

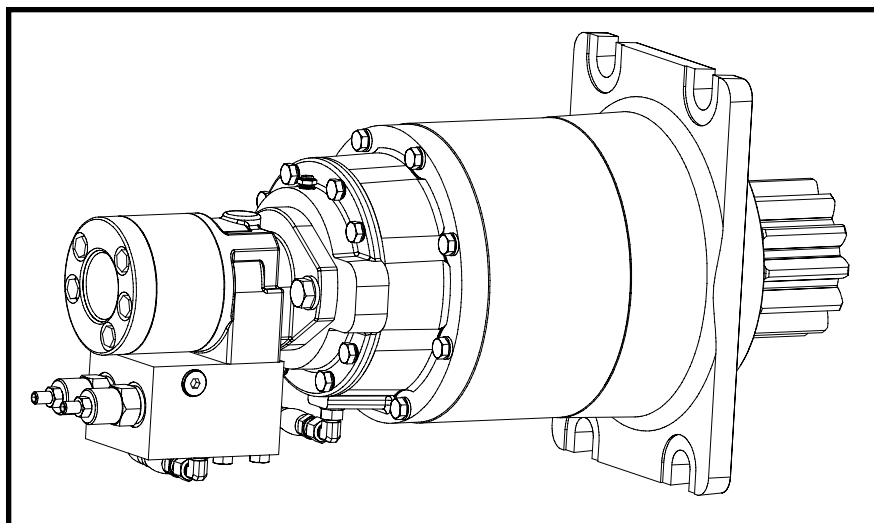
BRADEN

SD40B

MATERIAL LIST

Covering Serial Number
0668241

FOR MODEL #05645 ONLY



PACCAR WINCH DIVISION
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EXPLANATION OF MODEL NUMBER



- SD** DESIGNATES SWING DRIVE
- 40** DESIGNATES 40,000 INCH-POUND TORQUE RATING
- B** DESIGNATES THE MODEL SERIES RELATING TO DESIGN CHANGES

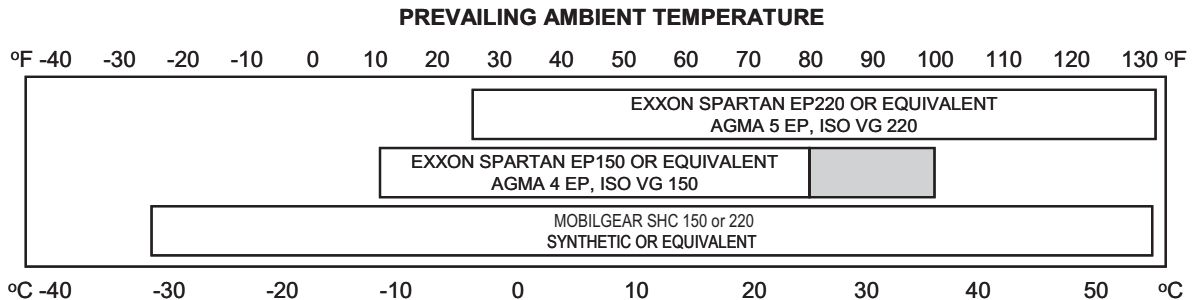
TO ORDER:

- (1) List model and serial numbers of the drive unit.
- (2) Refer to exploded view and select the component(s) needed and note item number.
- (3) Find item number on material list, show part number, description and quantity required on your order.
- (4) Refer to Parts List and show price for each component or assembly.

RECOMMENDED PLANETARY GEAR OIL

For simplicity, BRADEN has listed available products in each temperature range that have been tested and found to meet our specifications. This is not to say that other lubricant brands would not perform equally as well.

If the following lubricant brands are not available in your area, make certain your lubricant vendor supplies you with oil that is equivalent to those products listed below.

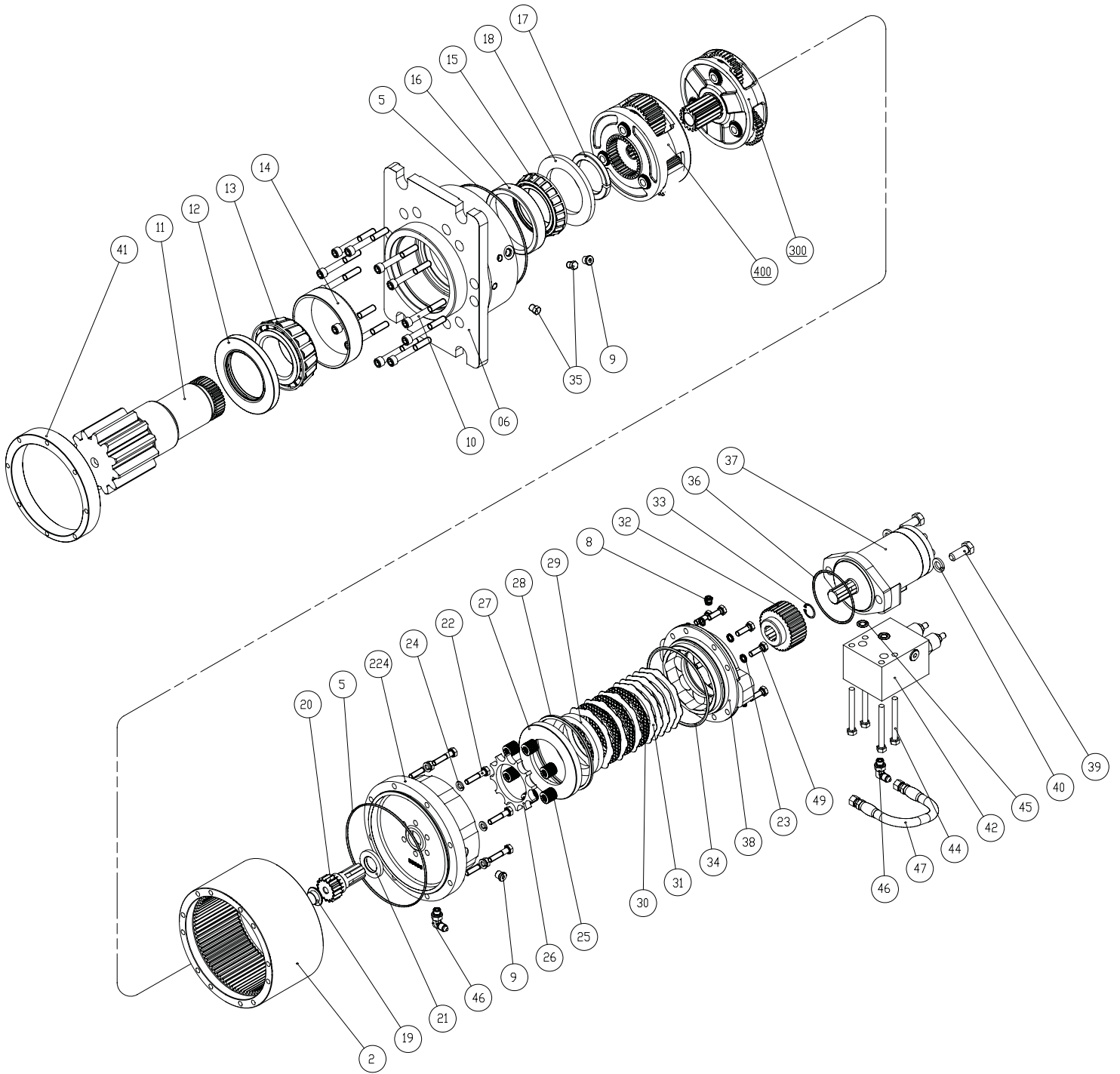


i **NOTE:** SHADED TEMPERATURE RANGE IN THE CHART ABOVE NOT RECOMMENDED FOR SEVERE APPLICATIONS SUCH AS: OFFSHORE CRANES, SUSTAINED FAST DUTY CYCLES OR FREQUENT LIFTING.

Texaco Meropa 150, previously used as factory fill, may no longer be widely available due to current market conditions. As of mid-year 2002, planetary hoists are factory filled with Exxon Spartan EP150, or equivalent. The chart below relates the Texaco products to 4 currently available oils. Consult your oil supplier for other equivalent oils if required.

| Texaco | Exxon | Mobil | Shell | Chevron |
|------------|----------------|---------------|-----------|-----------------------|
| Meropa 150 | Spartan EP 150 | Mobilgear 629 | Omala 150 | Gear Compounds EP 150 |
| Meropa 220 | Spartan EP 220 | Mobilgear 630 | Omala 220 | Gear Compounds EP 220 |

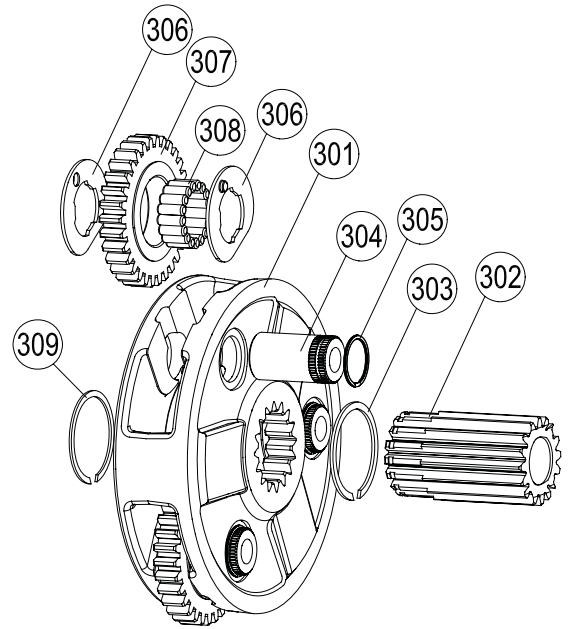
COMPONENT ASSEMBLY



| Item # | Description | Part # | QTY | Item# | Description | Part # | QTY |
|--------|----------------------------|--------|-----|-------|------------------------------|--------|-----|
| 001 | MANIFOLD * | 105192 | 1 | 029 | BRAKE PLATE SPACER | 103578 | 1 |
| 002 | GEAR, RING * | 105817 | 1 | 030 | FRICITION DISC | 25541 | 3 |
| 002 | CBV CARTRIDGE * | 106685 | 2 | 031 | BRAKE DISC | 102314 | 8 |
| 005 | O-RING | 28973 | 2 | 032 | BRAKE COUPLING | 29929 | 1 |
| 006 | BEARING CARRIER - SD40 | 103500 | 1 | 033 | SNAP RING | 27535 | 1 |
| 008 | RELIEF VALVE 7.5-15 PSI | 18062 | 1 | 034 | O-RING | 70138 | 1 |
| 009 | RETAINING RING, EXTERNAL * | 105823 | 1 | 035 | PLUG | 23379 | 3 |
| 009 | 16496-4 PLUG | 69325 | 2 | 036 | O-RING | 29677 | 1 |
| 010 | CAPSCREW * | 106324 | 12 | 037 | HYD MOTOR, CL "H" 4.5 CI * | 103524 | 1 |
| 011 | PINION, OUTPUT | 105795 | 1 | 038 | MOTOR ADAPTER | 103474 | 1 |
| 012 | LIP SEAL | 103519 | 1 | 039 | CAPSCREW * | 104174 | 2 |
| 013 | BEARING, TAPERED ROLLER * | 103505 | 1 | 040 | LOCKWASHER * | 11026 | 2 |
| 014 | BEARING, TAPERED ROLLER | 103506 | 1 | 041 | ECCENTRIC RING * | 106713 | 1 |
| 015 | BEARING CONE | 26384 | 1 | 042 | VALVE, BRAKE * | 106179 | 1 |
| 016 | BEARING CUP | 26383 | 1 | 044 | CAPSCREW * | 106032 | 4 |
| 017 | SPLIT RING | 105794 | 1 | 045 | O-RING | 12463 | 2 |
| 018 | RETAINER, SPLIT RING | 105796 | 1 | 046 | ELBOW FITTING | 25302 | 2 |
| 019 | PLUG, THRUST | 106325 | 1 | 047 | HOSE ASSY | 25936 | 1 |
| 020 | PRIMARY SUN GEAR 16T | 103523 | 1 | 048 | SHIPPING PLUG | 29965 | 2 |
| 021 | WASHER, THRUST | 106337 | 1 | 049 | CAPSCREW, METRIC * | 103494 | 8 |
| 022 | CAPSCREW * | 21466 | 8 | 200 | BRAKE SUB-ASSY* | 82969 | 1 |
| 023 | LOCKWASHER, METRIC M8 | 103495 | 8 | 224 | BRAKE HOUSING | 103482 | 1 |
| 024 | LOCKWASHER * | 11024 | 8 | 300 | PLANET CARRIER ASSY, PRIMARY | 83370 | 1 |
| 025 | SPRING | 26094 | 6 | 400 | PLANET CARRIER ASSY, OUTPUT | 83525 | 1 |
| 026 | SPRING LOCATOR | 100136 | 1 | 600 | BEARING CARRIER PARTS GROUP | 83365 | 1 |
| 027 | SPRING PLATE | 25552 | 1 | 700 | HYDRAULIC MOTOR GROUP (5.9) | 83417 | 1 |
| 028 | U-CUP SEAL | 25594 | 1 | | | | |

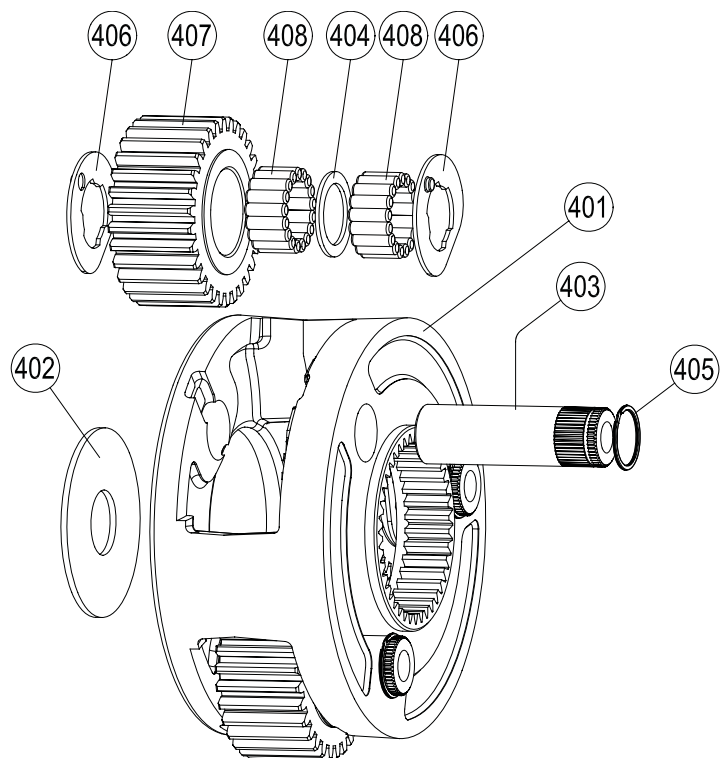
INPUT CARRIER ASSEMBLY

| Item # | Description | Part # | QTY |
|--------|------------------------------|--------|-----|
| 300 | PLANET CARRIER ASSY, PRIMARY | 83370 | 1 |
| 001 | CARRIER, PRIMARY PLANET * | 105811 | 1 |
| 003 | RETAINING RING, EXTERNAL * | 105806 | 1 |
| 004 | PIN, PRIMARY PLANET * | 105808 | 3 |
| 005 | RETAINING RING, EXTERNAL * | 105807 | 3 |
| 006 | WASHER, THRUST * | 105804 | 6 |
| 007 | GEAR, PRIMARY PLANET * | 105813 | 3 |
| 008 | BEARING, ROLLER * | 105810 | 51 |



OUTPUT CARRIER ASSEMBLY

| Item # | Description | Part # | QTY |
|--------|-----------------------------|--------|-----|
| 400 | PLANET CARRIER ASSY, OUTPUT | 83525 | 1 |
| 001 | CARRIER, OUTPUT PLANET * | 106868 | 1 |
| 002 | SPACER, THRUST * | 105805 | 1 |
| 003 | PIN, OUTPUT PLANET * | 106869 | 3 |
| 004 | SPACER, BEARING * | 105815 | 3 |
| 005 | RETAINING RING, EXTERNAL * | 105807 | 3 |
| 006 | WASHER, THRUST * | 105804 | 6 |
| 007 | GEAR, OUTPUT PLANET * | 105814 | 3 |
| 008 | BEARING, ROLLER * | 105803 | 102 |



METRIC CONVERSION TABLE

| MULTIPLY: | BY: | TO GET: | MULTIPLY: | BY: | TO GET: |
|--------------------------------|-----------|---|---|------------|----------------------------------|
| LINEAR | | | | | |
| inches (in.) | X 25.4 | = millimeters (mm) | millimeters (mm) | X 0.3937 | = inches (in.) |
| feet (ft.) | X 0.3048 | = meters (m) | meters (m) | X 3.281 | = feet (ft.) |
| miles (mi.) | X 1.6093 | = kilometers (km) | kilometers (km) | X 0.6214 | = miles (mi.) |
| AREA | | | | | |
| inches ² (sq.in.) | X 645.15 | = millimeters ² (mm ²) | millimeters ² (mm ²) | X 0.000155 | = inches ² (sq.in.) |
| feet ² (sq.ft.) | X 0.0929 | = meters ² (m ²) | meters ² (m ²) | X 10.764 | = feet ² (sq.ft.) |
| VOLUME | | | | | |
| inches ³ (cu.in.) | X 0.01639 | = liters (l) | liters (l) | X 61.024 | = inches ³ (cu.in.) |
| quarts (qts.) | X 0.94635 | = liters (l) | liters (l) | X 1.0567 | = quarts (qts.) |
| gallons (gal.) | X 3.7854 | = liters (l) | liters (l) | X 0.2642 | = gallon (gal.) |
| inches ³ (cu.in.) | X 16.39 | = centimeters ³ (cc) | centimeters ³ (cc) | X 0.06102 | = inches ³ (cu.in.) |
| feet ³ (cu.ft.) | X 28.317 | = liters (l) | liters (l) | X 0.03531 | = feet ³ (cu.ft.) |
| feet ³ (cu.ft.) | X 0.02832 | = meters ³ (m ³) | meters ³ (m ³) | X 35.315 | = feet ³ (cu.ft.) |
| fluid ounce (fl.oz.) | X 29.57 | = milliliters (ml) | milliliters (ml) | X 0.03381 | = fluid ounce (fl.oz.) |
| MASS | | | | | |
| ounces (oz.) | X 28.35 | = grams (g) | grams (g) | X 0.03527 | = ounces (oz.) |
| pounds (lbs.) | X 0.4536 | = kilograms (kg) | kilograms (kg) | X 2.2046 | = pounds (lbs.) |
| tons (2000 lbs.) | X 907.18 | = kilograms (kg) | kilograms (kg) | X 0.001102 | = tons (2000 lbs.) |
| tons (2000 lbs.) | X 0.90718 | = metric tons (t) | metric tons (t) | X 1.1023 | = tons (2000 lbs.) |
| tons (long) (2240 lbs.) | X 1013.05 | = kilograms (kg) | kilograms (kg) | X 0.000984 | = tons (long) (2240 lbs.) |
| PRESSURE | | | | | |
| inches Hg (60°F) | X 3600 | = kilopascals (kPa) | kilopascals (kPa) | X 0.2961 | = inches Hg (60°F) |
| pounds/sq.in. (PSI) | X 6.895 | = kilopascals (kPa) | kilopascals (kPa) | X 0.145 | = pounds/sq.in. (PSI) |
| pounds/sq.in. (PSI) | X 0.0703 | = kilograms/sq.cm. (kg/cm ²) | kilograms/sq.cm. (kg/cm ²) | X 14.22 | = pounds/sq.in. (PSI) |
| pounds/sq.in. (PSI) | X 0.069 | = bars | bars | X 14.5 | = pounds/sq.in. (PSI) |
| inches H ₂ O (60°F) | X 0.2488 | = kilopascals (kPa) | kilopascals (kPa) | X 4.0193 | = inches H ₂ O (60°F) |
| bars | X 100 | = kilopascals (kPa) | kilopascals (kPa) | X 0.01 | = bars |
| POWER | | | | | |
| horsepower (hp) | X 0.746 | = kilowatts (kW) | kilowatts (kW) | X 1.34 | = horsepower (hp) |
| ft.-lbs./min. | X 0.0226 | = watts (W) | watts (W) | X 44.25 | = ft.-lbs./min. |
| TORQUE | | | | | |
| pound-inches (in.-lbs.) | X 0.11298 | = newton-meters (N-m) | newton-meters (N-m) | X 8.851 | = pound-inches (in.-lbs.) |
| pound-feet (ft.-lbs.) | X 1.3558 | = newton-meters (N-m) | newton-meters (N-m) | X 0.7376 | = pound-feet (ft.-lbs.) |
| pound-feet (ft.-lbs.) | X .1383 | = kilograms/meter (kg-m) | kilogram/meter (kg-m) | X 7.233 | = pound-feet (ft.-lbs.) |
| VELOCITY | | | | | |
| miles/hour (m/h) | X 0.11298 | = kilometers/hour (km/hr) | kilometers/hour (km/hr) | X 0.6214 | = miles/hour (m/h) |
| feet/second (ft./sec.) | X 0.3048 | = meter/second (m/s) | meters/second (m/s) | X 3.281 | = feet/second (ft./sec.) |
| feet/minute (ft./min.) | X 0.3048 | = meter/minute (m/min) | meters/minute (m/min) | X 3.281 | = feet/minute (ft./min.) |
| TEMPERATURE | | | | | |
| °Celsius = 0.556 (°F - 32) | | | °Fahrenheit = (1.8 X °C) + 32 | | |
| COMMON METRIC PREFIXES | | | | | |
| mega | (M) | = 1,000,000 or 10 ⁶ | deci | (d) | = 0.1 or 10 ⁻¹ |
| kilo | (k) | = 1,000 or 10 ³ | centi | (c) | = 0.01 or 10 ⁻² |
| hecto | (h) | = 100 or 10 ² | milli | (m) | = 0.001 or 10 ⁻³ |
| deka | (da) | = 10 or 10 ¹ | micro | (µ) | = 0.000.001 or 10 ⁻⁶ |