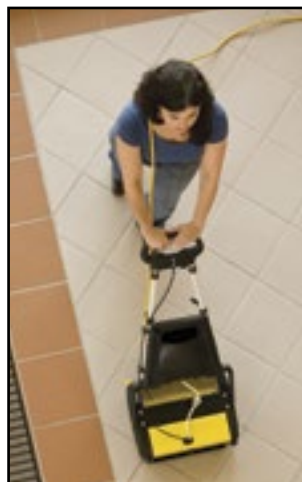


Call us today for information on the Tornado Line of Scrubbers  
**The BR 13/1 Family of Compact Automatic Scrubbers**



The Family of BR 13/1 Scrubbers are easier on the indoor environment and make cleaning so simple, it is actually enjoyable. In-house facility managers, building engineers, housekeepers and BSCs will appreciate the BR 13/1 Scrubber's superior flexibility, advanced productivity and reduced environmental impact. Where high quality floor cleaning performance, ease of use and durability are called for, the BR 13/1 Family of Scrubbers are the most versatile and effective answer for any hard or soft floor surface.

### Low-Moisture Cleaning with Cylindrical Brush

Environmentally preferred, the BR 13/1 Scrubbers offer one of the best cleaning options — cylindrical brush technology. The use of cylindrical brush technology uses 30% less water, delivering low moisture cleaning design and deep scrubbing through concentrated brush speeds of 650 RPMs — over three times higher than the speed of comparable rotary brush automatic scrubbers. Cylindrical brushes provide 4-6 times more contact pressure than rotary brush scrubbing, handling any flat floor surface with ease, as well as uneven surfaces such as quarry tile, paver bricks, and raised rubber disc flooring. The BR 13/1 Family of Scrubbers can also be used for cleaning escalators and moving walkways. For even greater flexibility, the units can be used on commercial-grade carpeting and entrance matting in conjunction with low-moisture, carpet mill approved encapsulation carpet cleaning. Producing minimal impact on the environment, waste is reduced as cylindrical brushes far outlast rotary pads, using on average one set of brushes for every 100 floor pads.

### Sealed, Maintenance Free Battery Option

The BR 13/1 Roam runs on sealed, maintenance free, Lithium-Iron Phosphate (LiFePO4) batteries. There are many types of Lithium-Iron (cobalt, magnesium, polymer, etc.) batteries on the market. The BR 13/1 Roam uses the latest, most advanced, lithium technology on the market today. These batteries not only meet LEED EB Green Building Standards, Lithium-Iron Phosphate batteries also:

- Deliver up to 2,000 charging cycles to boost productivity
- Stay cooler than other battery technology on the market
- Can be rapidly recharged
- Have an extremely low self discharge rate
- Provide a virtually flat discharge curve, which means maximum power is available until fully discharged (no "voltage sag" as with lead acid batteries)
- Do not suffer from "thermal runaway"

**Less moisture,  
mold, bacteria  
and allergens**



BR 13/1 MW



BR 13/1 ROAM



## Low-moisture, multi-purpose floor cleaning machine for a healthier and safer indoor environment

### BROAD RANGE FLORE CARE APPLICATIONS

BRUSH / PAD TYPE	DAILY CLEANING	DEEP SCRUB	SPORTS FLOOR	TEXTURED	EPOXY / RUBBER	WOOD FLOORS	GROUT	ESCALATOR	CONCRETE	COMMERCIAL CARPET	MARBLE OR GRANITE	VINYL
Standard	x		x	x	x	x	x		x			x
Hard		x			x				x			
Soft	x		x	x	x	x	x			x	x	x
Escalator								x				
Side	x	x	x	x	x	x	x		x	x	x	x



### DUAL CLEANING APPLICATIONS

Excellent results on both hard and soft floor coverings including vinyl tile, hardwood, concrete, short nap commercial carpeting, diamond plate, quarry tile, brick, slate, mosaic, studded rubber, granite, marble, rubber floors, and even escalators! For eco-friendly encapsulation carpet cleaning, cylindrical brushes "lift" and revitalize the carpet fibers, while low-moisture solution atomization minimizes the moisture, allergens and bacteria in carpets..

### PRODUCT SPECIFICATIONS

MODEL	BR 13/1 MW	BR 13/1 ROAM
Catalog Number	99410	99412
Machine Dimensions (LxWxH)	15 x 17 x 44 in / 38 x 44 x 111 cm	15 x 17 x 44 in / 38 x 44 x 111 cm
Net Weight	55 Lbs. / 25 kg.	49 Lbs. / 22 kg.
Solution / Recovery Tank	1 gal / .4 gal. 4 liters / 1.5 liters	1 gal / .4 gal. 4 liters / 1.5 liters

### DESIGN CHARACTERISTICS

Tank construction	Polyethylene	Polyethylene
Brush Type	2, counter-rotating cylindrical	2, counter-rotating cylindrical
Brush Width	12 in / 30 cm	12 in / 30 cm
Brush RPM	650 rpm	400 rpm
Cleaning Path	13 in / 33 cm	13 in / 33 cm
Cleaning Rate	3,775 sq. ft./hr. 351 sq. m/hr.	3,775 sq. ft./hr. 351 sq. m/hr.
Sound Level	69 db (A)	66 db (A)
Cord Length	40 ft. / 12 m	N/A
Brush Motor	1 hp / 600 W	.4 hp / 300 W
Charger	N/A	External
Battery Voltage	N/A	24 V

### REPLACEMENT ITEMS AND ACCESSORIES

Standard Brush	33855	33855
Soft Brush	33856	33856
Hard Brush	33857	33857
Escalator Brush	33859	33859
Carpet Brush	33926	33926
Side Brush	33858	33858
Transport Trolley	05-3395-0500	05-3395-0500
Battery	N/A	33936
Charger Cable	N/A	33937
Charger	N/A	90-0588-0000



### TRANSPORT EASILY

For fast and simple transport, an optional trolley is available.



### OPTIONAL SIDE BRUSH

Providing superior edge-cleaning capability, optional side-brushes are available to widen your cleaning path even further, delivering access to tight-corners and hard-to-reach spaces.



### SOLUTION ATOMIZATION

Cleaning solution is atomized into a fine mist and dispersed through the cylindrical brushes, so less moisture is consumed during the hard floor or carpet cleaning process.

See Page 64 for warranty information.



BR 16/3



## Powerful, automatic floor scrubbing in a compact package

The **BR 16/3** puts the power of automatic scrubbing in a compact package ready for virtually any hard floor surface. This corded electric unit, operates in forward and reverse with a 16" scrubbing path at 660 RPMs. Cleaning approximately 3,200 square feet per hour, your small and congested spaces are clean, healthy and ready for use in no time.

The **BR 16/3** comes standard with brushes, allowing you to replace your standard floor cleaning methods out of the box. Tornado® also offers a wide selection of versatile brushes allowing the **BR 16/3** to clean multiple hard floor types including ceramic tile, quarry tile, paver brick, raised rubber disc floors and other challenging surfaces

Tornado's **BR 16/3** cylindrical brush machine is designed for environmental sustainability. The use of cylindrical brushes conserves natural resources including water, solution and source materials. Cylindrical brush technology delivers low moisture deep-clean scrubbing through concentrated brush speeds of 660 RPMs — three times faster than the speed of comparable rotary brush automatic scrubbers, digging deeper into uneven flooring surfaces to remove dirt that a disc unit can't reach. Cylindrical brushes also provide 4-6 times more contact pressure than rotary brush scrubbing, handling any flat or structured floor surface with ease.



### PROFESSIONAL PERFORMANCE

Brush pressure adjustment allows variable contact pressure with the floor surface.



### SIMPLE TO USE

Removable solution and recovery tanks are easily emptied, rinsed, and re-filled.



### CYLINDRICAL BRUSHES

The BR 16/3 unit comes standard with brushes for daily cleaning operations. A variety of brushes are available for high performance on structured flooring.



### VERSATILE AND COMPACT

The BR 16/3 takes automatic scrubbing technology into confined areas where bigger units can't go.

### PRODUCT SPECIFICATIONS

MODEL	BR 16/3
Catalog Number	99406

### MACHINE DIMENSIONS

Dimensions (L X W X H)	21 in x 19 in x 15 in 520 mm x 470 mm x 380 mm
Net Weight	67 Lbs. / 33 kg.
Solution Tank	3 gal / 10 l
Recovery Tank	3 gal / 10 l

### CLEANING SYSTEMS

Productivity	3200 f <sup>2</sup> per hour 300 m <sup>2</sup> per hour
Brush Type	Cylindrical
Brush Width	16 in / 400 mm
Brush Rpm	660 RPM
Cleaning Path	16 in / 400 mm
Sound Level	71 dB (A)

### MOTOR

Brush Motor	1.5 HP / 1100 W / 14 A
Vacuum Motor	0.67 HP / 500 W / 4 A

### REPLACEMENT ITEMS

Soft Scrub Brush (2 Req.)	K47622500
Squeegee Set (2 Included)	K47773230
50 Ft. Extension Cord (14-3 Gauge)	32217

### OPTIONAL ACCESSORIES

Oil Resistant Squeegee Set (2 Req.)	K47773220
Medium Scrub Brush (2 Req.)	K47622490
Hi-Low Grout (2 Req.)	K47622510
Grit Heavy Scrub Brush (2 Req.)	K47622520
Horse Hair Brushes (2 Req.)	K47622740
Cylindrical Pad Shaft (2 Req.)	K47622280
20-Pc. Light Scrub/Polishing Pack (2 Packs Req.)	K63694530
20-Pc. Heavy Scrubbing Pad Pack (2 Packs Req.)	K63694510
20-Pc. Extra Heavy Scrubbing Pad Pack (2 Packs Req.)	K63694520
20-Pc. Polishing Pad Pack (2 Packs Req.)	K63693880

See Page 64 for warranty information.



## World-class scrubber delivering versatility and enhanced productivity

Designed to scrub hard-to-clean areas where a traditional mop and bucket are used, the new, eco-friendly **BD 14/4** battery operated scrubber from Tornado® is compact, powerful, versatile and perfect for small or confined spaces. Cleaning approximately 11,300 square feet per hour, your small and congested spaces are clean, dry, healthy and safe in no time.

The **BD 14/4's** low-moisture design includes an integrated parabolic squeegee system, mounted just 1" behind the pad. Solution is contained within the cleaning path and instantly recovered, even around 180 degree turns! Floors are left amazingly dry, avoiding touch-up work that is often required on competitive models.

Say goodbye to corded electric units that can cause trips and falls. The **BD 14/4's** eco-friendly, maintenance-free AGM battery eliminates the danger of a power cord and periodic maintenance. What's more, the ergonomic handle minimizes worker fatigue and injuries.

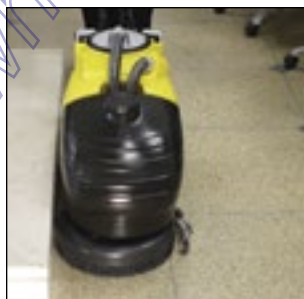
PRODUCT SPECIFICATIONS	
MODEL	BD 14/4
Part Number	99414
MACHINE DIMENSIONS	
Dimensions (Lxwxh)	38" X 15" X 22"
Net Weight (W/O Batteries)	132 Lbs.
Shipping Weight	185 Lbs.
Solution Tank	3.5 Gal.
Recovery Tank	4 Gal.
Squeegee Width	16"
DESIGN CHARACTERISTICS	
Tank Construction	Polyethylene
CLEANING SYSTEM	
Productivity	13,342 (Sq. Ft. Per Hour)
Brush Type	Disc
Brush Width	14"
Brush Rpm	180
Cleaning Path	14"
Sound Level	69 Db
MOTOR	
Vacuum Motor	0.8 Hp
Brush Motor	0.3 Hp
BATTERY	
Voltage	24 V
REPLACEMENT ITEMS	
Standard Poly Scrub Brush	48903020
Rear Squeegee	48410070
Front Squeegee	48410090
OPTIONAL ITEMS	
Soft Poly Scrub Brush	48903010
Medium Poly Scrub Brush	48903030
5-Mix Brush	48903050
Rear Squeegee	48410060
Front Squeegee	48410010
Linatex Rear Squeegee	48410080
13" Pad Holder Green Center Lock	48803030

See Page 64 for warranty information.

**Great for  
Hard-to-Reach  
Areas!**



**BD 14/4 COMPACT AUTO-SCRUBBER**



### FITS IN NARROW SPACES

Now clean narrow, congested aisles or stalls with this compact unit. The 14" cleaning path and adjustable, collapsible handle makes getting under partitions and counters so easy.



### EASY ACCESS TO TANKS AND BATTERIES

For easy maintenance, and access to batteries, simply remove the solution tank for filling and dumping purposes.



### COMPACT LOW-PROFILE

This highly maneuverable unit reaches difficult areas previously cleaned by a mop and bucket. With an adjustable handle, the unit fits operators of any height.

### REDUCE TRAINING TIME

The unit is so simple to use, you'll save time and money by reducing training time required for your staff. With an ergonomic handle and control system plus easy-to-fill, empty and remove tanks, the BD 14/4 delivers easy and safe operation.



### COMPACT STORAGE

The collapsible handle and wheels on the back of the unit make storage easy. Stand on end to store in small closets or spaces.

## Compact scrubber with premium features and superior results

Designed to scrub and dry underneath countertops and small, hard-to-reach areas where a mop is traditionally used, the **BD 17/6 Compact Scrubber** is battery operated and designed to easily tackle these hard-to-clean areas. The BD 17/6's design includes a 180 degree rotating integrated parabolic squeegee system. This squeegee is mounted just 1" behind the pad to allow for immediate solution pick-up going both forwards and backwards. Pairing that with a 6 gallon solution and recovery tank, this machine makes your most difficult cleaning tasks no problem at all!

The **BD 17/6's** eco-friendly, maintenance-free AGM battery provides long run-times, eliminating the danger of a power cord, and reduces periodic maintenance. What's more, the ergonomic handle is adjustable to accommodate a variety of user-heights, and minimizes worker fatigue and injuries as a result.

Maintenance and access to the brush deck and squeegee on the **BD 17/6** is simple! When the unit is upright in storage position, your staff can easily access the brush deck and squeegee to check parts to ensure they are in top working condition. What's more, you have easy access to the tanks and batteries by simply removing the solution tank for filling and dumping purposes, or to recharge the 24 Volt AGM batteries.



### REDUCE TRAINING TIME

The unit is so simple to use, you'll save time and money by reducing training time required for your staff. With an ergonomic handle and control system plus easy-to-fill, empty and remove tanks, the BD 17/6 delivers easy and safe operation.



### COMPACT LOW-PROFILE

This highly maneuverable unit reaches difficult areas previously cleaned by a mop and bucket. With an adjustable handle, the unit fits operators of any height.

### FITS IN NARROW SPACES

Now clean narrow, congested aisles or stalls with this compact unit. The 17" cleaning path and adjustable, collapsible handle makes getting under partitions and counters so easy!



### EASY ACCESS TO TANKS AND BATTERIES

For easy maintenance, and access to batteries, simply remove the solution tank for filling and dumping purposes.

Great for  
Hard-to-Reach  
Areas!



BD 17/6 COMPACT  
AUTO-SCRUBBER

180° Rotating  
Squeegee!

### PRODUCT SPECIFICATIONS

MODEL	BD 17/6
Part Number	99617

### MACHINE DIMENSIONS

Dimensions (Lxwxh)	31 in x 24 in x 21 in 793 mm x 603 mm x 518 mm
Net Weight	191 Lbs. / 86.5 kg
Solution Tank	6 gal.
Recovery Tank	6 gal.
Squeegee Width	20 in / 510 mm

### DESIGN CHARACTERISTICS

Tank Construction	Polyethylene
-------------------	--------------

### CLEANING SYSTEM

Productivity (Per Hour)	16,200 sq. ft. / 1,505 sq. m
Brush Type	Disc
Brush Width	17 in / 430 mm
Brush Rpm	190
Cleaning Path	17 in / 430 mm
Sound Level	less than 70 dB

### MOTOR

Vacuum Motor	340 W / 14 amp
Brush Motor	340 W / 14 amp

### BATTERY

Voltage	24 V
---------	------

### REPLACEMENT ITEMS

Standard Scrub Brush	48903120
Rear Squeegee	48413040
Front Squeegee	48413030

### OPTIONAL ITEMS

Medium Poly Scrub Brush	48903130
5-Mix Brush	48903150
Grit Scrub Brush	48903140
Front Squeegee	48413030
Rear Squeegee	48413040
Rear Squeegee Para	48413050
17" Pad Holder	48803050

See Page 64 for warranty information.



## World-class scrubbers delivering leading edge innovation, durability, and versatility

Designed for environmental sustainability, the BR 18/11 conserves water, solution and source materials, and also operate at a whisper-quiet 67 dB, which is perfect for use in noise-sensitive facilities such as hospitals, schools, libraries, restaurants, and more. The BR 18/11 features cylindrical brush technology which delivers low moisture deep scrubbing through concentrated brush speeds of 1300 RPM, and provides 4-6 times more contact pressure than rotary brush scrubbing, handling any flat floor surface with ease, as well as structured surfaces such as quarry tile, paver bricks, and raised rubber disc flooring.

Our small walk-behind scrubbers feature a tough, no-hassle, quick-change parabolic squeegee system delivering 100% solution recovery — even on 180 degree turns. Constructed with a tough roto-molded polyethylene body, you'll get years of maximum performance and reliability, while experiencing minimal machine down-time.



BR 18/11



### ON-BOARD CHARGER

The BR 18/11 cylindrical brush scrubber comes standard with a built-in on-board charger to ensure quick and easy charging.



### CYLINDRICAL BRUSHES

The BR unit comes standard with white brushes for daily cleaning operations. A variety of brushes are available for high performance on structured flooring.



### EASY TO CLEAN

Quick release recovery tank lid for easy tank rinsing and filling.



### PARABOLIC SQUEEGEE

Heavy duty assembly featuring a four-sided rear blade with quick release lever to facilitate squeegee changes in 10 seconds or less! This ensures a lower cost of ownership.



### VACUUM MOTOR PROTECTION

Automatic recovery tank float shut off device to avoid foam and water from damaging vacuum motors.



### SILENT SUPERVISOR

Ergonomic handle and easy-to-read control panel displays battery run time and charge indicator, maximizing your team's cleaning efficiency and protecting your investment.

### PRODUCT SPECIFICATIONS

MODEL	BR 18/11
Catalog Number	99685

### MACHINE DIMENSIONS

L X W X H	43" X 21" X 41"
Net Weight	157 Lbs.
Solution / Recovery Tank	11 gal. / 12 gal.
Squeegee Width	31"

### DESIGN CHARACTERISTICS

Tank Construction	Polyethylene
-------------------	--------------

### CLEANING SYSTEM

Brush Type	Cylindrical
Brush Width	18"
Brush RPM	1,300
Brush Pressure	50 Lbs.
Cleaning Path	18"

### PRODUCTIVITY

Cleaning Rate (Sq. Ft Per Hour)	17,969
---------------------------------	--------

### MOTORS

Vacuum Motor	.6 hp
Brush Motor	.8 hp
Sound Level	66 dB

### BATTERY

Voltage	24 V
---------	------

### REPLACEMENT ITEMS

Super Soft Scrub Brush (2 required)	48901230
Medium Scrub Brush	
Rear Squeegee	48903120

### OPTIONAL ITEMS

Super Soft Scrub Brush (2 required)	48901230
Medium Hard Scrub Brush (2 required)	K57620080
Grit Scrub Brush	K57621710
Hi-Low Grout Brush (2 required)	K57621700
Oil Resistant - Rear Squeegee (before serial#: 10003331. N/A for 20/11T)	48401040
Rear Squeegee	48405030
Oil Resistant - Rear Squeegee (after serial#: 10003331)	48405040

See Page 64 for warranty information.



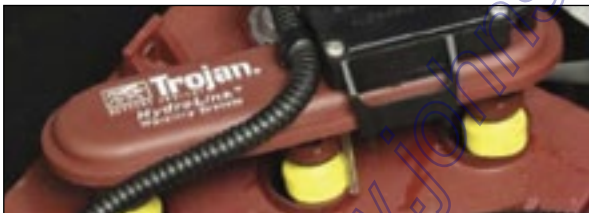
# Introducing the Redesigned Floorkeeper Scrubber Series



## Created 1965. Perfected 2019.

Tornado's Floorkeeper scrubbers have been a trusted name in the industry since 1965, and our latest redesign improves the operator's experience from top to bottom. American made with all-steel frames and dent-proof rotomolded tanks and shroud, these scrubbers are built for the long haul.

Tornado has a variety of configurations with disk and orbital models that can tackle any cleaning task. Our orbital scrubbers feature industry-leading adjustable down pressure and isolator warranty (5 years or 5,000 hours). Operators will appreciate the low 63 dBA sound level and complete solution recovery on 180 degree turns. Use and care has never been easier with ergonomic, user-friendly controls, onboard instructions, and a QR code link to manuals and training videos.



### HYDRALERT™ BATTERY PROTECTION SYSTEM

Our patented system detects low water levels and audibly alerts operators, protecting your batteries and saving thousands of dollars over the life of your scrubber (optional accessory on any Floorkeeper model)



### SIMPLIFIED TRAINING & OPERATION

Onboard instructions and access to videos/manuals, plus simplified operator controls for an easy user experience



### ADJUSTABLE DOWN PRESSURE

Change orbital pad pressure to transition between daily cleaning and chemical-free removal of the toughest floor finishes



### IMPROVED TANK DESIGN

Redesigned tanks have wider access for full cleaning, gross debris filter cup, Bromine tank treatment system to stop odors (22 gallon units only), and built-in tie-down points for easier transportation

## Best-in-class orbital down pressure



FKS28 ORBITAL

FKS20 ORBITAL

### Benefits of the FKS Orbital Scrubbers:

- Best-in-class orbital down pressure for chemical-free finish removal and daily cleaning
- Industry-leading isolator warranty – 5 years or 5,000 hours
- Minimize training time with user-friendly controls and onboard instructions
- Complete solution recovery on 180 degree turns reduces slip and fall risks
- Audible battery protection (optional feature) alerts operators and extends battery life
- Made in the USA and rigorously tested for your toughest jobs
- Built in squeegee hanger (22 gallon only)



PRODUCT SPECIFICATIONS		
Model	FKS20 Orbital	FKS28 Orbital
Catalog Number	99120ORB	99128ORB
SOLUTION DELIVERY SYSTEM		
Solution Capacity	11 gallons / 42 liters	22 gallons / 83 liters
Solution Control	0-.5 gpm / 0-1.9 lpm, variable knob adjustment	0-.55 gpm / 0-2.1 lpm, variable knob adjustment
SCRUBBING SYSTEM		
Cleaning Path Width	20 in. / 510 mm	28 in. / 711 mm
Pad Size	20 x 14 in / 510 x 356 mm	28 x 14 in / 711 x 356 mm
Productivity (per hour) Theoretical Max	23,800 ft <sup>2</sup> / 2,211 m <sup>2</sup>	30,800 ft <sup>2</sup> / 2,861 m <sup>2</sup>
BRUSH DRIVE SYSTEM		
Motor Power	1 hp / 750 W	1 hp / 750 W
Motor Speed	2,200 rpm	2,200 rpm
Pressure	75 & 100 lb / 34 & 45 kg	70, 110 & 160 lb / 32, 50 & 73 kg
RECOVERY SYSTEM		
Tank Capacity	13 gallons / 49 liters (2 gallons / 7.6 liters demisting chamber)	25 gallons / 95 liters (3 gallons / 11.4 liters demisting chamber)
Vacuum Motor	.56 hp / 380 W	.7 hp / 522 W
Vacuum Motor Water-Lift / CFM	48 in / 122 cm 66 cfm / 1.9 cmm	71 in / 180 cm 71 cfm / 2.0 cmm
DRIVE SYSTEM		
Drive Type	Transaxle	Transaxle
Motor Power	.25 hp / 187 W	.5 hp / 373 W
BATTERY & CHARGING SYSTEM		
System Voltage	24	24
MISC PRODUCT SPECIFICATIONS		
Length	L 45 in. x W 21 in. x H 43 in. L 114 cm x W 53cm. x H 109cm	L 52 in. x W 28 in. x H 44 in. L 132 cm x W 71 cm x H 112cm
Construction	Rotationally molded polyethylene tanks, powder coated steel frame	Rotationally molded polyethylene tanks, powder coated steel frame

See Page 64 for warranty information.



Simple where it should be,  
smart when it counts



FKS20 DISK

FKS24 DISK

#### Benefits of the FKS Disk Scrubbers:

- Minimize training time with user-friendly controls and onboard instructions
- 20" available in brush and traction drive models
- Complete solution recovery on 180 degree turns reduces slip and fall risks
- Audible battery protection (optional feature) alerts operators and extends battery life
- Made in the USA and rigorously tested for your toughest jobs

PRODUCT SPECIFICATIONS			
Model	FKS20B Brush Assist	FKS20 Disk	FKS24
Catalog Number	99120B	99120D	99124D
SOLUTION DELIVERY SYSTEM			
Solution Capacity	11 gallons / 42 liters	11 gallons / 42 liters	11 gallons / 42 liters
Standard Control	0-.5 gpm / 0-1.9 lpm, variable knob adjustment	0-.5 gpm / 0-1.9 lpm, variable knob adjustment	0-.5 gpm / 0-1.9 lpm, variable knob adjustment
SCRUBBING SYSTEM			
Cleaning Path Width	20 in. / 510 mm	20 in. / 510 mm	24 in. / 610 mm
Pad Size	20 in. / 510 mm	20 in. / 510 mm	(2) 12 in. / 305 mm
Productivity (per hour) Theoretical Max	23,800 ft <sup>2</sup> / 2,211 m <sup>2</sup>	23,800 ft <sup>2</sup> / 2,211 m <sup>2</sup>	26,400 ft <sup>2</sup> / 2,453 m <sup>2</sup>
BRUSH DRIVE SYSTEM			
Brush Motor Power	.75 hp / 560 W	.75 hp / 560 W	1 hp / 750 W
Brush rpm	220 rpm	220 rpm	360 rpm
Brush/Pad Pressure	60 & 90 lbs. / 27 & 41 kg	60 & 90 lbs. / 27 & 41 kg	60 & 90 lbs. / 27 & 41 kg
Brush/Pad Attachment/Removal	Auto on	Auto on	Auto on
RECOVERY SYSTEM			
Tank Capacity	13 gallons / 49 liters (2 gallons / 7.6 liters demisting chamber)	13 gallons / 49 liters (2 gallons / 7.6 liters demisting chamber)	13 gallons / 49 liters (2 gallons / 7.6 liters demisting chamber)
Vacuum Motor Power	.56 hp / 380 W	.56 hp / 380 W	.56 hp / 380 W
Vacuum Motor Water-Lift/CFM	48 in. / 122 cm 66 cfm / 1.9 cmm	48 in. / 122 cm 66 cfm / 1.9 cmm	48 in. / 122 cm 66 cfm / 1.9 cmm
DRIVE SYSTEM			
Type	Pad Assist	Transaxle Drive	Transaxle Drive
Motor Horsepower	n/a	.25 hp / 187 W	.25 hp / 187 W
BATTERY & CHARGING SYSTEM			
System Voltage	24 V	24 V	24 V
MISC PRODUCT SPECIFICATIONS			
LxWxH	L 50 in. x W 21 in. x H 43 in. L 127 cm x W 53 cm x H 109 cm	L 50 in. x W 21 in. x H 43 in. L 127 cm x W 53 cm x H 109 cm	L 48 in. x W 26 in. x H 43 in. L 122 cm x W 66 cm x H 109 cm
Construction	Rotationally molded polyethylene tanks, powder coated steel frame	Rotationally molded polyethylene tanks, powder coated steel frame	Rotationally molded polyethylene tanks, powder coated steel frame

See Page 64 for warranty information.

## Premium down pressure performance



FKS28 DISK

FKS32 DISK

### Benefits of the FKS Large Disk Scrubbers:

- Minimize training time with user-friendly controls and onboard instructions
- Odor-stopping tank treatment system kills bacteria and leaves tanks smelling fresh
- Complete solution recovery on 180 degree turns reduces slip and fall risks
- Audible battery protection (optional feature) alerts operators and extends battery life
- Made in the USA and rigorously tested for your toughest jobs
- Built in squeezee hanger

PRODUCT SPECIFICATIONS		
Model	FKS28 Disk	FKS32 Disk
Catalog Number	99128D	99132D
SOLUTION DELIVERY SYSTEM		
Solution Capacity	22 gal / 83 l	22 gal / 83 l
Solution Control	0-.55 gpm / 0-2.1 lpm Variable, knob adjustment	0-.55 gpm / 0-2.1 lpm Variable, knob adjustment
SCRUBBING SYSTEM		
Cleaning Path	28 in / 711 mm	32 in / 813 mm
Pad/brush Size	(2) 14 in / 356 mm disks	(2) 16 in / 406 mm disks
Productivity (per hour) Theoretical Max	30,800 ft <sup>2</sup> / 2,861 m <sup>2</sup>	35,200 ft <sup>2</sup> / 3,270 m <sup>2</sup>
BRUSH DRIVE SYSTEM		
Brush Motor Horsepower	(2) 1.0 hp / 750 W	(2) 1.0 hp / 750 W
Brush rpm	300 rpm	300 rpm
Brush/Pad Pressure	70, 110 & 150 lb / 32, 50 & 68 kg	70, 110 & 150 lb / 32, 50 & 68 kg
Brush/Pad Attachment/Removal	Automatic on	Automatic on
RECOVERY SYSTEM		
Tank Capacity	25 gal / 95 l (3 gal / 11.4 l demisting chamber)	25 gal / 95 l (3 gal / 11.4 l demisting chamber)
Vacuum Motor Power	.7 hp / 522 W	.7 hp / 522 W
Vac Motor Water-Lift/CFM	71 in / 180 cm 71 cfm / 2.0 cmm	71 in / 180 cm 71 cfm / 2.0 cmm
DRIVE SYSTEM		
Drive Type	Transaxle drive	Transaxle drive
Motor Horsepower	.5 hp / 373 W	.5 hp / 373 W
BATTERY SYSTEM		
System Voltage	24 V	24 V
MACHINE SPECIFICATIONS		
LxWxH	L 56 in x W 30 in x H 44 in L 142 cm x W 76 cm x H 112 cm	L 58 in x W 34 in x H 44 in L 147 cm x W 86 cm x H 112 cm

See Page 64 for warranty information.

## World-class scrubbers delivering increased productivity, durability, health and safety

Maintain and renew hard floor surfaces faster than ever before. Tornado's **BD 26/27 and BR 28/27 Ride-on Automatic Scrubbers** increase cleaning productivity in areas where walk-behind scrubbers were used in the past, thanks to their compact footprint and great maneuverability. The **BD 26/27 and BR 28/27** are the perfect units for supermarkets, schools, health care, warehouses, and more. Operating at an incredibly low 69 dB the units are also perfect for daytime cleaning needs.

For effortless operation, Tornado's ride-on **BD 26/27 and BR 28/27** offers an automatic mode which starts all of the necessary operations of the scrubber once turned on. This system constantly controls the operation parameters to guarantee longer runtime and reliability. When an operator places the unit in reverse the unit intuitively retracts the squeegee. The **BD 26/27 and BR 28/27** are paramount units in Tornado's family of scrubbers, which are recognized throughout the industry as market leaders and world-class products!

Tornado's **BD 26/27 and BR 28/27 Ride-on Automatic Scrubbers** are perfect for use in many different environments including:

- Supermarkets
- Warehouses
- Schools
- Health Clubs
- Hospitals, and more.

### PRODUCT SPECIFICATIONS

MODEL	BD 26/27	BR 28/27
Part Number	99772	99775

### MACHINE DIMENSIONS

Dimensions (Lxwxh)	62" x 28" x 52"	62" x 31" x 52"
Net Weight (W/O Batteries)	573 Lbs.	578 Lbs.
Shipping Weight	672 Lbs.	677 Lbs.
Solution Tank	27 gal.	27 gal.
Recovery Tank	27 gal.	28 gal.
Squeegee Width	33"	38.5"

### DESIGN CHARACTERISTICS

Tank Construction	Polyethylene	Polyethylene
-------------------	--------------	--------------

### CLEANING SYSTEM

Productivity	35,508 (Ft <sup>2</sup> Per Hour)	37,673 (Ft <sup>2</sup> Per Hour)
Brush Type	Disc	Cylindrical
Brush Width	26"	28"
Brush Rpm	190	785
Brush Pressure	132 Lbs. max	320 Lbs. max
Cleaning Path	26"	28"
Sound Level	69 dB	69 dB

### MOTOR

Vacuum Motor	580 W	580 W
Brush Motor	650 W	two 600 W

### BATTERY

Battery	24 V	24 V
---------	------	------

### REPLACEMENT ITEMS

13" Pad Holder	48803030	N/A
Standard Front Squeegee	48408020	48403020
Standard Rear Squeegee	48408010	48406100
Poly Scrub Brush	N/A	48906020

### OPTIONAL ITEMS

Extra Soft Scrub Brush	N/A	48906100
Medium Scrub Brush	N/A	48906060
Hi-Low Scrub Brush	N/A	48906040
Grit Scrub Brush	N/A	48906080
13" Medium Scrub Brush	48903020	N/A
13" Grit Scrub Brush	48903040	N/A

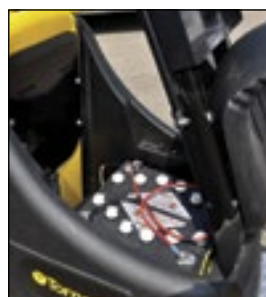


BD 26/27



### COMPACT LOW-PROFILE

This highly maneuverable unit reaches difficult areas previously cleaned by larger ride-on scrubbers.



### SILENT SUPERVISOR

Easy-to-read control panel displays battery run time and charge indicator, maximizing your team's cleaning efficiency and protecting your investment.

### EASY ACCESS TO TANKS AND BATTERIES

For easy maintenance, gain access to batteries by simply lifting the seat.

### DISC PADS AND BRUSHES

The BD units come standard with pad holders. When used with the appropriate pad, this is the ideal solution to daily maintenance cleaning. The BD machines can be fitted with a variety of optional scrub brushes, a time-proven solution for smooth floors.



### CYLINDRICAL BRUSHES

The BR unit comes standard with brushes for daily cleaning operations. A variety of brushes are available for high performance on structured flooring. *Note:* Brushes shown above are examples. Actual brushes colors may vary.



See Page 64 for warranty information.



## World-class ride-on automatic scrubbers — attractive design, advanced engineering, unsurpassed performance

Renew hard floor surfaces in large, unobstructed spaces faster than ever before. Tornado's ride-on automatic scrubbers increase cleaning productivity in areas including supermarkets, manufacturing plants, airports, exhibit halls and much more.

For effortless operation, Tornado's **Ride-On BR/BD 33/30** units offer an automatic mode which will start all necessary operations of the scrubber once it is turned on. This system also gradually starts all of the motors and constantly controls the operation parameters to guarantee longer run-time and reliability. When in reverse, this machine also includes an automatic squeegee retraction feature.

### Features of the BR 33/30 and BD 33/30

- Both units have a 33" cleaning path
- BR unit comes standard with a stainless steel pre-sweep function
- 30 gallon solution tank
- Automatic operation control mode
- Automatic squeegee retraction when in reverse
- Steering radius of only 6 feet for maneuvering tight corners
- Simple operator interface
- Exceptionally durable Roto-molded polyethylene construction
- Ergonomic design
- Multiple brush pressure settings



BR 33/30



PRODUCT SPECIFICATIONS		
MODEL	BD 33/30	BR 33/30
Catalog Number	99780	99785
MACHINE DIMENSIONS		
L X W X H	65" X 36" X 51"	65" X 36" X 51"
Height with rollbar	67"	51"
Net Weight	690 Lbs.	739 Lbs.
Solution / Recovery Tank	30 / 32 gal.	30 / 32 gal.
Squeegee Width	45"	45"
DESIGN CHARACTERISTICS		
Tank Construction	Polyethylene	Polyethylene
CLEANING SYSTEM		
Brush Type	Twin Disk	Cylindrical
Brush Width	33"	33"
Brush RPM	162	785
Brush Pressure	187 Lbs. (max)	176 Lbs. (max)
Cleaning Path	33"	33"
PRODUCTIVITY		
Cleaning Rate (Sq. Ft Per Hour)	55,952	55,952
MOTORS		
Vacuum Motor	.7 hp	.8 hp
Brush Motor	1.5 hp	.9 hp
Sound Level	70 dB	70 dB
BATTERY		
Voltage	36 V	36 V
REPLACEMENT AND OPTIONAL ITEMS		
Standard Rear Squeegee	48406100	48406100
Poly / Oil Resistant Front Squeegee	48403110	48403110
Oil Resistant Rear Squeegee	48406030	48406030
Medium Scrub Brush	NA	48906050
Hi-Low Grout Brush	NA	48906030
Grit Scrub Brush	NA	48906070
16" Pad Holder (2 req.)	48803050	N/A
16" Soft Brush (2 req.)	48903120	N/A
16" Medium Scrub Brush (2 req.)	48903130	N/A
16" 5 Mil Grit Scrub Brush (2 req.)	48903150	N/A



### PARABOLIC SQUEEGEE

Heavy duty assembly featuring a four-sided rear blade with quick release lever to facilitate squeegee changes in 10 seconds or less! This ensures a lower cost of ownership.



### SAFETY FEATURES:

To ensure worker safety, the machine includes a roll-bar for greater operator protection.

### QUICK BRUSH CHANGE

Deck shroud peels back allowing easy access to change brushes.



### CYLINDRICAL BRUSHES

The BR unit comes standard with white brushes for daily cleaning operations. A variety of brushes are available for high performance on structured flooring.

Note: Brushes shown above are examples. Actual brush colors may vary.



### DISC PADS AND BRUSHES

The BD unit comes standard with pad holders. When used with the appropriate pad, this is the ideal solution to daily maintenance cleaning. The BD machine can be fitted with a variety of optional scrub brushes, a time-proven solution for smooth floors.

See Page 64 for warranty information.