



## PDG 6000 Manual



SASE Company, Inc.  
Phone 800.522.2606 or Fax 877.762.0748  
[www.SASECompany.com](http://www.SASECompany.com)

Version 11  
Ser #: 1000-1100  
Date: 5/15/2015





Corporate Office  
26423 79<sup>th</sup> Ave South  
Kent, WA 98032-7321  
1.800.522.2606 (P)  
1.877.762.0748 (F)  
[www.SASECompany.com](http://www.SASECompany.com)  
[sales@SASECompany.com](mailto:sales@SASECompany.com)

Congratulations on your decision to get the Power of SASE behind you! SASE is committed to excellence, excellence in the quality of products we sell and excellence in service and support after the sale. It is important to us that your business continues to succeed and grow, and we know that the right products, service and support can have a great impact on your bottom line.

SASE has made great strides in the concrete preparation and polishing industry over the years. With a 40,000 square foot distribution and service facility in Seattle, a 22,000 square foot distribution and service facility in Knoxville, and local sales and technical support representatives throughout the United States, SASE is able to provide unsurpassed service and technical support for the contractor.

At SASE we engineer and manufacture our own equipment, which allows us to be in control of the quality of the equipment we sell. SASE offers a complete line of concrete preparation and polishing equipment, our newest introduction being our new line of PDG planetary diamond grinders, which is setting a new standard for the concrete grinding and polishing industry. SASE is also the leader in diamond tooling technology.

We look forward to a long and prosperous partnership with you! Thank you again for choosing SASE. You won't regret having the Power of SASE behind your company!

Sincerely,

SASE Company, Inc.

A handwritten signature in black ink, appearing to read "J. Weder".

Jim Weder

President





# Table of Contents

Safety Instructions.....	2
Introduction.....	4
Transportation.....	4
Storage.....	4
Setup and Operation.....	5
Changing of Diamonds.....	8
Determining Diamond Selection.....	9
Final Assembly.....	11
Frame w/o Drum.....	13
Handle Assembly.....	15
Basic Frame.....	17
Step View.....	19
Complete Drum.....	21
Bottom Drum Assembly Level I.....	23
Bottom Drum Assembly Level II.....	25
Bottom Drum Assembly Level III.....	27
Top Plate Assembly.....	29
Intermediate Sheave Assembly.....	31
PTO Tensioner Assembly.....	33
Top Belt Idler Assembly.....	35
Top Belt Tensioner.....	37
Belt Tightener.....	39
Main Belt Idler.....	41
Main Belt Spindle.....	43
Planetary Assembly.....	45
PTO Assembly.....	47
Flex Head.....	49

Tooling.....	51
Water System.....	53
Belt Paths.....	55
Technical Specifications.....	56
List of Fault or Alarm Indications.....	57
Certificate of Declaration and Conformity.....	60

# Safety Instructions



Please read the operator's manual carefully and make sure you understand the instructions before using the machine.



WARNING! Dust forms when grinding which can cause injuries if inhaled. Use an approved breathing mask. Always provide for good ventilation while machine is in use.



Always wear:

- ❖ Approved protective helmet.
- ❖ Approved hearing protection.
- ❖ Protective goggles or a visor.
- ❖ Dust Mask
- ❖ Dust forms when grinding, which can cause injuries if inhaled.



Always wear approved protective gloves.



Always wear sturdy non-slip boots with steel toe-caps.



## WARNING

*Under no circumstances may the machine be started without observing the safety instructions.*

*Should the user fail to comply with these, SASE Company Inc or its representatives are free from all liability both directly and indirectly.*

*Read through these operating instructions and make sure that you understand the contents before starting to use the machine.*

*Should you, after reading these safety instructions, still feel uncertain about the safety risks involved you must not use the machine, please contact your SASE representative for more information.*

- ❖ Only qualified personnel should be allowed to operate machinery.
- ❖ Never use a machine that is faulty. Carry out the checks, maintenance and service instructions described in this manual. All repairs not covered in this manual must be performed by a repairer nominated by either the manufacturer or distributor.
- ❖ Always wear personal safety equipment such as sturdy non-slip boots, ear protection, dust mask and approved eye protection.
- ❖ The machine should not be used in areas where potential for fire or explosions exist.
- ❖ Machinery should only be started when grinding heads are resting on the ground.
- ❖ The machine should not be started without the rubber dust skirt attached. It is essential a good seal between floor and machine be established for safety, especially when operating in dry grinding applications.
- ❖ When changing the grinding discs ensure power supply to the unit is OFF by engaging the Emergency Stop button and the power-plug disconnected.
- ❖ The machine should not be lifted by handles, motor, chassis or other parts. Transportation of the machine is best done on a pallet / skid to which the machine must be firmly secured.
- ❖ Extreme caution must be used when moving machinery by hand on an inclined plane. Even the slightest slope can cause forces/ momentum making the machinery impossible to brake manually.
- ❖ Never use the machine if you are tired, if you have consumed any alcohol, or if you are taking medication that could affect your vision, your judgment or your coordination.
- ❖ Never use a machine that has been modified in any way from its original specification.
- ❖ Be on your guard for electrical shocks. Avoid having body contact with lightning conductors/metal in the ground.
- ❖ Never drag the machine by means of the cord and never pull out the plug by pulling the cord. Keep all cords and extension cords away from water, oil and sharp edges.

## Safety Instructions

- ❖ Check that the cord and extension cord are intact and in good condition. Never use the machine if the cord is damaged, hand it in to an authorized service workshop for repair.
- ❖ Does not use a rolled up extension cord.
- ❖ Electrical cords must not exceed 200ft in length.
- ❖ The machine should be connected to an earthed outlet socket.
- ❖ Check that the mains voltage corresponds with that stated on the rating plate on the machine.
- ❖ Ensure the cord is behind you when you start to use the machine so that the cord will not be damaged.



**WARNING HIGH VOLTAGE!**



**Inspection and/or maintenance should be carried out with the motor switched off and the plug disconnected.**



**This product is in accordance with applicable EU directives**



**WARNING**

***At no time should lifting of machinery be attempted without mechanical means such as a hoist or a forklift.***

## Introduction

The SASE PDG 6000 planetary diamond grinders are designed for wet or dry grinding of marble, terrazzo, granite and concrete. Their applications range from rough grinding through to a polished finish.



### IMPORTANT!

It is extremely important all users be familiar with the contents of this manual before commencing operation of either machine. Failure to do so may result in damage to machinery or expose operator to unnecessary dangers.

*It is recommended that machinery be transported with a set of diamonds attached at all times to ensure protection of locking mechanism for diamond plates.*



### IMPORTANT!

*Only staff that has received the necessary training, both practically and theoretically concerning their usage should operate the machinery.*

## Storage

The machine should always be stored in a dry place when not in use.

## Transportation

The machine comes equipped with an electronic system called a variable speed drive or a frequency converter. The drive enables the variable speed and direction component of the motor.

The drive is located in the steel cabinet mounted on the machine chassis.

As with all electronic equipment, the drives are sensitive to excessive vibration, rough treatment and high levels of dust. Much care and attention has been given by SASE to ensure maximal protection is given to the drive. Note the shock absorbing mounting system used to mount the steel cabinet on the machine chassis/frame.

When transporting, it is important to ensure the machinery is properly secured at all times to eliminate “bouncing” of the variable speed drive. Ensure the chassis or frame section of the machine is secured down at all times when in transit.

The machine should always be transported under cover limiting the exposed to natural elements – in particular rain and snow.



### WARNING

*The machine should not be lifted by handle, motor, chassis or other parts. Transportation of the machine is best done on a pallet/skid to which the machine must be firmly secured.*

*Do not attempt to slide the tines/forks from a fork lift under grinding heads unless on a pallet/skid.*

*Failure to do so can cause irreparable damage to grinding heads of machine and internal parts.*

# Setup and Operation

The machine can be divided into two main parts.

1. Chassis/Frame section – this comprises the handle bars, body panels, electrical cabinet, steel frame and wheels.
2. Head – this comprises the motor, cover, grinding/satellite/planetary heads and internal components.

The machine has been manufactured to allow movement between the chassis and head via the connection point at the lifting lugs and chassis pins. This movement is important during the grinding process as it creates a “floating” effect for the head.

The floating gives the head a self-leveling effect, negating the need to adjust the height of the head as the machine passes over floor areas with different slopes or undulations

## Control panel

The control panel consists of a number of buttons, giving 6 separate controls (see picture).

**Power** - Power is turned on as soon as the machine is plugged in to a power source

**Emergency Stop** - When pushed will immediately shut down machine by totally stopping power supply to drives/ frequency converters in electrical cabinet.

**Speed Control** - Controls the speed of the planetary head and grinding heads.

**Fwd/Rev (Green)** - Direction control for both planetary head and grinding heads rotation.

**Stop (Red)** - To stop machine during normal Operation.

**Reset (yellow)** - Resets the VFD after a fault has occurred.



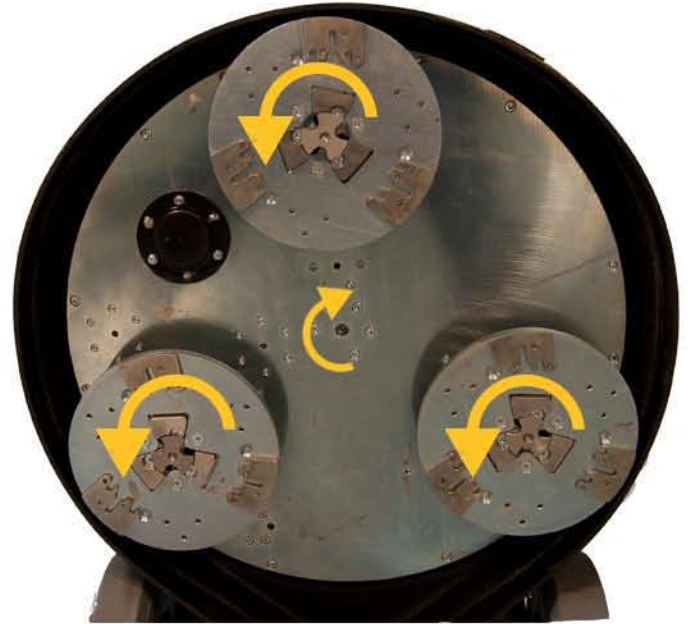
## IMPORTANT!

*It is important to use the STOP/RUN switch to control the running of the machine, not the EMERGENCY STOP button. Each time the EMERGENCY STOP button is pressed it shuts down the drive/ frequency converter. Frequently powering up and down of the drive/ frequency converter will reduce the life span of the drive/ frequency converter*



## IMPORTANT!

*Planetary head and grinding heads are set to turn in opposite directions of each other. (Planetary head turns clockwise while grinding heads turn counter clockwise or planetary heads turn counter clockwise while the grinding heads turn clockwise.)*



Control panel shown is for high volt machines; the low volt model has a push-button potentiometer versus a knob potentiometer as shown.



# Setup and Operation



Position grinder on the working area. Make sure the are diamonds underneath machine and that the head locks are tight



## IMPORTANT!

*When using the machine, each grinding head must always have the same diamond type and number of diamonds as the other grinding heads. Each grinding head must have diamonds the same height as the other grinding heads.*

The rubber skirt must be adjusted so that a good seal is established between the floor and head of machine (see picture below).

Setting of the skirt is essential to obtain good dust extraction and eliminate the possibility of airborne dust when dry grinding.

For the most comfortable working height set the handle using adjustment lever.



## IMPORTANT!

*It is recommended that this height be set as close as possible to the height of the operator's hip bone. When the machine is running, there will be a grinding force/pull to one side that can be felt through the handlebars. Use the hip to resist this force instead of trying to control this through the arms (such positioning will be much easier for the operator using the machine over prolonged periods of time.)*



## Machine power up

- ❖ Engage Emergency Stop button.
- ❖ Plug power supply to the machine



## IMPORTANT!

*Before plugging in machine double check supply voltage to ensure that the correct voltage is going to the machine.*

- ❖ Disengage Emergency Stop button (twist clockwise).
- ❖ Press the desired rotation button to start machine (FWD/REV).

## Setting Speed and direction

On the control panel there are FORWARD/REVERSE buttons for motor direction and Fast/Slow buttons for motor speed (Speed dial knob for 480V models). Generally, when starting the machine for the first time on any given application, it is advised the speed setting should not exceed 680 rpms initially.

When the operator feels comfortable with the application then speed may be increased.

Speed and direction setting is often depends on the application and personal choice.

Operators are encouraged to experiment to find which settings best suit the given applications. The following table lists some suggested set-ups for different applications.

## 1-10 Potentiometer Conversion

1. 300 RPM
2. 420 RPM
3. 540 RPM
4. 660 RPM
5. 780 RPM
6. 900 RPM
7. 1,020 RPM
8. 1,140 RPM
9. 1,260 RPM
10. 1,380 RPM



# Setup and Operation

## Planetary rotation direction

The correlation between FWD/REV & Clockwise/Counter clockwise rotation can be said as follows if looking at the grinding discs from underneath the machine:

❖ REV-Clockwise.

❖ FWD-Reverse.

As mentioned earlier, when the machine is in operation it will pull to one side. The direction of pull is determined by the planetary head direction of rotation. The head of the machine will pull to the right (and therefore, will be felt on the right hip of the operator) when the planetary head is set in the REVERSE direction.

This sideways pull can be very useful when grinding, particularly along a wall. Set the machine so that it pulls towards the wall, and then control the machine so it can just touch the wall. This will ensure a grind close to the wall or object.

Direction is also a matter of personal preference, however to improve the cutting efficiency of diamonds, change directions on a regular basis. This will work both sides of the diamond crystals, keeping the abrasives as sharp as possible by creating maximal exposure of the diamond crystal.

Once both a speed and direction have been nominated, switch on dust extraction or vacuum device.



**IMPORTANT!**

*It is highly recommended to use a SASE BULL 1250 Industrial Vacuum system for complete dust control.*

# Changing of Diamonds

*Different applications often require different selections of diamond tooling. There will be many occasions when the grinding discs need to be changed.*

*Following is a guide for this procedure.*

## Preparation

Press the Stop button and engage the Emergency Stop button.



*As an extra precaution, unplug power cord to prevent unintentional starting of the machine while changing disc, which could result in serious injury.*



**WARNING**



*It is highly recommended to have a set of gloves ready, as diamonds can get very hot, especially during dry grinding applications.*

## Changing

1. Set handle in upright position (Illustrated upper right).
2. Pull back on handle to lift grinding head off the ground (Illustrated middle right).
3. Lay machine back on the ground (Illustrated bottom right)
4. Put on gloves.
5. Remove grinding disc from flex plate.
6. Check to ensure that all discs are secure.
7. Once new diamonds have been attached, reverse procedure to lower machine to ground.
8. As new diamonds may be a different height than the set being previously used, re-adjust skirt to ensure good seal is established with the floor.



# Determining Diamond Selection

## Diamond Background

Diamond abrasives usually consist of 2 components:

- ❖ Diamond powder (also known as diamond crystals or grit). By changing the size of the diamond powder or grit, we can change how coarse or fine the scratches will be that are left behind from the grinding process.
- ❖ A binding agent (metal or resin). Diamond powder is mixed and suspended in either a metal or resin binding agent. When suspended in a metal bond matrix, the finished product is referred to as a Metal Bond or Sintered diamond segment. When suspended in a resin bond matrix, the finished product is referred to as a Resin Bond diamond segment or pad

## General Diamond Principles

### Diamond Grit Size:

Changing the size of the diamond grit to a smaller particle/ grit size will affect the performance of the diamond tool in the following ways:

- ❖ Create a finer scratch pattern.
- ❖ Increase the life of the diamond tool.

The opposite will occur when changing to a larger particle/grit size.

### The Binding Agent/Metal Bond or Resin Bond:

Increasing hardness of bond will:

- ❖ Increase life of diamond tool.
- ❖ Decrease production rate.
- ❖ Cause diamond tool to leave finer scratches in dry - grinding applications (when compared to a softer bond diamond tool with the same diamond grit size).
- ❖ A hard bond matrix should be used on a soft floor and a soft bond matrix should be used on a hard floor.

## Grinding disc set-up

The set-up of diamond segments on the grinding heads of the machine will influence the performance of the machine, the productivity levels and also the finished floor quality.

There are basically two types of diamond configurations that can be used when grinding:

1. Half set of diamonds – when there are diamonds placed at three alternating positions on the diamond holder discs. ( See pictures on upper right).
2. Full set of diamonds – when there are diamonds placed at each of the six positions on the diamond holder discs. (See pictures on middle right).

## HALF-SET OF DIAMONDS

When the diamonds are set-up as a half-set, they tend to follow the surface of the floor.

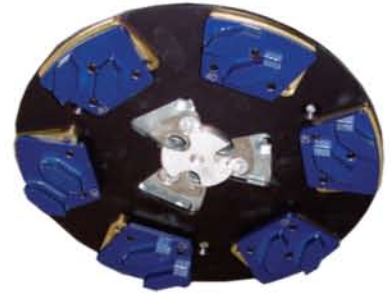
The half-set diamond configuration should only be used when an extremely flat floor finish is not required.



## FULL-SET OF DIAMONDS

Diamonds that are set-up as a full-set tend not to follow the surface of the floor. If the floor is wavy the machine will grind the high areas yet miss the low spots (unless the high areas are ground down first).

The full-set diamond configuration should be used when a very flat floor finish is desired.



# Metal Bond Diamond Tooling Quick Reference Guide



## Yellow Series

### Extremely Hard Concrete

Very soft bonded diamonds for grinding extremely hard concrete floors.



## Gold Series

### Very Hard to Hard Concrete

Very soft bonded diamonds for grinding very hard to hard concrete floors.



## Blue Series

### Hard to Medium Concrete

Soft bonded diamonds for grinding hard to medium concrete floors.



## Red Series

### Medium to Soft Concrete

Medium bonded diamonds for grinding medium concrete floors.



## Black Series

### Soft Concrete

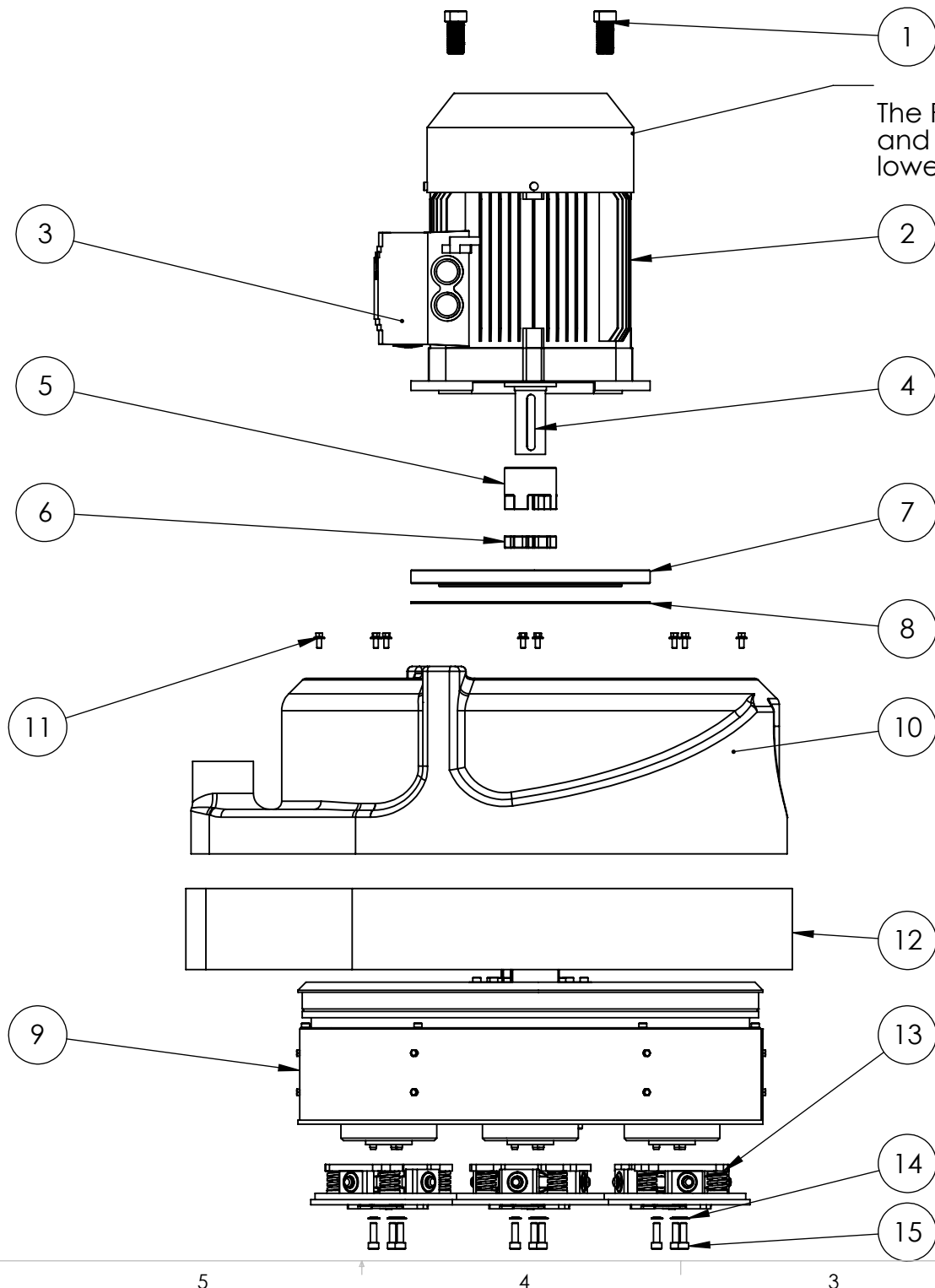
Hard bonded diamonds for grinding medium to soft concrete floors.



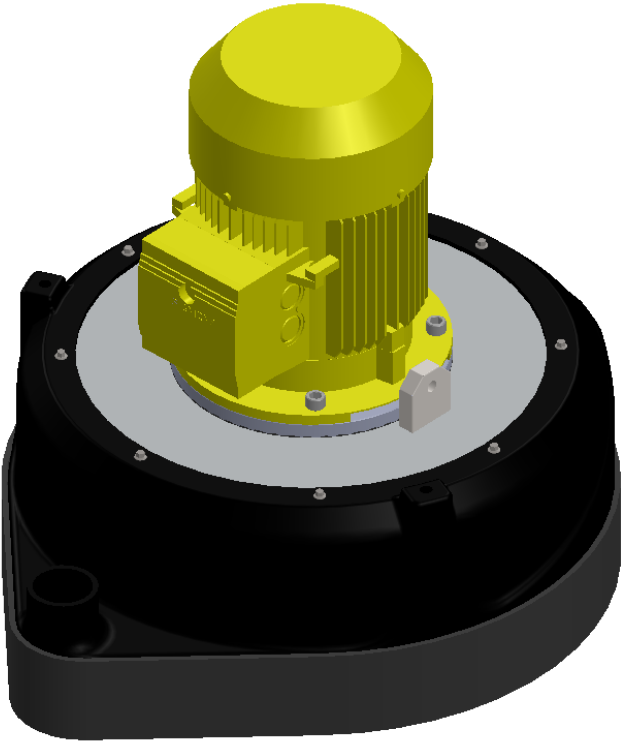
## Orange Series

### Soft to Very Soft Concrete

Very hard bonded diamonds for grinding soft to very soft concrete floors.



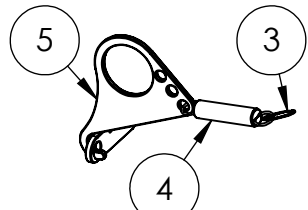
**Take Note:**  
The PDG6000 can not be built like this yet. The drum and frame must be joined before the motor can be lowered into place.



<b>PDG 6000</b>		
<b>Motor on Drum</b>		
SCALE: 1:1	WEIGHT:	SHEET 2 OF 2

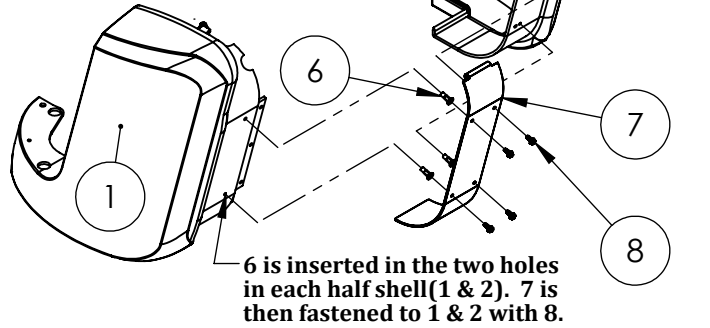
**Motor on Drum**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	NB.12.266	SCREW, SOCKET HEAD CAP M14-2.0 X 40 ZINC	4
2	HOL.U11898	MOTOR, 535 230-460V 10KW 50-60HZ	1
3	NB.60.108	LUG, TERMINAL 8 AWG #10 STUD	4
4	NB.70.108	KEY, PARALLEL	1
5	PDG.60063.00	COUPLER, CJ28/38 LOVEJOY	1
6	PDG.60064.00	SPIDER, CJ28/38 GEAR	1
7	PDG.60077.01	SPACER, MOTOR	1
8	PDG.60048.25	GASKET, MOTOR, RUBBER	1
9	PDG.60210.00	DRUM, COMPLETE	1
10	PDG.60038.00	SHROUD, MOLDED VACUUM	1
11	NB.11.108	SCREW, FLANGED SOCKET HEAD CAP M6x16mm	8
12	PDG.60062.00	SHIELD, RUBBER DUST	1
13	PDG.6A010.00	FLEX HEAD, COMPLETE WITH BLUE SPRINGS	3
14	NB.30.212	WASHER, LOCK M8 ZINC	9
15	NB.12.219	SCREW, SOCKET HEAD CAP M8-1.25 X 25 12.9 ZINC	9

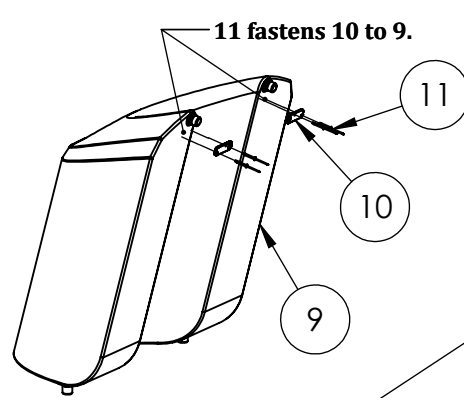


3 is used to fasten  
4 & 5 to 1 & 2  
here on each side.

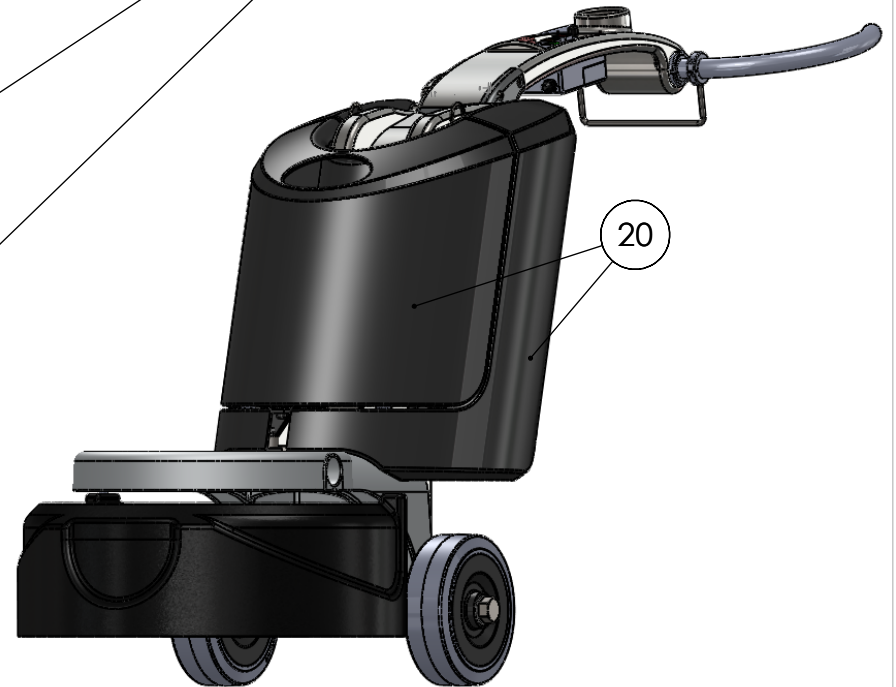
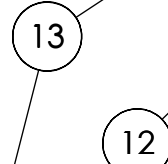
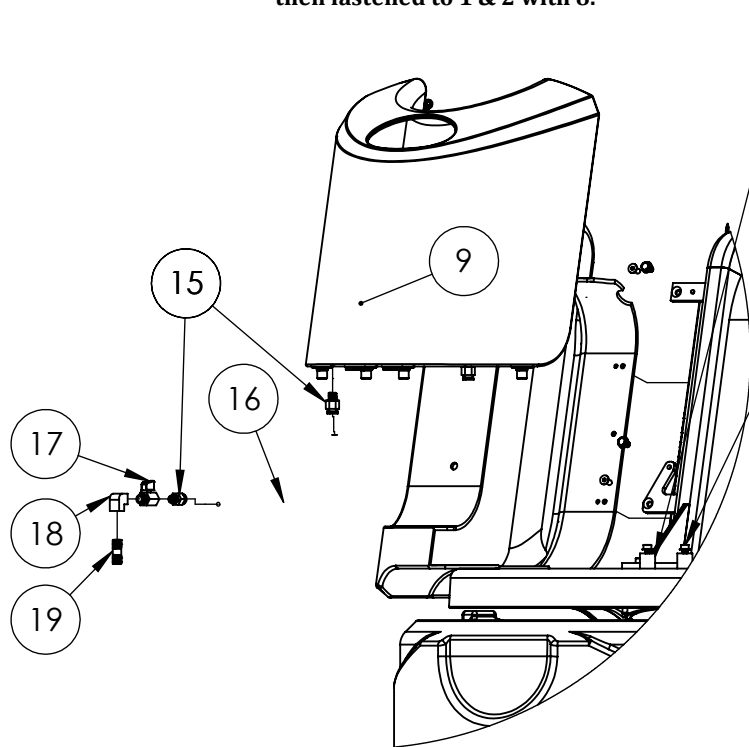
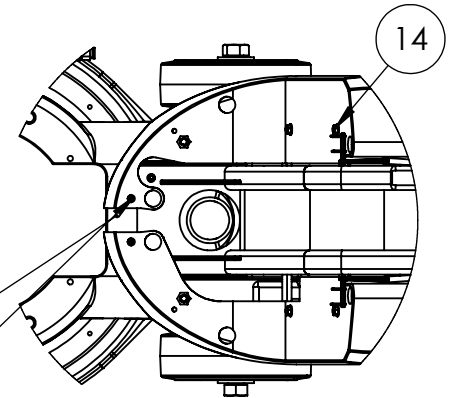
The Tank Hook Assembly  
(3/4/5/10/11)  
fastens 9 to 1 & 2



6 is inserted in the two holes  
in each half shell (1 & 2). 7 is  
then fastened to 1 & 2 with 8.



11 fastens 10 to 9.



**PDG 6000**

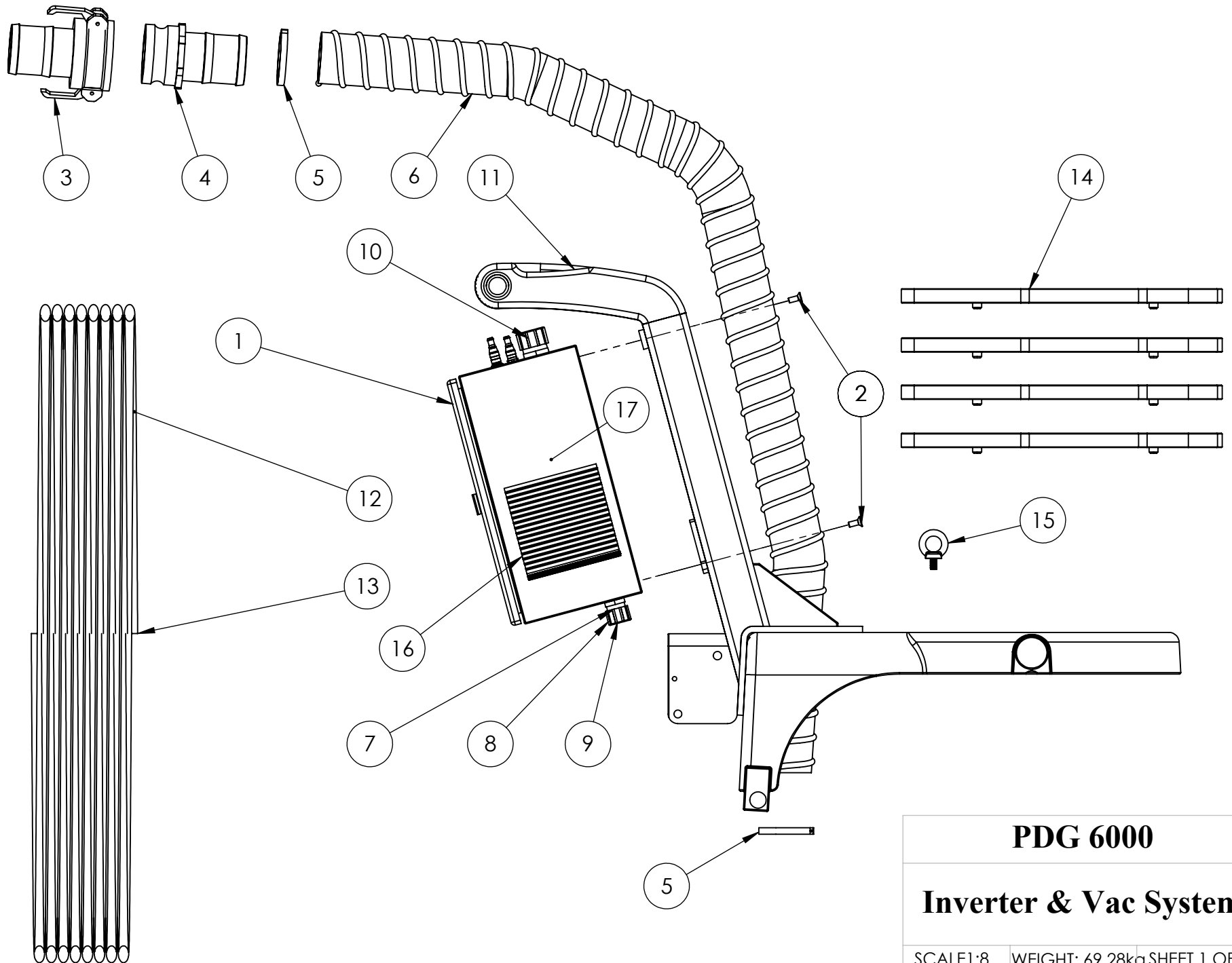
**Plastics & Water System**

SCALE: 1:25 WEIGHT: 90.38kg SHEET 1 OF 1



Plastics & Water System			
Item No.	Part No.	Description	Qty.
1	PDG.60042.00	SHELL, RIGHT HAND	1
2	PDG.60043.00	SHELL, LEFT HAND	1
3	NB.40.116	RING, EXTERNAL RETAINING 5/8' 18-8 SS SPIRAL	2
4	NB.91.101	SPRING, EXTENTION 0.375 X 0.0475 X 2.25	2
5	PDG.20282.00	HOOK, SPRING	2
6	NB.20.140	NUT, SLOT BODIED RIVET M6	4
7	PDG.60078.00	COVER, HALF SHELL	1
8	NB.11.112	SCREW, FLANGED HEX HEAD CAP M6-1.0 X 30 NON-SERRATED ZINC	4
9	PDG.60041.00	TANK, WATER	1
10	PDG.20283.00	HOOK, RING	2
11	NB.47.120	RIVET, BLIND 1/8 DIA 0.313 L	4
12	NB.11.904	SCREW, FLANGED HEX HEAD CAP M8-1.25 X 40 10.9 ZINC	2
13	NB.30.116	WASHER, FLAT M8 X 20 X 4 ZINC	8
14	NB.11.121	SCREW, FLANGED HEX HEAD CAP M8-1.25 X 16 NON-SERRATED ZINC	2
15	PDG.20246.00	FITTING, PUSH TO CONNECT 3/8 X 1/4	4
16	PDG.20262.00	TUBING, WATER 3/8 INCH OD	4.5 ft
17	PDG.20247.00	VALVE, 1/4 BALL	2
18	PDG.20268.00	ELBOW, BRASS FEMALE 1/4 NPT X 1/4 NPT	2
19	PDG.20267.00	NIPPLE, 1/4" X CLOSE GALV /PDG5K PDG6K PDG8K	2
20	PDG.60075.00	DECAL, SET	1
21	PDG.20395.00	ADAPTER, USB CHARGER (NOT DISPLAYED)(Arrow 2 points where it goes.)	1

USB PORT added 5/15/2015 with serial number 05150992



**PDG 6000**

**Inverter & Vac System**

SCALE 1:8    WEIGHT: 69.28kg    SHEET 1 OF 1

5

4

3

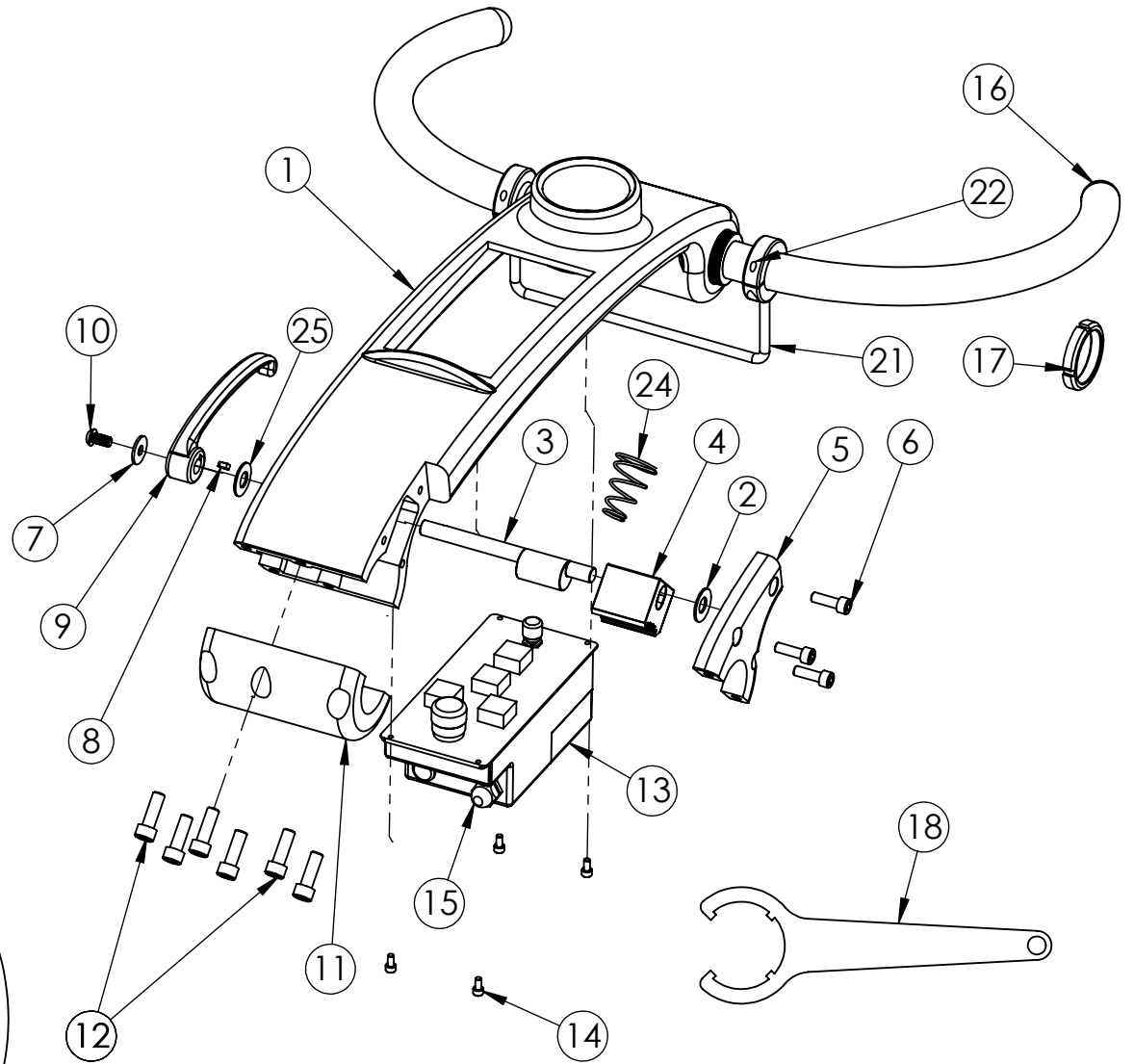
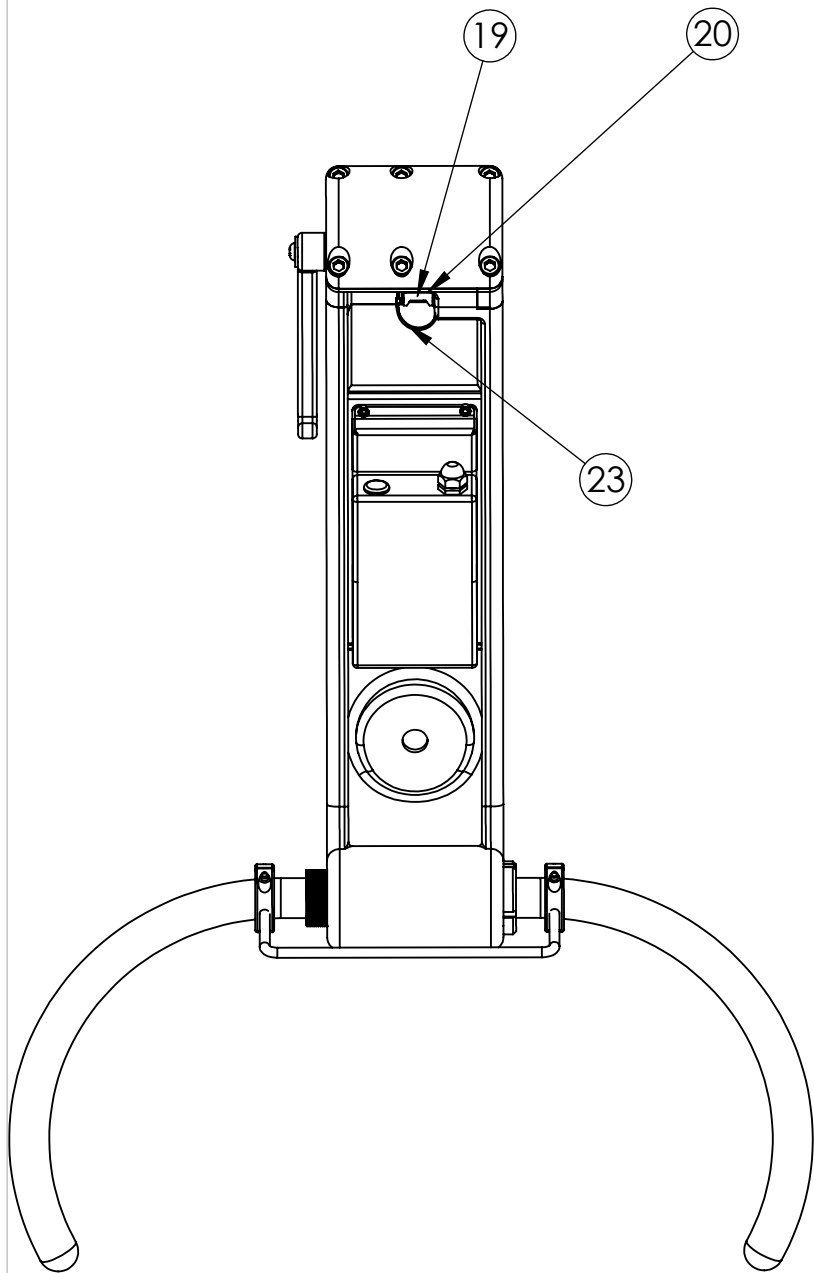
2

1

<b>Inverter &amp; Vacuum System</b>			
<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	PDG.60201.00	DRIVE, WITH ENCLOSURE 10HP 460V COMPLETE	1
2	NB.13.116	SCREW, FLAT HEAD SOCKET CAP M6 -1.0 X 20	4
3	WVAC.10.113	COUPLER, PLASTIC FEMALE FOR 3" VAC HOSE PART C	1
4	VAC.10.111	COUPLER, PLASTIC MALE FOR 3" VAC HOSE PART E	1
5	VAC.10.095	CLAMP, 3" BLACK PDG VACUUM HOSE	2
6	WVAC.HS3.00060	HOSE, 3" CLEAR WITH YELLOW STRIPE	6ft
7	PDG.80080.00	WHIP, MOTOR KIT 4 WIRE 8 AWG COMPLETE(Not shown)	1
8	795.00.06	3/4" W/R BLACK SLRN21(Not shown)	1
9	NB.20.145	NUT, 3/4" NYLON CONDUIT LOCK(Not shown)	1
10	WSAS.CS.8165C	TWISTLOCK 50A 480V 3P MALE(Not shown)	1
11	PDG.20242.00	CORD, GRIP (Not shown)	1
12	AIW.10X4.CRD	CORD, POWER 10/4	60ft
13	WSAS.CS.8164C	TWISTLOCK 50A 480V 3P FEMALE(Not shown)	1
14	PDG.60045.00	WEIGHT, BALLAST	2
15	PDG.20244.00	EYE, LIFTING	2

<b>Inverter Box, Fan Filters: Need to be washed or replaced every 100 operation hours.</b>			
16	PDG.20239.00	FILTER, INLET FINE ELECTRICAL BOX (Right)	1
17	PDG.20239.01	FILTER, OUTLET COARSE ELECTRICAL BOX (Left)	1

<b>Low Voltage</b>			
1	PDG.60200.00	DRIVE, WITH ENCLOSURE 10HP 230V COMPLETE	1
10	WSAS.CS.8365C	TWISTLOCK 50A 230V 3P MALE(Not shown)	1
13	WSAS.CS.8364C	TWISTLOCK 50A 230V 3P FEMALE(Not shown)	1



TITLE:  
**Handle Assembly**

SCALE: 1:6 WEIGHT: 18.6kg SHEET 1 OF 1

5

4

3

2

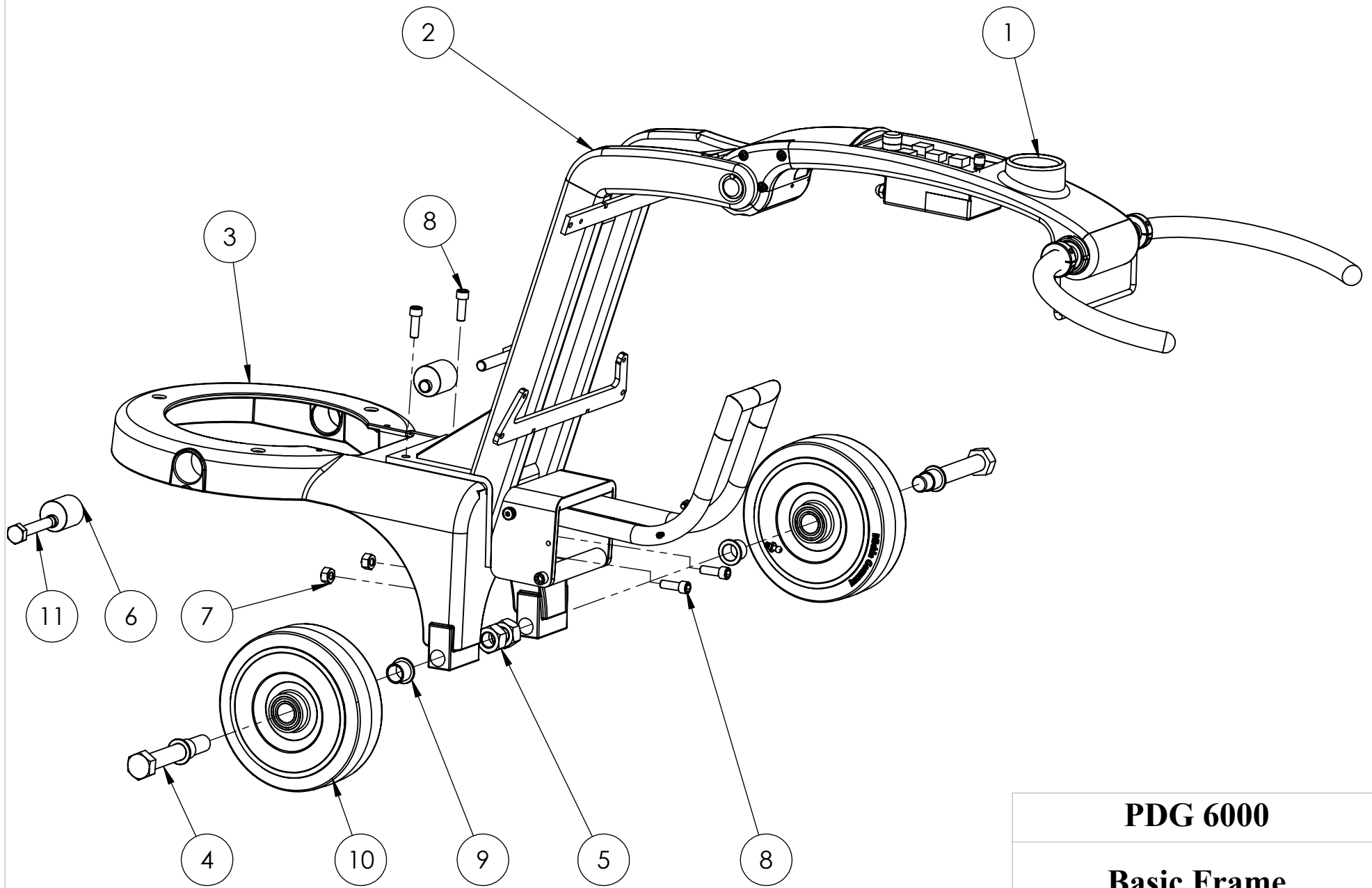
1

Handle Assembly			
Item No.	Part No.	Description	Qty.
1	PDG.20225.00	STEM, HANDLE	1
2	NB.30.129	WASHER, WAVEY	1
3	PDG.20229.00	ACTUATOR, STEM LOCK	1
4	PDG.20228.00	LOCK, HANDLE STEM	1
5	PDG.20230.00	COVER, HANDLE STEM	1
6	NB.12.219	SCREW, SOCKET HEAD CAP M8-1.25 X 25 12.9 ZINC	3
7	NB.30.111	WASHER, FLAT M8 ZINC	1
8	NB.70.110	KEY, PARALLEL M5 X 20	1
9	PDG.20227.00	HANDLE, STEM LOCK LEVER	1
10	NB.16.119	SCREW, BUTTON HEAD SOCKET CAP M8-1.25 X 12	1
11	PDG.20226.00	CAP, HANDLE STEM	1
12	NB.12.235	SCREW, SOCKET HEAD CAP M10-1.5 X 20 12.9 ZINC	6
13	PDG.20026.00	PANEL, COMPLETE INTERFACE NO DISPLAY V2	1
14	NB.11.107	SCREW, FLANGED SOCKET HEAD CAP M4-0.70 X 8 ZINC	4
15	PDG.20271.00	WRAP, 1/2" SPIRAL CORD (Not Shown)	2ft
16	PDG.20232.00	BAR, HANDLE	1
17	NB.20.135	NUT, SHAFT KM8 M40-1.5 ZINC	1
18	PDG.20238.00	WRENCH, HANDLE BAR SPANNER	1
19	NB.16.117	SCREW, BUTTON HEAD SOCKET M6 X 8	1
20	NB.51.201	Zip Tie Mount	1
21	PDG.20110.00	Vacuum Hose Hanger	1
22	NB.12.108	M6x12 Socket Head Bolt	4
23	795.00.12	Zip Tie (mounts to #20, fastens #13 wires)	1
24	PDG.20296.00	SPRING, COMPRESSION (located behind #4 inside handle)	1
25	NB.30.121	WASHER, BELLEVILLE (located between #1 and #9 cone pointed to #9)	1

**SETTING HANDLE POSITION:**

Using the provided spanner wrench, turn the nut counter-clockwise to remove completely. Place nut on opposite of handle stem, draw the handle taper out by turning the nut clockwise against the handle stem.

To tighten the handle, put the nut on the original side of the handle and draw the taper back into the stem by turning the nut clockwise against the handle stem.



**PDG 6000**

**Basic Frame**

SCALE: 1:8 | WEIGHT: 69.28kg | SHEET 1 OF 1

5

4

3

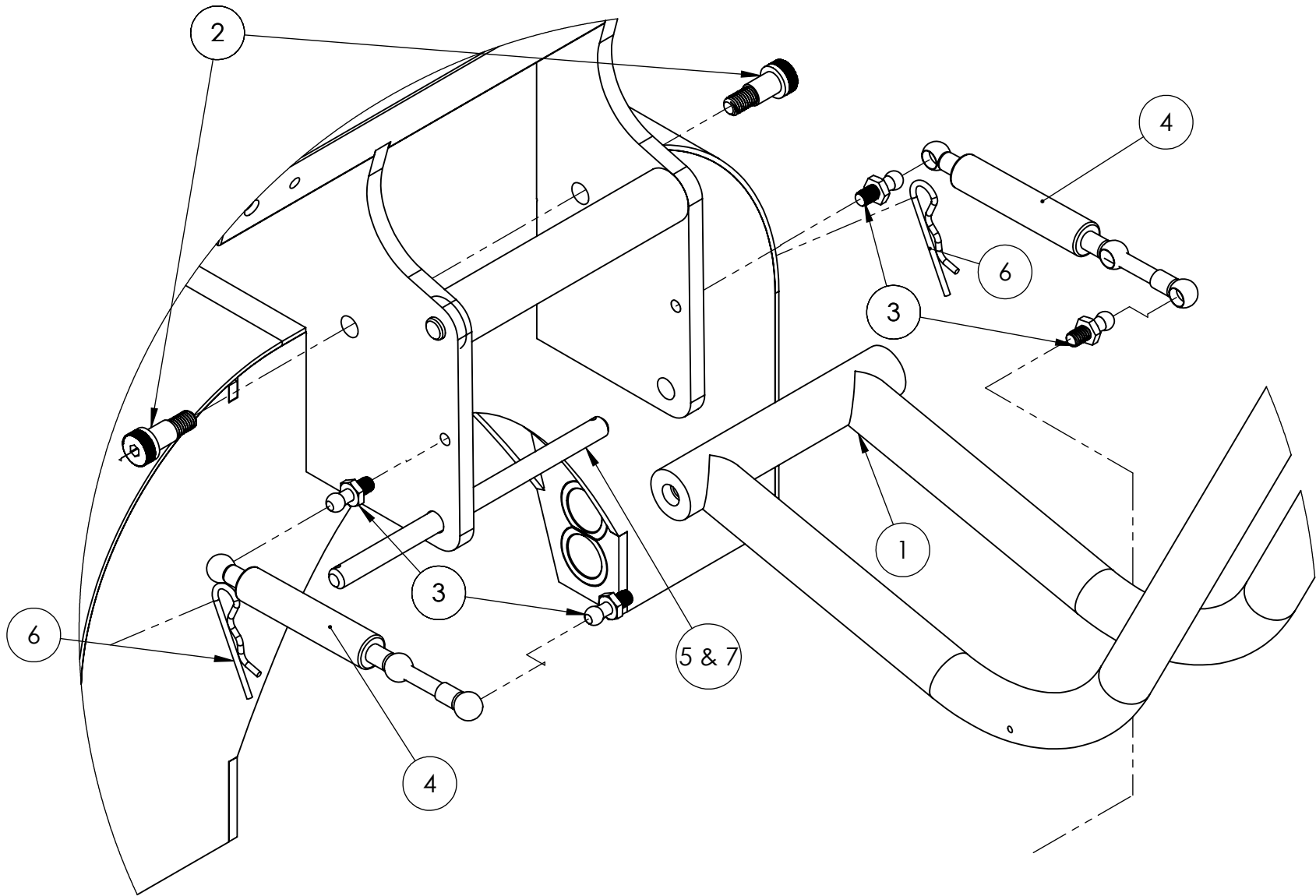
2

1

**Basic Frame**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	See Page 22	Handle Assembled	1
2	PDG.60044.00	Vertical Frame Member	1
3	PDG.60040.00	Carriage	1
4	NB.10.128	M24-3.0x210 Modified Hex Bolt	2
5	NB.20.151	M24-3.0 Nylock Hex Nut	2
6	PDG.60049.00	Metaxentric Bushing	2
7	NB.20.118	M12-1.75 Nylock Hex Nut	2
8	NB.12.253	M12-1.75x35 Socket Head Cap Screw	4
9	PDG.20255.01	Axle Bushing	4
10	PDG.60052.00	Rear Wheel 10"	2
11	NB.10.118	Metaxentric Bolt	2





**PDG 6000**

**Step View**

SCALE: 1:20 WEIGHT:

SHEET 1 OF 1

5

4

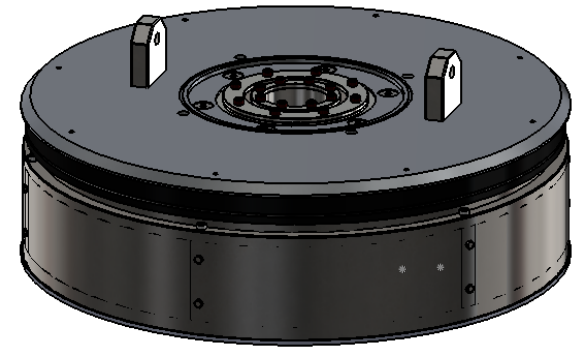
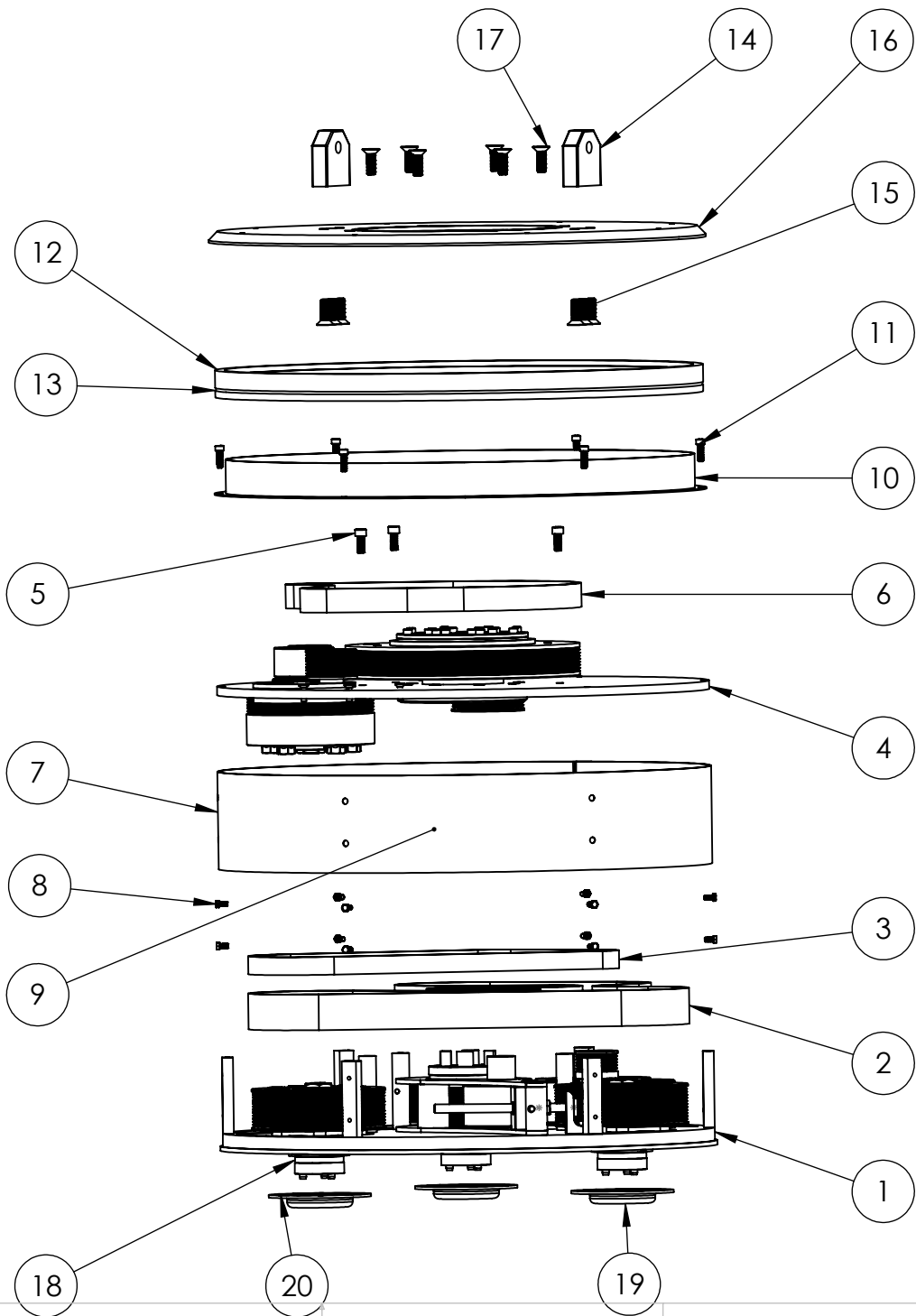
3

2

1

**Step View**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	PDG.60068.00	STEP, TILT ASSIST	1
2	NB.15.250	SCREW, SOCKET HEAD SHOULDER M12 X 16 ZINCED	2
3	PDG.20237.00	STUD, BALL GAS STRUT	4
4	PDG.20236.00	STRUT, GAS (Image shows install backwards)	2
5	PDG.20235.25	ROD,TILT STEP STOP V2	1
6	NB.50.127	PIN, COTTER 0.093" WIRE	2
7	PDG.20235.20	TUBE, TILT STEP STOP (Covers # 5)	1



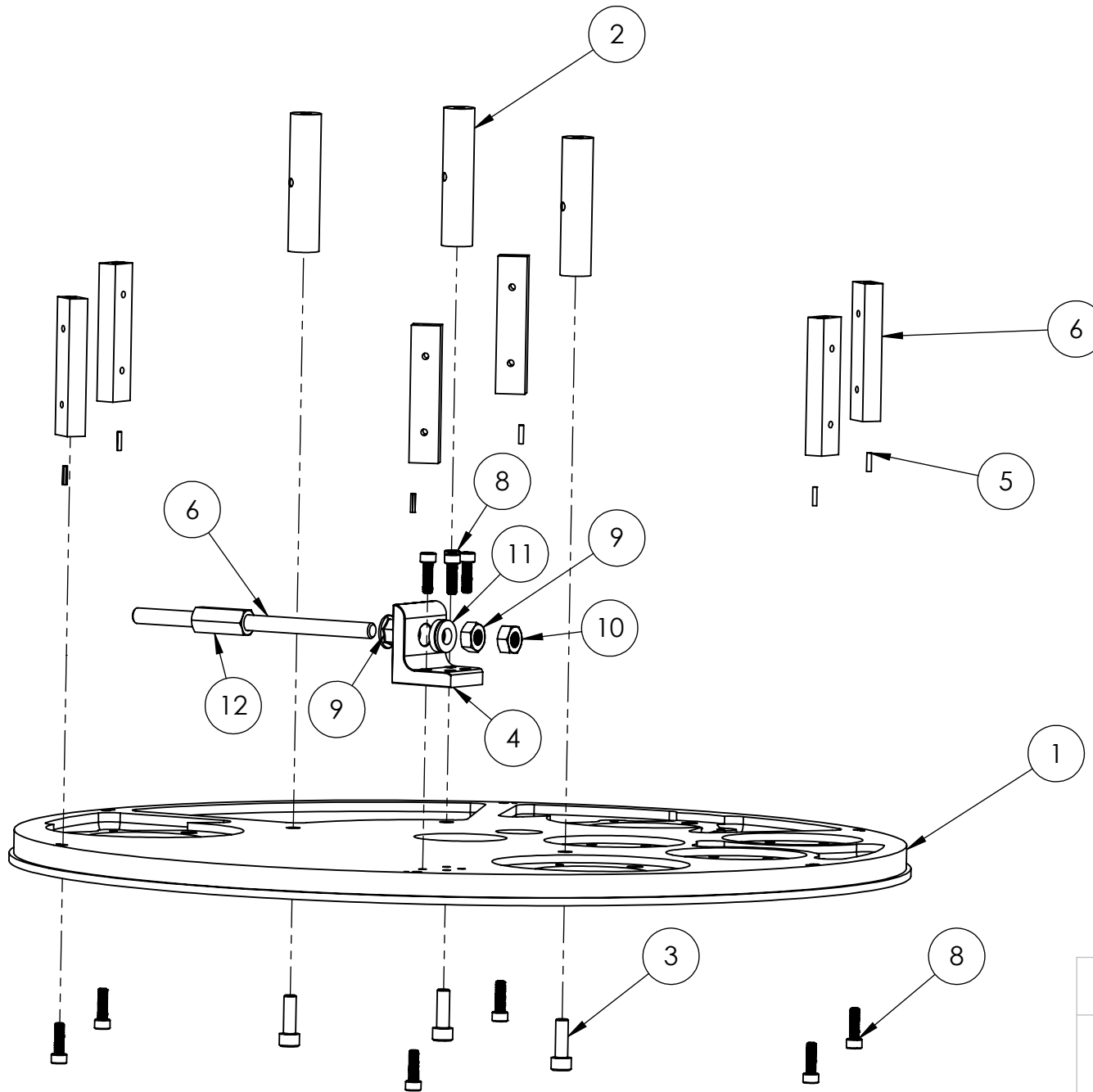
**PDG 6000**

**Complete Drum**

SCALE: 1:1 | WEIGHT: 97.24 | SHEET 1 OF 1

**Complete Drum**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	SEE PAGE	PLATE, BOTTOM DRUM	1
2	PDG.60056.00	BELT, MAIN PK12 M42 X 2381.4 OC BOTTOM	1
3	PDG.60057.00	BELT, PTO PK6 M20 X 1043 OC MIDDLE	1
4	SEE PAGE	PLATE, TOP DRUM	1
5	NB.10.219	SCREW, SOCKET LOW HEAD CAP M8-1.25 X 20 ZINC	3
6	PDG.60058.00	BELT, TOP PK8 M28 X 1122.4 OC	1
7	PDG.60036.00	SHROUD, BOTTOM BELT DUST	1
8	NB.16.113	SCREW, HEX HEAD CAP M5-0.8 X 10 ZINC 8.8	12
9	PDG.20287.00	TAPE, PRESERVATION HEAT SHRINK 3" WHITE(3-3 2/3 revolutions)	40 ft
10	PDG.60037.00	SHROUD, TOP BELT DUST	1
11	NB.12.116	SCREW, SOCKET HEAD CAP M6-1.0 X 20 12.9 ZINC	6
12	PDG.60047.00	SEAL, FOAM/FELT	1
13	PDG.20269.00	ZIP TIE, 48"	2
14	PDG.60046.00	EARS, DRUM MOUNTING	2
15	NB.13.252	SCREW, SOCKET FLAT HEAD CAP M10-1.5 X 30	6
16	PDG.60034.00	PLATE, STATIONARY	1
17	NB.13.252	SCREW, SOCKET FLAT HEAD CAP M10-1.5 X 30	6
18	PDG.20286.02	SEAL, AXLE NITRILE AL. SLURRY COVERS	3
19	PDG.20285 02	COVER, PLANETARY SLURRY ALUMINUM	3
20	NB.12.117	SCREW, FLANGED HEX HEAD CAP M6-1.0 X 12	9



**PDG 6000**

**Bottom Drum I**

SCALE: 1:4

WEIGHT:

SHEET 1 OF 1

5

4

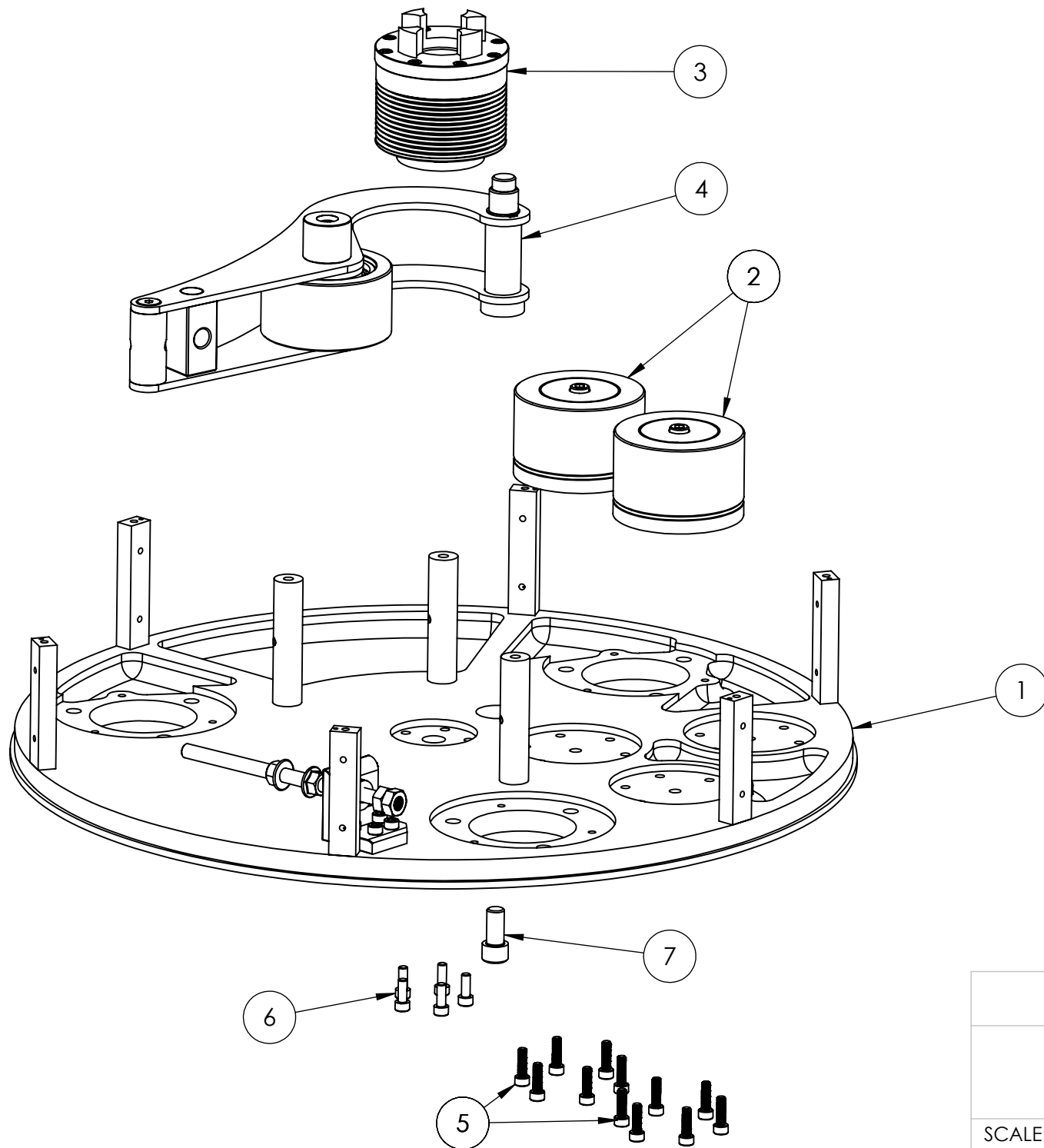
3

2

1

**Bottom Drum 1**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	PDG.60023.00	PLATE, BOTTOM	1
2	PDG.60011.00	STANCION, INNER	3
3	NB.12.219	SCREW, SOCKET HEAD M8-1.25 X 25	3
4	PDG.45017.25	POST, REACTION	1
5	NB.50.147	PIN, SPIRAL M3x16	6
6	PDG.60079.00	ROD, TIGHTENER	1
7	PDG.60010.00	STANCION, PERIMETER	6
8	NB.12.116	SCREW, SOCKET HEAD M6-1.0x20	10
9	NB.20.137	NUT, JAM M10	2
10	NB.20.131	NUT, NYLOC M10	1
11	NB.32.101	WASHER, SPHERICAL M10	1
12	NB.20.119	NUT, TENSIONER M10	1



**PDG 6000**

**Bottom Drum II**

SCALE: 1:4

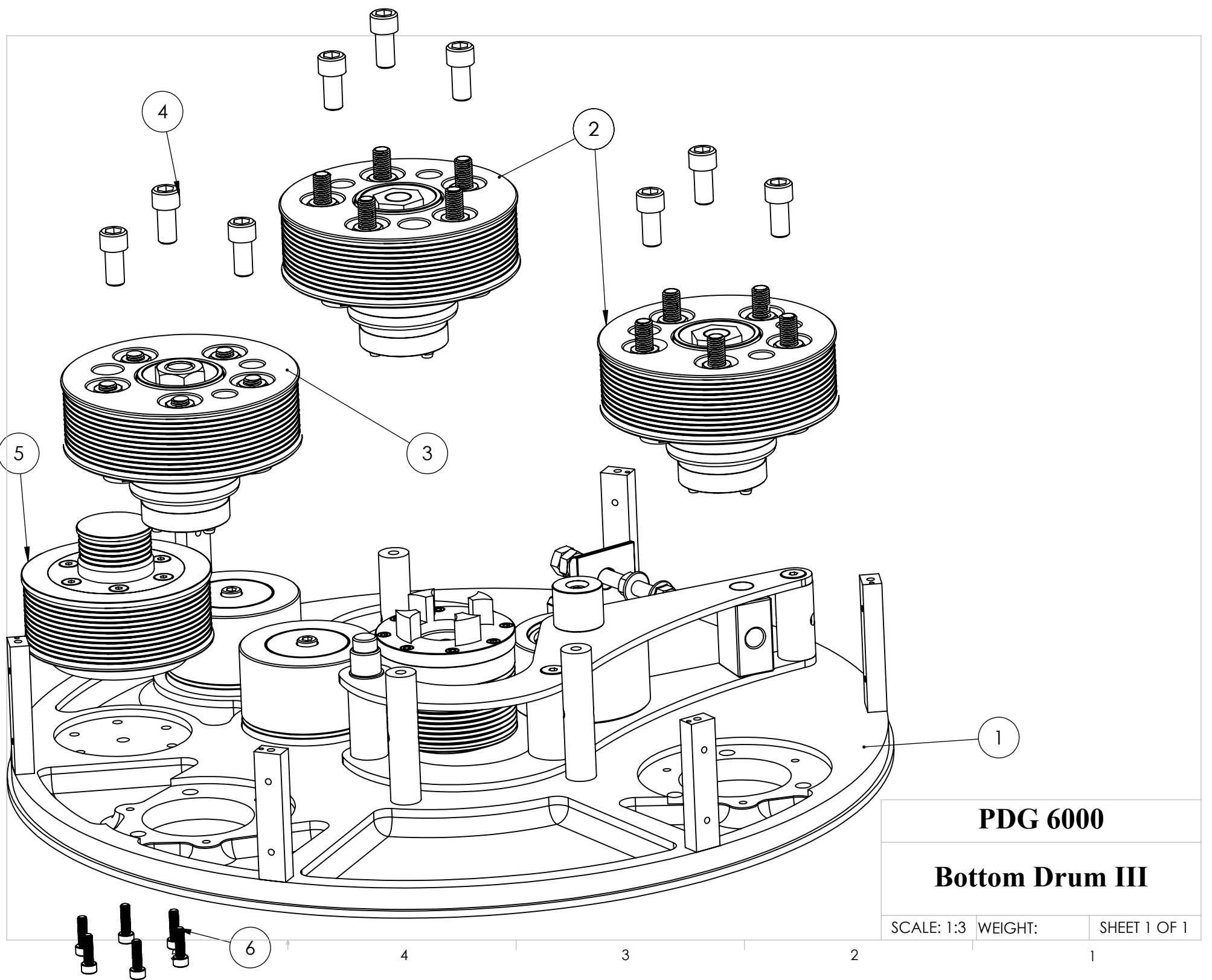
WEIGHT:

SHEET 1 OF 1



**Bottom Drum II**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	SEE PAGE	Bottom Drum I	1
2	PDG.6A006.10	SUBASSEM, MAIN BELT IDLER	2
3	PDG.6A007.10	SUBASSEM, MAIN BELT SPINDLE	1
4	PDG.6A005.00	SUBASSEM, BELT TIGHTENER	1
5	NB.12.116	SCREW, SOCKET HEAD CAP M6-1.0 X 20 12.9 ZINC	12
6	NB.12.111	SCREW, SOCKET HEAD CAP M6 -1.0 X 16 12.9 ZINC	6
7	NB.12.249	SCREW, SOCKET HEAD CAP M12-1.75 X 25 12.9 ZINC	1



**PDG 6000**

**Bottom Drum III**

SCALE: 1:3	WEIGHT:	SHEET 1 OF 1
------------	---------	--------------

6

4

3

2

1

4

2

3

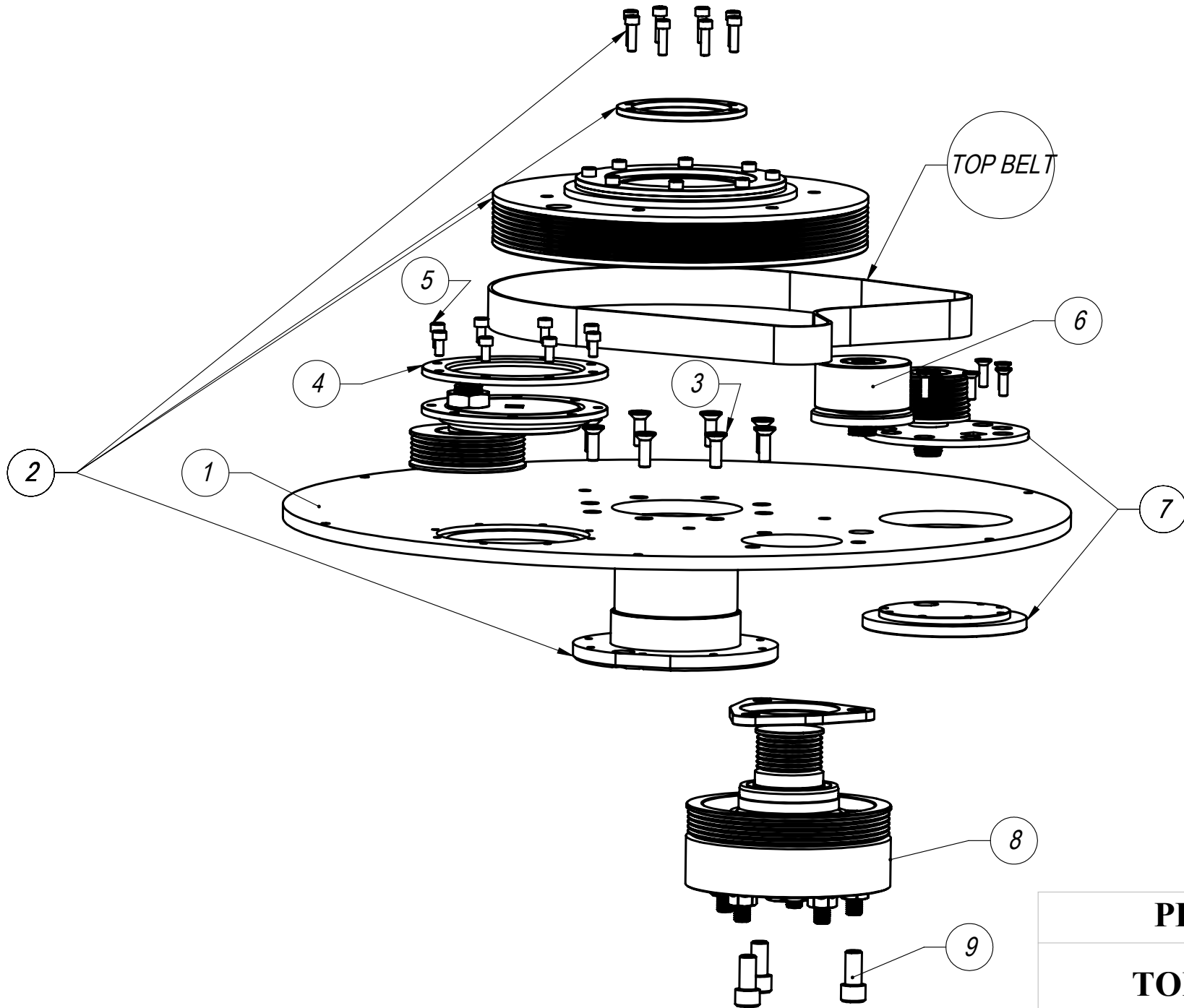
5

1

**Bottom Drum 3**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	SEE PAGE	Bottom Drum 2	1
2	PDG.6A008.00	SUBASSEM, PLANETARY	2
3	PDG.6A008.10	SUBASSEM, PLANETARY, SHORTENED	1
4	NB.12.249	SCREW, SOCKET HEAD CAP M12-1.75 X 25 12.9 ZINC	9
5	PDG.6A009.00	SUBASSEM, PTO	1
6	NB.12.116	SCREW, SOCKET HEAD CAP M6-1.0 X 20 12.9 ZINC	6

Be sure to install the shortened planetary into the hole with a cut-out on either side.



**PDG 6000**

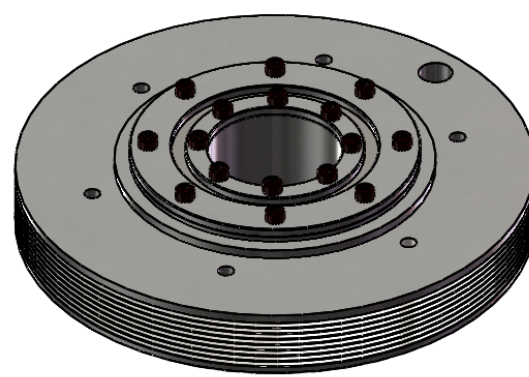
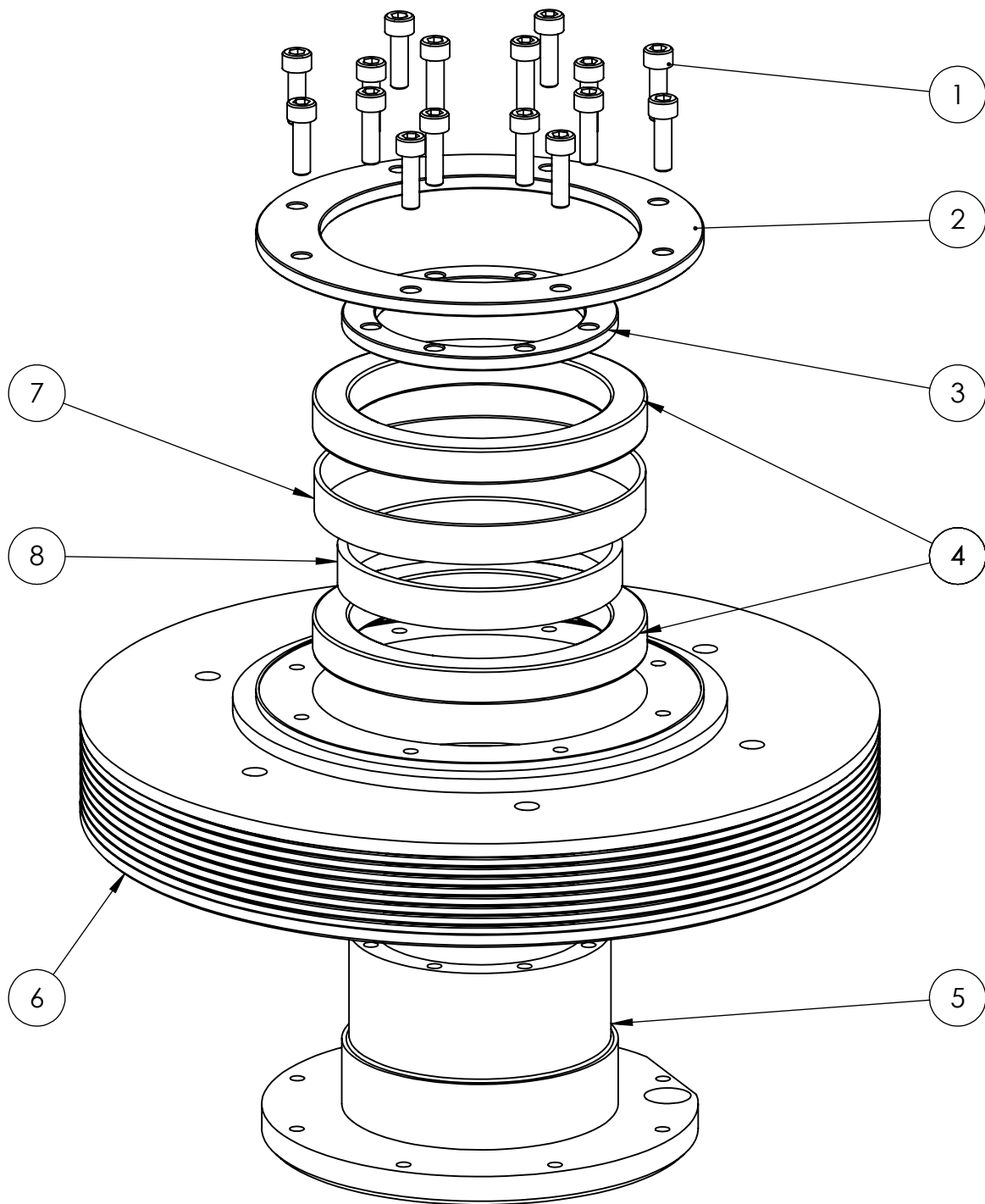
**TOP PLATE**

SCALE: 1:10 WEIGHT:

SHEET 1 OF 1

**Top Drum**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	PDG.60024.00	PLATE, TOP DRUM	1
2	PDG.6A001.00	SUBASSEM, DRUM SHEAVE	1
3	NB.13.116	SCREW, FLAT HEAD SOCKET CAP M6 -1.0 X 20	8
4	PDG.2A001.00	SUBASSEM, PTO TENSIONER	1
5	NB.12.111	SCREW, SOCKET HEAD CAP M6 -1.0 X 16 ZINC	8
6	PDG.6A003.00	SUBASSEM, TOP BELT IDLER	1
7	PDG.6A004.00	SUBASSEM, TOP BELT TENSIONER	1
8	PDG.6A002.00	SUBASSEM, INTERMEDIATE SHEAVE	1
9	NB.12.249	SCREW, SOCKET HEAD CAP M12-1.75 X 25 12.9	3



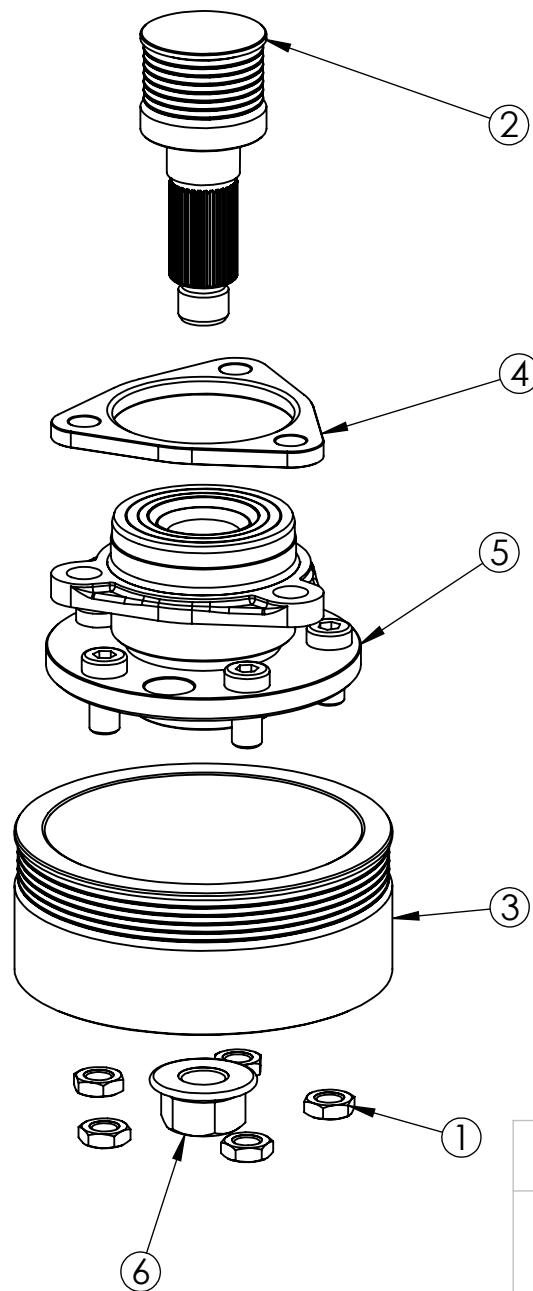
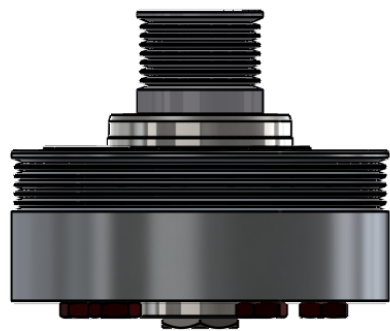
**PDG 6000**

**Drum Sheave**

SCALE: 1:4 | WEIGHT: | SHEET 2 OF 2

<b>Drum Sheave</b>			
<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	NB.12.116	SCREW, SOCKET HEAD CAP M6-1.0 X 20 12.9 ZINC	16
2	PDG.60032.50	RETAINER, OUTER SUSPENSION DUAL BEARING	1
3	PDG.60033.50	RETAINER, INNER SUSPENSION BEARING DUAL	1
4	PDG.20224.00	BEARING, 61818-2RS	2
5	PDG.60030.00	SPINDLE, STATIONARY DRUM	1
6	PDG.60035.00	SHEAVE, STATIONARY DRUM	1
7	PDG.60060.00	SPACER, INNER SUSPENSION BEARING	1
8	PDG.60059.00	SPACER, INNER DRUM SPINDLE BEARING	1
<b>PDG.6A001.00</b>			<b>1</b>
<b>SUBASSEM, DRUM SHEAVE</b>			

These are the parts included in this sub assembly, however some parts must be assembled directly onto the top plate.  
Part numbers 3 and 5 are left out during sub-assembly.



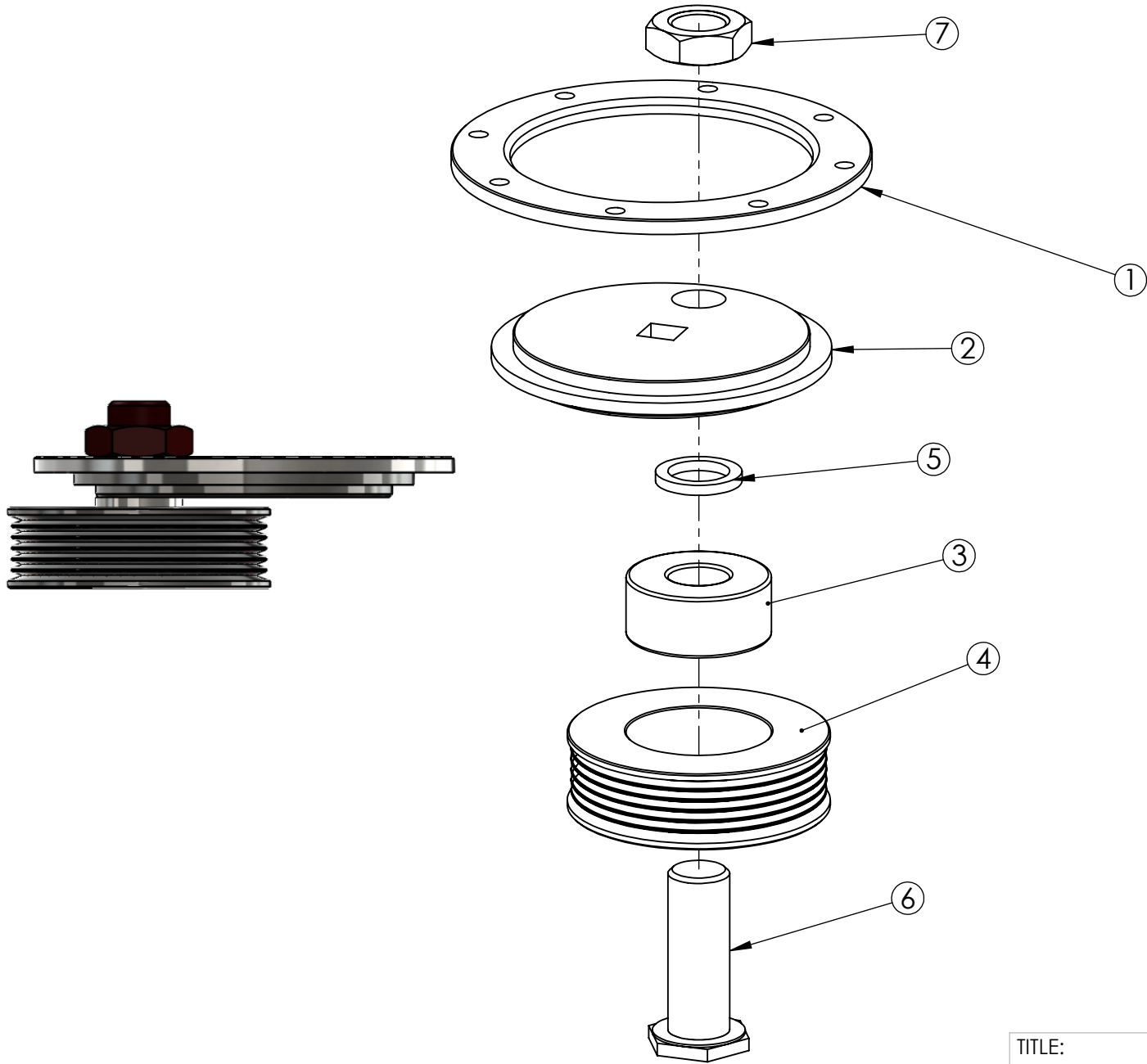
## PDG 6000

### Intermediate Sheave Assembly

SCALE: 1:3 | WEIGHT: 4.47kg | SHEET 1 OF 1



<b>Intermediate Sheave</b>			
<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	NB.20.109	JAM NUT, M12-1.5	5
2	PDG.60026.00	AXLE, INTERMEDIATE	1
3	PDG.60025.00	SHEAVE, INTERMEDIATE	1
4	PDG.20209.00	SPACER, PTO HUB	1
5	PDG.20201.00	HUB	1
6	NB.20.108	NUT, HEX FLANGE M20-2.5	1
<b>PDG.6A002.00</b>			<b>1</b>
<b>SUBASSEM, INTERMEDIATE SHEAVE</b>			



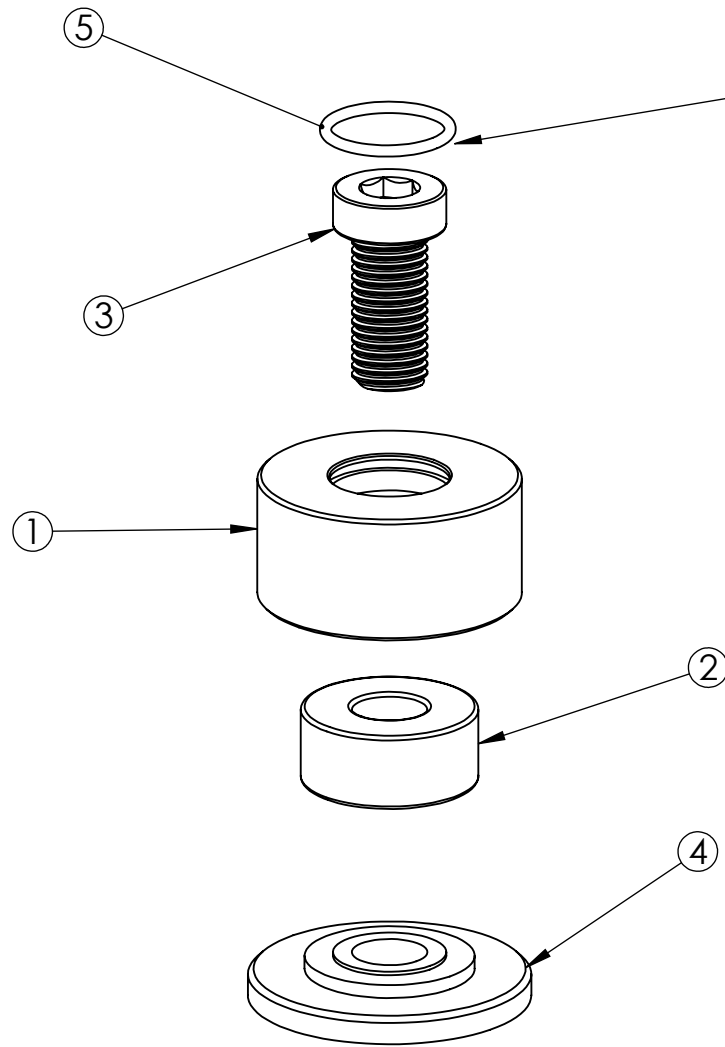
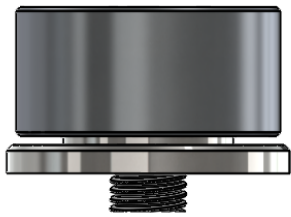
TITLE:  
**PTO Tensioner Assembly**

SCALE: 1:2 | WEIGHT: 1.99kg | SHEET 1 OF 1

**PTO Tensioner Assembly**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	PDG.20203.00	CLAMP, PTO TENSIONER	1
2	PDG.20204.00	PLATE, PTO TENSIONER	1
3	PDG.20220.00	BEARING, 3204-2RS	1
4	PDG.20212.00	IDLER, PTO TENSIONER	1
5	PDG.20211.00	SPACER, PTO TENSIONER IDLER	1
6	PDG.20214.00	SCREW, HEX HEAD MODIFIED M20-2.5 X 55	1
7	NB.20.110	NUT, JAM M20 - 2.5	1

<b>PDG.2A001.00</b>	<b>SUBASSEM, PTO TENSIONER</b>	<b>1</b>
---------------------	--------------------------------	----------



Install O-Ring before inserting bolt and with a dab of grease

## PDG 6000

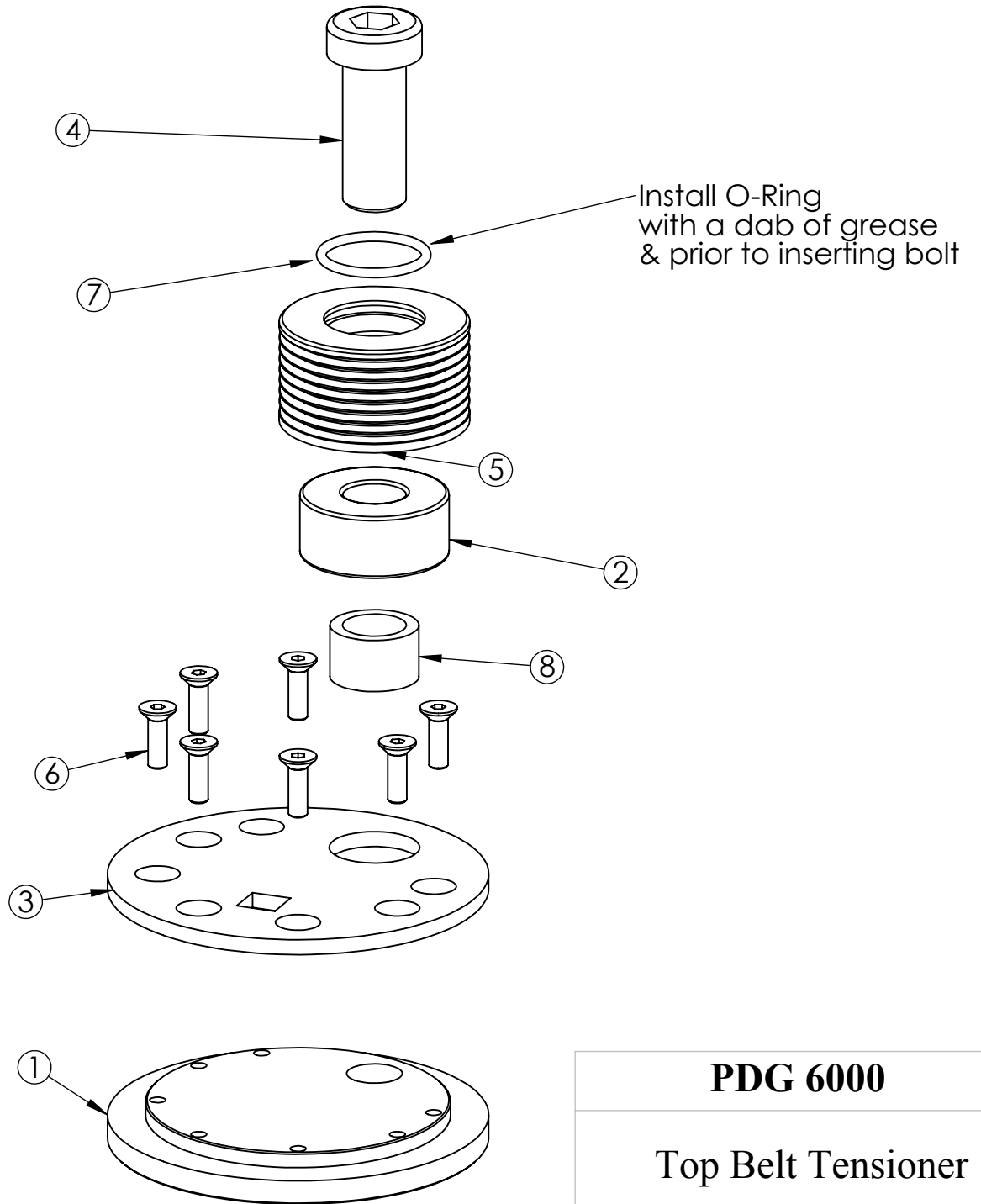
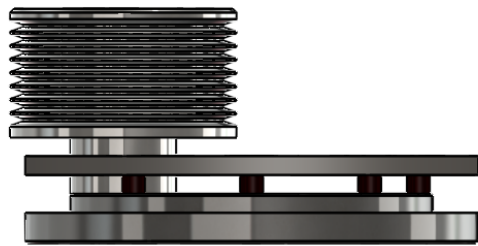
### Top Belt Idler Assembly

SCALE: 1:2 | WEIGHT: .70kg | SHEET 1 OF 1

**Top Idler**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Quantity</b>
1	PDG.60028.00	IDLER, TOP BELT	1
2	PDG.20220.00	BEARING, 3204-2RS	1
3	PDG.60073.00	SCREW, MODIFIED SOCKET HEAD M20-2.5xmodified	1
4	PDG.60027.00	BASE, TOP BELT IDLER	1
5	PDG.20215.00	O-RING, M30	1

<b>PDG.6A003.00</b>	<b>SUBASSEM, TOP BELT IDLER</b>	<b>1</b>
---------------------	---------------------------------	----------



**PDG 6000**

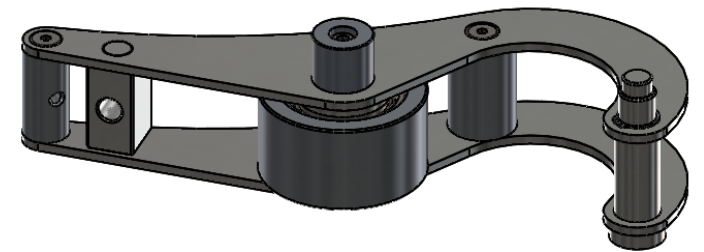
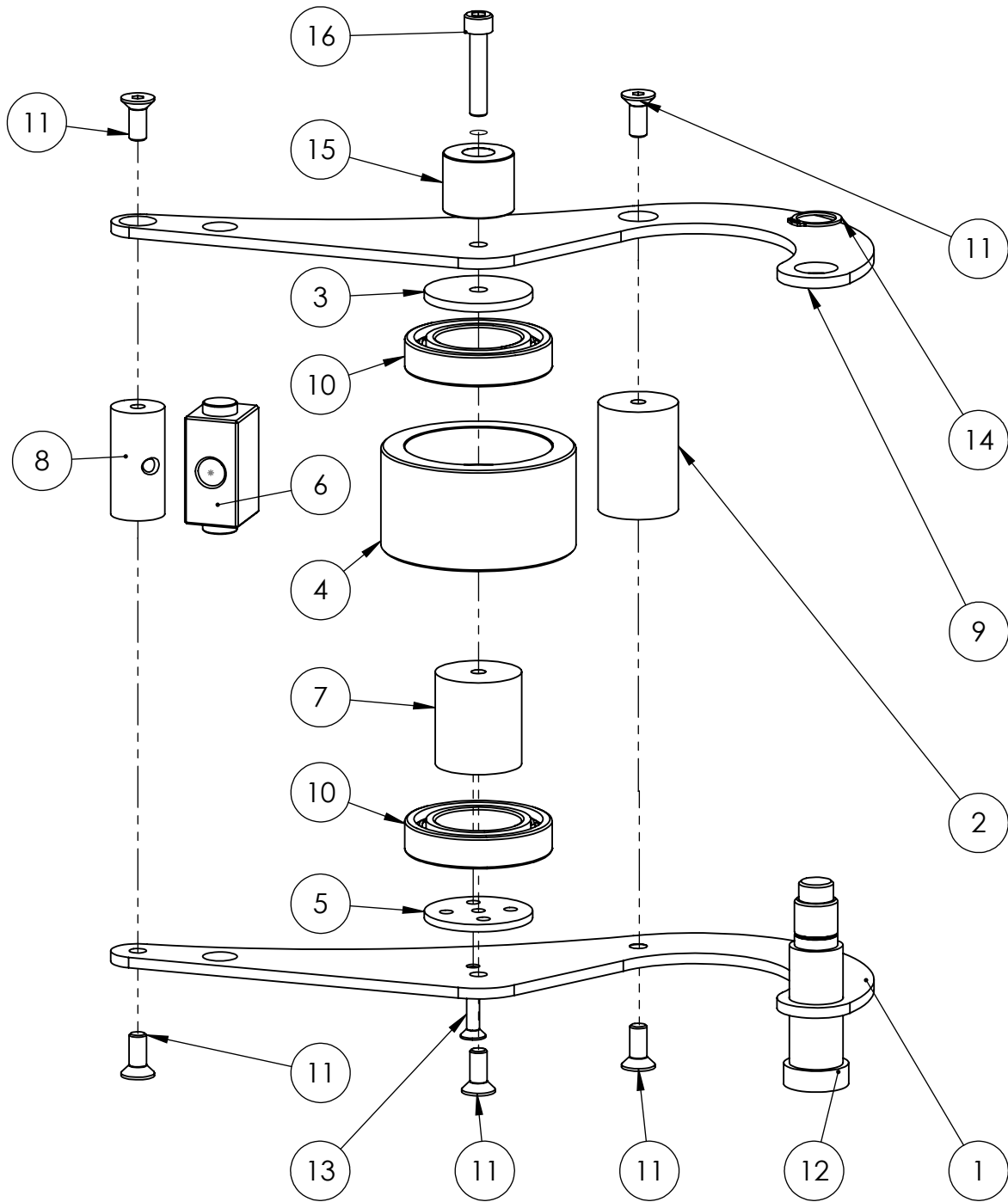
**Top Belt Tensioner**

SCALE: 1:2 | WEIGHT: 1.92Kg | SHEET 1 OF 1

**Top Tensioner**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Quantity</b>
1	PDG.20205.50	PLATE, BELT TENSIONER	1
2	PDG.20220.00	BEARING 3204-2RS	1
3	PDG.20206.50	CLAMP, TOP BELT TENSIONER	1
4	NB.12.263	SCREW, LOW SOCKET HEAD CAP M20-2.5	1
5	PDG.60031.00	IDLER, TOP BELT TENSIONER	1
6	NB.13.116	SCREW, FLAT HEAD SOCKET CAP M6 - 1.0	7
7	PDG.20215.00	O-RING, M30	1
8	PDG.20210.00	SPACER, TOP BELT TENSIONER IDLER	1

<b>PDG.6A004.00</b>	<b>SUBASSEM, TOP BELT TENSIONER</b>	<b>1</b>
---------------------	-------------------------------------	----------



**PDG 6000**

**Belt Tightener**

SCALE: 1:10 WEIGHT: 3.36kg SHEET 1 OF 1

5

4

3

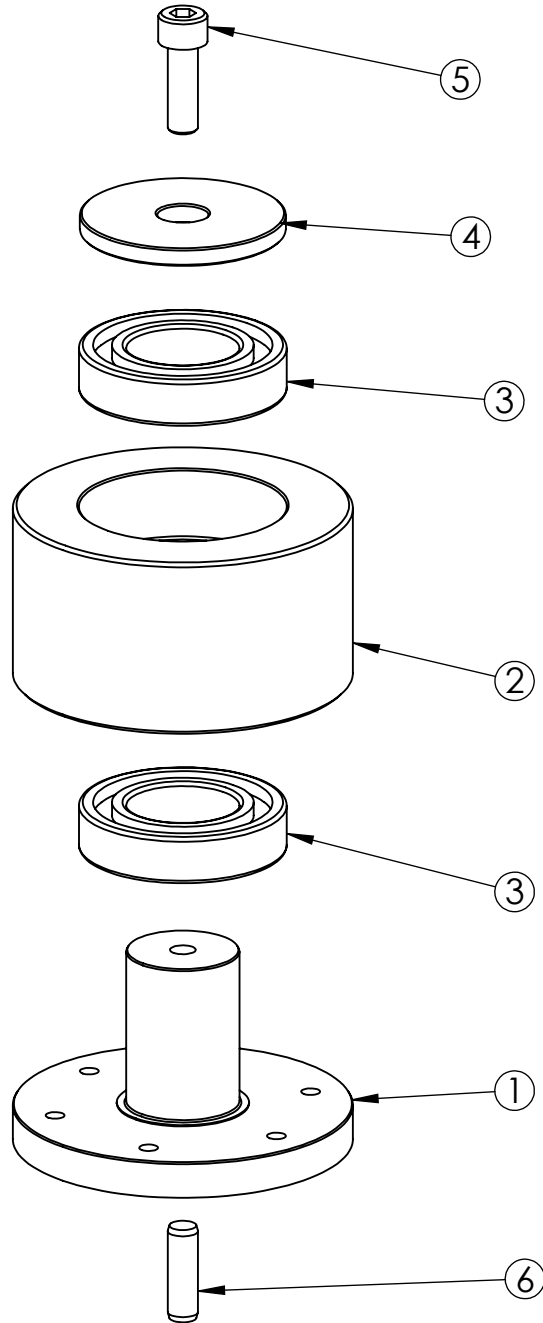
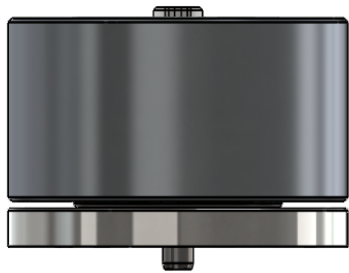
2

1



<b>Belt Tensioner</b>			
<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	PDG.60013.10	ARM, LOWER TENSION	1
2	PDG.60015.10	STANCION, HEAVY MAIN TENSIONER	1
3	PDG.60016.00	SPACER, UPPER TENSIONER SPINDLE	1
4	PDG.60017.00	IDLER, MAIN TENSIONER	1
5	PDG.60020.00	SPACER, LOWER TENSIONER SPINDLE	1
6	PDG.60022.00	GRUDGEON, MAIN TENSIONER	1
7	PDG.60018.10	SPINDLE, MAIN TENSIONER IDLER	1
8	PDG.60019.00	STANCION, MAIN TENSIONER LIGHT	1
9	PDG.60014.10	ARM, UPPER TENSION	1
10	PDG.20217.00	Bearing 6008-2RS	2
11	NB.13.218	SCREW, FLAT HEAD SOCKET CAP M8 -1.25 X 20	5
12	PDG.60012.10	SPINDLE, MAIN TENSIONER	1
13	NB.13.116	SCREW, FLAT HEAD SOCKET CAP M6 -1.0 X 20	1
14	NB.40.104	M20 Retaining ring	1
15	PDG.60016.01	Upper Tensioner Upper Spacer	1
16	NB.12.218	M8x1.25x40 SHCS	1
<b>PDG.6A005.10</b>			<b>1</b>
<b>SUBASSEM, BELT TIGHTENER</b>			

This assembly requires the use of Bottom Plate PDG.60023.10 on Bottom Drum I.



**PDG 6000**

**Main Belt Idler**

SCALE: 1:2 | WEIGHT: 1.39kg | SHEET 1 OF 1

5

4

3

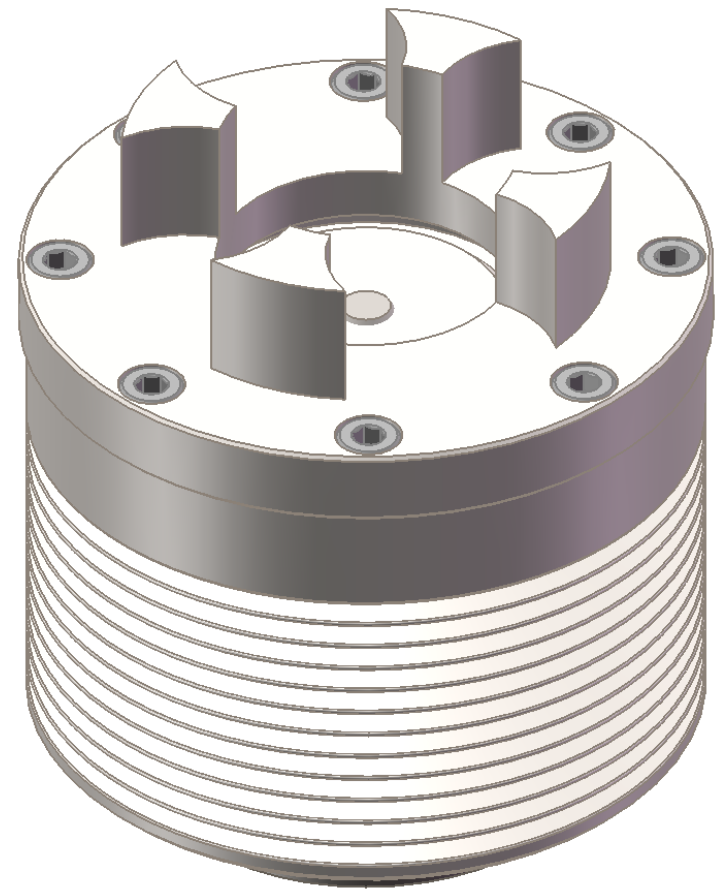
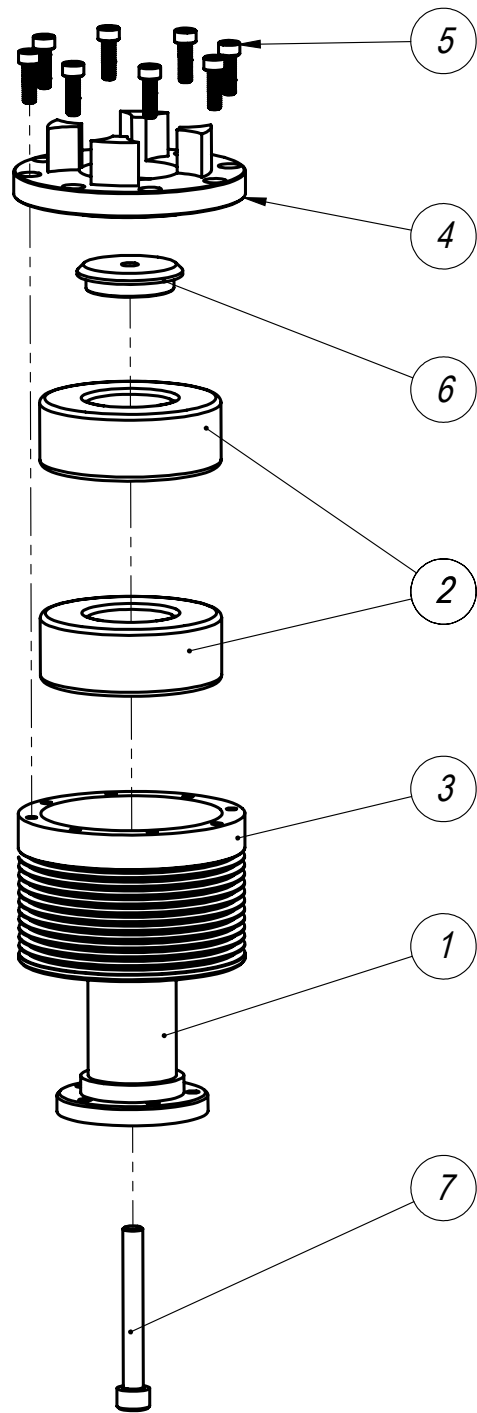
2

1

**Main Idler**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Quantity</b>
1	PDG.60008.00	SPINDLE, MAIN BELT IDLER	1
2	PDG.60007.00	IDLER, MAIN BELT	1
3	PDG.20221.00	BEARING 6006-2RS	2
4	PDG.60009.00	RETAINER, IDLER BEARING	1
5	NB.12.219	SCREW, SOCKET HEAD CAP M8-1.25X25	1
6	NB.50.143	PIN, HARDENED M8 X 26	1

<b>PDG.6A006.00</b>	<b>SUBASSEM, MAIN BELT IDLER</b>	<b>2</b>
---------------------	----------------------------------	----------



**PDG 6000**

**Main Spindle**

SCALE: 1:3

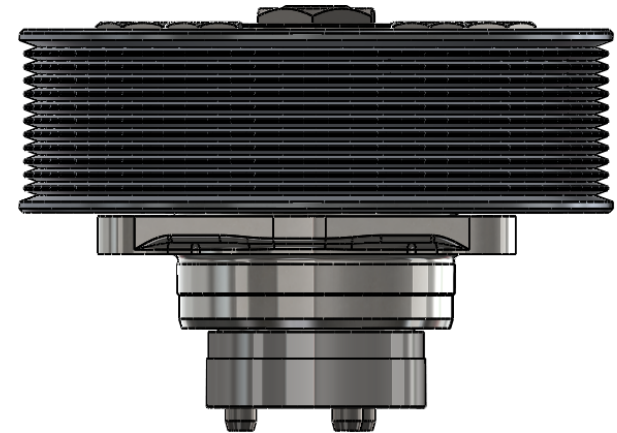
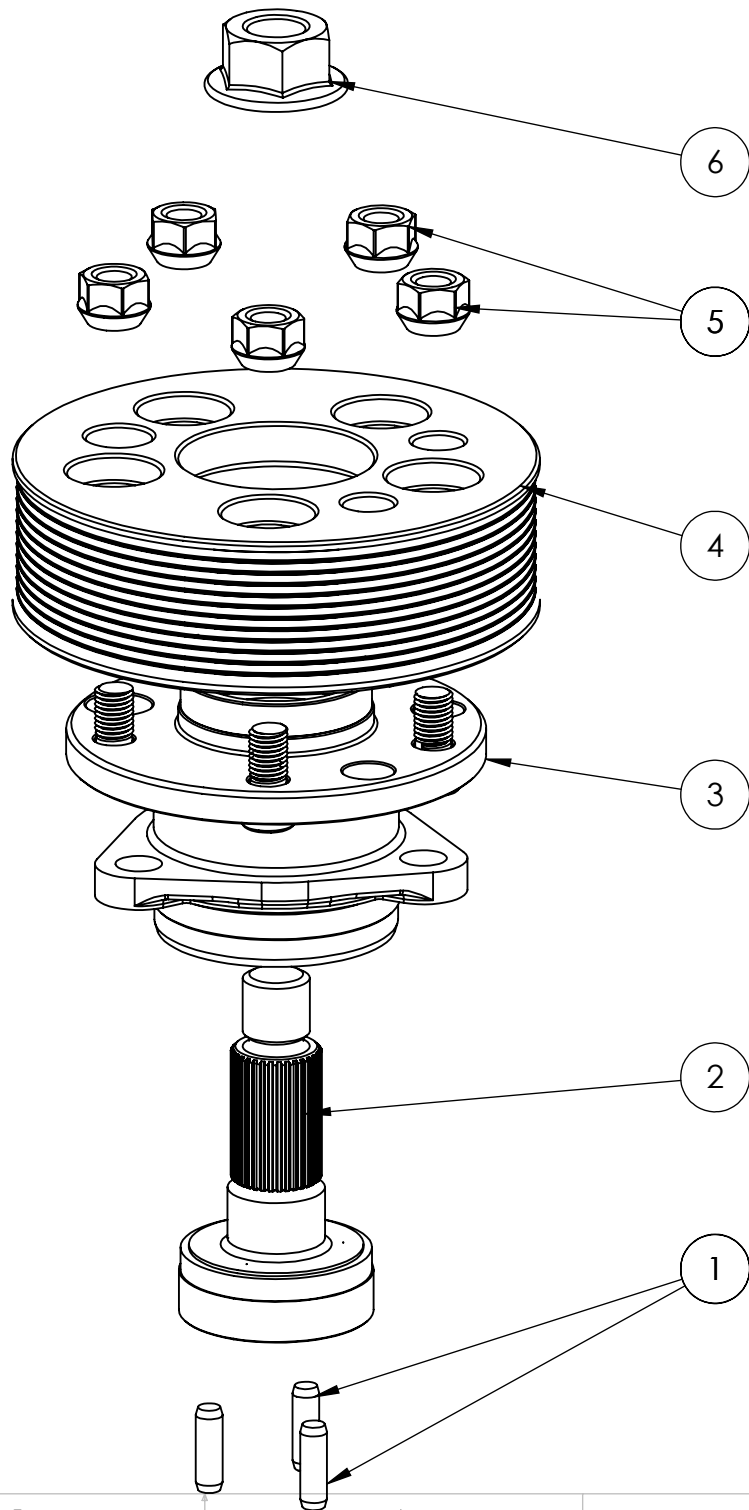
WEIGHT:

SHEET 1 OF 1

**Main Spindle V2**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	PDG.60005.10	SPINDLE, MAIN DRIVE SHEAVE	1
2	PDG.20216.00	BEARING, 5207-2RS	2
3	PDG.60004.60	SHEAVE, MAIN DRIVE	1
4	PDG.60039.60	CAP, MAIN SHEAVE	1
5	NB.12.090	SCREW, SOCKET HEAD CAP M5 -0.8 X 16	8
6	PDG.60005.11	Retainer, Bearing	1
7	NB.12.222	M8x1.25x65 SHCS	1

<b>PDG.6A007.00</b>	<b>Main Spindle</b>	<b>1</b>
---------------------	---------------------	----------



**PDG 6000**

**Planetary Assembly**

SCALE: 1:10 WEIGHT: 4.36kg SHEET 1 OF 1

5

4

3

2

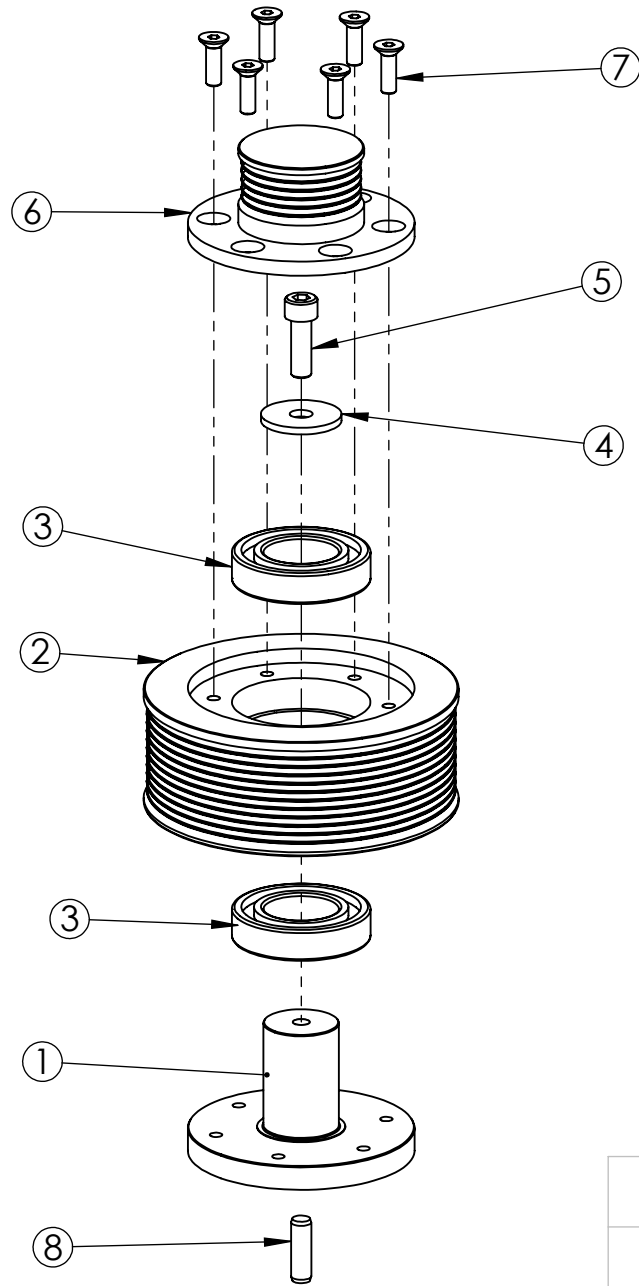
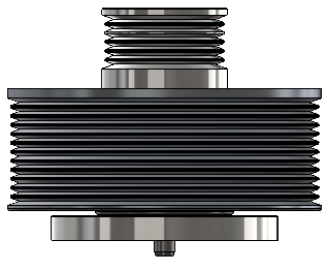
1

<b>Planetary Assembly (Short)</b>			
<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	NB.50.143	PIN, HARDENED M8 X 26	3
2	PDG.20200.00	AXLE, PLANETARY 40MM (MODIFIED)	1
3	PDG.60029.00	HUB WITH SHORT STUDS M32	1
4	PDG.60001.00	SHEAVE, PLANETARY	1
5	NB.20.109	NUT, JAM M12-1.5 (Lugnuts displayed are for a 'future' revision)	5
6	NB.20.108	NUT, HEX FLANGE M20-2.5 (MODIFIED)	1

<b>PDG.6A008.10</b>	<b>Planetary Assembled Short</b>	<b>1</b>
---------------------	----------------------------------	----------

1	NB.50.143	PIN, HARDENED M8 X 26	3
2	PDG.20200.00	AXLE, PLANETARY 40MM	1
3	PDG.20201.00	HUB	1
4	PDG.60001.00	SHEAVE, PLANETARY	1
5	NB.20.109	NUT, JAM M12-1.5 (Lugnuts displayed are for a 'future' revision)	5
6	NB.20.108	NUT, HEX FLANGE M20-2.5	1

<b>PDG.6A008.00</b>	<b>Planetary Assembled</b>	<b>2</b>
---------------------	----------------------------	----------



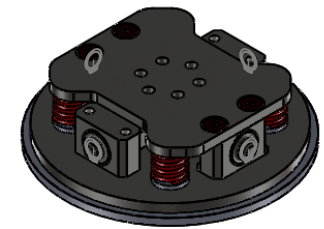
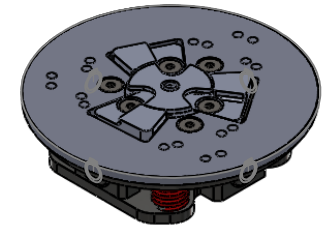
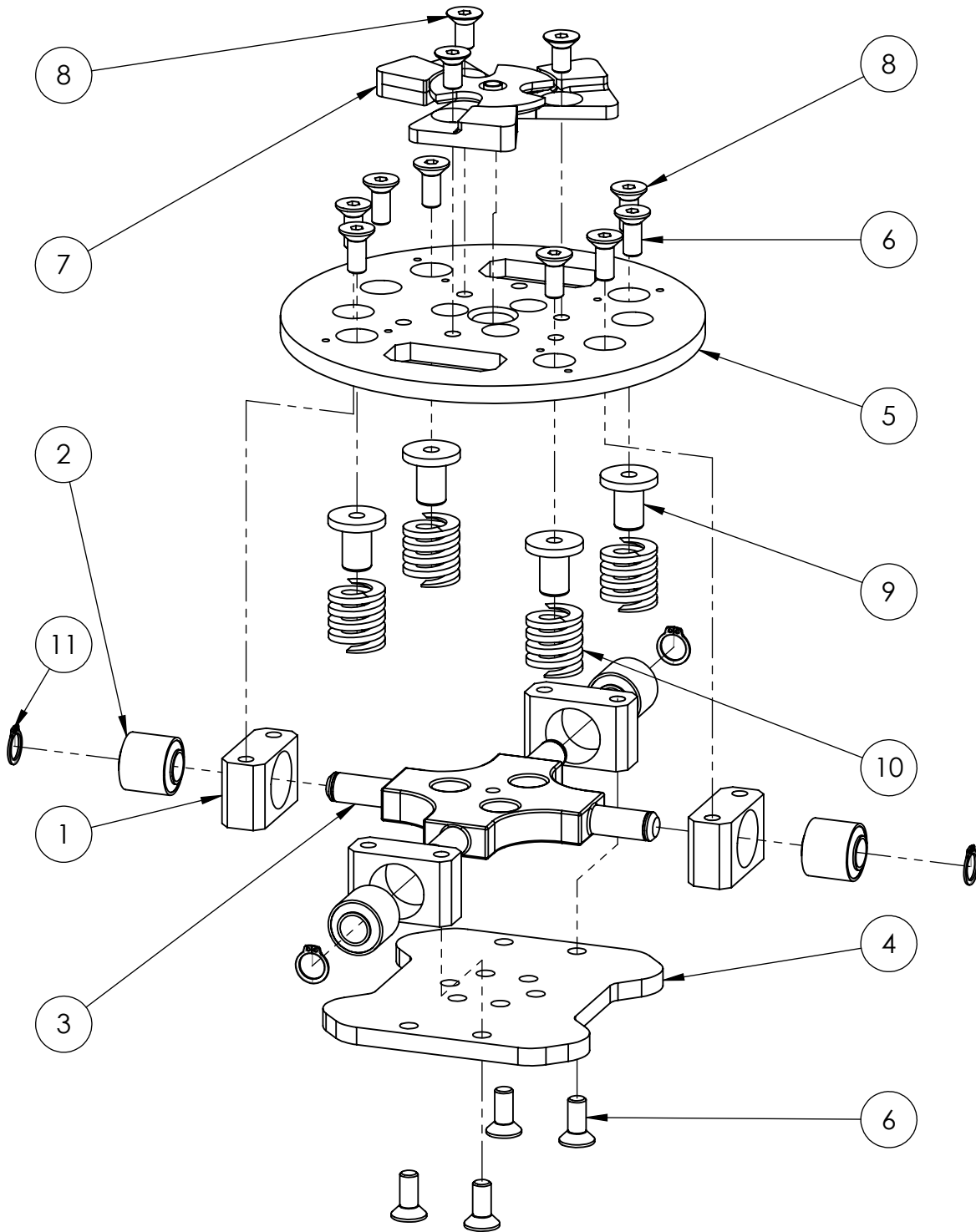
**PDG 6000**

**PTO Assembly**

SCALE: 1:3 | WEIGHT: 2.62kg | SHEET 1 OF 1



<b>PTO Assembly</b>			
<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty.</b>
1	PDG.60006.00	PTO Sheave Spindle	1
2	PDG.60002.00	PTO Hub Sheave	1
3	PDG.20221.00	Bearing 6006-2RS	2
4	NB.30.112	M8X35X2.5 Fender Washer	1
5	NB.12.219	M8-1.25x25 Socket Head Cap Screw	1
6	PDG.60003.00	PTO Drive Sheave	1
7	NB.13.116	M6-1.0x20 Socket Flat Head Cap Screw	6
8	NB.50.143	Hardened Pin M8x26	1
<b>PDG.6A009.00</b>			<b>PTO Assembled</b>
			<b>1</b>



**PDG 6000**

**Flex Head**

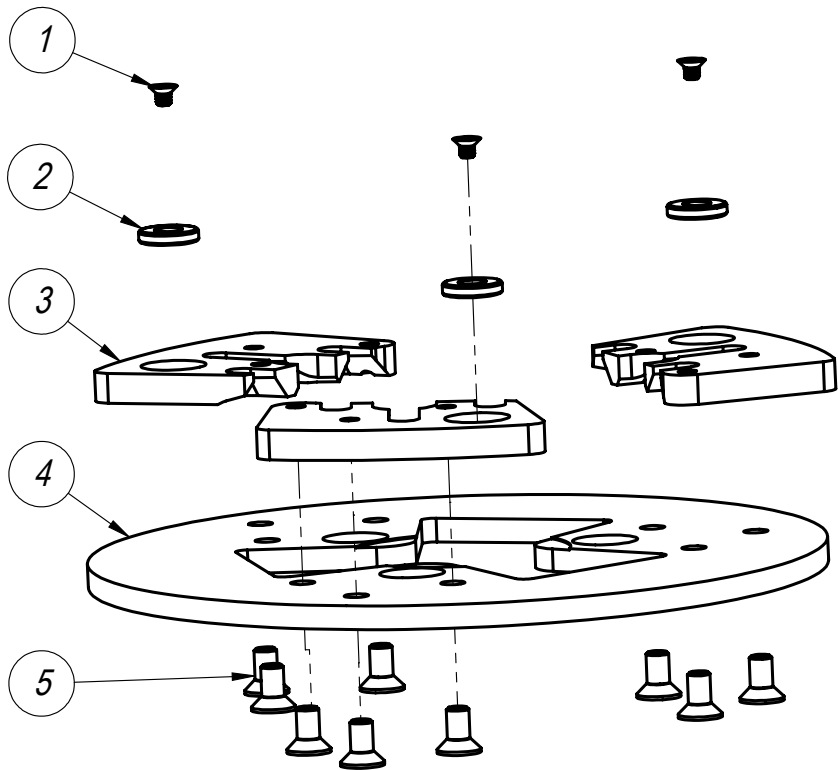
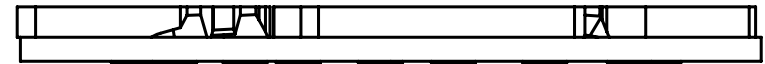
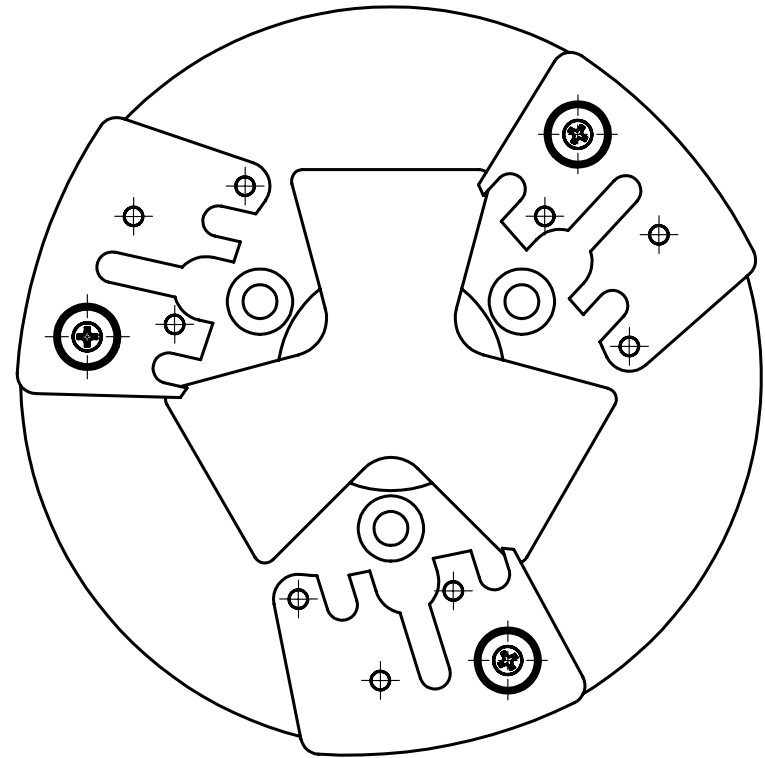
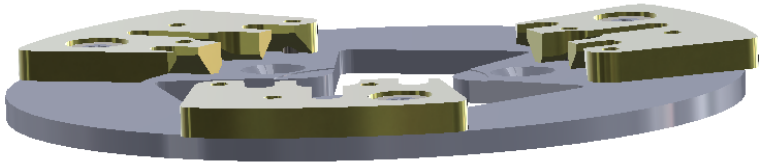
SCALE: 1:10 WEIGHT: 3.81

SHEET 1 OF 1

**PDG 6000 FLEX HEAD**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Quantity</b>
1	PDG.20103.00	YOKE, SUSPENSION	4
2	PDG.20109.00	BUSHING, YOKE	4
3	PDG.20102.01	ELEMENT, CENTER STUDDED	1
4	PDG.20100.50	PLATE, DRIVING	1
5	PDG.20101.01	PLATE, DRIVEN	1
6	NB.13.218	SCREW, FLAT HEAD SOCKET CAP M8 -1.25 X 20	8
7	PDG.20104.25	LOCK, SHAMROCK PLATE ASSEM	1
8	NB.13.216	SCREW, FLAT HEAD SOCKET CAP M8-1.25 X 16	7
9	PDG.20106.25	POST, SPRING	4
10	PDG.20106.52	SPRING, DIE BLUE MEDIUM	4
11	NB.40.113	RING, EXTERNAL 1/2"	4

<b>PDG.6A010.00</b>	<b>FLEX HEAD, WITH BLUE SPRING</b>	<b>3</b>
---------------------	------------------------------------	----------



**PDG 6000**

**Tooling Plate**

SCALE: 1:2

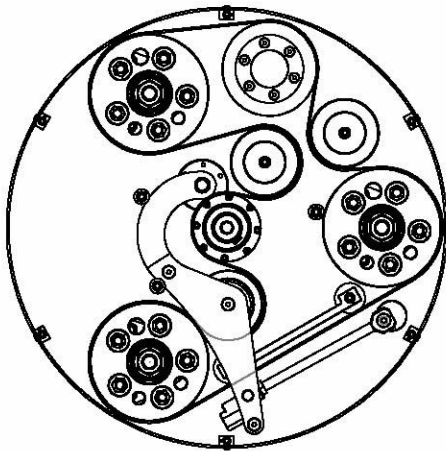
WEIGHT:

SHEET 1 OF 1

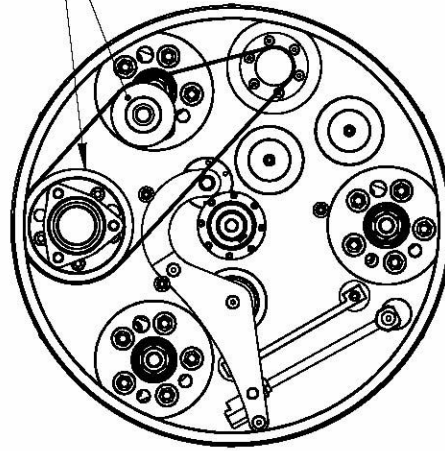
**Tooling Plate**

<b>Item No.</b>	<b>Part No.</b>	<b>Description</b>	<b>Quantity</b>
1	NB.13.110	SCREW, M4 X 6 FLAT HEAD PHILLIPS S/S	3
2	PDG.20295.00	MAGNET, 5/8" OD X 1/8" THICK WITH CS HOLE NORTH	3
3	WHOL.904132	QCS METAL BOND ADAPTERS FOR MAGNET	3
4	PDG.60071.00	PLATE, TOOLING 6000 /PDG6K	1
5	NB.13.118	SCREW, FLAT HEAD SOCKET CAP M6 -1.0 X 12 ZINC	9

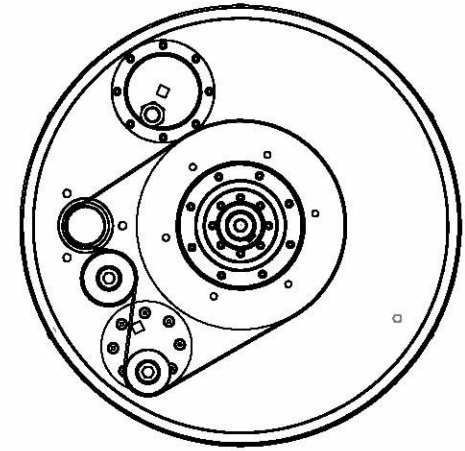
THESE SHEAVES ARE  
LOCATED ON THE TOP  
PLATE ASSEMBLY



Main Belt  
PDG.60056.00



PTO Belt  
PDG.60057.00



Top Belt  
PDG.60058.00

**PDG 6000**

**Belt Paths**

SCALE: 1:10 WEIGHT: 90kg SHEET 1 OF 1



## TECHNICAL DATA

Item Number	PDG6000.01 (230 v) PDG6000.03 (460 v)  PDG6000.02 (380 v) <i>*European version</i>
Required Circuit	3Ø, 230 V, 40 Amp 3Ø, 460 V, 30 Amp <b>3Ø, 380 V, 30 Amp</b> <i>*Only for European machines</i>
Motor Output	7.5 kw, 10 HP
RPM	Variable Speed 600 - 1750
Grinding Pressure	267 - 330 lbs 122 - 149 kg
Grinding Width	25 in Grinding Path 63.5 cm
Weight	480 lbs 218 kg
Dimensions	53x26x44 in (LxWxH) 134.5x66x11.5 cm

## 7.2 List of fault or alarm indications

Operation Panel Indication		Name	
Error message	<b>E---</b>	E--	Faults history
	<b>HOLD</b>	HOLD	Operation panel lock
	<b>Er 1 to Er 4</b>	Er1 to 4	Parameter write error
	<b>Err.</b>	Err.	Inverter reset
Warnings	<b>OL</b>	OL	Stall prevention (overcurrent)
	<b>oL</b>	oL	Stall prevention (overvoltage)
	<b>rb</b>	RB	Regenerative brake prealarm
	<b>TH</b>	TH	Electronic thermal relay function prealarm
	<b>PS</b>	PS	PU stop
	<b>MT</b>	MT	Maintenance signal output
	<b>UV</b>	UV	Undervoltage
Alarm	<b>Fn</b>	FN	Fan fault
Fault	<b>E.OC 1</b>	E.OC1	Overcurrent trip during acceleration
	<b>E.OC 2</b>	E.OC2	Overcurrent trip during constant speed
	<b>E.OC 3</b>	E.OC3	Overcurrent trip during deceleration or stop
	<b>E.OV 1</b>	E.OV1	Regenerative overvoltage trip during acceleration
	<b>E.OV 2</b>	E.OV2	Regenerative overvoltage trip during constant speed
	<b>E.OV 3</b>	E.OV3	Regenerative overvoltage trip during deceleration or stop
	<b>E.THT</b>	E.THT	Inverter overload trip (electronic thermal relay function)
	<b>E.THM</b>	E.THM	Motor overload trip (electronic thermal relay function)
	<b>E.FIN</b>	E.FIN	Fin overheat

Operation Panel Indication		Name
<b>E.I LF</b>	E.ILF *	Input phase loss
<b>E.OLT</b>	E.OLT	Stall prevention
<b>E. bE</b>	E. BE	Brake transistor alarm detection
<b>E. GF</b>	E.GF	Output side earth(ground) fault overcurrent protection at start
<b>E. LF</b>	E.LF	Output phase loss
<b>E.OHT</b>	E.OHT	External thermal relay operation
<b>E.OP 1</b>	E.OP1	Communication option fault
<b>E. 1</b>	E. 1	Option fault
<b>E. PE</b>	E.PE	Parameter storage device fault
<b>E.PE 2</b>	E.PE2 *	Parameter storage device fault
<b>E.PUE</b>	E.PUE	PU disconnection
<b>E.RET</b>	E.RET	Retry count excess
<b>E. 6 / E. 7 / E.CPU</b>	E. 6 / E. 7 / E.CPU	CPU fault
<b>E.I OH</b>	E.IOH *	Inrush current limit circuit fault
<b>E.AIE</b>	E.AIE *	Analog input fault
<b>E.USB</b>	E.USB *	USB communication fault
<b>E.MB 4 to E.MB 7</b>	E.MB4 to E.MB7	Brake sequence fault
<b>E. 13</b>	E.13	Internal circuit fault

\* If a fault occurs when using with the FR-PU04, "Fault 14" is displayed on the FR-PU04.



### Display Screen Error Code Index

FAULT CODE	DRIVE DISPLAY	DESCRIPTION
0	-	No fault
16	E.OC1	Overcurrent trip during acceleration
17	E.OC2	Overcurrent trip during constant speed
18	E.OC3	Overcurrent trip during deceleration or stop
32	E.OV1	Regenerative overvoltage trip during acceleration
33	E.OV2	Regenerative overvoltage trip during constant speed
34	E.OV3	Regenerative overvoltage trip during deceleration or stop
48	E.THT	Inverter overload trip (electronic thermal relay function)
49	E.THM	Motor overload trip (electronic thermal relay function)
64	E.FIN	Fin overheat
82	E.ILF	Input phase loss
96	E.OLT	Stall prevention
112	E.BE	Brake transistor alarm detection
128	E.GF	Output side earth (ground) fault overcurrent at start
129	E.LF	Output phase loss
144	E.OHT	External thermal relay operation
145	E.PTC	PTC thermistor operation
176	E.PE	Parameter storage device fault (control circuit board)
177	E.PUE	PU disconnection
178	E.RET	Retry count excess
192	E.CPU	CPU fault
196	E.CDO	Output current detection value exceeded
197	E.IOH	Inrush current limit circuit fault
199	E.AIE	Analog input fault
201	E.SAF	Safety circuit fault



Prior to any repair work on the machine and its drives, secure the machine against unintentional powering on.

<b>Problem</b>	<b>Possible cause</b>	<b>Remedy</b>
Excessive Vibration	Imbalance due to worn or broken grinding tools. Screws worked loose on the grinding disc.	Replace all worn or broken parts.  Tighten the countersunk head screws on the grinding disc.
Unusual noises	Defective bearing. Wrong tension of the V- belt.  Defective motor bearing. Debris deposit on the coupling.	Check the bearing on the axle drive shaft and replace if necessary.  Check the tension of the V-belt; replace the V-belt if necessary.  Change the motor. Clean the coupling.
Reduced or no grinding performance	Grinding tools have reached the maximum permissible wear. Inappropriate grinding tool for the application.  Not enough tension on the V-belt.	Replace the worn parts.  Replace the grinding tools with appropriate tools for the surface to be treated.  Re-tension the V-belt.

Work on electrical equipment may only be undertaken by a skilled electrician or by a trained person under the supervision of an electrician, as well as in accordance with the local electrical engineering regulations.



Prior to any repair work on the machine and its drives, secure the machine against unintentional powering on.



<b>Problem</b>	<b>Possible cause</b>	<b>Remedy</b>
Motor does not switch on	Missed phase Defective component	Check the main power supply and switch on again Replace defective component
Motor triggers while running	Motor protections switch triggered because of overload Motor has defect	Reduce additional load  Check the motor
Screen Goes Blank	Lost Phase	Check for 3 legs power
No voltage reading on Display	Loose connection	Check pin connectors on interface



## MANUFACTURER'S WARRANTY POLICY

### **Included in this warranty are the following pieces of equipment:**

Planetary Diamond Grinders: PDG 8000, PDG 6000, PDG 5000, Edge Pro 180  
Dust Extractors: Bull 1250, Bull 300, Bull 45  
Scarifiers: SC12E, SC10E, SC8E

### **Our Commitment to our customer:**

SASE Company ("SASE") equipment is warranted to be free of defects in workmanship and materials for a period of one (1) year from original date of purchase. In the event that you should have a claim SASE shall repair, replace or remedy the defective parts resulting from the faulty design, materials or workmanship. Note: This warranty is only valid for equipment either sold by SASE or by an authorized wholesaler or distributor.

### **Limitations:**

- Warranty does not apply to cosmetic damage, damage due to lightning, electrical surges, fire, flood, or other acts of God, accident, misuse, abuse, repair or alteration by other than factory service (unless service center was approved in writing by SASE), negligence, or improper or neglected maintenance as recommended by SASE.
- Common wear parts, such as belts, bearings, seals, filters, dust skirts, wheels, etc., are exempt from warranty.
- SASE is not responsible for loss of income or down time as a result faulty design, materials or workmanship.
- Warranty coverage is valid once a warranty registration card is filled out and returned to SASE.
- A \$100 labor charge may be assessed on the items returned for warranty repair in which no fault is found. Freight charges and associated fees will then become the responsibility of the customer in such an instance.
- Damages which are caused during transportation are not covered under warranty. Such damage claims should be filed with the freight carrier.

### **Claims:**

In the unlikely event that you should experience a defect please contact your SASE representative or a SASE service technician by calling 1.800.522.2606. Please have all pertinent information readily available such as, invoice with date of purchase, model and serial number, and an explanation of the issue. SASE will respond immediately with a corrective action.

Freight responsibility for approved warranty claims:

If the piece of equipment was purchased within 90 days of warranty claim, SASE will arrange for ground freight and will assume all ground freight charges to send the customer the parts required or to send the equipment to an authorized SASE repair center. This includes inbound and outbound ground freight and all fees (duties, fuel surcharges) associated with the shipment.

If the piece of equipment was purchased beyond 90 days and prior to one (1) year of warranty claim, SASE will cover 50% of all ground freight charges, including inbound and outbound freight and all fees (duties, fuel surcharges) associated with the shipment.



## PRODUCT & WARRANTY REGISTRATION

WARRANTY IS VOID IF NOT RETURNED AND REGISTERED WITH SASE WITHIN 30 DAYS OF PURCHASE

COMPANY \_\_\_\_\_

NAME AND TITLE \_\_\_\_\_

STREET ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_ COUNTRY \_\_\_\_\_

PHONE \_\_\_\_\_ EMAIL \_\_\_\_\_

DATE OF PURCHASE \_\_\_\_\_ SERIAL NUMBER \_\_\_\_\_

INVOICE NUMBER OF PURCHASE \_\_\_\_\_

PDG 8000  PDG 6000  PDG 5000  EDGE PRO 180  SC8E

SC10E  SC12E  BULL 1250  BULL 300  BULL 45

PLEASE FILL OUT IN FULL AND SUBMIT TO: SASE COMPANY 2475 STOCK CREEK BLVD  
ROCKFORD TN, 37853 FAX: 865.745.4110 EMAIL: JohnA@SASECompany.com

QUESTIONS? CALL 800.522.2606



Corporate Office  
26423 79<sup>th</sup> Ave South  
Kent, WA 98032-7321  
1.800.522.2606 (P)  
1.877.762.0748 (F)  
www.SASECompany.com  
sales@SASECompany.com

## **Certificate of Declaration and Conformity:**

**(Applies to Europe only)**

### **SASE Planetary Diamond Grinders**

PDG 4500	230 volt 50/60 HZ single phase	8464.20.0120
PDG 6000	460 volt 50/60 HZ three phase	8464.20.0120
PDG 6000	380 volt 50/60 HZ three phase	8464.20.0120
PDG 6000	230 volt 50/60 HZ three phase	8464.20.0120
PDG 8000	230 volt 50/60 HZ three phase	8464.20.0120
PDG 8000	380 volt 50/60 HZ three phase	8464.20.0120
PDG 8000	460 volt 50/60 HZ three phase	8464.20.0120

**SASE Company hereby certifies that the above listed Planetary Diamond Grinders are classified within the following EU directives of conformity for CE markings:**

EU Machinery directive 2006/42/EC

EU Low voltage directive 2006/95/EC

EU Electromagnetic compatibility directive 2004/108/EC

and further conform with the following EU Harmonized Standards:

EN 60745-2-3:2007 EN 60204-1:2006 + A1:2009

EN 6100-6-3:2007 EN 61000-6-1:2007