UNICASE™ SPEED REDUCERS

HELICAL IN-LINE
- Foot or Flange Mount
- Torque up to 205,000 lb-in
- Gear ratios – 1.82:1 to over 300,000:1

NORD Bloc™, HELICAL IN-LINE
- Foot or Flange Mount
- Torque up to 26,550 lb-in
- Gear ratios – 1.88:1 to over 370:1

PARALLEL HELICAL CLINCHER™
- Shaft, Flange or Foot Mount
- Torque up to 797,000 lb-in
- Gear ratios – 4.26:1 to over 300,000:1

SCP SCREW CONVEYOR PACKAGE
- Shaft, or Flange Mount
- Torque up to 53,100 lb-in
- Gear ratios – 4.32:1 to over 1500:1

RIGHT ANGLE HELICAL-BEVEL 2-STAGE
- Foot, Flange or Shaft Mount
- Torque up to 5,840 lb-in
- Gear ratios – 4.1:1 to 72:1

RIGHT ANGLE HELICAL-WORM
- Foot, Flange or Shaft Mount
- Torque up to 27,585 lb-in
- Gear ratios – 4.40:1 to over 300,000:1

HIGH PERFORMANCE MOTORS & BRAKEMOTORS

INVERTER/VECTOR DUTY
- Standard or Energy Efficient
- Integral, NEMA or Metric IEC
- 1/6 to 250 hp

FLEXBLOC™ WORM DRIVES

MINICASE® RIGHT ANGLE WORM
- Foot, Flange or Shaft Mount
- Torque up to 3,540 lb-in
- Gear ratios – 5:1 to 500:1

FLEXBLOC™ WORM
- Modular bolt-on options
- Torque up to 4,683 lb-in
- Gear ratios – 5:1 to 3,000:1

MAXXDRIVE™ LARGE INDUSTRIAL GEARS UNITS PARALLEL HELICAL
- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1

MAXXDRIVE™ LARGE INDUSTRIAL GEARS UNITS HELICAL-BEVEL
- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1

NORDAC AC VECTOR DRIVES

SK200E FAMILY
- Decentralized, high performance
- 380-480V, 3phase, to 10 hp
- 200-240V, 3phase, to 5 hp
- 200-240V, 1phase, to 1.5 hp
- 100-120V, 1phase, to 1 hp

SK500E FAMILY
- Compact, high performance
- 380-480V, 3phase, to 50hp
- 200-240V, 3phase, to 15hp
- 200-240V, 1phase, to 3hp
- 110-120V, 1phase, to 1.5hp

INTEGRAL DRIVESYSTEMS
FLEXBLOC™ & MINICASE® Speed Reducers

FLEXBLOC™ and MINICASE® Worm Gears

NORD modular worm gear products cover 5 industry standard center distances from 31 mm-75 mm (1.2 in-3.0 in) and range in torque capacity up to 3,779 lb-in. This product offering comes in a variety of standard, single worm, and compound worm ratios ranging from 5:1 to 10,000:1. The product family consists of the FLEXBLOC™ (SI Series) worm with universal gear housing and the MINICASE® (SMI Series) worm characterized by its smooth outer surface design and its separate footed and flanged gear housing. Exceptional modularity is guaranteed by offering a unified set of factory-stocked and easy-to-assemble accessory kits. This flexibility allows for a variety of input and output mounting options along with a large variety of output shaft options. The FLEXBLOC™ and MINICASE® worm gear products share many innovative design features.

FLEXBLOC™ Key Features:
• Factory-stocked worm-modules & accessory kits
• Universal foot and flange-mount housings
• Keyed hollow-bore units with solid shaft kits
• Adaptable to any mounting position (universal oil fill)
• Easy to assemble accessories
• NEMA, IEC, or solid shaft input as standard
• Accommodates stocked C-Face motors or brakemotors

MINICASE® Key Features:
• Factory-assembled from stocked parts
• Separate smooth-bodied foot & flange-mount housings
• Keyed hollow-bore or one-piece solid shaft as standard
• Specific bores accommodate plug-in shafts
• Easy to assemble accessories
• NEMA, IEC, or solid shaft input
• Supplied as an integral motor or brakemotor (C-Face motorized options possible)

MINICASE® Worm Dimensions

NEMA C-FACE DIMENSIONS

INTEGRAL GEARMOTOR DIMENSIONS

GEARBOX & SHAFT DIMENSIONS

METER Shaft available
### FLEXBLOC™ Worm Dimensions

#### Product Features

**Worm Pinion Gear**  
Surfaced hardened alloy steel gears with an optimized tooth form maximize gear contact and provide long service life.

**Worm Gear**  
Fine-grained bronze alloy minimizes wear providing maximum strength and durability.

**Dual Pinion Shaft Bearings**  
Two bearing supports maintain accurate gear and shaft alignment, isolate and protect motor bearings, and provide smooth/quite operation.

**Alluminum Alloy Housing**  
Light weight, high strength, optimal heat dissipation and natural corrosion resistance.

**Output Bearings**  
Oversized bearings provide high radial and axial load capacities and long service life.

**Oil Seals**  
Double-lip oil seals provide extra sealing and protection against the elements.

---

### DIMENSIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>O</th>
<th>QA</th>
<th>U</th>
<th>UN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK 1SI 31</td>
<td>3.15</td>
<td>2.48</td>
<td>1.57</td>
<td>2.13</td>
<td>1.73</td>
<td>3.82</td>
<td>3.82</td>
<td>0.625</td>
<td>0.625</td>
<td></td>
</tr>
<tr>
<td>SK 1SI 40</td>
<td>3.94</td>
<td>3.07</td>
<td>1.97</td>
<td>2.76</td>
<td>2.36</td>
<td>4.78</td>
<td>4.69</td>
<td>0.750</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>SK 1SI 50</td>
<td>4.72</td>
<td>3.65</td>
<td>2.36</td>
<td>3.15</td>
<td>2.76</td>
<td>5.67</td>
<td>5.16</td>
<td>1.000</td>
<td>1.125</td>
<td></td>
</tr>
<tr>
<td>SK 1SI 63</td>
<td>5.67</td>
<td>4.41</td>
<td>2.83</td>
<td>3.94</td>
<td>3.35</td>
<td>6.85</td>
<td>6.22</td>
<td>1.125</td>
<td>1.4375</td>
<td></td>
</tr>
<tr>
<td>SK 1SI 75</td>
<td>6.77</td>
<td>5.12</td>
<td>3.39</td>
<td>4.72</td>
<td>3.54</td>
<td>8.08</td>
<td>7.87</td>
<td>1.375</td>
<td>1.9375</td>
<td></td>
</tr>
</tbody>
</table>

**Metric Shaft available**

### NEMA C-FACE DIMENSIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>O</th>
<th>QA</th>
<th>U</th>
<th>UN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK 1SI 31</td>
<td>7.57</td>
<td>9.78</td>
<td>8.44</td>
<td>10.72</td>
<td>9.46</td>
<td>11.98</td>
<td>9.46</td>
<td>11.98</td>
<td>11.00</td>
<td>13.95</td>
</tr>
<tr>
<td>SK 1SI 40</td>
<td>7.57</td>
<td>9.78</td>
<td>8.44</td>
<td>10.72</td>
<td>9.46</td>
<td>11.98</td>
<td>9.46</td>
<td>11.98</td>
<td>11.00</td>
<td>13.95</td>
</tr>
<tr>
<td>SK 1SI 50</td>
<td>7.57</td>
<td>9.78</td>
<td>8.44</td>
<td>10.72</td>
<td>9.46</td>
<td>11.98</td>
<td>9.46</td>
<td>11.98</td>
<td>11.00</td>
<td>13.95</td>
</tr>
<tr>
<td>SK 1SI 63</td>
<td>7.57</td>
<td>9.78</td>
<td>8.44</td>
<td>10.72</td>
<td>9.46</td>
<td>11.98</td>
<td>9.46</td>
<td>11.98</td>
<td>11.00</td>
<td>13.95</td>
</tr>
<tr>
<td>SK 1SI 75</td>
<td>7.57</td>
<td>9.78</td>
<td>8.44</td>
<td>10.72</td>
<td>9.46</td>
<td>11.98</td>
<td>9.46</td>
<td>11.98</td>
<td>11.00</td>
<td>13.95</td>
</tr>
</tbody>
</table>

**NEMA C-FACE GEARMOTOR DIMENSIONS**

### Advantages of the NORD Compact Coupled Unit

- Easy to assemble and disassemble.
- Eliminates fretting corrosion common to quill-mount inputs.
- Maintains shaft alignment and provides vibration-free torque transfer.
- Protects and isolates motor shaft and reducer shaft bearings.
- Provides a stiff, high-strength, near-zero backlash connection.
- Reduces the chance of bearing, shaft and key failures.
Innovative Design Features

**UNICASE® One Piece Housing**
NORD heavy-duty, one-piece housings are precisely machined to exacting standards. Internal reinforcements further increase strength and rigidity. All bearings and seal seats are contained within the casting, eliminating splits or bolt-on carriers that can weaken the housing and allow oil leakage. Bores and mounting faces are machined in one step, producing extremely precise tolerances — thus ensuring accurate positioning of gear teeth, bearings and seals, and longer life for all components.

- Increased torsional strength and rigidity.
- Eliminates housing splits and bolt-on carriers.
- Leak-free housing design.
- Versatile mounting options and accessory kits.

**Modular Construction**
- Easy-to-configure input and output accessories.
- Integral motor or motorized c-face units.
- NEMA, IEC or solid shaft input options.
- Footed, flanged or shaft-mount.
- 10:1 helical pre-stage & compound assemblies.
- Keyed hollow bore, solid shaft, and bushing-kit options.

Factory Oil Filled
NORD factory-filled gear units allow for easy commissioning of the gear unit and prevent damage caused by dry start-ups. Each unit is filled with a quality gear lubricant that is recognized by the industry.
- Maintenance free / lubricated-for-life.
- High-quality long-life synthetic lubricant.
- USDA H1 lubrication readily available.
- Optional venting capabilities.

Motor Specifications
Inverter duty • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase 1.15 Service Factor • Continuous Duty • 40°C Ambient up to 3300ft Elevation • Class B temperature rise
Class F insulation

### 230/460V or 200-208V or 575V – 60Hz

<table>
<thead>
<tr>
<th>Power (hp)</th>
<th>Speed (rpm)</th>
<th>Motor Type (Frame)</th>
<th>Integral</th>
<th>NEMA C-Face</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.16</td>
<td>1700</td>
<td>63 S/4</td>
<td>63 S/4-56C</td>
<td></td>
</tr>
<tr>
<td>0.25</td>
<td>1680</td>
<td>63 L/4</td>
<td>63 L/4-56C</td>
<td></td>
</tr>
<tr>
<td>0.33</td>
<td>1710</td>
<td>71 S/4</td>
<td>71 S/4-56C</td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td>1720</td>
<td>71 L/4</td>
<td>71 L/4-56C</td>
<td></td>
</tr>
<tr>
<td>0.75</td>
<td>1710</td>
<td>80 S/4</td>
<td>80 S/4-56C</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>1650</td>
<td>80 L/4</td>
<td>80 L/4-56C</td>
<td></td>
</tr>
</tbody>
</table>

### 230/460V+ or 575V – 60Hz | Energy Efficient (EPAct)

<table>
<thead>
<tr>
<th>Power (hp)</th>
<th>Speed (rpm)</th>
<th>Motor Type (Frame)</th>
<th>Integral</th>
<th>NEMA C-Face</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>1750</td>
<td>80 LH/4</td>
<td>80 LH/4-145TC</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>1740</td>
<td>90 S/4</td>
<td>90 S/4-145TC</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>1745</td>
<td>90 LH/4</td>
<td>90 LH/4-145TC</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>1765</td>
<td>*</td>
<td>100 LH/4-182TC</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>1770</td>
<td>*</td>
<td>112 LH/4-184TC</td>
<td></td>
</tr>
</tbody>
</table>

* Consider a gear unit with NEMA C-face input
+ 208-230/460V Rating Possible

### 230/460V+ or 575V – 60Hz | Premium Efficient (EISA)

<table>
<thead>
<tr>
<th>Power (hp)</th>
<th>Speed (rpm)</th>
<th>Motor Type (Frame)</th>
<th>Integral</th>
<th>NEMA C-Face</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>1750</td>
<td>80 LP/4</td>
<td>80 LP/4-56C</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>1740</td>
<td>90 SP/4</td>
<td>90 SP/4-145TC</td>
<td></td>
</tr>
<tr>
<td>2.0</td>
<td>1745</td>
<td>90 LP/4</td>
<td>90 LP/4-145TC</td>
<td></td>
</tr>
<tr>
<td>3.0</td>
<td>1765</td>
<td>*</td>
<td>100 LP/4-182TC</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>1770</td>
<td>*</td>
<td>112 MP/4-184TC</td>
<td></td>
</tr>
</tbody>
</table>

* Consider a gear unit with NEMA C-face input
+ 208-230/460V Rating Possible

Motor Ratings

Blower Fan Option

Brakemotor with Fan

Encoder Option
### Gearbox Ratings

**Standard Worm Ratios**

- 5:1 - 100:1 single worm ratios.
- Up to 1000:1 with a 10:1 helical pre-stage option.
- Compound Unit ratios up to 10,000:1

<table>
<thead>
<tr>
<th>Type</th>
<th>Ratio</th>
<th>Output RPM</th>
<th>Torque [lb-in]</th>
<th>Max Input HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK 1SI 31</td>
<td>5</td>
<td>350</td>
<td>336</td>
<td>2.10</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
<td>233</td>
<td>239</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>175</td>
<td>230</td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td>12.5</td>
<td>140</td>
<td>212</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>117</td>
<td>257</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>94</td>
<td>239</td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>70</td>
<td>221</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>58</td>
<td>266</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>43</td>
<td>248</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>35</td>
<td>230</td>
<td>0.27</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>29</td>
<td>212</td>
<td>0.23</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>22</td>
<td>165</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>18</td>
<td>186</td>
<td>0.17</td>
</tr>
</tbody>
</table>

### Sealed Surface Conversion

The NEW NSD™ Sealed Surface Conversion System offers a cost effective weight saving alternative to stainless steel reducers. Through a revolutionary process the reducer housing and its components are electrically catalyzed resulting in a surface conversion at the molecular level. NSD™ provides exceptional chemical, corrosion and abrasion resistance. The converted surface also becomes extremely scratch resistant as it becomes 6-7 times harder than the original aluminum alloy.

The NSD™ package includes stainless steel reducer hardware and c-face gasket for the motor. Options include stainless steel reducer shafting, smooth-bodied stainless steel c-face motors, and food grade lubricants. NSD™ is the ideal package for many harsh environments involving chemicals or wash-downs and areas where sanitation and cleanliness are the highest priority.

### Available FLEXBLOC™ / MINICASE® worm Units with NSD™ Conversion

<table>
<thead>
<tr>
<th>SK1SI31</th>
<th>SK1SI40</th>
<th>SK1S1M10</th>
<th>SK1S1M10</th>
<th>SK1SI50 / SK1S1M50</th>
<th>SK1SI63 / SK1S1M63</th>
</tr>
</thead>
<tbody>
<tr>
<td>N48C Input</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>N56C Input</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>N140TC Input</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

### System Package

- Standard electrically catalyzed reducer housing and accessories
- Standard stainless steel hardware
- Standard C-Face gasket included
- housings surfaces are self draining
- Food grade H1 synthetic lubrication (optional)
- Stainless steel output shafting (optional)
- Stainless steel C-Face invertor duty motor up to 10HP (optional)
- 3 Year warranty when supplied with synthetic lube

---

![Image of Sealed Surface Conversion System](image-url)
NEMA C-FACE COUPLING ADAPTER
For attaching standard motors
Kit contains:
• Adapter flange
• Coupling
• Nuts and bolts

2ND REDUCTION
Helical 10:1 gear set
Fits all size gearboxes
Lifetime synthetic lubricant
Sealed unit
Kit contains:
• Pre-assembled unit
• Bolts

SOLID INPUT SHAFT
Fits all size gearboxes
Lifetime lubricant
Sealed unit
Kit contains:
• Pre-assembled unit
• Bolts

DOUBLE WORM ADAPTER
Mounts the SK1SI/SM31 to the input of the larger SK1SI/SM40 - SK1SI/SM75 to produce a high reduction double worm gear unit
Kit contains:
• Adapter flange
• Coupling
• Shaft
• Keys
• Bolts

NORD C-FACE MOTORS & BRAKEMOTORS
3 phase, 230/460, 60 Hertz
3 phase, 575V, 60 Hertz
Options:
• Power off brake
• Numerous brake options
• Thermistor temperature sensors
• Thermocouple temperature sensors
• Blower fan
• Encoders
• Space heater
• Conopy drip covers
• Encapsulated windings
• End bell drain holes

SOLID OUTPUT SHAFT
Inch dimensions with standard keys
Plug into standard hollow shaft
Install on either side
Kit contains:
• Shaft
• Options:
  • Double solid shaft
  • Keys
  • External snap ring

B5 OUTPUT FLANGE
Multiple flanges available for each size gearbox. Flange pilots are centered in seal bore.
Kit contains:
• Die cast flange
• Bolts

SHAFT PROTECTION COVER
Seals shaft end. Safety protection from rotating shafts.
Kit contains:
• Cover
• Bolts

FOOT PLATE
Mounts to the bottom of the FLEXBLOC™ to provide drop-in compatibility with many worm gear reducers.
Kit contains:
• Foot plate
• Bolts

TORQUE REACTION ARM
For shaft mounting
Rubber shock absorber installed in attachment end.
Kit contains:
• Torque arm
• Bolts

SHAFT BUSHING
Hollow shaft bushes for increased bore flexibility.
Kit contains:
• Bushings with set screw
• Key

FIXING KIT
Optional mounting device that engages the customer solid shaft tap and draws the end of the shaft into contact with the hollow bore snap ring.
Kit contains:
• Carbon Steel retaining washer and bolt
• Spring loaded steel snap ring
• Plastic cover
**FLEXBLOC™ & MINICASE®**
Flexible Solutions & Bolt-On Modules

### NEMA C-FACE COUPLING ADAPTER
For attaching standard motors

**Kit contains:**
- Adapter flange
- Coupling
- Nuts and bolts

### SOLID INPUT SHAFT
Fits all size gearboxes
Lifetime synthetic lubricant
Sealed unit

**Kit contains:**
- Pre-assembled unit
- Bolts

### SOLID OUTPUT SHAFT
Inch dimensions with standard keys
Plug into standard hollow shaft
Install on either side

**Kit contains:**
- Shaft
- Keys
- External snap ring

### 2ND REDUCTION
Helical 10:1 gear set
Fits all size gearboxes
Lifetime synthetic lubricant
Sealed unit

**Kit contains:**
- Pre-assembled unit
- Bolts

### DOUBLE WORM ADAPTER
Mounts the SK1S/SI/SMI31 to the input of the larger SK1S/SI/SMI40 - SK1S/SI/SMI75 to produce a high reduction double worm gear unit

**Kit contains:**
- Adapter flange
- Coupling
- Shaft
- Keys
- Bolts

### NORD C-FACE MOTORS & BRAKEMOTORS
3 phase, 230/460, 60 Hertz
3 phase, 575V, 60 Hertz

**Options:**
- Power off brake
- Numerous brake options
- Thermistor temperature sensors
- Thermostat temperature sensors
- Blower fan
- Encoders
- Space heater
- Conopy drip covers
- Encapsulated windings
- End bell drain holes

### B5 OUTPUT FLANGE
Multiple flanges available for each size gearbox. Flange pilots are centered in seal bore.

**Kit contains:**
- Die cast flange
- Bolts

### SHAFT PROTECTION COVER
Seals shaft end Safety protection from rotating shafts.

**Kit contains:**
- Cover
- Bolts

### FOOT PLATE
Mounts to the bottom of the FLEXBLOC™ to provide drop-in compatibility with many worm gear reducers.

**Kit contains:**
- Foot plate
- Bolts

### TORQUE REACTION ARM
For shaft mounting
Rubber shock absorber installed in attachment end.

**Kit contains:**
- Torque arm
- Bolts

### SHAFT BUSHING
Hollow shaft bushing for increased bore flexibility.

**Kit contains:**
- Bushings with set screw
- Key

### FIXING KIT
Optional mounting device that engages the customer solid shaft tap and draws the end of the shaft into contact with the hollow bore snap ring.

**Kit contains:**
- Carbon Steel retaining washer and bolt
- Spring loaded steel snap ring
- Plastic cover
### Gearbox Ratings

<table>
<thead>
<tr>
<th>Type</th>
<th>Ratio</th>
<th>Output RPM</th>
<th>Torque [lb-in]</th>
<th>Max Input HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK 1SI 31</td>
<td>5</td>
<td>350</td>
<td>336</td>
<td>2.10</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>7.5</td>
<td>233</td>
<td>239</td>
<td>1.06</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>10</td>
<td>175</td>
<td>230</td>
<td>0.80</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>12.5</td>
<td>140</td>
<td>212</td>
<td>0.61</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>15</td>
<td>117</td>
<td>257</td>
<td>0.66</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>20</td>
<td>88</td>
<td>239</td>
<td>0.49</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>25</td>
<td>63</td>
<td>221</td>
<td>0.38</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>30</td>
<td>58</td>
<td>266</td>
<td>0.44</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>40</td>
<td>43</td>
<td>248</td>
<td>0.24</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>50</td>
<td>35</td>
<td>230</td>
<td>0.27</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>60</td>
<td>29</td>
<td>212</td>
<td>0.23</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>80</td>
<td>22</td>
<td>165</td>
<td>0.18</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>100</td>
<td>18</td>
<td>185</td>
<td>0.17</td>
</tr>
</tbody>
</table>

### Sealed Surface Conversion

The NEW NSD™ Sealed Surface Conversion System offers a cost effective weight saving alternative to stainless steel reducers. Through a revolutionary process the reducer housing and its components are electrolytically catalyzed resulting in a surface conversion at the molecular level. NSD™ provides exceptional chemical, corrosion and abrasion resistance. The converted surface also becomes extremely scratch resistant as it becomes 6-7 times harder than the original aluminum alloy.

The NSD™ package includes stainless steel reducer hardware and c-face gasket for the motor. Options include stainless steel reducer shafting, smooth-bodied stainless steel c-face motors, and food grade lubricants. NSD™ is the ideal package for many harsh environments involving chemicals or wash-downs and areas where sanitation and cleanliness are the highest priority.

### Available FLEXBLOC™ / MINICASE™ worm Units with NSD™ Conversion

- N48C Input
- N56C Input
- N140TC Input

### System Package

- Standard electrically catalyzed reducer housing and accessories
- Standard stainless steel hardware
- Standard C-Face gasket included
- Housings surfaces are self draining
- Food grade H1 synthetic lubrication (optional)
- Stainless steel output shafting (optional)
- Stainless steel C-Face inverter duty motor up to 10HP (optional)
- 3 Year warranty when supplied with synthetic lube

Some of the Many Benefits of NSD™

- Cost effective alternate to stainless steel
- Corrosion resistance
- Chip resistance
- Non-propagating from scratches or other blemishes
- Highly cleanable low friction surface
- Non-porous
- Lighter than stainless
- Chemical resistant
- Elimination of galvanic corrosion
- Surface conversion is 1000X harder than paint
UNICASE® One Piece Housing
NORD heavy-duty, one-piece housings are precisely machined to exacting standards. Internal reinforcements further increase strength and rigidity. All bearings and seal seats are contained within the casting, eliminating splits or bolt-on carriers that can weaken the housing and allow oil leakage. Bores and mounting faces are machined in one step, producing extremely precise tolerances — thus ensuring accurate positioning of gear teeth, bearings and seals, and longer life for all components.

- Increased torsional strength and rigidity.
- Eliminates housing splits and bolt-on carriers.
- Leak-free housing design.
- Versatile mounting options and accessory kits.

Factory Oil Filled
NORD factory-filled gear units allow for easy commissioning of the gear unit and prevent damage caused by dry start-ups. Each unit is filled with a quality gear lubricant that is recognized by the industry.

- Maintenance-free / lubricated-for-life.
- High-quality long-life synthetic lubricant.
- USDA H1 lubrication readily available.
- Optional venting capabilities.

Motor Specifications
Inverter duty • TEFC
Synchronous speed 1800rpm @ 60Hz • 4-pole • Three-phase
1.15 Service Factor • Continuous Duty • 40°F Ambient
up to 3300ft Elevation • Class B temperature rise
Class F insulation

Motor Ratings

<table>
<thead>
<tr>
<th>Power [hp]</th>
<th>Speed [rpm]</th>
<th>Motor Type (Frame)</th>
<th>Integral</th>
<th>NEMA C-Face</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.16</td>
<td>1700</td>
<td>63 S/4</td>
<td>63 S/4-56C</td>
<td></td>
</tr>
<tr>
<td>0.25</td>
<td>1680</td>
<td>63 L/4</td>
<td>63 L/4-56C</td>
<td></td>
</tr>
<tr>
<td>0.33</td>
<td>1710</td>
<td>71 S/4</td>
<td>71 S/4-56C</td>
<td></td>
</tr>
<tr>
<td>0.5</td>
<td>1720</td>
<td>71 L/4</td>
<td>71 L/4-56C</td>
<td></td>
</tr>
<tr>
<td>0.75</td>
<td>1710</td>
<td>80 S/4</td>
<td>80 S/4-56C</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1650</td>
<td>80 L/4</td>
<td>80 L/4-56C</td>
<td></td>
</tr>
</tbody>
</table>

230/460V+ or 575V – 60Hz (Energy Efficient (EPAct))

<table>
<thead>
<tr>
<th>Power [hp]</th>
<th>Speed [rpm]</th>
<th>Motor Type (Frame)</th>
<th>Integral</th>
<th>NEMA C-Face</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1750</td>
<td>80 LH4</td>
<td>80 LH4-56C</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1750</td>
<td>80 LH4</td>
<td>80 LH4-145TC</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>1740</td>
<td>90 LH4</td>
<td>90 LH4-145TC</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1745</td>
<td>90 LH4</td>
<td>90 LH4-145TC</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2200</td>
<td>*</td>
<td>100 LH4-182TC</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>3200</td>
<td>*</td>
<td>112 LH4-184TC</td>
<td></td>
</tr>
</tbody>
</table>

* Consider a gear unit with NEMA C-face input
+ 208-230/460V Rating Possible

230/460V+ or 575V – 60Hz (Premium Efficient (EISA))

<table>
<thead>
<tr>
<th>Power [hp]</th>
<th>Speed [rpm]</th>
<th>Motor Type (Frame)</th>
<th>Integral</th>
<th>NEMA C-Face</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1750</td>
<td>80 LP4</td>
<td>80 LP4-56C</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1750</td>
<td>80 LP4</td>
<td>80 LP4-145TC</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>1740</td>
<td>90 LP4</td>
<td>90 LP4-145TC</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1745</td>
<td>90 LP4</td>
<td>90 LP4-145TC</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>2200</td>
<td>*</td>
<td>100 LP4-182TC</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>3200</td>
<td>*</td>
<td>112 MP4-184TC</td>
<td></td>
</tr>
</tbody>
</table>

* Consider a gear unit with NEMA C-face input
+ 208-230/460V Rating Possible

blower fan option
brakemotor with fan
encoder option
**Worm Dimensions**

**NEMA C-FACE DIMENSIONS**

<table>
<thead>
<tr>
<th>SK 1SI 31</th>
<th>48C Available</th>
<th>CC Available</th>
<th>56C Available</th>
<th>CC Available</th>
<th>140TC Available</th>
<th>CC Available</th>
<th>180TC Available</th>
<th>CC Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>1.50</td>
<td>X</td>
<td>1.89</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SK 1SI 40</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>1.93</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SK 1SI 50</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>1.93</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SK 1SI 63</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>1.93</td>
<td>X</td>
<td>3.06</td>
<td>-</td>
</tr>
<tr>
<td>SK 1SI 75</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>1.61</td>
<td>X</td>
<td>1.61</td>
<td>2.16</td>
</tr>
</tbody>
</table>

**NEMA C-FACE GEAR MOTOR DIMENSIONS**

<table>
<thead>
<tr>
<th>56C-635L</th>
<th>56C-715L</th>
<th>56C-805L-LH-LP</th>
<th>140TC-80L-LH-LP</th>
<th>140TC-90L-LH-LP</th>
<th>180TC-100L-LH-LP</th>
<th>180TC-112LH-MMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>L BR</td>
<td>L</td>
<td>L BR</td>
<td>L</td>
<td>L BR</td>
<td>L BR</td>
</tr>
<tr>
<td>SK 1SI 31</td>
<td>7.57</td>
<td>9.78</td>
<td>8.44</td>
<td>10.72</td>
<td>9.46</td>
<td>11.98</td>
</tr>
<tr>
<td>SK 1SI 40</td>
<td>7.57</td>
<td>9.78</td>
<td>8.44</td>
<td>10.72</td>
<td>9.46</td>
<td>11.98</td>
</tr>
<tr>
<td>SK 1SI 50</td>
<td>7.57</td>
<td>9.78</td>
<td>8.44</td>
<td>10.72</td>
<td>9.46</td>
<td>11.98</td>
</tr>
<tr>
<td>SK 1SI 63</td>
<td>7.57</td>
<td>9.78</td>
<td>8.44</td>
<td>10.72</td>
<td>9.46</td>
<td>11.98</td>
</tr>
<tr>
<td>SK 1SI 75</td>
<td>-</td>
<td>-</td>
<td>8.44</td>
<td>10.72</td>
<td>9.46</td>
<td>11.98</td>
</tr>
</tbody>
</table>

**Advantages of the NORD Compact Coupled Unit**

- Easy to assemble and disassemble.
- Eliminates fretting corrosion common to quill-mount inputs.
- Maintains shaft alignment and provides vibration-free torque transfer.
- Protects and isolates motor shaft and reducer shaft bearings.
- Provides a stiff, high-strength, near-zero backlash connection.
- Reduces the chance of bearing, shaft and key failures.

**Product Features**

- **Dual Pinion Shaft Bearings**
  - Two bearing supports maintain accurate gear and shaft alignment, isolate and protect motor bearings, and provide smooth/quite operation.

- **Worm Pinion Gear**
  - Surfaced hardened alloy steel gears with an optimized tooth form maximize gear contact and provide long service life.

- **Alluminum Alloy Housing**
  - Light weight, high strength, optimal heat dissipation and natural corrosion resistance.

- **Output Shaft**
  - Hollow bore and single-sided or double-sided shafted models are also available.

- **Motor Coupling**
  - Guarantees accurate motor shaft alignment, minimizes fretting and provides a low backlash/high strength connection.

- **Output Bearings**
  - Oversized bearings provide high radial and axial load capacities and long service life.

- **Oil Seals**
  - Double-lip oil seals provide extra sealing and protection against the elements.
NORD modular worm gear products cover 5 industry standard center distances from 31 mm-75 mm (1.2 in-3.0 in) and range in torque capacity up to 3,779 lb-in. This product offering comes in a variety of standard, single worm, and compound worm ratios ranging from 5:1 to 10,000:1. The product family consists of the FLEXBLOC™ (SI Series) worm with universal gear housing and the MINICASE® (SMI Series) worm characterized by its smooth outer surface design and its separate footed and flanged gear housing. Exceptional modularity is guaranteed by offering a unified set of factory-stocked and easy-to-assemble accessory kits. This flexibility allows for a variety of input and output mounting options along with a large variety of output shaft options. The FLEXBLOC™ and MINICASE® worm gear products share many innovative design features.

**FLEXBLOC™ Key Features:**
- Factory-stocked worm-modules & accessory kits
- Universal foot and flange-mount housings
- Keyed hollow-bore units with solid shaft kits
- Adaptable to any mounting position (universal oil fill)
- Easy to assemble accessories
- NEMA, IEC, or solid shaft input as standard
- Accommodates stocked C-Face motors or brakemotors

**MINICASE® Key Features:**
- Factory-assembled from stocked parts
- Separate smooth boded foot & flange-mount housings
- Keyed hollow-bore or one-piece solid shaft as standard
- Specific bores accommodate plug-in shafts
- Easy to assemble accessories
- NEMA, IEC, or solid shaft input
- Supplied as an integral motor or brakemotor (C-Face motorized options possible)
UNICASE™ SPEED REDUCERS

HELICAL IN-LINE
- Foot or Flange Mount
- Torque up to 205,000 lb-in
- Gear ratios – 1:82:1 to over 300,000:1

NORD®1 HELICAL IN-LINE
- Foot or Flange Mount
- Torque up to 26,550 lb-in
- Gear ratios – 1:88:1 to over 370:1

PARALLEL HELICAL CLINCHER™
- Shaft, Flange or Foot Mount
- Torque up to 797,000 lb-in
- Gear ratios – 4:26:1 to over 300,000:1

SCP SCREW CONVEYOR PACKAGE
- Shaft, or Flange Mount
- Torque up to 53,100 lb-in
- Gear ratios – 4:32:1 to over 1500:1

RIGHT ANGLE
HELICAL-BEVEL 2-STAGE
- Foot, Flange or Shaft Mount
- Torque up to 5,840 lb-in
- Gear ratios – 4:11:1 to 72:1

RIGHT ANGLE HELICAL-BEVEL
- Foot, Flange or Shaft Mount
- Torque up to 283,000 lb-in
- Gear ratios – 8:04:1 to over 300,000:1

RIGHT ANGLE HELICAL-WORM
- Foot, Flange or Shaft Mount
- Torque up to 27,585 lb-in
- Gear ratios – 4:40:1 to over 300,000:1

HIGH PERFORMANCE MOTORS & BRAKEMOTORS

INVERTER/VECTOR DUTY
- Standard or Energy Efficient
- Integral, NEMA or Metric IEC
- 1/6 to 250 hp

FLEXBLOC™ WORM
- Modular bolt-on options
- Torque up to 3,540 lb-in
- Gear ratios – 5:1 to 3000:1

MAXXDRIVE™ LARGE INDUSTRIAL GEAR UNITS PARALLEL HELICAL
- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1

MAXXDRIVE™ LARGE INDUSTRIAL GEAR UNITS HELICAL-BEVEL
- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1

NORDAC AC VECTOR DRIVES

SK200E FAMILY
- Decentralized, high performance
- 380-480V, 3-phase to 10 hp
- 200-240V, 3-phase to 5 hp
- 200-240V, 1-phase to 1.5 hp
- 100-120V, 1-phase to 1 hp

SK500E FAMILY
- Compact, high performance
- 380-480V, 3-phase, to 50hp
- 200-240V, 3-phase, to 15hp
- 200-240V, 1-phase, to 3hp
- 110-120V, 1-phase, to 1.5hp

MINICASE® RIGHT ANGLE WORM
- Foot, Flange or Shaft Mount
- Torque up to 3,540 lb-in
- Gear ratios – 5:1 to 3000:1

FLEXBLOC™ WORM
- Modular bolt-on options
- Torque up to 4,683 lb-in
- Gear ratios – 5:1 to 3,000:1

MAXXDRIVE™ LARGE INDUSTRIAL GEAR UNITS PARALLEL HELICAL
- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1

MAXXDRIVE™ LARGE INDUSTRIAL GEAR UNITS HELICAL-BEVEL
- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1

HIGH PERFORMANCE MOTORS & BRAKEMOTORS

INVERTER/VECTOR DUTY
- Standard or Energy Efficient
- Integral, NEMA or Metric IEC
- 1/6 to 250 hp

MINICASE® RIGHT ANGLE WORM
- Foot, Flange or Shaft Mount
- Torque up to 3,540 lb-in
- Gear ratios – 5:1 to 3000:1

FLEXBLOC™ WORM
- Modular bolt-on options
- Torque up to 4,683 lb-in
- Gear ratios – 5:1 to 3,000:1

MAXXDRIVE™ LARGE INDUSTRIAL GEAR UNITS PARALLEL HELICAL
- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1

MAXXDRIVE™ LARGE INDUSTRIAL GEAR UNITS HELICAL-BEVEL
- Modular bolt-on options
- Torque up to 2,027,000 lb-in
- Gear ratios – 5:1 to 1,600:1

HIGH PERFORMANCE MOTORS & BRAKEMOTORS

INVERTER/VECTOR DUTY
- Standard or Energy Efficient
- Integral, NEMA or Metric IEC
- 1/6 to 250 hp

MINICASE® RIGHT ANGLE WORM
- Foot, Flange or Shaft Mount
- Torque up to 3,540 lb-in
- Gear ratios – 5:1 to 3000:1

FLEXBLOC™ WORM
- Modular bolt-on options
- Torque up to 4,683 lb-in
- Gear ratios – 5:1 to 3,000:1