

Module 1

| Catalog No. | Module | No. of teeth | Bore NOTE 1 | Hub dia. | Pitch dia. | Outside dia. | Face width | Hub width | Total length | Web thickness | Web O.D. |
|-------------|--------|--------------|-------------|----------|------------|--------------|------------|-----------|--------------|---------------|----------|
| | m | z | A | B | C | D | E | F | G | H | I |
| PS1- 15 | 1 | 15 | 6 | 12 | 15 | 17 | 10 | 10 | 20 | — | — |
| PS1- 16 | 1 | 16 | 6 | 12 | 16 | 18 | 10 | 10 | 20 | — | — |
| PS1- 18 | 1 | 18 | 6 | 14 | 18 | 20 | 10 | 10 | 20 | — | — |
| PS1- 20 | 1 | 20 | 6 | 16 | 20 | 22 | 10 | 10 | 20 | — | — |
| PS1- 22 | 1 | 22 | 8 | 18 | 22 | 24 | 10 | 10 | 20 | — | — |
| PS1- 24 | 1 | 24 | 8 | 20 | 24 | 26 | 10 | 10 | 20 | — | — |
| PS1- 25 | 1 | 25 | 8 | 20 | 25 | 27 | 10 | 10 | 20 | — | — |
| PS1- 26 | 1 | 26 | 8 | 20 | 26 | 28 | 10 | 10 | 20 | — | — |
| PS1- 28 | 1 | 28 | 8 | 22 | 28 | 30 | 10 | 10 | 20 | — | — |
| PS1- 30 | 1 | 30 | 8 | 25 | 30 | 32 | 10 | 10 | 20 | — | — |
| PS1- 32 | 1 | 32 | 8 | 26 | 32 | 34 | 10 | 10 | 20 | — | — |
| PS1- 35 | 1 | 35 | 8 | 26 | 35 | 37 | 10 | 10 | 20 | — | — |
| PS1- 36 | 1 | 36 | 8 | 28 | 36 | 38 | 10 | 10 | 20 | — | — |
| PS1- 40 | 1 | 40 | 10 | 35 | 40 | 42 | 10 | 10 | 20 | — | — |
| PS1- 45 | 1 | 45 | 10 | 35 | 45 | 47 | 10 | 10 | 20 | — | — |
| PS1- 48 | 1 | 48 | 10 | 35 | 48 | 50 | 10 | 10 | 20 | — | — |
| PS1- 50 | 1 | 50 | 10 | 35 | 50 | 52 | 10 | 10 | 20 | — | — |
| PS1- 55 | 1 | 55 | 10 | 35 | 55 | 57 | 10 | 10 | 20 | — | — |
| PS1- 60 | 1 | 60 | 10 | 35 | 60 | 62 | 10 | 10 | 20 | — | — |
| PS1- 65 | 1 | 65 | 10 | 35 | 65 | 67 | 10 | 10 | 20 | — | — |
| PS1- 70 | 1 | 70 | 10 | 40 | 70 | 72 | 10 | 10 | 20 | — | — |
| PS1- 75 | 1 | 75 | 10 | 40 | 75 | 77 | 10 | 10 | 20 | — | — |
| PS1- 80 | 1 | 80 | 10 | 40 | 80 | 82 | 10 | 10 | 20 | — | — |
| PS1- 85 | 1 | 85 | 10 | 40 | 85 | 87 | 10 | 10 | 20 | — | — |
| PS1- 90 | 1 | 90 | 10 | 40 | 90 | 92 | 10 | 10 | 20 | — | — |
| PS1- 95 | 1 | 95 | 10 | 40 | 95 | 97 | 10 | 10 | 20 | — | — |
| PS1-100 | 1 | 100 | 10 | 40 | 100 | 102 | 10 | 10 | 20 | — | — |

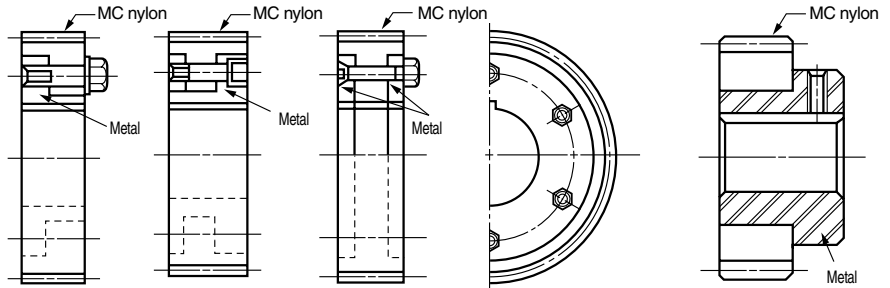
NOTE 1: The bore tolerance at the time of production is H8. Significant variations in temperature or humidity can cause dimensional changes plastic gears (MC Nylon). Please see page 32 for more details.

USEFUL HINT

A key, taper pin, roll or spiral pin, set screw or pressed bushing can be used to fasten a plastic gear to a shaft. For conditions shown below, there is a tendency for the gear to loosen. Therefore, a metal hub must be used to fix the gear:

1. When the ambient temperature is high.
2. When the gear diameter is large.
3. When the gear is subjected to reversing load which causes high impact on the key.

The diagrams on the right are three examples of methods for fastening plastic gears to metal hubs. If the shape of a gear is not suitable for bolt fastening, then the overmolding of plastic on a metal hub is recommended (shown in the far right diagram).



The overmolding of plastic on a metal hub



Specifications

| | | | |
|-----------------|-----------------------------------------------------------------------|------------------------------------------|------------|
| Precision grade | JIS N9 grade (JIS B1702-1: 1998) OLD JIS 5 grade (JIS B1702: 1976) | Tooth hardness | 115~120HRR |
| Gear teeth | Standard full depth | Surface treatment | — |
| Pressure angle | 20° | Tooth surface finish | Cut |
| Material | MC901 | Datum reference surface for gear cutting | Bore |
| Heat treatment | — | Secondary Operations | Possible |

| Shape | Allowable torque (N·m) <small>NOTE 2</small> | | Backlash (mm) <small>NOTE 3</small> | Weight (kgf) | Catalog No. |
|-------|----------------------------------------------|------------------|----------------------------------------|--------------|----------------|
| | Bending strength | Bending strength | | | |
| S1 | 0.4109 | (0.0419) | 0.1 ~ 0.24 | 0.003 | PS1- 15 |
| S1 | 0.454 | (0.0463) | 0.1 ~ 0.24 | 0.003 | PS1- 16 |
| S1 | 0.5296 | (0.054) | 0.1 ~ 0.24 | 0.004 | PS1- 18 |
| S1 | 0.6139 | (0.0626) | 0.1 ~ 0.24 | 0.006 | PS1- 20 |
| S1 | 0.6933 | (0.0707) | 0.12 ~ 0.26 | 0.006 | PS1- 22 |
| S1 | 0.7737 | (0.0789) | 0.12 ~ 0.26 | 0.007 | PS1- 24 |
| S1 | 0.8179 | (0.0834) | 0.12 ~ 0.26 | 0.007 | PS1- 25 |
| S1 | 0.862 | (0.0879) | 0.12 ~ 0.26 | 0.008 | PS1- 26 |
| S1 | 0.9424 | (0.0961) | 0.12 ~ 0.26 | 0.009 | PS1- 28 |
| S1 | 1.025 | (0.1045) | 0.12 ~ 0.26 | 0.011 | PS1- 30 |
| S1 | 1.113 | (0.1135) | 0.12 ~ 0.26 | 0.015 | PS1- 32 |
| S1 | 1.25 | (0.1275) | 0.12 ~ 0.26 | 0.016 | PS1- 35 |
| S1 | 1.298 | (0.1324) | 0.12 ~ 0.26 | 0.018 | PS1- 36 |
| S1 | 1.482 | (0.1511) | 0.12 ~ 0.26 | 0.023 | PS1- 40 |
| S1 | 1.714 | (0.1748) | 0.12 ~ 0.26 | 0.028 | PS1- 45 |
| S1 | 1.858 | (0.1895) | 0.12 ~ 0.26 | 0.03 | PS1- 48 |
| S1 | 1.956 | (0.1995) | 0.12 ~ 0.26 | 0.032 | PS1- 50 |
| S1 | 2.182 | (0.2225) | 0.14 ~ 0.28 | 0.037 | PS1- 55 |
| S1 | 2.412 | (0.246) | 0.14 ~ 0.28 | 0.042 | PS1- 60 |
| S1 | 2.64 | (0.2692) | 0.14 ~ 0.28 | 0.048 | PS1- 65 |
| S1 | 2.872 | (0.2929) | 0.14 ~ 0.28 | 0.057 | PS1- 70 |
| S1 | 3.109 | (0.317) | 0.14 ~ 0.28 | 0.064 | PS1- 75 |
| S1 | 3.335 | (0.3401) | 0.14 ~ 0.28 | 0.073 | PS1- 80 |
| S1 | 3.565 | (0.3635) | 0.14 ~ 0.28 | 0.078 | PS1- 85 |
| S1 | 3.797 | (0.3872) | 0.14 ~ 0.28 | 0.086 | PS1- 90 |
| S1 | 4.031 | (0.4111) | 0.14 ~ 0.28 | 0.095 | PS1- 95 |
| S1 | 4.269 | (0.4353) | 0.14 ~ 0.28 | 0.104 | PS1-100 |

NOTE 2: The allowable torques shown in the table are calculated values using the Lewis formula.

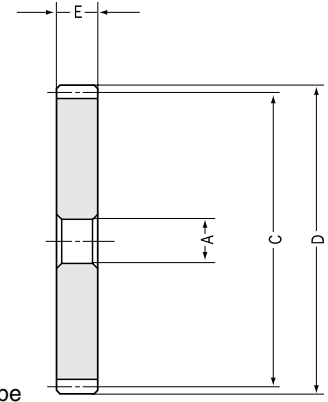
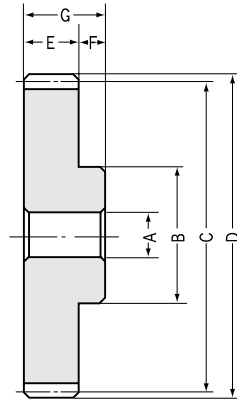
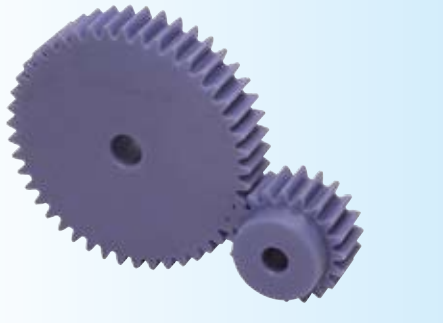
Please see page 27 for more details.

NOTE 3: The backlash values shown in the table are the theoretical values of a pair of identical gears in mesh.



PS-PSA Plastic Spur Gears Modules 1.5~2

Spur Gears
P
S
P



S1 Shape

S5 Shape

Module 1.5

| Catalog No. | Module | No. of teeth | Bore NOTE 1 | Hub dia. | Pitch dia. | Outside dia. | Face width | Hub width | Total length | Web thickness | Web O.D. |
|-------------|--------|--------------|-------------|----------|------------|--------------|------------|-----------|--------------|---------------|----------|
| | m | z | A | B | C | D | E | F | G(E) | H | I |
| PS1.5- 15 | 1.5 | 15 | 8 | 18 | 22.5 | 25.5 | 15 | 10 | 25 | — | — |
| PS1.5- 16 | 1.5 | 16 | 8 | 20 | 24 | 27 | 15 | 10 | 25 | — | — |
| PS1.5- 18 | 1.5 | 18 | 8 | 22 | 27 | 30 | 15 | 10 | 25 | — | — |
| PS1.5- 20 | 1.5 | 20 | 8 | 24 | 30 | 33 | 15 | 10 | 25 | — | — |
| PS1.5- 22 | 1.5 | 22 | 8 | 26 | 33 | 36 | 15 | 10 | 25 | — | — |
| PS1.5- 24 | 1.5 | 24 | 8 | 28 | 36 | 39 | 15 | 10 | 25 | — | — |
| PS1.5- 25 | 1.5 | 25 | 8 | 30 | 37.5 | 40.5 | 15 | 10 | 25 | — | — |
| PS1.5- 26 | 1.5 | 26 | 8 | 32 | 39 | 42 | 15 | 10 | 25 | — | — |
| PS1.5- 28 | 1.5 | 28 | 8 | 36 | 42 | 45 | 15 | 10 | 25 | — | — |
| PS1.5- 30 | 1.5 | 30 | 8 | 38 | 45 | 48 | 15 | 10 | 25 | — | — |
| PS1.5- 32 | 1.5 | 32 | 8 | 40 | 48 | 51 | 15 | 10 | 25 | — | — |
| PS1.5- 35 | 1.5 | 35 | 8 | 42 | 52.5 | 55.5 | 15 | 10 | 25 | — | — |
| PS1.5- 36 | 1.5 | 36 | 8 | 45 | 54 | 57 | 15 | 10 | 25 | — | — |
| PS1.5- 40 | 1.5 | 40 | 10 | 45 | 60 | 63 | 15 | 10 | 25 | — | — |
| PS1.5- 45 | 1.5 | 45 | 10 | 45 | 67.5 | 70.5 | 15 | 10 | 25 | — | — |
| PS1.5- 48 | 1.5 | 48 | 10 | 45 | 72 | 75 | 15 | 10 | 25 | — | — |
| PS1.5- 50 | 1.5 | 50 | 10 | 45 | 75 | 78 | 15 | 10 | 25 | — | — |
| PS1.5- 55 | 1.5 | 55 | 10 | 45 | 82.5 | 85.5 | 15 | 10 | 25 | — | — |
| PS1.5- 60 | 1.5 | 60 | 10 | 50 | 90 | 93 | 15 | 10 | 25 | — | — |
| PS1.5- 65 | 1.5 | 65 | 12 | 50 | 97.5 | 100.5 | 15 | 10 | 25 | — | — |
| PS1.5- 70 | 1.5 | 70 | 12 | 50 | 105 | 108 | 15 | 10 | 25 | — | — |
| PS1.5- 75 | 1.5 | 75 | 12 | 50 | 112.5 | 115.5 | 15 | 10 | 25 | — | — |
| PS1.5- 80 | 1.5 | 80 | 12 | 55 | 120 | 123 | 15 | 10 | 25 | — | — |
| PS1.5- 85 | 1.5 | 85 | 12 | 55 | 127.5 | 130.5 | 15 | 10 | 25 | — | — |
| PS1.5- 90 | 1.5 | 90 | 12 | 55 | 135 | 138 | 15 | 10 | 25 | — | — |
| PS1.5- 95 | 1.5 | 95 | 12 | 60 | 142.5 | 145.5 | 15 | 10 | 25 | — | — |
| PS1.5-100 | 1.5 | 100 | 12 | 60 | 150 | 153 | 15 | 10 | 25 | — | — |

Module 2

| | | | | | | | | | | | |
|--------|---|----|----|----|----|----|----|----|----|---|---|
| PS2-12 | 2 | 12 | 10 | 18 | 24 | 28 | 20 | 10 | 30 | — | — |
| PS2-13 | 2 | 13 | 10 | 20 | 26 | 30 | 20 | 10 | 30 | — | — |
| PS2-14 | 2 | 14 | 10 | 20 | 28 | 32 | 20 | 10 | 30 | — | — |
| PS2-15 | 2 | 15 | 10 | 24 | 30 | 34 | 20 | 10 | 30 | — | — |
| PS2-16 | 2 | 16 | 10 | 26 | 32 | 36 | 20 | 10 | 30 | — | — |
| PS2-18 | 2 | 18 | 10 | 30 | 36 | 40 | 20 | 10 | 30 | — | — |
| PS2-20 | 2 | 20 | 10 | 32 | 40 | 44 | 20 | 10 | 30 | — | — |
| PS2-22 | 2 | 22 | 10 | 35 | 44 | 48 | 20 | 10 | 30 | — | — |
| PS2-24 | 2 | 24 | 10 | 38 | 48 | 52 | 20 | 10 | 30 | — | — |
| PS2-25 | 2 | 25 | 10 | 40 | 50 | 54 | 20 | 10 | 30 | — | — |
| PS2-26 | 2 | 26 | 10 | 42 | 52 | 56 | 20 | 10 | 30 | — | — |
| PS2-28 | 2 | 28 | 10 | 45 | 56 | 60 | 20 | 10 | 30 | — | — |
| PS2-30 | 2 | 30 | 10 | 50 | 60 | 64 | 20 | 10 | 30 | — | — |

| | | | | | | | | | | | |
|----------|---|-----|----|---|-----|-----|----|---|----|---|---|
| PSA2- 32 | 2 | 32 | 12 | — | 64 | 68 | 20 | — | 20 | — | — |
| PSA2- 35 | 2 | 35 | 12 | — | 70 | 74 | 20 | — | 20 | — | — |
| PSA2- 36 | 2 | 36 | 12 | — | 72 | 76 | 20 | — | 20 | — | — |
| PSA2- 40 | 2 | 40 | 12 | — | 80 | 84 | 20 | — | 20 | — | — |
| PSA2- 45 | 2 | 45 | 12 | — | 90 | 94 | 20 | — | 20 | — | — |
| PSA2- 48 | 2 | 48 | 12 | — | 96 | 100 | 20 | — | 20 | — | — |
| PSA2- 50 | 2 | 50 | 12 | — | 100 | 104 | 20 | — | 20 | — | — |
| PSA2- 55 | 2 | 55 | 12 | — | 110 | 114 | 20 | — | 20 | — | — |
| PSA2- 60 | 2 | 60 | 12 | — | 120 | 124 | 20 | — | 20 | — | — |
| PSA2- 65 | 2 | 65 | 15 | — | 130 | 134 | 20 | — | 20 | — | — |
| PSA2- 70 | 2 | 70 | 15 | — | 140 | 144 | 20 | — | 20 | — | — |
| PSA2- 75 | 2 | 75 | 15 | — | 150 | 154 | 20 | — | 20 | — | — |
| PSA2- 80 | 2 | 80 | 15 | — | 160 | 164 | 20 | — | 20 | — | — |
| PSA2- 85 | 2 | 85 | 15 | — | 170 | 174 | 20 | — | 20 | — | — |
| PSA2- 90 | 2 | 90 | 15 | — | 180 | 184 | 20 | — | 20 | — | — |
| PSA2- 95 | 2 | 95 | 15 | — | 190 | 194 | 20 | — | 20 | — | — |
| PSA2-100 | 2 | 100 | 15 | — | 200 | 204 | 20 | — | 20 | — | — |

NOTE 1: The bore tolerance at the time of production is H8. Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon) leading to distortions of bore, outside diameter etc. Please see page 32 for more details.



Specifications

| | | | |
|-----------------|-----------------------------------------------------------------------|------------------------------------------|------------|
| Precision grade | JIS N9 grade (JIS B1702-1: 1996) OLD JIS 5 grade (JIS B1702: 1976) | Tooth hardness | 115~120HRR |
| Gear teeth | Standard full depth | Surface treatment | — |
| Pressure angle | 20° | Tooth surface finish | Cut |
| Material | MC901 | Datum reference surface for gear cutting | Bore |
| Heat treatment | — | Secondary Operations | Possible |

| Shape | Allowable torque (N·m) <small>NOTE 2</small> | Allowable torque (kgf·m) | Backlash (mm) <small>NOTE 3</small> | Weight (kgf) | Catalog No. |
|-------|----------------------------------------------|--------------------------|-------------------------------------|--------------|------------------|
| | Bending strength | Bending strength | | | |
| S1 | 1.386 | (0.1413) | 0.14 ~ 0.3 | 0.009 | PS1.5- 15 |
| S1 | 1.532 | (0.1562) | 0.14 ~ 0.3 | 0.01 | |
| S1 | 1.788 | (0.1823) | 0.14 ~ 0.3 | 0.013 | |
| S1 | 2.07 | (0.2111) | 0.14 ~ 0.3 | 0.018 | |
| S1 | 2.341 | (0.2387) | 0.14 ~ 0.3 | 0.019 | |
| S1 | 2.612 | (0.2664) | 0.14 ~ 0.3 | 0.028 | PS1.5- 24 |
| S1 | 2.76 | (0.2814) | 0.14 ~ 0.3 | 0.029 | |
| S1 | 2.91 | (0.2967) | 0.14 ~ 0.3 | 0.03 | |
| S1 | 3.181 | (0.3244) | 0.14 ~ 0.3 | 0.035 | |
| S1 | 3.46 | (0.3528) | 0.14 ~ 0.3 | 0.045 | |
| S1 | 3.758 | (0.3832) | 0.14 ~ 0.3 | 0.045 | PS1.5- 32 |
| S1 | 4.222 | (0.4305) | 0.16 ~ 0.32 | 0.05 | |
| S1 | 4.382 | (0.4468) | 0.16 ~ 0.32 | 0.059 | |
| S1 | 5.001 | (0.51) | 0.16 ~ 0.32 | 0.065 | |
| S1 | 5.785 | (0.5899) | 0.16 ~ 0.32 | 0.078 | |
| S1 | 6.272 | (0.6396) | 0.16 ~ 0.32 | 0.086 | PS1.5- 48 |
| S1 | 6.604 | (0.6734) | 0.16 ~ 0.32 | 0.092 | |
| S1 | 7.364 | (0.7509) | 0.16 ~ 0.32 | 0.11 | |
| S1 | 8.141 | (0.8302) | 0.16 ~ 0.32 | 0.13 | |
| S1 | 8.91 | (0.9086) | 0.16 ~ 0.32 | 0.15 | |
| S1 | 9.694 | (0.9885) | 0.18 ~ 0.36 | 0.17 | PS1.5- 70 |
| S1 | 10.49 | (1.07) | 0.18 ~ 0.36 | 0.19 | |
| S1 | 11.26 | (1.148) | 0.18 ~ 0.36 | 0.22 | |
| S1 | 12.03 | (1.227) | 0.18 ~ 0.36 | 0.25 | |
| S1 | 12.82 | (1.307) | 0.18 ~ 0.36 | 0.27 | |
| S1 | 13.6 | (1.387) | 0.18 ~ 0.36 | 0.3 | PS1.5- 95 |
| S1 | 14.41 | (1.469) | 0.18 ~ 0.36 | 0.34 | |

| | | | | | |
|----|-------|----------|-------------|-------|---------------|
| S1 | 2.247 | (0.2291) | 0.18 ~ 0.34 | 0.011 | PS2-12 |
| S1 | 2.589 | (0.264) | 0.18 ~ 0.34 | 0.013 | |
| S1 | 2.956 | (0.3014) | 0.18 ~ 0.34 | 0.015 | |
| S1 | 3.285 | (0.335) | 0.18 ~ 0.34 | 0.016 | |
| S1 | 3.63 | (0.3702) | 0.18 ~ 0.34 | 0.022 | |
| S1 | 4.238 | (0.4322) | 0.18 ~ 0.34 | 0.029 | PS2-18 |
| S1 | 4.908 | (0.5005) | 0.18 ~ 0.34 | 0.032 | |
| S1 | 5.548 | (0.5657) | 0.18 ~ 0.34 | 0.043 | |
| S1 | 6.193 | (0.6315) | 0.18 ~ 0.34 | 0.052 | |
| S1 | 6.541 | (0.667) | 0.18 ~ 0.34 | 0.059 | |
| S1 | 6.896 | (0.7032) | 0.2 ~ 0.36 | 0.062 | PS2-26 |
| S1 | 7.54 | (0.7689) | 0.2 ~ 0.36 | 0.074 | |
| S1 | 8.201 | (0.8363) | 0.2 ~ 0.36 | 0.087 | |

| | | | | | |
|----|-------|----------|-------------|-------|-----------------|
| S5 | 8.906 | (0.9082) | 0.2 ~ 0.36 | 0.072 | PSA2- 32 |
| S5 | 10 | (1.02) | 0.2 ~ 0.36 | 0.086 | |
| S5 | 10.39 | (1.059) | 0.2 ~ 0.36 | 0.089 | |
| S5 | 11.86 | (1.209) | 0.2 ~ 0.36 | 0.11 | |
| S5 | 13.71 | (1.398) | 0.2 ~ 0.36 | 0.15 | |
| S5 | 14.87 | (1.516) | 0.2 ~ 0.36 | 0.16 | PSA2- 48 |
| S5 | 15.65 | (1.596) | 0.2 ~ 0.36 | 0.18 | |
| S5 | 17.46 | (1.78) | 0.22 ~ 0.38 | 0.22 | |
| S5 | 19.3 | (1.968) | 0.22 ~ 0.38 | 0.28 | |
| S5 | 21.12 | (2.154) | 0.22 ~ 0.38 | 0.3 | |
| S5 | 22.98 | (2.343) | 0.22 ~ 0.38 | 0.35 | PSA2- 70 |
| S5 | 24.87 | (2.536) | 0.22 ~ 0.38 | 0.41 | |
| S5 | 26.68 | (2.721) | 0.22 ~ 0.38 | 0.46 | |
| S5 | 28.52 | (2.908) | 0.22 ~ 0.38 | 0.52 | |
| S5 | 30.38 | (3.098) | 0.22 ~ 0.38 | 0.59 | |
| S5 | 32.25 | (3.289) | 0.22 ~ 0.38 | 0.65 | PSA2- 95 |
| S5 | 34.15 | (3.482) | 0.22 ~ 0.38 | 0.72 | |

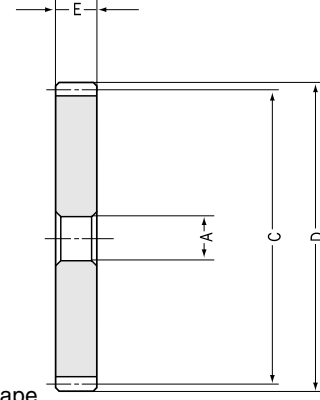
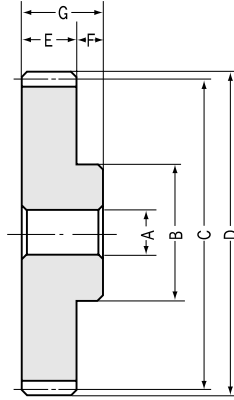
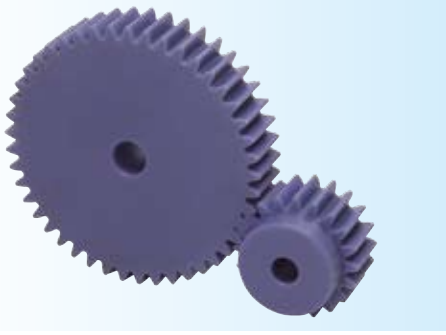
NOTE 2: The allowable torques shown in the table are calculated values using the Lewis formula. Please see page 27 for more details.

NOTE 3: The backlash values shown in the table are the theoretical values of a pair of identical gears in mesh.



PS-PSA Plastic Spur Gears Modules 2.5~3

Spur Gears
A S P



S1 Shape

S5 Shape

Module 2.5

| Catalog No. | Module | No. of teeth | Bore NOTE 1 | Hub dia. | Pitch dia. | Outside dia. | Face width | Hub width | Total length | Web thickness | Web O.D. |
|-------------|--------|--------------|-------------|----------|------------|--------------|------------|-----------|--------------|---------------|----------|
| | m | z | A | B | C | D | E | F | G(E) | H | I |
| PS2.5-12 | 2.5 | 12 | 10 | 23 | 30 | 35 | 25 | 12 | 37 | — | — |
| PS2.5-13 | 2.5 | 13 | 10 | 25 | 32.5 | 37.5 | 25 | 12 | 37 | — | — |
| PS2.5-14 | 2.5 | 14 | 10 | 25 | 35 | 40 | 25 | 12 | 37 | — | — |
| PS2.5-15 | 2.5 | 15 | 12 | 30 | 37.5 | 42.5 | 25 | 12 | 37 | — | — |
| PS2.5-16 | 2.5 | 16 | 12 | 32 | 40 | 45 | 25 | 12 | 37 | — | — |
| PS2.5-18 | 2.5 | 18 | 12 | 38 | 45 | 50 | 25 | 12 | 37 | — | — |
| PS2.5-20 | 2.5 | 20 | 12 | 40 | 50 | 55 | 25 | 12 | 37 | — | — |
| PS2.5-22 | 2.5 | 22 | 12 | 44 | 55 | 60 | 25 | 12 | 37 | — | — |
| PS2.5-24 | 2.5 | 24 | 12 | 48 | 60 | 65 | 25 | 12 | 37 | — | — |
| PS2.5-25 | 2.5 | 25 | 12 | 50 | 62.5 | 67.5 | 25 | 12 | 37 | — | — |
| PS2.5-26 | 2.5 | 26 | 12 | 55 | 65 | 70 | 25 | 12 | 37 | — | — |
| PS2.5-28 | 2.5 | 28 | 12 | 60 | 70 | 75 | 25 | 12 | 37 | — | — |
| PS2.5-30 | 2.5 | 30 | 12 | 65 | 75 | 80 | 25 | 12 | 37 | — | — |

| | | | | | | | | | | | |
|-----------|-----|----|----|---|-------|-------|----|---|----|---|---|
| PSA2.5-32 | 2.5 | 32 | 15 | — | 80 | 85 | 25 | — | 25 | — | — |
| PSA2.5-35 | 2.5 | 35 | 15 | — | 87.5 | 92.5 | 25 | — | 25 | — | — |
| PSA2.5-36 | 2.5 | 36 | 15 | — | 90 | 95 | 25 | — | 25 | — | — |
| PSA2.5-40 | 2.5 | 40 | 15 | — | 100 | 105 | 25 | — | 25 | — | — |
| PSA2.5-45 | 2.5 | 45 | 15 | — | 112.5 | 117.5 | 25 | — | 25 | — | — |
| PSA2.5-48 | 2.5 | 48 | 15 | — | 120 | 125 | 25 | — | 25 | — | — |
| PSA2.5-50 | 2.5 | 50 | 15 | — | 125 | 130 | 25 | — | 25 | — | — |
| PSA2.5-55 | 2.5 | 55 | 15 | — | 137.5 | 142.5 | 25 | — | 25 | — | — |
| PSA2.5-60 | 2.5 | 60 | 15 | — | 150 | 155 | 25 | — | 25 | — | — |

Module 3

| | | | | | | | | | | | |
|--------|---|----|----|----|----|----|----|----|----|---|---|
| PS3-12 | 3 | 12 | 12 | 28 | 36 | 42 | 30 | 15 | 45 | — | — |
| PS3-13 | 3 | 13 | 12 | 30 | 39 | 45 | 30 | 15 | 45 | — | — |
| PS3-14 | 3 | 14 | 12 | 32 | 42 | 48 | 30 | 15 | 45 | — | — |
| PS3-15 | 3 | 15 | 14 | 36 | 45 | 51 | 30 | 15 | 45 | — | — |
| PS3-16 | 3 | 16 | 14 | 38 | 48 | 54 | 30 | 15 | 45 | — | — |
| PS3-18 | 3 | 18 | 14 | 40 | 54 | 60 | 30 | 15 | 45 | — | — |
| PS3-20 | 3 | 20 | 14 | 50 | 60 | 66 | 30 | 15 | 45 | — | — |
| PS3-22 | 3 | 22 | 14 | 54 | 66 | 72 | 30 | 15 | 45 | — | — |
| PS3-24 | 3 | 24 | 14 | 58 | 72 | 78 | 30 | 15 | 45 | — | — |
| PS3-25 | 3 | 25 | 14 | 60 | 75 | 81 | 30 | 15 | 45 | — | — |
| PS3-26 | 3 | 26 | 14 | 65 | 78 | 84 | 30 | 15 | 45 | — | — |
| PS3-28 | 3 | 28 | 14 | 70 | 84 | 90 | 30 | 15 | 45 | — | — |
| PS3-30 | 3 | 30 | 14 | 75 | 90 | 96 | 30 | 15 | 45 | — | — |

| | | | | | | | | | | | |
|---------|---|----|----|---|-----|-----|----|---|----|---|---|
| PSA3-32 | 3 | 32 | 18 | — | 96 | 102 | 30 | — | 30 | — | — |
| PSA3-35 | 3 | 35 | 18 | — | 105 | 111 | 30 | — | 30 | — | — |
| PSA3-36 | 3 | 36 | 18 | — | 108 | 114 | 30 | — | 30 | — | — |
| PSA3-40 | 3 | 40 | 18 | — | 120 | 126 | 30 | — | 30 | — | — |
| PSA3-45 | 3 | 45 | 18 | — | 135 | 141 | 30 | — | 30 | — | — |
| PSA3-48 | 3 | 48 | 18 | — | 144 | 150 | 30 | — | 30 | — | — |
| PSA3-50 | 3 | 50 | 18 | — | 150 | 156 | 30 | — | 30 | — | — |
| PSA3-55 | 3 | 55 | 18 | — | 165 | 171 | 30 | — | 30 | — | — |
| PSA3-60 | 3 | 60 | 18 | — | 180 | 186 | 30 | — | 30 | — | — |

NOTE 1: The bore tolerance at the time of production is H8. Significant variations in temperature or humidity can cause dimensional changes in plastic gears (MC Nylon) leading to distortions of bore, outside diameter etc. Please see page 32 for more details.



Specifications

| | | | |
|-----------------|-----------------------------------------------------------------------|------------------------------------------|------------|
| Precision grade | JIS N9 grade (JIS B1702-1: 1998) OLD JIS 5 grade (JIS B1702: 1976) | Tooth hardness | 115~120HRR |
| Gear teeth | Standard full depth | Surface treatment | — |
| Pressure angle | 20° | Tooth surface finish | Cut |
| Material | MC901 | Datum reference surface for gear cutting | Bore |
| Heat treatment | — | Secondary Operations | Possible |

| Shape | Allowable torque (N·m) <small>NOTE 2</small> | Allowable torque (kgf·m) | Backlash (mm) <small>NOTE 3</small> | Weight (kgf) | Catalog No. |
|-------|----------------------------------------------|--------------------------|-------------------------------------|--------------|-----------------|
| | Bending strength | Bending strength | | | |
| S1 | 4.387 | (0.4474) | 0.2 ~ 0.36 | 0.026 | PS2.5-12 |
| S1 | 5.057 | (0.5157) | 0.2 ~ 0.36 | 0.027 | |
| S1 | 5.773 | (0.5887) | 0.2 ~ 0.36 | 0.031 | |
| S1 | 6.416 | (0.6543) | 0.2 ~ 0.36 | 0.034 | |
| S1 | 7.091 | (0.7231) | 0.2 ~ 0.36 | 0.037 | |
| S1 | 8.279 | (0.8442) | 0.2 ~ 0.36 | 0.074 | PS2.5-18 |
| S1 | 9.586 | (0.9775) | 0.2 ~ 0.36 | 0.065 | |
| S1 | 10.84 | (1.105) | 0.22 ~ 0.38 | 0.084 | |
| S1 | 12.09 | (1.233) | 0.22 ~ 0.38 | 0.096 | |
| S1 | 12.78 | (1.303) | 0.22 ~ 0.38 | 0.1 | |
| S1 | 13.47 | (1.374) | 0.22 ~ 0.38 | 0.12 | PS2.5-26 |
| S1 | 14.73 | (1.502) | 0.22 ~ 0.38 | 0.15 | |
| S1 | 16.01 | (1.633) | 0.22 ~ 0.38 | 0.18 | |

| | | | | | |
|----|-------|---------|-------------|------|------------------|
| S5 | 17.4 | (1.774) | 0.22 ~ 0.38 | 0.16 | PSA2.5-32 |
| S5 | 19.54 | (1.993) | 0.22 ~ 0.38 | 0.16 | |
| S5 | 20.28 | (2.068) | 0.22 ~ 0.38 | 0.17 | |
| S5 | 23.15 | (2.361) | 0.22 ~ 0.38 | 0.18 | |
| S5 | 26.78 | (2.731) | 0.24 ~ 0.4 | 0.28 | |
| S5 | 29.04 | (2.961) | 0.24 ~ 0.4 | 0.32 | PSA2.5-48 |
| S5 | 30.58 | (3.118) | 0.24 ~ 0.4 | 0.36 | |
| S5 | 34.09 | (3.476) | 0.24 ~ 0.4 | 0.42 | |
| S5 | 37.7 | (3.844) | 0.24 ~ 0.4 | 0.51 | |

| | | | | | |
|----|-------|----------|-------------|-------|---------------|
| S1 | 7.581 | (0.7731) | 0.28 ~ 0.44 | 0.04 | PS3-12 |
| S1 | 8.739 | (0.8911) | 0.28 ~ 0.44 | 0.048 | |
| S1 | 9.973 | (1.017) | 0.28 ~ 0.44 | 0.056 | |
| S1 | 11.09 | (1.131) | 0.28 ~ 0.44 | 0.059 | |
| S1 | 12.25 | (1.249) | 0.28 ~ 0.44 | 0.074 | |
| S1 | 14.31 | (1.459) | 0.3 ~ 0.46 | 0.1 | PS3-18 |
| S1 | 16.56 | (1.689) | 0.3 ~ 0.46 | 0.12 | |
| S1 | 18.72 | (1.909) | 0.3 ~ 0.46 | 0.15 | |
| S1 | 20.9 | (2.131) | 0.3 ~ 0.46 | 0.18 | |
| S1 | 22.07 | (2.251) | 0.3 ~ 0.46 | 0.19 | |
| S1 | 23.27 | (2.373) | 0.3 ~ 0.46 | 0.21 | PS3-26 |
| S1 | 25.45 | (2.595) | 0.3 ~ 0.46 | 0.25 | |
| S1 | 27.67 | (2.822) | 0.3 ~ 0.46 | 0.26 | |

| | | | | | |
|----|-------|---------|-------------|------|----------------|
| S5 | 30.06 | (3.065) | 0.3 ~ 0.46 | 0.23 | PSA3-32 |
| S5 | 33.77 | (3.444) | 0.32 ~ 0.48 | 0.29 | |
| S5 | 35.05 | (3.574) | 0.32 ~ 0.48 | 0.31 | |
| S5 | 40.01 | (4.08) | 0.32 ~ 0.48 | 0.38 | |
| S5 | 46.28 | (4.719) | 0.32 ~ 0.48 | 0.49 | |
| S5 | 50.18 | (5.117) | 0.32 ~ 0.48 | 0.55 | PSA3-48 |
| S5 | 52.83 | (5.387) | 0.32 ~ 0.48 | 0.53 | |
| S5 | 58.91 | (6.007) | 0.32 ~ 0.48 | 0.73 | |
| S5 | 65.14 | (6.642) | 0.32 ~ 0.48 | 0.88 | |

NOTE 2: The allowable torques shown in the table are calculated values using the Lewis formula.

Please see page 27 for more details.

NOTE 3: The backlash values shown in the table are the theoretical values of a pair of identical gears in mesh.