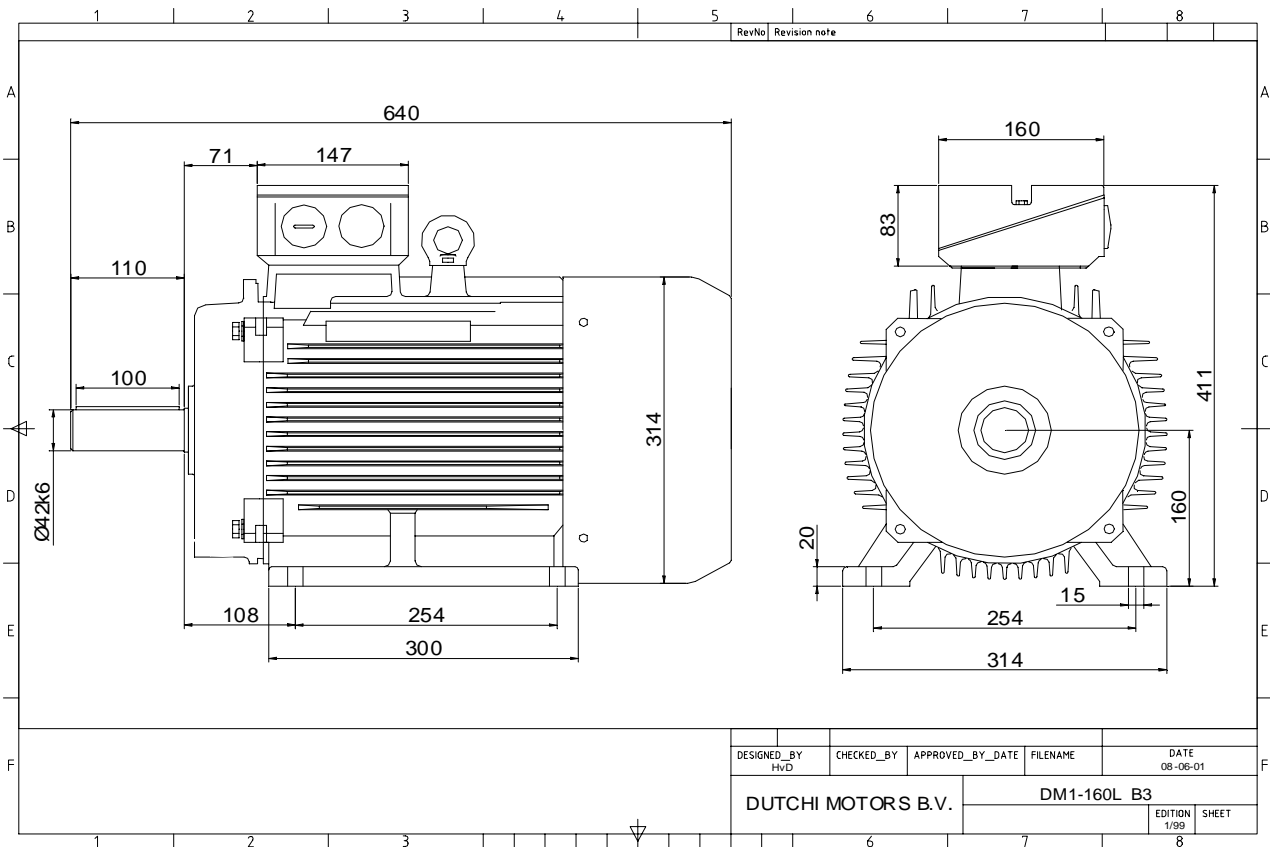


Power is our commodity, the world is our market !



Specification **IEC 60034-1**  
 Manufacturer **Dutchi Motors B.V.**  
 Motor type **DM1- 160 L2**  
 Rated power **18,50** kW **S1** duty  
 Speed **2935** r.p.m  
 Voltage **400** / **690** V  
 Frequency **50** Hz  
 Connection **Δ** / **Y**  
 Amps full load **32,7** / **18,9** A  
 Amps no-load(400V) **8,27** A  
 Enclosure **IP 55**  
 Insulation Class **F (temp. rise B (80 K))**

Max. coolant temp. **40°C**  
 Max. altitude **1.000** mtr, above sea level  
 Comment **3 x PTC 150°C**  
 Cable entries **2 x M40x1,5 + 1 x M20x1,5 (ptc)**

Feature **Cast-iron motor**  
 Weight **134** kg  
 Catalog no. **11132A18D**  
 Warranty **12~18 months**

Efficiency class **EFF 2**  
 Load data 100% 75% 50% 25%  
 Efficiency **90,4 91,0 90,1 85,1** %  
 Power factor **0,90 0,90 0,84 0,63**

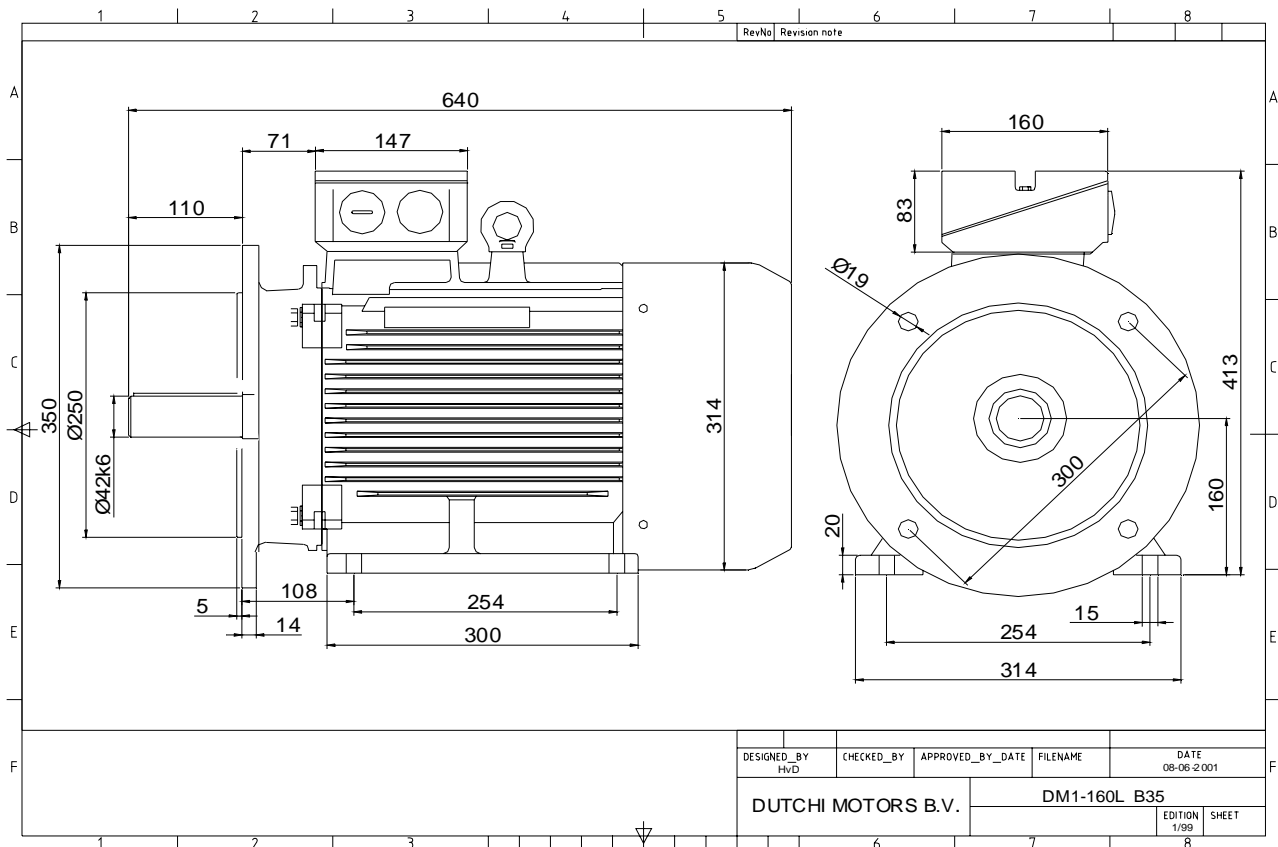
Sound pressure level (1m) **76,3** dB(A)  
 Resistance R20 (open) **0,469** Ω  
 Resistance R20 **Δ 0,313** Ω

Full load torque **60** Nm  
 DOL Starting torque vs FL torque **2,31**  
 DOL Pull up torque vs FL torque **1,67**  
 DOL Pull out torque vs FL torque **3,18**  
 Star-Delta Starting torque vs FL torque **0,72**  
 Star-Delta Pull up torque vs FL torque **0,52**  
 Star-Delta Pull out torque vs FL torque **0,99**  
 DOL Starting current vs FL current **7,30**  
 Star Delta Starting current vs FL current **2,28**  
 Rotor Inertia **0,0525** kgm<sup>2</sup>

Bearing DE **6309 - ZZ C3**  
 Bearing NDE **6309 - ZZ C3**


WI	Change	date	sign.
Dutchi Motors B.V.		Description	date
P.O. Box 5390		Drawing made by :	27-04-04
NL-6802 EJ ARNHEM			
Tel : +31-(0)26 - 3541 600		dutchi.motors@dutchi.nl	
Fax : +31-(0)26 - 3541 650		www.dutchi.com	

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Specification **IEC 60034-1**  
 Manufacturer **Dutchi Motors B.V.**  
 Motor type **DM1- 160 L2**  
 Rated power **18,50** kW **S1** duty  
 Speed **2935** r.p.m  
 Voltage **400** / **690** V  
 Frequency **50** Hz  
 Connection **Δ** / **Y**  
 Amps full load **32,68** / **18,87** A  
 Amps no-load(400V) **8,27** A  
 Enclosure **IP 55**  
 Insulation Class **F (temp. rise B (80 K))**

Max. coolant temp. **40°C**  
 Max. altitude **1.000** mtr, above sea level  
 Comment **3 x PTC 150°C**  
 Cable entries **2 x M40x1,5 + 1 x M20x1,5 (ptc)**

Feature **Cast-iron motor**  
 Weight **134** kg  
 Catalog no. **11532A18D**  
 Warranty **12~18 months**

Efficiency class **EFF 2**  
 Load data 100% 75% 50% 25%  
 Efficiency **90,4 91,0 90,1 85,1** %  
 Power factor **0,90 0,90 0,84 0,63**

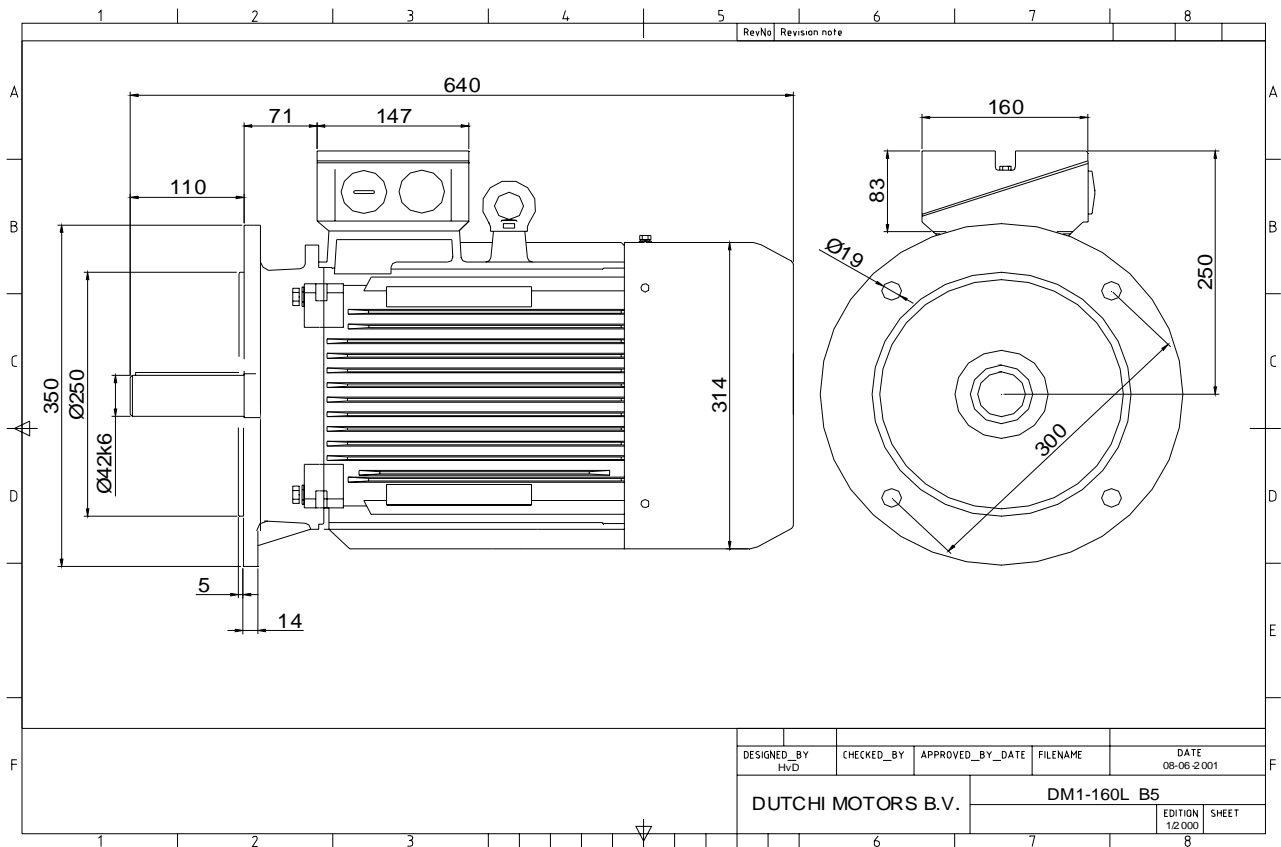
Sound pressure level (1m) **76,3** dB(A)  
 Resistance R20 (open) **0,469** Ω  
 Resistance R20 **Δ 0,313** Ω

Full load torque **60,20** Nm  
 DOL Starting torque vs FL torque **2,31**  
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 Star-Delta Pull up torque vs FL torque **0,52**  
 Star-Delta Pull out torque vs FL torque **0,99**  
 DOL Starting current vs FL current **7,30**  
 Star Delta Starting current vs FL current **2,28**  
 Rotor Inertia **0,0525** kgm2

Bearing DE **6309 - ZZ C3**  
 Bearing NDE **6309 - ZZ C3**


WI	Change	date	sign.
Dutchi Motors B.V. P.O. Box 5390 NL-6802 EJ ARNHEM Tel : +31-(0)26 - 3541 600 Fax : +31-(0)26 - 3541 650		Description Drawing made by :	date 19-04-04
			sign. HvD
		dutchi.motors@dutchi.nl www.dutchi.com	

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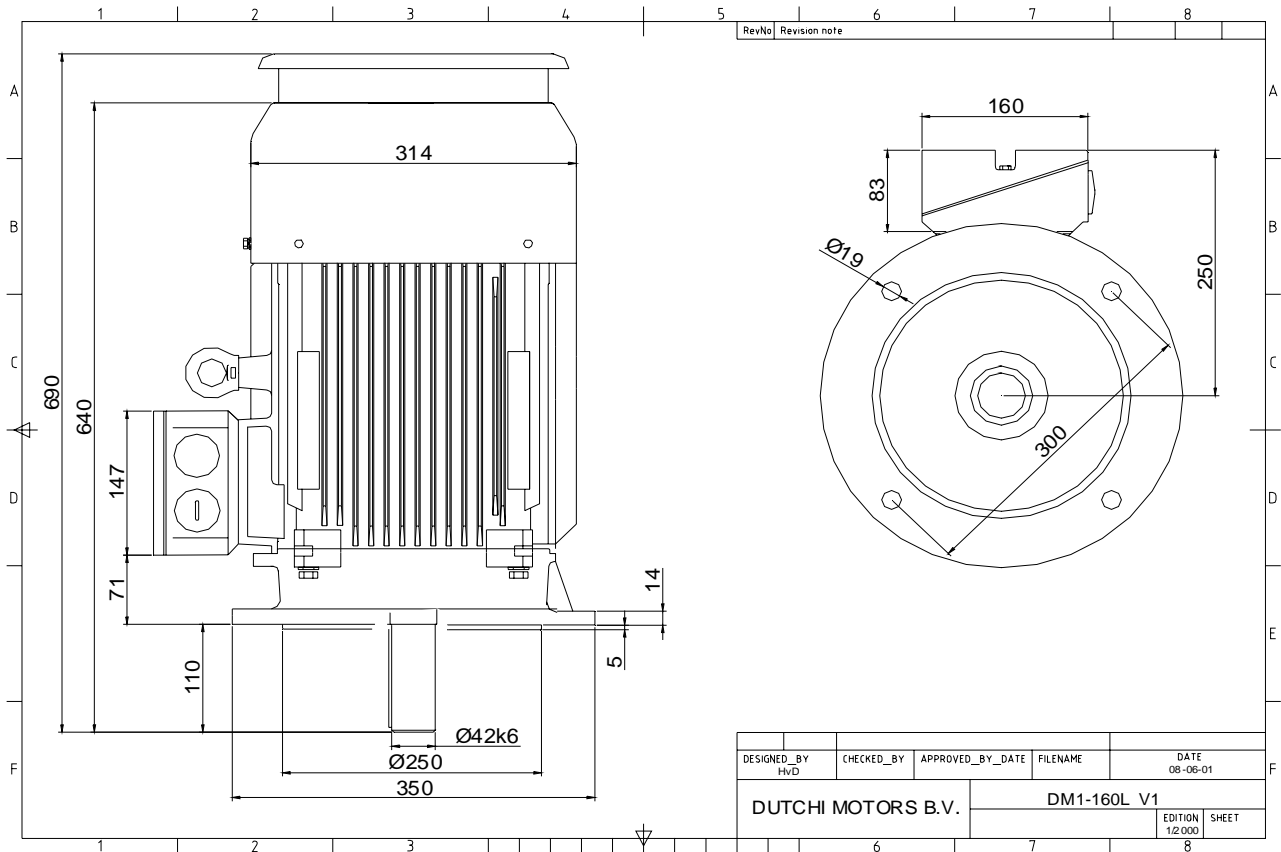


Specification	<b>IEC 60034-1</b>
Manufacturer	<b>Dutchi Motors B.V.</b>
Motor type	<b>DM1- 160 L2</b>
Rated power	<b>18,50</b> kW <b>S1</b> duty
Speed	<b>2935</b> r.p.m
Voltage	<b>400 / 690</b> V
Frequency	<b>50</b> Hz
Connection	<b>Δ / Y</b>
Amps full load	<b>32,68 / 18,87</b> A
Amps no-load(400V)	<b>8,27</b> A
Enclosure	<b>IP 55</b>
Insulation Class	<b>F (temp. rise B (80 K))</b>
Max. coolant temp.	<b>40°C</b>
Max. altitude	<b>1.000</b> mtr, above sea level
Comment	<b>3 x PTC 150°C</b>
Cable entries	<b>2 x M40x1,5 + 1 x M20x1,5 (ptc)</b>
Feature	<b>Cast-iron motor</b>
Weight	<b>134</b> kg
Catalog no.	<b>11232A18D</b>
Warranty	<b>12~18 months</b>

Efficiency class	<b>EFF 2</b>			
Load data	100%	75%	50%	25%
Efficiency	<b>90,4</b>	<b>91,0</b>	<b>90,1</b>	<b>85,1</b> %
Power factor	<b>0,90</b>	<b>0,90</b>	<b>0,84</b>	<b>0,63</b>
Sound pressure level (1m)				<b>76,3</b> dB(A)
Resistance R20 (open)				<b>0,469</b> Ω
Resistance R20	<b>Δ</b>			<b>0,313</b> Ω
Full load torque				<b>60,20</b> Nm
DOL Starting torque vs FL torque				<b>2,31</b>
DOL Pull up torque vs FL torque				<b>1,67</b>
DOL Pull out torque vs FL torque				<b>3,18</b>
Star-Delta Starting torque vs FL torque				<b>0,72</b>
Star-Delta Pull up torque vs FL torque				<b>0,52</b>
Star-Delta Pull out torque vs FL torque				<b>0,99</b>
DOL Starting current vs FL current				<b>7,30</b>
Star Delta Starting current vs FL current				<b>2,28</b>
Rotor Inertia				<b>0,0525</b> kgm <sup>2</sup>
Bearing DE				<b>6309 - ZZ C3</b>
Bearing NDE				<b>6309 - ZZ C3</b>


WI	Change	date	sign.
<b>Dutchi Motors B.V.</b> P.O. Box 5390 NL-6802 EJ ARNHEM Tel : +31-(0)26 - 3541 600 Fax : +31-(0)26 - 3541 650		Discription Drawing made by :	date 19-04-04 sign. HvD
dutchi.motors@dutchi.nl www.dutchi.com			

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Specification **IEC 60034-1**  
 Manufacturer **Dutchi Motors B.V.**  
 Motor type **DM1- 160 L2**  
 Rated power **18,50** kW **S1** duty  
 Speed **2935** r.p.m  
 Voltage **400** / **690** V  
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Feature **Cast-iron motor**  
 Weight **134** kg  
 Catalog no. **11032A18D**  
 Warranty **12~18 months**

Efficiency class **EFF 2**  
 Load data 100% 75% 50% 25%  
 Efficiency **90,4 91,0 90,1 85,1** %  
 Power factor **0,90 0,90 0,84 0,63**

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 DOL Starting current vs FL current **7,30**  
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Bearing DE **6309 - ZZ C3**  
 Bearing NDE **6309 - ZZ C3**


WI	Change	date	sign.
<b>Dutchi Motors B.V.</b> P.O. Box 5390 NL-6802 EJ ARNHEM Tel : +31-(0)26 - 3541 600 Fax : +31-(0)26 - 3541 650		Discription Drawing made by :	date 19-04-04 sign. HvD
		<b>dutchi.motors@dutchi.nl</b> <b>www.dutchi.com</b>	