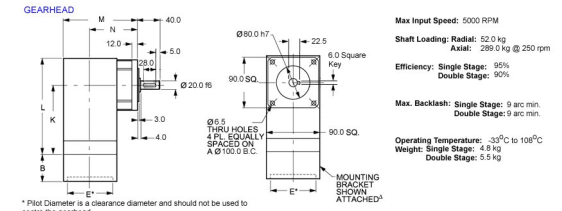




MBA

Gearheads - Right Angle - Planetary - Size 90 - Adapted



With Nema and Non Nema Size Adaptors.

Maximum input speed 5000 rpm.

Shaft loading 48 kg (107 lbs) radial and 470 kg (1050 lbs) axial at 250 rpm output.

Min. Efficiency ---- Single Stage : 90%, Double Stage : 85%.

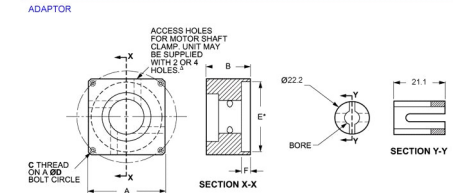
Max Backlash ---- Single Stage : 9 arc min, Double Stage : 9 arc min.

Operating Temperature : -34 to 121 Deg C (-29 to 250 Deg F).

This catalogue to be read in conjunction with information at
http://www.minibearings.com.au/ogue/tech/gearheads/gearhead_adapted_general.pdf

http://www.minibearings.com.au/ogue/tech/gearheads/gearhead_adapted_mounting.pdf

http://www.minibearings.com.au/ogue/tech/gearheads/Gear_Types.pdf



Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-003-09.53x145	3 : 1	9.525	Single Stage / 20mm	145	22.4 to 45.5	29 / 24	108.0 / 63.0	115.1 / 110.4	146.0 / 101.0	62.7
		0.375		5.709						2.469
# GHRP90-003-09.53x98	3 : 1	9.525	Single Stage / 20mm	98.3	15.5 to 38.9	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1
		0.375		3.870						1.736

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-003-09.53x100	3 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-003-12.70x100	3 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-003-12.70x145	3 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	29 / 24	108.0 / 63.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-003-12.70x98	3 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-003-14.00x100	3 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-003-14.00x145	3 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	29 / 24	108.0 / 63.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-003-14.00x98	3 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-003-15.88x145	3 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	29 / 24	108.0 / 63.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-003-15.88x98	3 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-003-15.88x100	3 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-003-16.00x98	3 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-003-16.00x145	3 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	29 / 24	108.0 / 63.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-003-16.00x100	3 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-003-19.00x100	3 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-003-19.00x98	3 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	29 / 24	108.0 / 63.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-003-19.00x145	3 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	145 <i>5.709</i>	45.5-22.4	29 / 24	108.0 / 63.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-005-09.53x98	5 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-005-09.53x100	5 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-005-09.53x145	5 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-005-12.70x100	5 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-005-12.70x145	5 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-005-12.70x98	5 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-005-14.00x100	5 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-005-14.00x98	5 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-005-14.00x145	5 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-005-15.88x100	5 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-005-15.88x145	5 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-005-15.88x98	5 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-005-16.00x98	5 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-005-16.00x145	5 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-005-16.00x100	5 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-005-19.00x98	5 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-005-19.00x100	5 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-005-19.00x145	5 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	66 / 41	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-010-09.53x145	10 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	76 / 47	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-010-09.53x98	10 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	76 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-010-09.53x100	10 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	76 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-010-12.70x98	10 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	76 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-010-12.70x100	10 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	76 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-010-12.70x145	10 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	76 / 47	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-010-14.00x145	10 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	76 / 47	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-010-14.00x100	10 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	76 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-010-14.00x98	10 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	76 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-010-15.88x100	10 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	76 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-010-15.88x98	10 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	76 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-010-15.88x145	10 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	76 / 47	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-010-16.00x100	10 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	76 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
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# GHRP90-010-19.00x145	10 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	76 / 47	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-010-19.00x98	10 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	76 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-010-19.00x100	10 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	76 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-09.53x98	15 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-09.53x100	15 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-09.53x145	15 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-015-12.70x145	15 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>

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# GHRP90-015-12.70x98	15 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-12.70x100	15 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-14.00x100	15 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-14.00x145	15 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-015-14.00x98	15 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-15.88x100	15 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-15.88x98	15 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-15.88x145	15 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-015-16.00x145	15 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-015-16.00x100	15 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-16.00x98	15 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-19.00x98	15 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-19.00x100	15 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-015-19.00x145	15 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	80 / 53	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-025-09.53x100	25 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-025-09.53x145	25 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-025-09.53x98	25 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-025-12.70x98	25 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-025-12.70x145	25 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-025-12.70x100	25 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-025-14.00x100	25 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-025-14.00x98	25 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-025-14.00x145	25 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-025-15.88x145	25 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-025-15.88x98	25 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-025-15.88x100	25 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-025-16.00x145	25 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-025-16.00x98	25 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-025-16.00x100	25 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-025-19.00x100	25 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-025-19.00x145	25 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	71 / 62	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-025-19.00x98	25 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	71 / 62	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-030-09.53x100	30 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-030-09.53x98	30 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-030-09.53x145	30 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-030-12.70x98	30 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-030-12.70x145	30 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-030-12.70x100	30 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-030-14.00x145	30 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-030-14.00x100	30 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-030-14.00x98	30 : 1	14.000 <i>0.551</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-030-15.88x98	30 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-030-15.88x100	30 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-030-15.88x145	30 : 1	15.875 <i>0.625</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-030-16.00x100	30 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-030-16.00x145	30 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-030-16.00x98	30 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-030-19.00x98	30 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-030-19.00x100	30 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-030-19.00x145	30 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	59 / 47	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-050-09.53x98	50 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-050-09.53x100	50 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-050-09.53x145	50 : 1	9.525 <i>0.375</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	63 / 51	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-050-12.70x145	50 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	63 / 51	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-050-12.70x98	50 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-050-12.70x100	50 : 1	12.700 <i>0.500</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-050-14.00x98	50 : 1	14.000	Single Stage / 20mm	98.3	15.5 to 38.9	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1
		<i>0.551</i>		<i>3.870</i>						<i>1.736</i>
# GHRP90-050-14.00x100	50 : 1	14.000	Single Stage / 20mm	100	22.4 to 45.5	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1
		<i>0.551</i>		<i>3.937</i>						<i>1.736</i>
# GHRP90-050-14.00x145	50 : 1	14.000	Single Stage / 20mm	145	22.4 to 45.5	63 / 51	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7
		<i>0.551</i>		<i>5.709</i>						<i>2.469</i>
# GHRP90-050-15.88x98	50 : 1	15.875	Single Stage / 20mm	98.3	15.5 to 38.9	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1
		<i>0.625</i>		<i>3.870</i>						<i>1.736</i>
# GHRP90-050-15.88x145	50 : 1	15.875	Single Stage / 20mm	145	22.4 to 45.5	63 / 51	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7
		<i>0.625</i>		<i>5.709</i>						<i>2.469</i>
# GHRP90-050-15.88x100	50 : 1	15.875	Single Stage / 20mm	100	22.4 to 45.5	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1
		<i>0.625</i>		<i>3.937</i>						<i>1.736</i>
# GHRP90-050-16.00x98	50 : 1	16.000	Single Stage / 20mm	98.3	15.5 to 38.9	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1
		<i>0.630</i>		<i>3.870</i>						<i>1.736</i>
# GHRP90-050-16.00x100	50 : 1	16.000	Single Stage / 20mm	100	22.4 to 45.5	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1
		<i>0.630</i>		<i>3.937</i>						<i>1.736</i>

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Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-050-16.00x145	50 : 1	16.000 <i>0.630</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	63 / 51	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-050-19.00x100	50 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-050-19.00x98	50 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	63 / 51	138.0 / 93.0	89.9 / 80.4	146.0 / 101.0	44.1 <i>1.736</i>
# GHRP90-050-19.00x145	50 : 1	19.000 <i>0.748</i>	Single Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	63 / 51	138.0 / 93.0	115.1 / 110.4	146.0 / 101.0	62.7 <i>2.469</i>
# GHRP90-100-09.53x98	100 : 1	9.525 <i>0.375</i>	Double Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>
# GHRP90-100-09.53x100	100 : 1	9.525 <i>0.375</i>	Double Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>
# GHRP90-100-09.53x145	100 : 1	9.525 <i>0.375</i>	Double Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	115.1 / 110.4	169.0 / 124.0	62.7 <i>2.469</i>
# GHRP90-100-12.70x145	100 : 1	12.700 <i>0.500</i>	Double Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	115.1 / 110.4	169.0 / 124.0	62.7 <i>2.469</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-100-12.70x98	100 : 1	12.700 <i>0.500</i>	Double Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>
# GHRP90-100-12.70x100	100 : 1	12.700 <i>0.500</i>	Double Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>
# GHRP90-100-14.00x100	100 : 1	14.000 <i>0.551</i>	Double Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>
# GHRP90-100-14.00x98	100 : 1	14.000 <i>0.551</i>	Double Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>
# GHRP90-100-14.00x145	100 : 1	14.000 <i>0.551</i>	Double Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	115.1 / 110.4	169.0 / 124.0	62.7 <i>2.469</i>
# GHRP90-100-15.88x98	100 : 1	15.875 <i>0.625</i>	Double Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>
# GHRP90-100-15.88x145	100 : 1	15.875 <i>0.625</i>	Double Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	115.1 / 110.4	169.0 / 124.0	62.7 <i>2.469</i>
# GHRP90-100-15.88x100	100 : 1	15.875 <i>0.625</i>	Double Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>

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Gearheads - Right Angle - Planetary - Size 90 - Adapted

Part Number	Ratio	Motor Shaft Diameter mm	Config. / Output Shaft	Bolt Circle (D) mm	Motor Shaft Length	Cont. Torque at 1000/5000 rpm N.m	Top Lengths (M / N) mm	Bracket Size (A / E) mm	Length Without Bracket (L/K) mm	Bracket Height (B) mm
# GHRP90-100-16.00x98	100 : 1	16.000 <i>0.630</i>	Double Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>
# GHRP90-100-16.00x145	100 : 1	16.000 <i>0.630</i>	Double Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	115.1 / 110.4	169.0 / 124.0	62.7 <i>2.469</i>
# GHRP90-100-16.00x100	100 : 1	16.000 <i>0.630</i>	Double Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>
# GHRP90-100-19.00x100	100 : 1	19.000 <i>0.748</i>	Double Stage / 20mm	100 <i>3.937</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>
# GHRP90-100-19.00x145	100 : 1	19.000 <i>0.748</i>	Double Stage / 20mm	145 <i>5.709</i>	22.4 to 45.5	100 / 61	138.0 / 93.0	115.1 / 110.4	169.0 / 124.0	62.7 <i>2.469</i>
# GHRP90-100-19.00x98	100 : 1	19.000 <i>0.748</i>	Double Stage / 20mm	98.3 <i>3.870</i>	15.5 to 38.9	100 / 61	138.0 / 93.0	89.9 / 80.4	169.0 / 124.0	44.1 <i>1.736</i>

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