

# ESTUN



Serwosilniki AC  
Serie EMJ, EMQ, EML, EMB

## Zestawienie



| Seria               | EMJ                                                             | EMG           | EML           | EMB                                            |
|---------------------|-----------------------------------------------------------------|---------------|---------------|------------------------------------------------|
| Napięcie            | 200V                                                            | 200V          | 200V          | 400V                                           |
| Moc                 | 200W~1000W                                                      | 1kW~5kW       | 1kW~4kW       | 7.5kW~15kW                                     |
| Moment znamionowy   | 0.64Nm~3.18Nm                                                   | 4.78Nm~23.9Nm | 9.55Nm~38.2Nm | 47.8Nm~95.5Nm                                  |
| Prędkość znamionowa | 3000 obr/min                                                    | 2000 obr/min  | 1000 obr/min  | 1500 obr/min                                   |
| Prędkość maksymalna | 4500 obr/min                                                    | 3000 obr/min  | 1500 obr/min  | 2000 obr/min                                   |
| Enkoder             | Inkrementalny: 2500 imp/obr ;<br>Inkrementalny/absolutny 17-bit |               |               | Resolver,<br>17-bit<br>inkrementalny/absolutny |
| Seria EDB i EDC     | Enkoder inkrementalny (2500 imp/obrót)                          |               |               | Brak                                           |
| Seria Pronet        | Enkoder inkrementalny (17bit - 131072 imp/obr)                  |               |               | Brak                                           |
|                     | Enkoder absolutny(17bit - 131072 imp/obr)                       |               |               |                                                |
|                     | brak                                                            | Resolver      |               |                                                |
| Stopień ochrony     | IP65                                                            |               |               | IP55                                           |
|                     | Obudowa całkowicie zamknięta, z własnym chłodzeniem             |               |               |                                                |

## Seria EMJ

- Prędkość obrotowa do 4500 obr/min
- Moment znamionowy od 0.64Nm do 3.18Nm
- Enkoder o rozdzielczości 2500 imp/obr
- Obudowa całkowicie zamknięta, IP 65
- Opcja hamulca



| Napięcie              |              | 200VAC                                                           |      |       |      |
|-----------------------|--------------|------------------------------------------------------------------|------|-------|------|
| Model                 | EMJ-         | 02A                                                              | 04A  | 08A   | 10A  |
| Moc znamionowa        | [W]          | 200                                                              | 400  | 750   | 1000 |
| Moment znamionowy     | [Nm]         | 0.64                                                             | 1.27 | 2.40  | 3.18 |
| Moment szczytowy      | [Nm]         | 1.92                                                             | 3.82 | 7.16  | 9.55 |
| Prąd znamionowy       | [A]          | 1.3                                                              | 2.7  | 4.0   | 5.3  |
| Prąd szczytowy        | [A]          | 3.9                                                              | 8.1  | 12.0  | 15.9 |
| Prędkość znamionowa   | [obr/min]    | 3000                                                             |      |       |      |
| Prędkość maksymalna   | [obr/min]    | 4500                                                             |      |       |      |
| Moment bezwładności   | [x10-4kg/m2] | 0.19                                                             | 0.31 | 1.35  | 1.74 |
| Enkoder               | Standard     | Inkrementalny : 2500P/R                                          |      |       |      |
|                       | Opcja        | 17-bit inkrementalny/absolutny enkoder: 131072 imp/obr; Resolver |      |       |      |
| Moc Hamulca           |              | 7.2W                                                             |      | 11.5W |      |
| Moment Hamulca        |              | 1.3Nm                                                            |      | 3.2Nm |      |
| Klasa izolacji        |              | F                                                                |      |       |      |
| Temperatura otoczenia |              | 0 to +40°C                                                       |      |       |      |
| Wilgotność            |              | 20 to 80% RH (bez kondensacji)                                   |      |       |      |
| Stopień ochrony       |              | IP65                                                             |      |       |      |
| Dopuszczalne drgania  |              | 49m/s2                                                           |      |       |      |

## Seria EMG

- Prędkość obrotowa do 3000 obr/min
- Moment znamionowy od 4.78Nm do 23.9Nm
- Enkoder o rozdzielczości 2500 imp/obr
- Obudowa całkowicie zamknięta, IP 65
- Opcja hamulca



| Napięcie              |                  | 200VAC                                                       |      |      |      |      |
|-----------------------|------------------|--------------------------------------------------------------|------|------|------|------|
| Model                 | EMG-             | 10A                                                          | 15A  | 20A  | 30A  | 50A  |
| Moc znamionowa        | [kW]             | 1.0                                                          | 1.5  | 2.0  | 3.0  | 5.0  |
| Moment znamionowy     | [Nm]             | 4.78                                                         | 7.16 | 9.55 | 14.3 | 23.9 |
| Moment szczytowy      | [Nm]             | 14.3                                                         | 21.5 | 28.7 | 43   | 71.6 |
| Prąd znamionowy       | [A]              | 6.0                                                          | 9.0  | 12.0 | 18.0 | 28   |
| Prąd szczytowy        | [A]              | 18.0                                                         | 27.0 | 36.0 | 54.0 | 84   |
| Prędkość znamionowa   | [obr/min<br>]    | 2000                                                         |      |      |      |      |
| Prędkość maksymalna   | [obr/min<br>]    | 3000                                                         |      |      |      |      |
| Moment bezwładności   | [x10-<br>4kg/m2] | 10                                                           | 14.5 | 19   | 41.3 | 65.7 |
| Enkoder               | Standard         | Inkrementalny : 2500P/R                                      |      |      |      |      |
|                       | Opcja            | 17-bit Inkrementalny/absolutny : 131072 imp/obr;<br>Resolver |      |      |      |      |
| Moc Hamulca           | [W]              | 19                                                           |      |      | 35   |      |
| Moment Hamulca        | [nm]             | 10                                                           |      |      | 40   |      |
| Klasa izolacji        |                  | F                                                            |      |      |      |      |
| Temperatura otoczenia |                  | 0 to +40°C                                                   |      |      |      |      |
| Wilgotność            |                  | 20 to 80% RH (bez kondensacji)                               |      |      |      |      |
| Stopień ochrony       |                  | IP65                                                         |      |      |      |      |
| Dopuszczalne drgania  |                  | 24.5m/s2                                                     |      |      |      |      |

## Seria EML

- Prędkość obrotowa do 1500 obr/min
- Moment znamionowy od 9.55Nm do 38.2Nm
- Enkoder o rozdzielczości 2500 imp/obr
- Obudowa całkowicie zamknięta, IP 65
- Opcja hamulca



| Napięcie              |                 | 200VAC                                                    |      |      |       |
|-----------------------|-----------------|-----------------------------------------------------------|------|------|-------|
| Model                 | EML -           | 10A                                                       | 20A  | 30A  | 40A   |
| Moc znamionowa        | [kW]            | 1.0                                                       | 2.0  | 3.0  | 4.0   |
| Moment znamionowy     | [Nm]            | 9.55                                                      | 19.1 | 28.7 | 38.2  |
| Moment szczytowy      | [Nm]            | 28.7                                                      | 57.3 | 86.0 | 114.6 |
| Prąd znamionowy       | [A]             | 6.0                                                       | 12.0 | 18.0 | 24.0  |
| Prąd szczytowy        | [A]             | 18.0                                                      | 36.0 | 54.0 | 72.0  |
| Prędkość znamionowa   | [obr/min]       | 1000                                                      |      |      |       |
| Prędkość maksymalna   | [obr/min]       | 1500                                                      |      |      |       |
| Moment bezwładności   | [x10 -4 kg /m2] | 19                                                        | 53.5 | 77.8 | 102.2 |
| Enkoder               | Standard        | Inkrementalny: 2500P/R                                    |      |      |       |
|                       | Opcja           | 17-bit Inkrementalny/absolutny : 131072 imp/obr; Resolver |      |      |       |
| Moc Hamulca           | [W]             | 19                                                        | 35   |      |       |
| Moment Hamulca        | [Nm]            | 10                                                        | 40   |      |       |
| Klasa izolacji        |                 | F                                                         |      |      |       |
| Temperatura otoczenia |                 | 0 to + 40°C                                               |      |      |       |
| Wilgotność            |                 | 20 to 80% RH (bez kondensacji)                            |      |      |       |
| Stopień ochrony       |                 | IP65                                                      |      |      |       |
| Dopuszczalne drgania  |                 | 24.5m /s 2                                                |      |      |       |

## Seria EMB

- Prędkość obrotowa do 2000 obr/min
- Moment znamionowy od 47.8Nm do 95.5Nm
- Enkoder absolutny rozdzielczości 131072 imp/obr
- Obudowa całkowicie zamknięta, IP 55
- Opcja hamulca



| Napięcie              |                          | 400VAC                                 |                |                |
|-----------------------|--------------------------|----------------------------------------|----------------|----------------|
| Model                 | EMB-                     | 75D-A                                  | 1AD-A          | 1ED-A          |
| Moc znamionowa        | [kW]                     | 7.5                                    | 11.0           | 15.0           |
| Moment znamionowy     | [Nm]                     | 47.8                                   | 70.0           | 95.5           |
| Moment szczytowy      | [Nm]                     | 119.4                                  | 175            | 191            |
| Prąd znamionowy       | [A]                      | 18.0                                   | 28.0           | 38.0           |
| Prąd szczytowy        | [A]                      | 56.0                                   | 70.0           | 84.0           |
| Prędkość znamionowa   | [obr/min]                | 1500                                   |                |                |
| Prędkość maksymalna   | [obr/min]                | 2000                                   |                |                |
| Moment bezwładności   | [x10-4kgm <sup>2</sup> ] | 186.2 (193.6)*                         | 217.6 (278.9)* | 338.8 (346.1)* |
| Enkoder               | Standard                 | 17-bit Inkrementalny : 131072 imp/obr; |                |                |
|                       | Opcja                    | Resolver                               |                |                |
| Napięcie hamulca      |                          | DC24V±10%                              |                |                |
| Moc Hamulca           | [W]                      | 90                                     |                |                |
| Moment Hamulca        | [Nm]                     | 100                                    |                |                |
| Klasa izolacji        |                          | F                                      |                |                |
| Temperatura otoczenia |                          | 0 to +40°C                             |                |                |
| Wilgotność            |                          | 20 to 80% RH (bez kondensacji)         |                |                |
| Stopień ochrony       |                          | IP55                                   |                |                |
| Dopuszczalne drgania  |                          | 24.5m/s <sup>2</sup>                   |                |                |

\* - wartości podane w nawiasach podają moment silnika przy trzymającym hamulcu

Kod oznaczenia:

# EMJ – 10

model silni ka serwo

10

moc z namiotowa

A

napięcie zasilania

D

en koder

A

projekt

# 1

wał

1

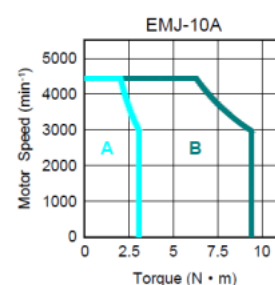
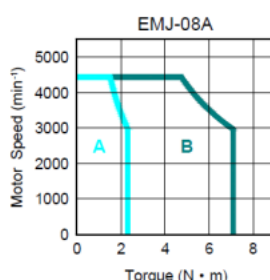
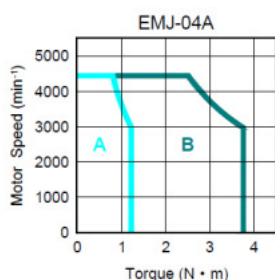
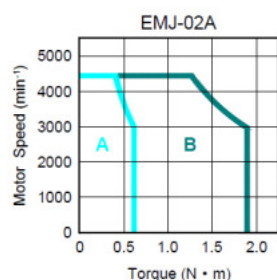
dodatkowe opcje

| Seria | Znak Specyfikacja |         |   |         |   |                                          |            |                                                          |                                                                                                                                  |
|-------|-------------------|---------|---|---------|---|------------------------------------------|------------|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| EMJ   | 02                | 0.2 kW  | A | 200 VAC | P | Enkoder<br>inkrementalny<br>2500 imp/obr | A Standard | 1 Bez wpustu<br>2 Z wpustem,<br>gwintowany<br>(Standard) | 1 Bez dodatkowych<br>opcji<br>2 Uszczelnienie olejowe<br>(Standard)<br>3 Z hamulcem<br>4 Z uszczelnieniem<br>olejowym i hamulcem |
|       | 04                | 0.4 kW  |   |         |   |                                          |            |                                                          |                                                                                                                                  |
|       | 08                | 0.75 kW |   |         |   |                                          |            |                                                          |                                                                                                                                  |
| EMG   | 10                | 1.0 kW  |   |         |   |                                          |            |                                                          |                                                                                                                                  |
|       | 15                | 1.5 kW  |   |         |   |                                          |            |                                                          |                                                                                                                                  |
|       | 20                | 2.0 kW  |   |         |   |                                          |            |                                                          |                                                                                                                                  |
|       | 30                | 3.0 kW  |   |         |   |                                          |            |                                                          |                                                                                                                                  |
|       | 50                | 1.0 kW  |   |         |   |                                          |            |                                                          |                                                                                                                                  |
| EML   | 10                | 1.0 kW  |   |         |   |                                          |            |                                                          |                                                                                                                                  |
|       | 20                | 2.0 kW  |   |         |   |                                          |            |                                                          |                                                                                                                                  |
|       | 30                | 3.0 kW  |   |         |   |                                          |            |                                                          |                                                                                                                                  |
|       | 40                | 4.0 kW  |   |         |   |                                          |            |                                                          |                                                                                                                                  |

# Charakterystyki mechaniczne

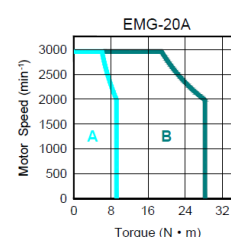
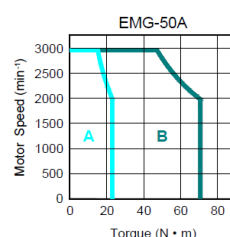
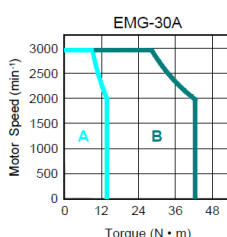
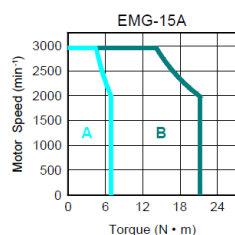
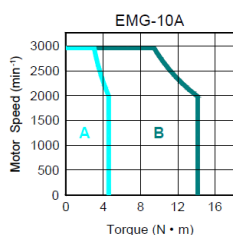
## prędkość w funkcji momentu obrotowego

### seria EMJ

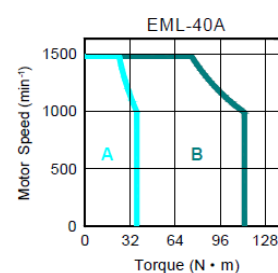
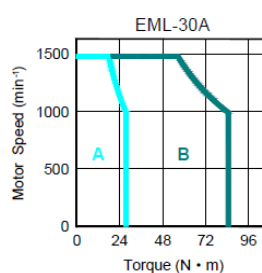
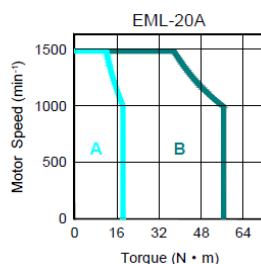
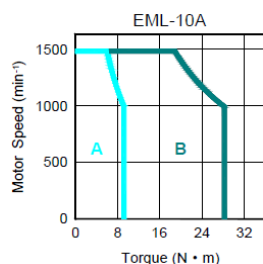


Uwaga: A – Obszar pracy ciągłej, B – Obszar pracy chwilowej.

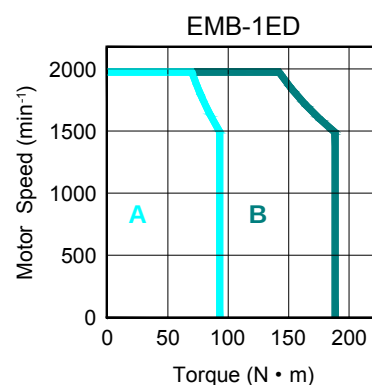
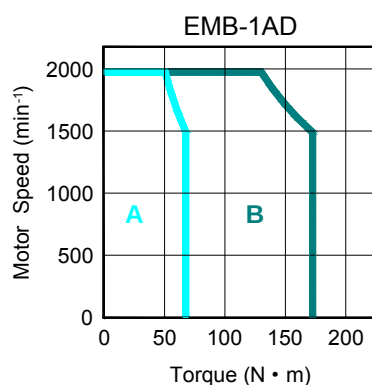
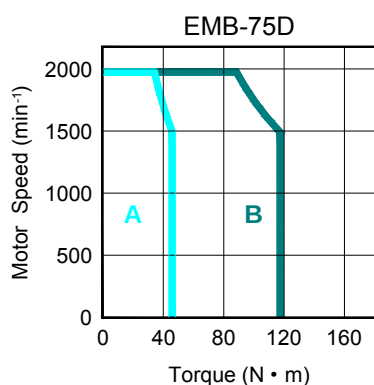
### seria EMG



### seria EML

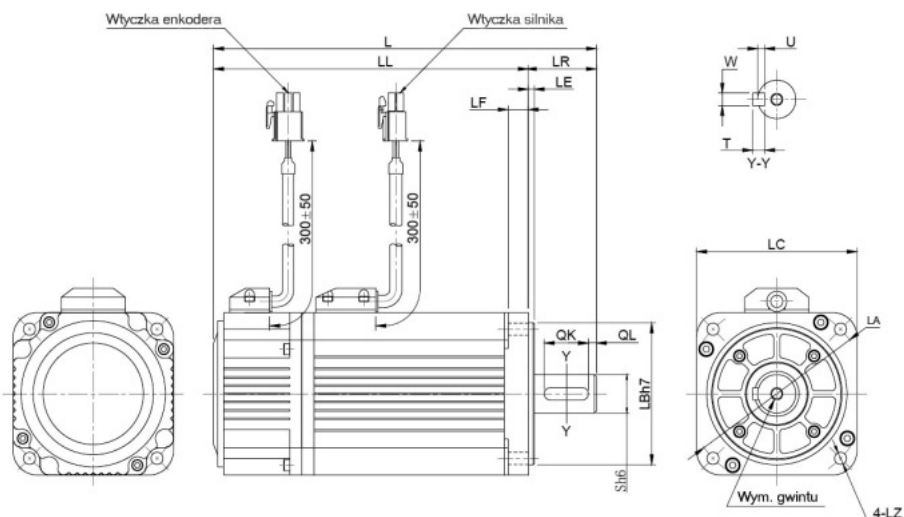


### seria EML





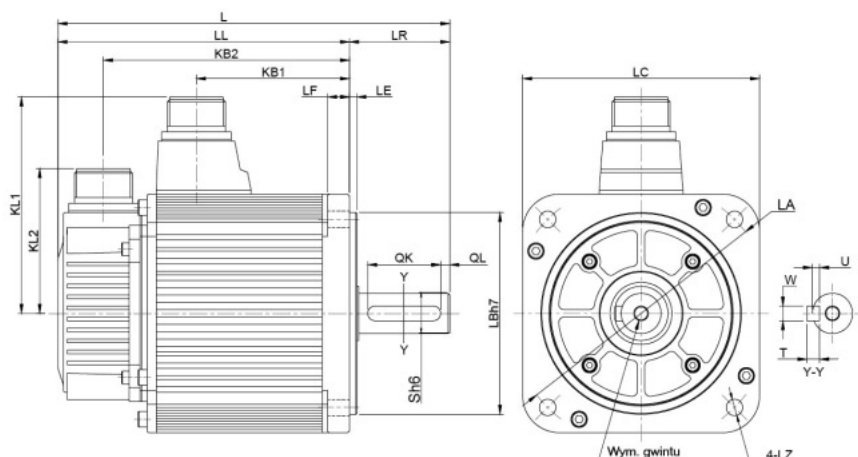
## seria EMJ



| Model EMJ | L        | LL       | Od strony kołnierza |    |    |    |    |    |     | S  | Wym. gwintu | Wpust |    |   |   |     |
|-----------|----------|----------|---------------------|----|----|----|----|----|-----|----|-------------|-------|----|---|---|-----|
|           |          |          | LR                  | LE | LF | LC | LA | LB | LZ  |    |             | QK    | QL | W | T | U   |
| 02A       | 153(193) | 123(163) | 30                  | 3  | 6  | 60 | 70 | 50 | 5.5 | 14 | M5x10L      | 16    | 4  | 5 | 5 | 3   |
| 04A       | 183(223) | 153(193) | 30                  | 3  | 6  | 60 | 70 | 50 | 5.5 | 14 | M5x10L      | 16    | 4  | 5 | 5 | 3   |
| 08A       | 191(234) | 156(199) | 35                  | 3  | 9  | 80 | 90 | 50 | 5.5 | 19 | M6x15L      | 22    | 4  | 6 | 6 | 3.5 |
| 10A       | 211(254) | 176(219) | 35                  | 3  | 9  | 80 | 90 | 50 | 5.5 | 19 | M6x15L      | 22    | 4  | 6 | 6 | 3.5 |

Uwaga: Wartości podane w nawiasach dotyczą silników wyposażonych w hamulec.

## seria EMG



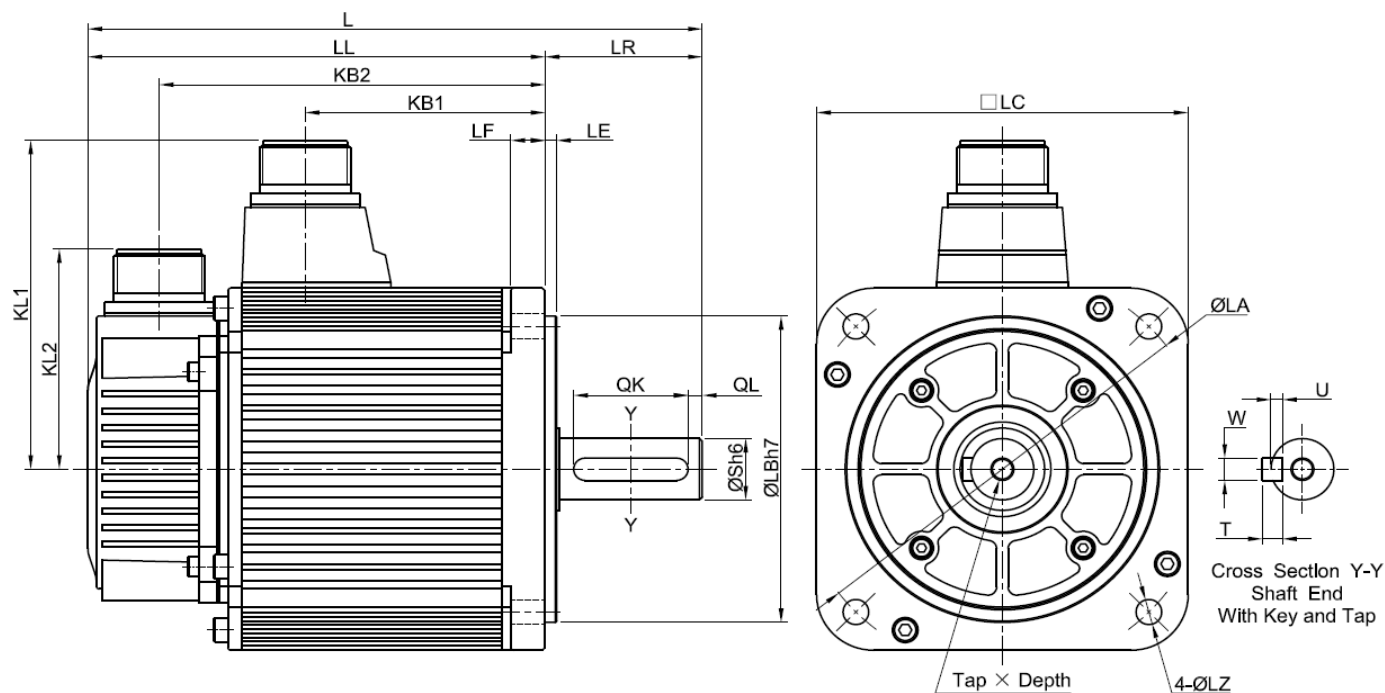
| Model EMG | L   | LL  | KB1 | KB2 | KL1 | KL2 | Od strony kołnierza |     |    |     |     |       |      | S  | Wym. gwintu | Wpust |    |    |   |   |
|-----------|-----|-----|-----|-----|-----|-----|---------------------|-----|----|-----|-----|-------|------|----|-------------|-------|----|----|---|---|
|           |     |     |     |     |     |     | LR                  | LE  | LF | LC  | LA  | LB    | LZ   |    |             | QK    | QL | W  | T | U |
| 10A       | 215 | 160 | 84  | 135 | 118 | 79  | 55                  | 4   | 12 | 130 | 145 | 110   | 9    | 22 | M6x20L      | 40    | 5  | 8  | 7 | 4 |
| 15A       | 240 | 185 | 109 | 160 | 118 | 79  | 55                  | 4   | 12 | 130 | 145 | 110   | 9    | 22 | M6x20L      | 40    | 5  | 8  | 7 | 4 |
| 20A       | 265 | 210 | 134 | 185 | 118 | 79  | 55                  | 4   | 12 | 130 | 145 | 110   | 9    | 22 | M6x20L      | 40    | 5  | 8  | 7 | 4 |
| 30A       | 307 | 228 | 143 | 203 | 140 | 79  | 79                  | 3.2 | 18 | 180 | 200 | 114.3 | 13.5 | 35 | M8x16L      | 55    | 6  | 10 | 8 | 5 |
| 50A       | 347 | 268 | 183 | 243 | 140 | 79  | 79                  | 3.2 | 18 | 180 | 200 | 114.3 | 13.5 | 35 | M8x16L      | 55    | 6  | 10 | 8 | 5 |

## seria EML

| Model EML | L   | LL  | KB1 | KB2 | KL1 | KL2 | Od strony kołnierza |     |    |     |     |       |      | S  | Wym. gwintu | Wpust |    |    |   |   |
|-----------|-----|-----|-----|-----|-----|-----|---------------------|-----|----|-----|-----|-------|------|----|-------------|-------|----|----|---|---|
|           |     |     |     |     |     |     | LR                  | LE  | LF | LC  | LA  | LB    | LZ   |    |             | QK    | QL | W  | T | U |
| 10A       | 265 | 210 | 134 | 185 | 118 | 79  | 55                  | 4   | 12 | 130 | 145 | 110   | 9    | 22 | M6x20L      | 40    | 5  | 8  | 7 | 4 |
| 20A       | 332 | 253 | 168 | 228 | 140 | 79  | 79                  | 3.2 | 18 | 180 | 200 | 114.3 | 13.5 | 35 | M8x16L      | 55    | 6  | 10 | 8 | 5 |
| 30A       | 372 | 293 | 208 | 268 | 140 | 79  | 79                  | 3.2 | 18 | 180 | 200 | 114.3 | 13.5 | 35 | M8x16L      | 55    | 6  | 10 | 8 | 5 |
| 40A       | 412 | 333 | 243 | 308 | 140 | 79  | 79                  | 3.2 | 18 | 180 | 200 | 114.3 | 13.5 | 35 | M8x16L      | 5     | 6  | 10 | 8 | 5 |

Uwaga: Rysunek wraz z oznaczeniami ten sam co w serii EMG.

# Seria EMB



| Model<br>EMB- | L   | LL  | KB1 | KB2 | KL1 | Flange side |    |    |     |     |     |      | S  | Tap×Depth | key |    |    |    |   |
|---------------|-----|-----|-----|-----|-----|-------------|----|----|-----|-----|-----|------|----|-----------|-----|----|----|----|---|
|               |     |     |     |     |     | LR          | LE | LF | LC  | LA  | LB  | LZ   |    |           | QK  | QL | W  | T  | U |
| 75D           | 530 | 414 | 366 | 302 | 184 | 116         | 4  | 18 | 220 | 235 | 200 | 13.5 | 42 | M16×32L   | 90  | 6  | 12 | 8  | 5 |
| 1AD           | 580 | 464 | 416 | 352 | 184 | 116         | 4  | 18 | 220 | 235 | 200 | 13.5 | 42 | M16×32L   | 90  | 6  | 12 | 8  | 5 |
| 1ED           | 615 | 499 | 451 | 387 | 184 | 116         | 4  | 18 | 220 | 235 | 200 | 13.5 | 55 | M20×40L   | 90  | 6  | 12 | 10 | 6 |