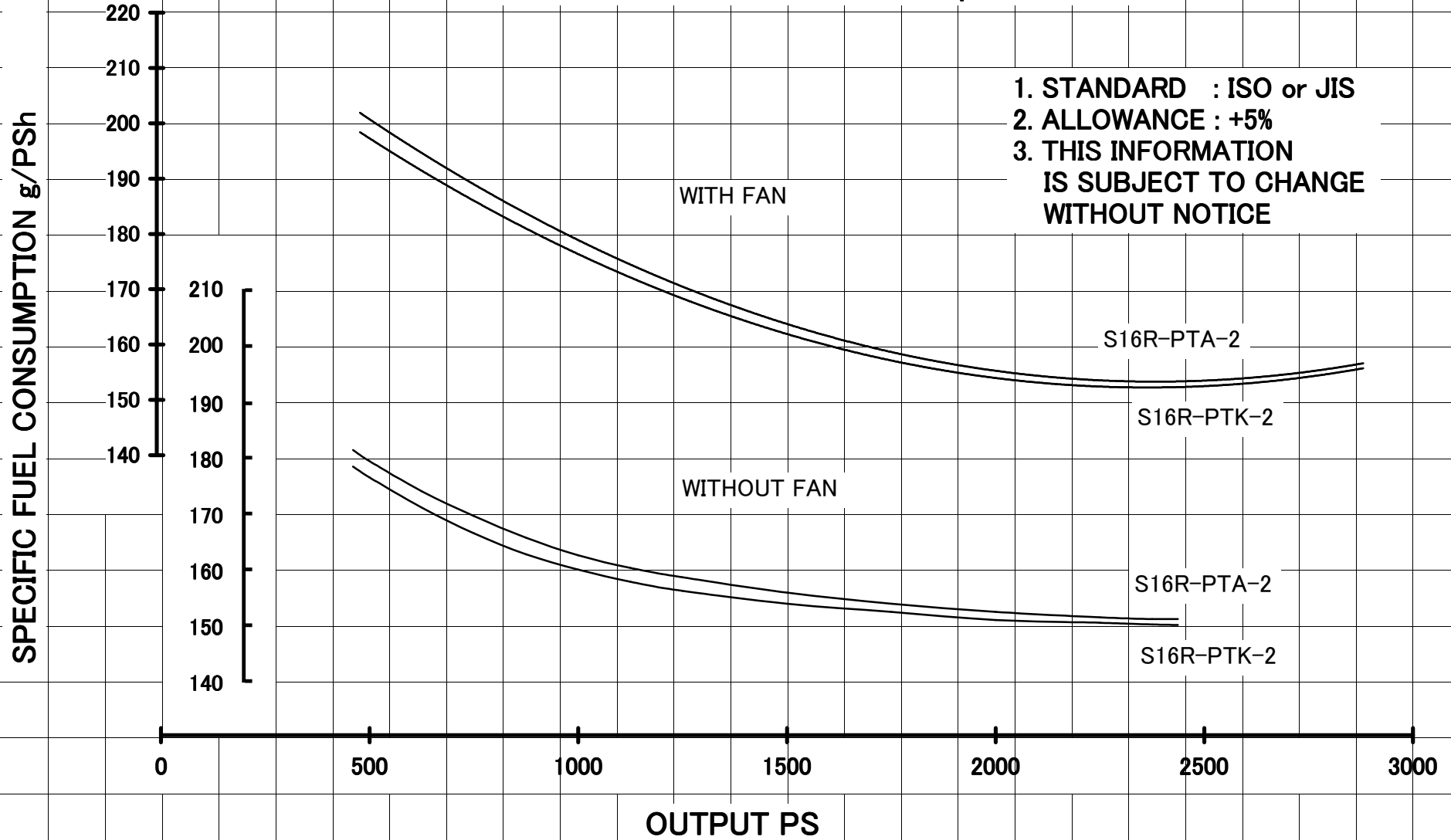
# SPECIFIC FUEL CONSUMPTION MODEL : S16R 1800rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%



# SPECIFIC FUEL CONSUMPTION MODEL : S16R-2 1500rpm

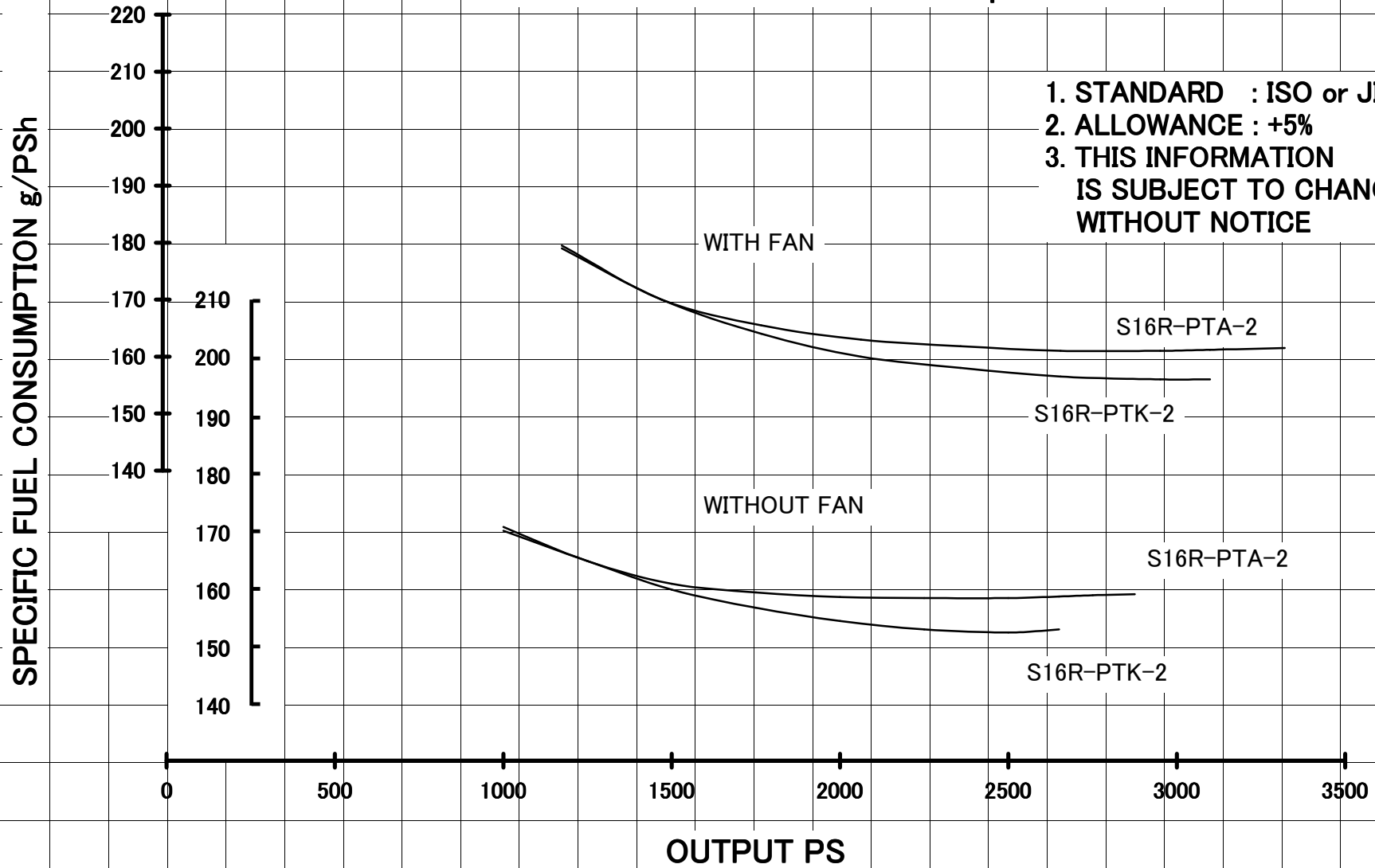
- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%
- 3. THIS INFORMATION IS SUBJECT TO CHANGE WITHOUT NOTICE



# SPECIFIC FUEL CONSUMPTION

## MODEL : S16R-2 1800rpm

1. STANDARD : ISO or JIS
2. ALLOWANCE : +5%
3. THIS INFORMATION IS SUBJECT TO CHANGE WITHOUT NOTICE



**SPECIFIC FUEL CONSUMPTION**  
**MODEL : S6R2-PTAA 1500rpm**

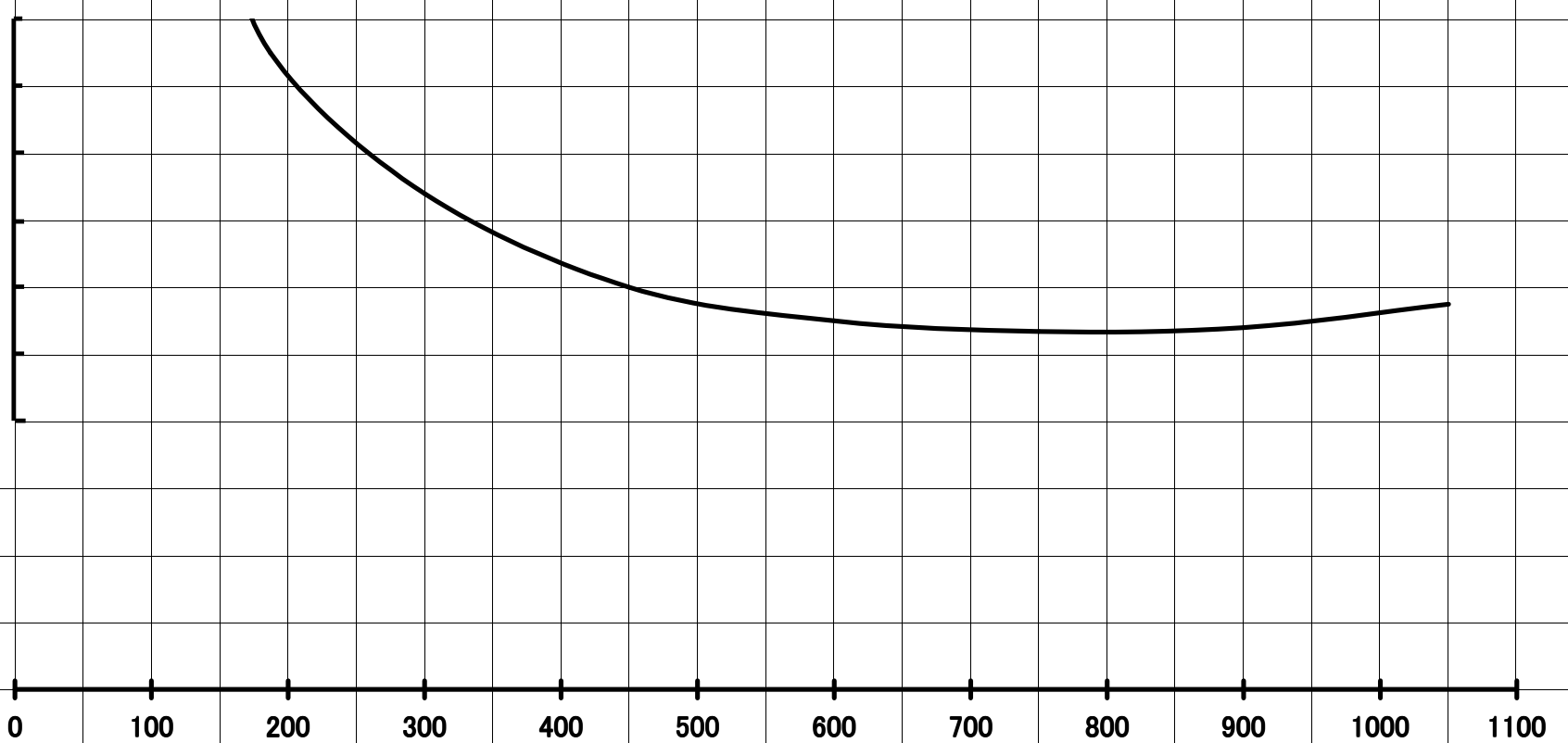
- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

**SPECIFIC FUEL CONSUMPTION g/PS<sub>h</sub>**

200  
190  
180  
170  
160  
150  
140

0 100 200 300 400 500 600 700 800 900 1000 1100

**OUTPUT PS**



**SPECIFIC FUEL CONSUMPTION  
MODEL : S12H-PTA 1500rpm**

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

SPECIFIC FUEL CONSUMPTION g/PS<sub>h</sub>

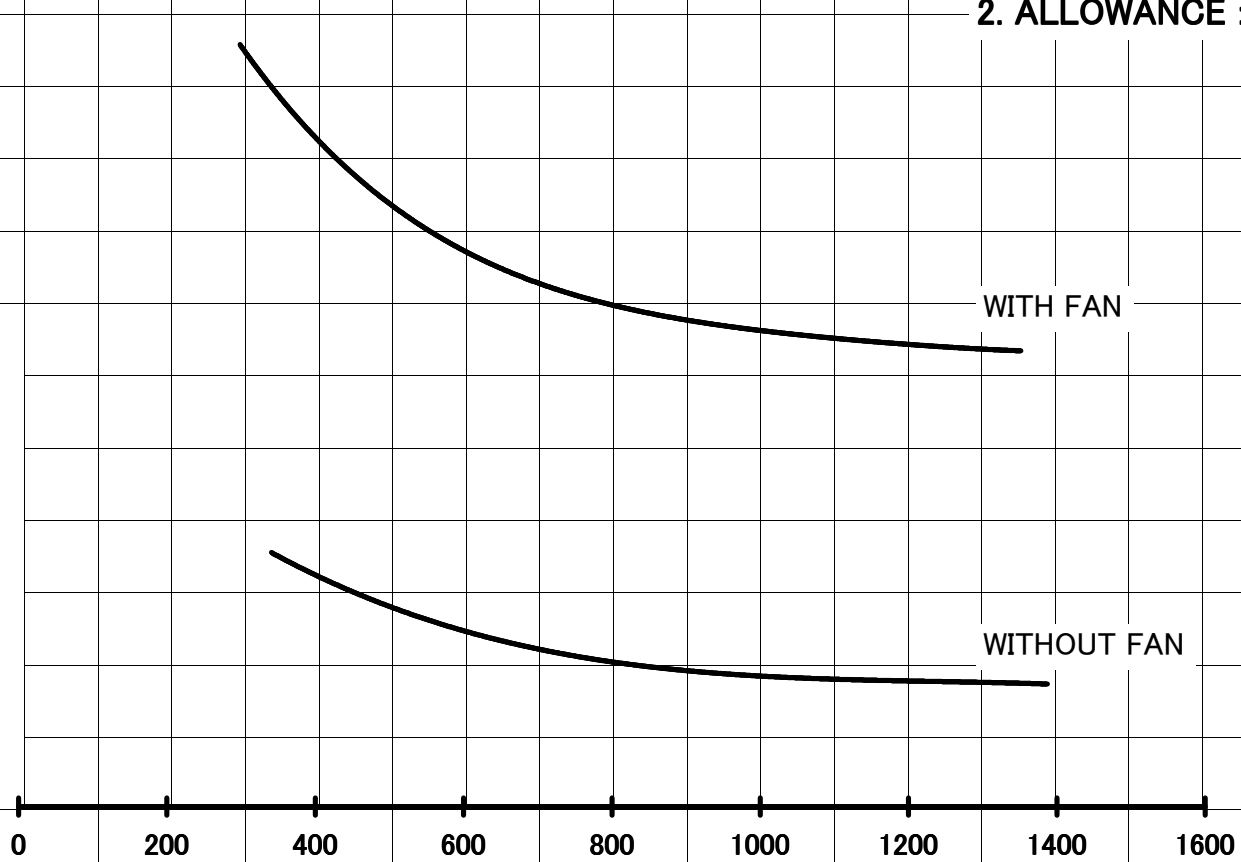
200  
190  
180  
170  
160  
150  
140  
190  
180  
170  
160  
150  
140

0 200 400 600 800 1000 1200 1400 1600

OUTPUT PS

WITH FAN

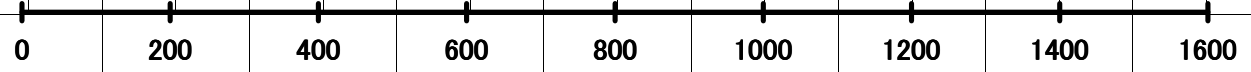
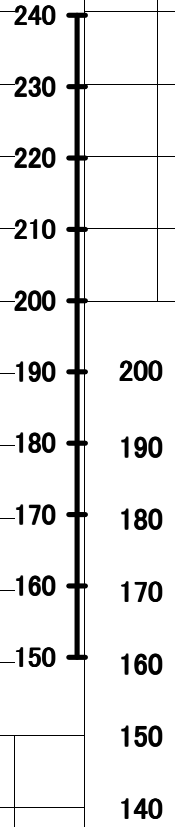
WITHOUT FAN



**SPECIFIC FUEL CONSUMPTION**  
**MODEL : S12H-PTA 1800rpm**

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

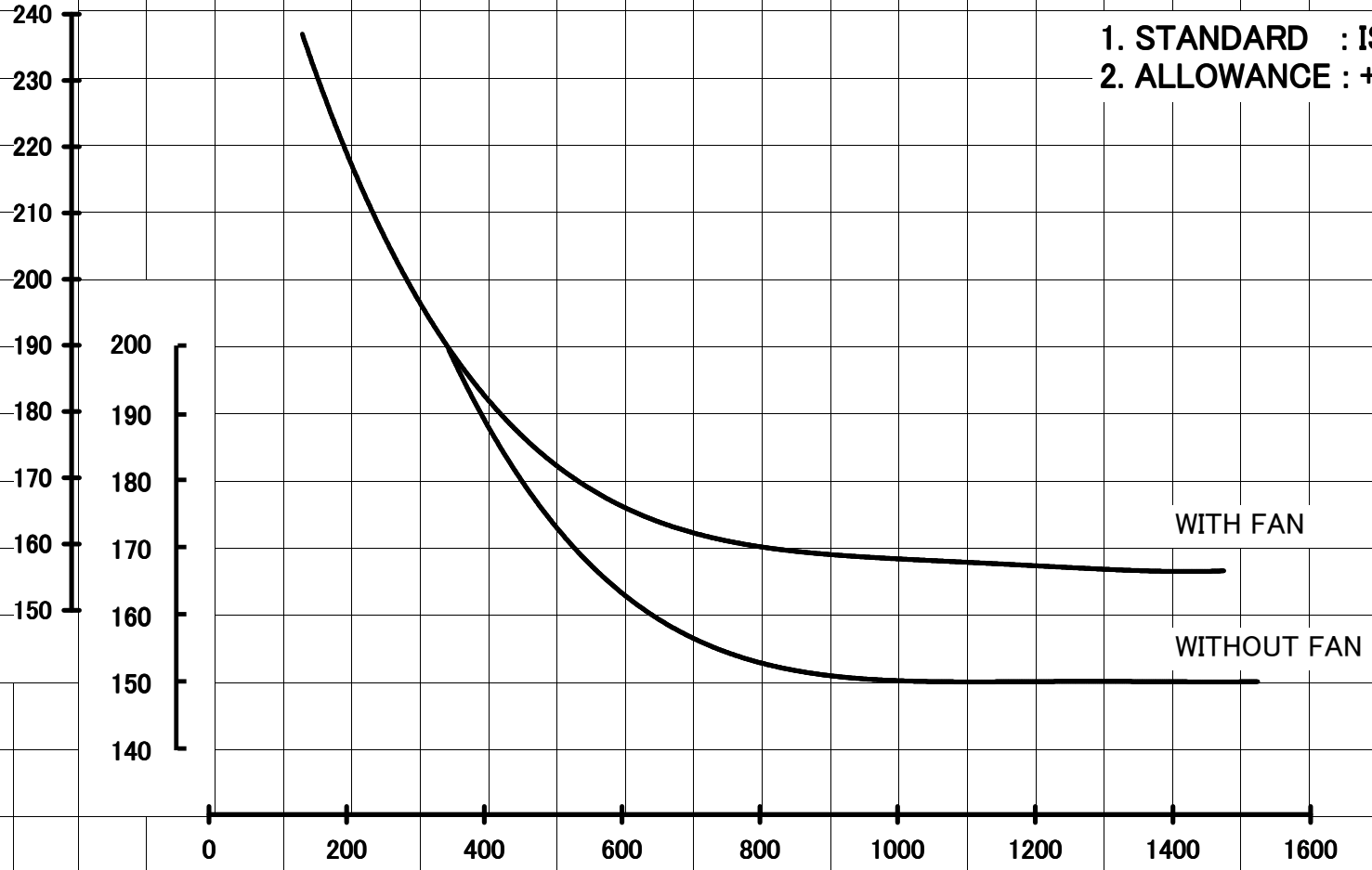
**SPECIFIC FUEL CONSUMPTION g/PSH**



**OUTPUT PS**

WITH FAN

WITHOUT FAN



# SPECIFIC FUEL CONSUMPTION MODEL : S12R-PTAA2

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

SPECIFIC FUEL CONSUMPTION g/PS<sub>h</sub>

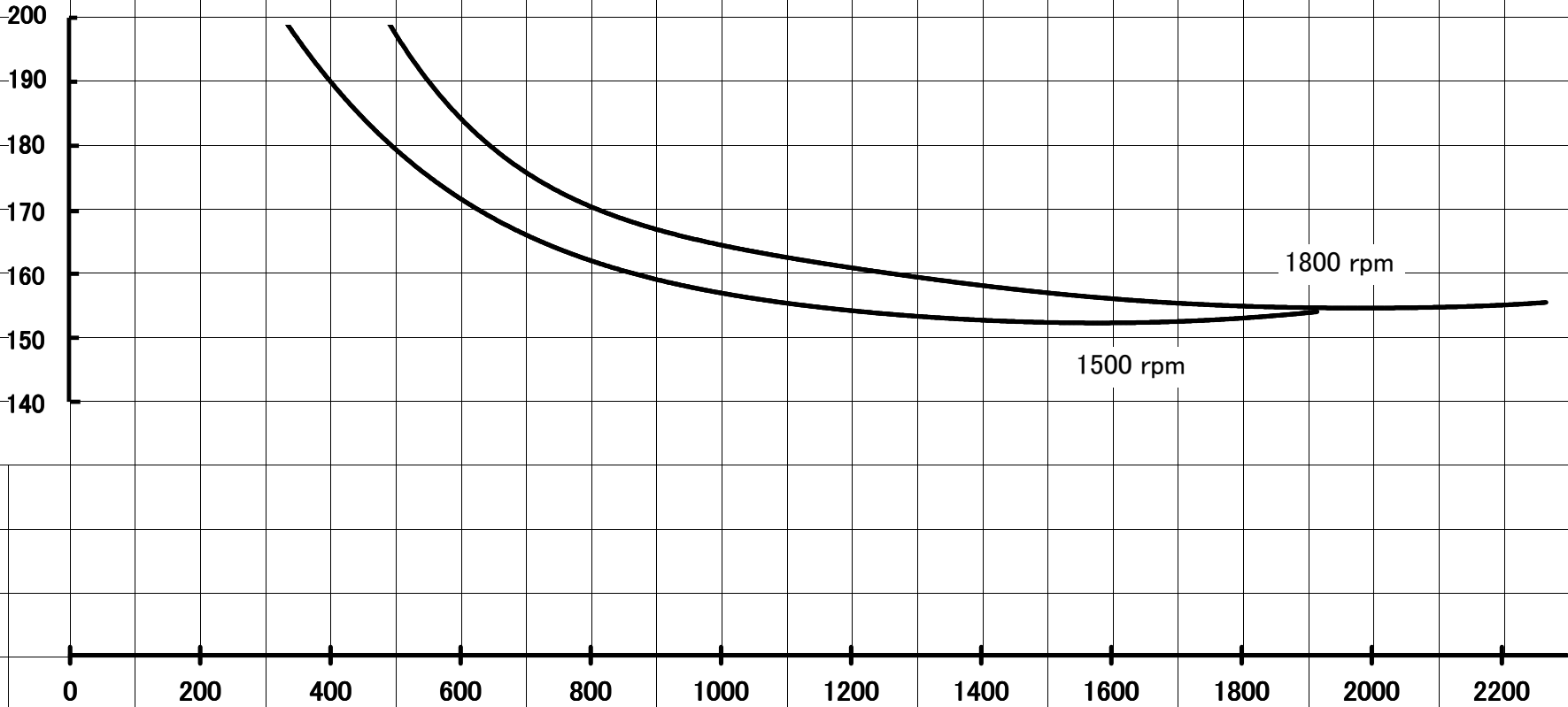
200  
190  
180  
170  
160  
150  
140

0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200

OUTPUT PS

1500 rpm

1800 rpm





# SPECIFIC FUEL CONSUMPTION MODEL : S16R-PTAA2

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

SPECIFIC FUEL CONSUMPTION g/PS<sub>h</sub>

200  
190  
180  
170  
160  
150  
140

1800 rpm

1500 rpm

0

500

1000

1500

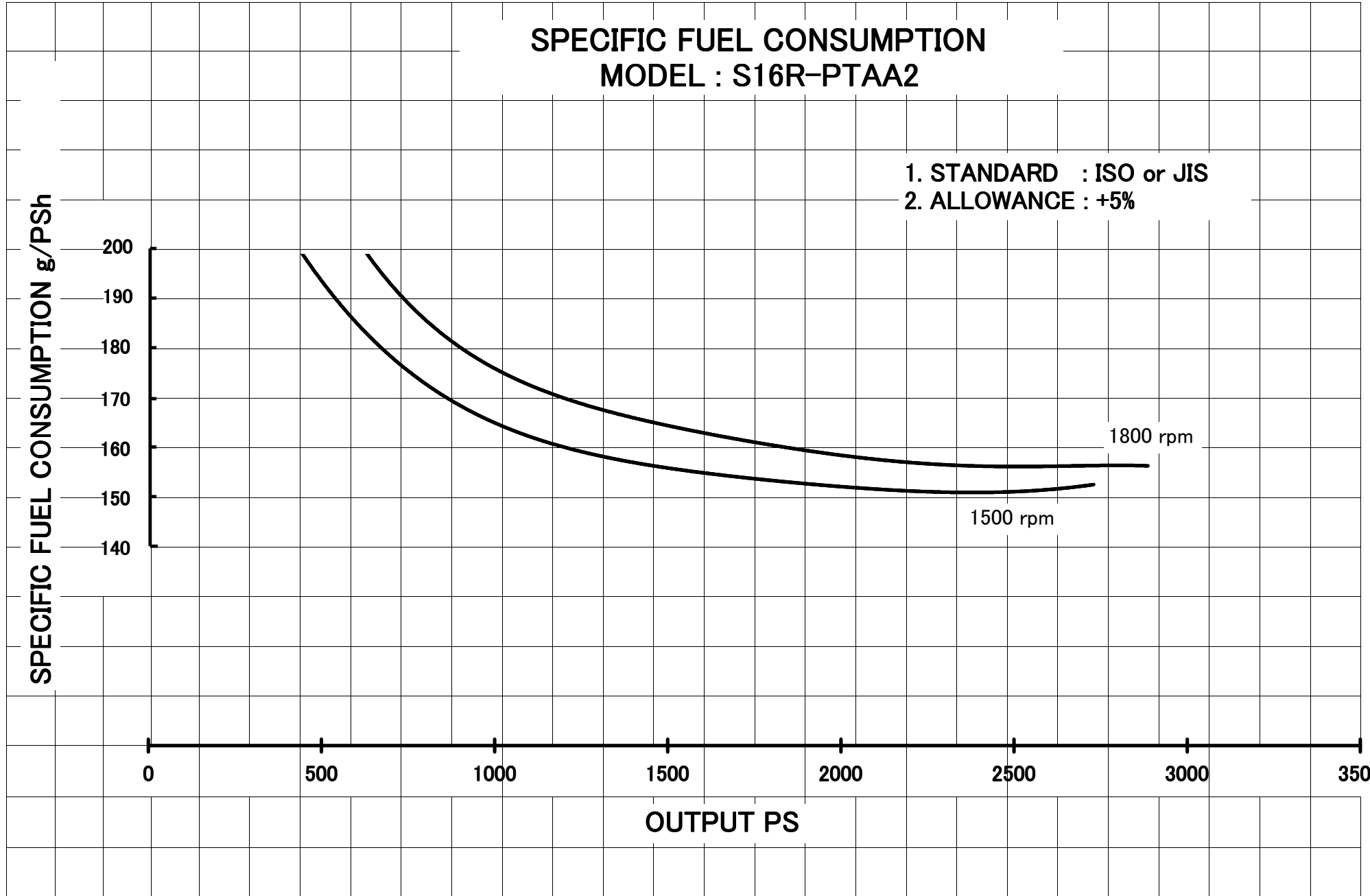
2000

2500

3000

3500

OUTPUT PS



# SPECIFIC FUEL CONSUMPTION MODEL : S12R-2 1500rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

SPECIFIC FUEL CONSUMPTION g/PS<sub>h</sub>

220  
210  
200  
190  
180  
170  
160  
150  
140

200  
190  
180  
170  
160  
150  
140

0 200 500 1000 1500 2000 2100

OUTPUT PS

WITH FAN

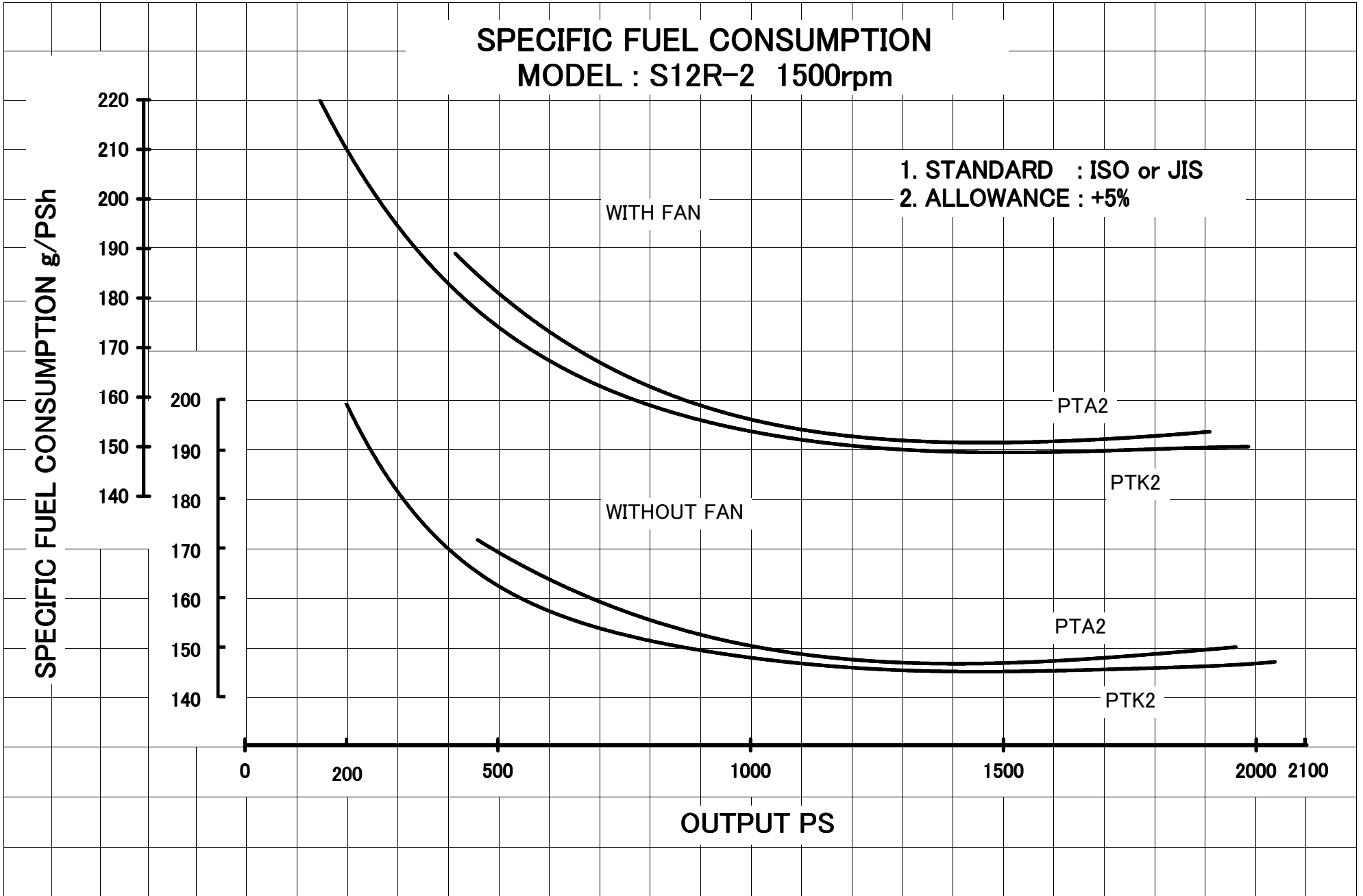
WITHOUT FAN

PTA2

PTK2

PTA2

PTK2



# SPECIFIC FUEL CONSUMPTION MODEL : S12R-2 1800rpm

- 1. STANDARD : ISO or JIS
- 2. ALLOWANCE : +5%

