

## 4.1 Two-speed gearboxes

PS

PS two-speed gearboxes with loss-optimized direct drive

### Features

Power density	★★★★☆
Backlash	★★★☆☆
Price category	€€€
Shaft load	★★★★★
Smooth operation	★★★★★
Torsional stiffness	★★★☆☆
Mass moment of inertia	★★★★☆
Fast changeover between high speed and high torque	✓
High-precision, helical planetary gear unit	✓
Direct drive or neutral gear position optimized to reduce loss (optional)	✓
Splash lubrication or circulating lubrication (optional)	✓
Oil sight glass or oil level gauge (optional)	✓
Easy and reliable attachment to any main feed motor	✓

Key: ★☆☆☆☆ good | ★★★★★ excellent

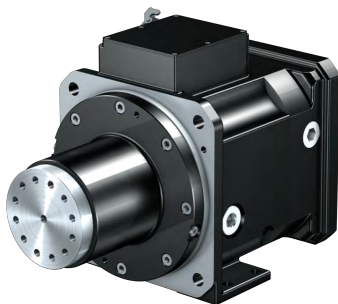
## Technical data

Type	i	$n_{1max}$ [rpm]	$P_{N,GB}$ [kW]	$M_{2max}$ [Nm]	$M_{2N}$ [Nm]	$\Delta\varphi_2$ [arcmin]
PS2501	1 – 5.5	2500 – 10000	47	2200	1375	20 – 30
PS2501	1 – 4	2500 – 10000	47	1600	1200	20 – 30
PS3001	1 – 5.5	2500 – 10000	47	2200	1375	20 – 30
PS3001	1 – 4	2500 – 10000	47	1600	1200	20 – 30

<b>Housing design</b>							
Short bearing distance							✓
Medium bearing distance							✓
Long bearing distance							✓
<b>Shaft design</b>							
Flange shaft							✓
Solid shaft without feather key							✓
Solid shaft with two feather keys							✓
<b>Bearing design</b>							
Deep-groove ball bearing							✓
Angular contact ball bearing							✓
Cylindrical roller bearing							✓
<b>Lubrication</b>							
Splash lubrication							✓
Circulating lubrication							✓
<b>Housing design</b>		<b>S</b>	<b>M</b>	<b>S</b>	<b>M</b>	<b>M</b>	<b>L</b>
<b>Shaft design</b>		<b>G</b>		<b>P</b>		<b>F</b>	
<b>Bearing design</b>							
<b>R</b>		SGR	–	SPR	–	–	–
<b>S</b>		SGS	MGS	SPS	MPS	MFS	–
<b>Z</b>		–	MGZ	–	MPZ	MFZ	LFZ

## Further information

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<http://www.stoeber.de/en/PS>