## 0

## BAUMULLER



# osc2 <br>  

Extremely compact and powerful the new DSC2 motor generation in six lengths

The DSC2 motors cover a speed range from 1,000 to $5,000 \mathrm{rpm}$.
Compared to other servo motors, they are up to 15 percent more compact.

## Compact Servo Motors

The DSC2 motors cover a speed range from 1,000 to $5,000 \mathrm{rpm}$. Compared to conventional servo motors, they are up to 15 percent more compact. A wide variety of cooling options, connections, gears, brakes and encoders create application-specific and flexible motor solutions. The low dead weight and minimal dimensions make the DSC2 a good solution for moving axes. The minimal cogging torque ensures precise positioning and high control quality. The advantage: precision in the process is increased. The motor also has a low $\mathrm{CO}_{2}$ footprint due to the reduced use of materials.
$\checkmark$ Cooling options: uncooled, air-cooled, water-cooled
$\checkmark$ Encoders: Resolver, Hiperface DSL, Hiperface, EnDat 2.2
$\checkmark$ Optionally with brake
$\checkmark$ Single cable technology






HIGH ENERGY EFFICIENCY
$\checkmark$ Permanent magnet synchronous servo motors
$\checkmark$ Compact type of construction with high power density
$\checkmark$ Degree of protection up to IP 65 regardless of the cooling method
$\checkmark$ Main connection via rotatable plug or terminal box
$\checkmark$ Single cable technology available
$\checkmark$ Very good concentricity properties
$\checkmark$ Smooth housing surface - not susceptible to dirt
$\checkmark$ Slim, integrated housing design
$\checkmark$ High overload capability
$\checkmark$ Encoder options:
Resolver, Hiperface DSL, Hiperface, EnDAT 2.2
$\checkmark$ All types optionally with brake

## Cooling methods



UNCOOLED


AIR-COOLED


The DSC2 range is available in uncooled, air-cooled and water-cooled versions.


Excellent combination of overall length and flexibility with maximum torque density at the same time. Energy efficiency is about 94 percent.

## DSC2 045-100 - Technical data

| Type | $P_{N}$ |  | $\mathrm{n}_{\mathrm{N}}$ | J |  | $M_{0}$ |  | $M_{0 \text { max }}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [kW] | [hp] | [ $\mathrm{min}^{-1}$ ] | [ $\mathrm{ggcm}^{2}$ ] | [ $\mathrm{lb} \mathrm{in}^{2}$ ] | [ Nm ] | [lbf ft] | [ Nm ] | [lbf ft] |
| DSC2-045* | * | * | * | * | * | * | * | * | * |
| DSC2-056* | * | * | * | * | * | * | * | * | * |
| DSC2-071 | 1.21-36 | 1.62-48 | 1000-5000 | 9.5-48.9 | 3.2-16.7 | 12.6-120 | 9.3-88.5 | 25-170 | 18.4-125 |
| DSC2-100* | * | * | * | * | * | * | * | * | * |

## Cooling options

The DSC2 range is available in uncooled, air-cooled and watercooled versions. The most compact variant of the DSC2 is made possible by the water cooling concept.
The active cooling increases the power density. In addition, close installation of several servo motors is possible without any problems due to the good heat dissipation. This saves space in the machine and is a plus point especially for applications with many axes.


Power density


## Encoder interfaces

We work with numerous manufacturers and offer analog, digital and reliable rotary encoder systems. These differ, among other things, regarding their accuracy. Our drive experts advise you on the different variants depending on your requirements. The range extends from resolver to Sick to Heidenhain encoders with their different protocols.

## Areas of application

Plastics machines
$\checkmark$ Textile machines
$\checkmark$ Robotics
$\checkmark$ Packaging machines
Printing machines
$\checkmark$ Metalworking machines
$\checkmark$ Environmental and recycling technology
$\checkmark$ Medical technology and pharmaceuticals



Type code

## Version with fan

| Motorbaulängen <br> motorsize | L1 | L2 |
| :--- | :---: | :---: |
| DSC2-071 AA | 136 | 305 |
| DSC2-071 BB | 168 | 337 |
| DSC2-071 CC | 200 | 369 |
| DSC2-071 DD | 232 | 401 |
| DSC2-071 EE | 264 | 433 |
| DSC2-071 FF | 296 | 465 |

## Version water cooled



| Motorbaulängen <br> motorsize | L1 | L2 |
| :--- | :---: | :---: |
| DSC2-071 AA | 91 | 179 |
| DSC2-071 BB | 123 | 211 |
| DSC2-071 CC | 155 | 243 |
| DSC2-071 DD | 187 | 275 |
| DSC2-071 EE | 219 | 307 |
| DSC2-071 FF | 251 | 339 |


| Overall size | 045, 056, 071, 100 |
| :---: | :---: |
| Overall length | AA ... FF |
| Degree of protection | IP64, IP65 |
| Cooling type | $\mathbf{U}$ - uncooled, $\mathbf{0}$ - air-cooled, $\mathbf{W}$ - water cooled |
| Nominal speed class | 10-1000 $\mathrm{min}^{-1} \ldots$ 50-5000 $\mathrm{min}^{-1}$ |
| UZK DC | 54-540 V |
| Encoder type | $\mathbf{0}$ - no encoder, A - Resolver, B - EDS35, C - EDM35, D - SRS50, E - SRM50, <br> F-ECN1313, G-EON1325, H-ECN1325, I-EON1337, J-EES37, K - EEM37, <br> L-SEK37, M-SEL37, N - Hallsensor, P-ECI1319, 0-E@I1331 |
| Encoder option | $\mathbf{0}$ - none, E-E-Type plate, S-Safety, T-E-Type plate + Safety |
| Brake | $\mathbf{0}$ - without brake, B - with PE brake |
| Shaft option | A - smooth shaft, B - with parallel key |
| Type main connection | A - single cable solution, B - device sockets Speedtec (PT1000 on main connection), <br> D - device sockets Speedtec (PT1000 on encoder socket), <br> $\mathbf{K}$ - terminal box (with PT1000 connection), $\mathbf{N}$ - terminal box (PT1000 on encoder socket) |
| Main outlet port | $\mathbf{T}$ - top, B-bottom, L- left, R-right, $\mathbf{D}$ - $\mathbf{A}$-side, $\mathbf{N}$ - B-side, $\mathbf{P}$ - pivoted |
| Encoder outlet port | $\mathbf{O}$ - without encoder socket, $\mathbf{T}$ - top, $\mathbf{B}$ - bottom, $\mathbf{L}$ - left, $\mathbf{R}$ - right, $\mathbf{D}$ - - -side, $\mathbf{N}$ - B-side, $\mathbf{P}$ - pivoted |
| Bearing | $\mathbf{K}$ - ball bearing, $\mathbf{R}$ - roller bearing |
| Vibration level | A - vibration level $A, B$ - vibration level $B$ |
| True running | $\mathbf{N}$ - normal, R-reduced |
| Gears / pump mounting | $\mathbf{0}$ - without, $\mathbf{A}$ - BPE gear box, $\mathbf{B}-\mathrm{BPEF}$ gear box, $\mathbf{C}$ - BPEA gear box, $\mathbf{D}-\mathrm{BPN}$ gear box, $\mathbf{E}$ - BPNA gear box, <br> $\mathbf{F}$ - BPNF gear box, G-BPV gear box, $\mathbf{H}$ - BPVF gear box, $\mathbf{Z}$ - pump mounting Advanced Line |

## HOUSE OF AUTOMATION



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