CLP-15S/CLP-35/CLP-65

全自動歯形・歯すじ・ピッチ測定機
Full automatic gear measuring instrument for profile, helix and pitch

大阪精密機械株式会社
OSAKA SEIMITSU KIKAI CO., LTD.
CLP-15S/CLP-35/CLP-65
多彩な測定事例
More quickly, Accurately, Easier to handle

CLP-15S/CLP-35/CLP-65 are compact and reliable measuring machines designed for the precise measurement of plastic gears. CLP-15S/CLP-35/CLP-65 have become the standard machine for the measurement of plastic gears. CLP-15S is designed for the measurement of small, medium, or large plastic gears, and CLP-65 is designed for the measurement of larger plastic gears.

Main features

- High durability and improved measurement accuracy
- Substantial maintenance support structure has been provided

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CLP-15S/CLP-35/CLP-65

Capable of executing measurements on many items and provide database.

Multiple measurement items are registered in the database.

Measurement pattern selection

Standard software

- Manual measurement of tooth profile and helix
- Automatic measurement of tooth profile and helix (internal and external gear/variety pattern)
- Memory of gear specifications
- Calculation and numerical output of total profile deviation, profile form deviation and profile slope deviation
- Calculation and numerical output of total helix deviation, helix form deviation and helix slope deviation
- Calculation and output of mean and bias values for profile and helix
- Pitch automatic measurement and calculation of single, adjacent and cumulative pitch deviation
- Calculation and output of runout
- Whole teeth measurement
- Fine dividing measurement of tooth surface and its output
- Successive measurement of counter shaft gears
- Three-dimensional display of tooth surface
- Output of comparison data before and after heat treatment (overwriting)
- ISO, JIS, DIN, andAGMA classification

Pitch deviation measurement

Single pitch deviation, adjacent pitch deviation and cumulative pitch deviation can automatically be measured at once. (Amount of the runout can also be calculated.)
CLP-15S/CLP-35/CLP-65

オプションの測定事例
Optional measurement cases

ウォーム・ウォームホイール

Worm & Worm wheel
This instrument supports the measurement of various kinds of worm. For the measurement of special type of worm (such as C type), please contact us.
Also measurement of profile, helix and pitch of worm wheel is available.

ホブ

Hob
With this instrument, the accuracy of the flank pre-finish cut by the hob can be checked automatically.

シェービングカッタ

Shaving cutter
This instrument measures profile, lead and pitch, etc. of shaving cutter, in full automatic mode with the prescribed measurement patterns. It is also possible to output the amount of deviation for a cutter and then feedback the amount of correction to the production process.

ビニオンカッタ

Pinion (shaper) cutter
This instrument measures profile, lead, pitch and rake face, etc. of pinion (shaper) cutter, in full automatic mode with the prescribed measurement patterns.
### 仕様
**Specification**

<table>
<thead>
<tr>
<th>测定項目</th>
<th>CLP-15S</th>
<th>CLP-35</th>
<th>CLP-65 (CLP-85)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulus</td>
<td>m0.2~5</td>
<td>m0.5~12</td>
<td>m0.5~20</td>
</tr>
<tr>
<td>Number of teeth</td>
<td>10~500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gear outer diameter(with optional spec)</td>
<td>Maxø150mm</td>
<td>Maxø350mm</td>
<td>Maxø650mm (Maxø850mm)</td>
</tr>
<tr>
<td>Base circle diameter(with optional spec)</td>
<td>Ø~ø130mm</td>
<td>Ø~ø310mm</td>
<td>Ø<del>ø600mm (Ø</del>ø800mm)</td>
</tr>
<tr>
<td>Tooth width</td>
<td>Max200mm</td>
<td>Max400mm</td>
<td>Max400mm</td>
</tr>
<tr>
<td>Tangent length for profile measurement</td>
<td>±50mm</td>
<td>±120mm</td>
<td>±200mm</td>
</tr>
<tr>
<td>Helix angle (with optional equipment)</td>
<td>0°<del>±65° (±65°</del>±90°)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gear shaft length (with optional spec)</td>
<td>0<del>300mm (0</del>600mm)</td>
<td>50<del>400mm (50</del>800mm)</td>
<td>50<del>800mm (50</del>1000mm)</td>
</tr>
<tr>
<td>Gear Weight</td>
<td>Max20kg</td>
<td>Max50kg</td>
<td>Max200kg</td>
</tr>
</tbody>
</table>

### 外観図と配置図
**Outline and layout**

**CLP-15S**

**CLP-35**

**CLP-65**

### 尺寸
**Dimensions**

<table>
<thead>
<tr>
<th>尺寸</th>
<th>CLP-15S</th>
<th>CLP-35</th>
<th>CLP-65</th>
</tr>
</thead>
<tbody>
<tr>
<td>重量 (W×D×H)</td>
<td>942.5×893×1670</td>
<td>1113×1071×1896</td>
<td>1500×1266×2118</td>
</tr>
<tr>
<td>(1133×1071×2104)</td>
<td>(1655×1268×2336)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
付属品

**標準付属品 Standard equipment**

<table>
<thead>
<tr>
<th>項目</th>
<th>数量</th>
<th>内容</th>
</tr>
</thead>
<tbody>
<tr>
<td>パソコンコンピュータ(PCラック付)</td>
<td>1台</td>
<td>Personal computer (with PC rack)</td>
</tr>
<tr>
<td>レーザープリント(A4判シート)</td>
<td>1台</td>
<td>Laser printer (A-4 sheet type)</td>
</tr>
<tr>
<td>検出器</td>
<td>1台</td>
<td>Detector</td>
</tr>
<tr>
<td>上部センサー</td>
<td>1台</td>
<td>Upper center</td>
</tr>
<tr>
<td>下部センサー</td>
<td>1台</td>
<td>Lower center</td>
</tr>
<tr>
<td>センターテーブル</td>
<td>1台</td>
<td>Center support</td>
</tr>
<tr>
<td>ワークドライバ</td>
<td>1台</td>
<td>Work driver</td>
</tr>
<tr>
<td>測定子</td>
<td>5本</td>
<td>Stylus</td>
</tr>
<tr>
<td>工具</td>
<td>1台</td>
<td>Tools</td>
</tr>
<tr>
<td>取扱説明書</td>
<td>1台</td>
<td>Instruction manual</td>
</tr>
<tr>
<td>検定承認書</td>
<td>1台</td>
<td>Inspection sheet</td>
</tr>
<tr>
<td>標準ソフトプログラム</td>
<td>1台</td>
<td>Standard software</td>
</tr>
</tbody>
</table>

**特別付属品 Optional equipment**

<table>
<thead>
<tr>
<th>項目</th>
<th>数量</th>
<th>内容</th>
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</thead>
<tbody>
<tr>
<td>交流電圧変圧器</td>
<td>1台</td>
<td>Voltage regulator</td>
</tr>
<tr>
<td>測定子(各種)</td>
<td>1台</td>
<td>Stylus(Various kinds)</td>
</tr>
<tr>
<td>内装用差動変換ホルダー(各種)</td>
<td>1台</td>
<td>Stylus holder for internal gear (Various kinds)</td>
</tr>
<tr>
<td>デジタルイーグルゲージ</td>
<td>1台</td>
<td>Digital indicator and holder for testing</td>
</tr>
<tr>
<td>信頼性超音波マイクロメータホルダ及びホルダ</td>
<td>1台</td>
<td>Micrometer head and holder for adjusting magnification</td>
</tr>
<tr>
<td>下部センサー</td>
<td>1台</td>
<td>Lower center</td>
</tr>
<tr>
<td>ワークドライバ</td>
<td>1台</td>
<td>Work driver</td>
</tr>
<tr>
<td>ワークテーブル</td>
<td>1台</td>
<td>Work table</td>
</tr>
<tr>
<td>手動測定装置</td>
<td>1台</td>
<td>Sairei table</td>
</tr>
<tr>
<td>自動測定用マスタギャヤ</td>
<td>1台</td>
<td>Master gear for automatic measurement</td>
</tr>
<tr>
<td>レーザープリント(A3判シート)</td>
<td>1台</td>
<td>Laser printer(A-3 sheet type)</td>
</tr>
</tbody>
</table>

**特別付属ソフトウェア Optional software**

<table>
<thead>
<tr>
<th>項目</th>
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<tbody>
<tr>
<td>【1】クーム(偏&gt;65)の測定</td>
<td>1台</td>
<td>Measurement of worm(D&gt;65)</td>
</tr>
<tr>
<td>【2】クームホイールの測定</td>
<td>1台</td>
<td>Measurement of worm wheel</td>
</tr>
<tr>
<td>【3】ラックの測定</td>
<td>1台</td>
<td>Measurement of rack</td>
</tr>
<tr>
<td>【4】ナゴの測定</td>
<td>1台</td>
<td>Measurement of nut</td>
</tr>
<tr>
<td>【5】シェービングカッタの測定</td>
<td>1台</td>
<td>Measurement of shaving cutter</td>
</tr>
<tr>
<td>【6】ピニオンカッタの測定</td>
<td>1台</td>
<td>Measurement of pinion (shaping cutter)</td>
</tr>
<tr>
<td>【7】巻取角度測定</td>
<td>1台</td>
<td>Measurement of rolled angle</td>
</tr>
<tr>
<td>【8】平・ハツ形螺旋のねじ線軸解析</td>
<td>1台</td>
<td>Unknown gear analysis of spur and helical gear</td>
</tr>
<tr>
<td>【9】形状測定</td>
<td>1台</td>
<td>Measurement of contact</td>
</tr>
<tr>
<td>【10】測定データの管理管理ソフト</td>
<td>1台</td>
<td>Data management software</td>
</tr>
<tr>
<td>【11】標準クリーニングソフト(アームテック社製)</td>
<td>1台</td>
<td>Standard cleaning software (ArmTek Inc.)</td>
</tr>
<tr>
<td>【12】その他</td>
<td>1台</td>
<td>Others</td>
</tr>
</tbody>
</table>

JCSS校正

**Gear calibration laboratory**

大階段機械性能測定センター(icity)は、計測基準法に基づき校正指数値測定機(geometric calibration machine)において国際MRA対応校正指標として認定されました。

MRAが発行する認定シンボル付き(geometric calibration machine)はNABL及びCitation(ドイツ)、NABL(米国)、NVLAP(米国)、AQLA(米国)などが認定する校正指標の発行する校正指標を同様であることが求められています。

また、NIST/JIS 1758 素子2003年に適用した日本で唯一の「国際MRA対応校正指標」です。

**適格性**

![Certificate of Accreditation](image)

【2013年1月1日から2013年12月31日まで】

【2013年1月1日から2013年12月31日まで】

2013年に旋盤された校正機関の発表検査に関するJIS機関(JIS B 1758 2013)の対応を行っています。

詳細はお問い合わせください。

adaptation of JIS standard about Acceptance tests for gear measuring instruments issued in 2013 (JIS B 1758: 2013) is also possible.
Please ask us about details.