

# Equipment Report: Professional Wet Cleaning

## *Environmental Garment Care Demonstration Project*



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## WET CLEANING TECHNOLOGY

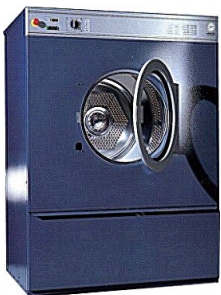
**DEFINITION:** Professional wet cleaning is a process that uses computer-controlled washers and dryers, specially formulated detergents, and specialized finishing equipment to create a cost-effective alternative to dry cleaning.

- *Professional wet clean washers* use a computer to control the rotation of the cleaning drum in order to minimize agitation while providing sufficient movement for effective garment cleaning. Wet clean washers are also equipped with a computer programmed detergent injection system, which allow the cleaner to specify the amount and type of wet clean detergent used for each load.
- *Biodegradable wet clean detergents* have been formulated by detergent manufacturers to maximize cleaning power while minimizing color change and shrinkage.
- *Wet clean dryers* include computer controls to assure that garments retain a proper amount of moisture after the dry cycle is complete.
- *Specialized tensioning pressing machines* are used to enhance the restoration of constructed garments, such as suit jackets, suit pants, and tailored items.

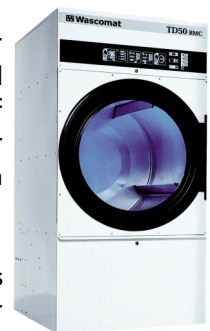
Currently, there are a number of companies who manufacture professional wet cleaning washer and dryer systems, tensioning equipment presses, and professional wet cleaning detergents and additives. This report provides an overview of the equipment and detergents that are currently available.

### Description: Wet Cleaning Washer and Dryer

While there are a number of manufacturers of professional wet cleaning washer and dryer systems, these machines share many common features. Computer control, programmability and other similar features are the essential components of these machines. In addition, in each of these systems, washing and drying are done in separate machines, allowing for greater throughput than advanced dry clean machines, which require washing and drying to occur in the same machine.



Professional wet clean equipment manufacturers have adopted different sales strategies for their equipment. Some offer a full package system of washer and dryer (and also offer the chemicals and finishing equipment) while others sell components and allow the professional cleaner to put together a system tailored to their own needs. Some manufacturers include extensive technical training as part of the purchase price, while others only instruct the cleaner in the basic operating features. Some manufacturers include a detergent injection system as part of their package, while others expect the detergent companies to provide this equipment. The machines span a wide range of sizes, design features, and prices. In general, hard mount washers are less expensive than soft mount machines, but require a custom concrete foundation and are not suitable for upper-floor or above-basement installation.



COMPANY	MODEL NO	WET CLEAN CAPACITY	LAUNDRY CAPACITY	EXTRACTION SPEED	HARD/SOFT MOUNT	LIST PRICE*
Aqua Solo	4080	40 lbs	80 lbs	40/850 rpm	Soft	\$35,000
	5500	55 lbs	100 lbs	40/850 rpm	Soft	\$38,000

## Wet Clean Washers Listing

COMPANY	MODEL NO	WET CLEAN CAPACITY	LAUNDRY CAPACITY	EXTRACTION SPEED	HARD/SOFT MOUNT	LIST PRICE*
Aqua Solo	P-500	50 lbs		40/580	Soft	\$6,500
Cissell	CHC035		35 lbs	1000 RPM	Soft	\$9,883
	CP040H	20 lbs	40 lbs	885 RPM	Hard	\$10,994
	CHF055		55 lbs	826 RPM	Soft	\$15,250
	CP060H		60 lbs	826 RPM	Hard	\$12,328
	CHF075		75 lbs	1000 RPM	Soft	\$19,457
	CP080H		80 lbs	756 RPM	Hard	\$19,016
Imesa	ICM 23	30 lbs	55 lbs	363G	Soft	\$24,950
Ipsco	HF 150	35 lbs		380G	Soft	\$8,690
	HF 185	40 lbs		380G	Soft	\$9,990
	HF 234	51 lbs		419G	Hard	\$15,500
	HF 304	67 lbs		475G	Hard	\$16,200
Maytag	MFS55	25 lbs	50 lbs	350G	Soft	\$12,995
Miele	W 6071	10 lbs	17 lbs	1200/405G	Soft	\$11,094
	PW 6101	14 lbs	23 lbs	1200/475G	Soft	\$17,088
	PW 6131	18 lbs	30 lbs	1100/400G	Soft	\$19,688
	PW 6161	22 lbs	36 lbs	1150/500G	Soft	\$24,109
	PW 6201	30 lbs	45 lbs	1100/460G	Soft	\$28,198
	PW 6241	35 lbs	54 lbs	1100/542G	Soft	\$34,109
	PW 6321	42 lbs	70 lbs	1000/448G	Soft	\$38,609
Wascomat	EX 630 CA	15 lbs	30 lbs	980/350G	Soft	\$12,087
	EX 640 CA	20 lbs	40 lbs	930/350G	Soft	\$14,444
	EX 655 CA	27.5 lbs	55 lbs	890/350G	Soft	\$15,951
	EX 670 CA	35 lbs	70 lbs	820/350G	Soft	\$21,604
	SU 630 CA	15 lbs	30 lbs	140G	Hard	\$7,943
	SU 640 CA	20 lbs	40 lbs	140G	Hard	\$10,374
	EXSM665ca	32.5 lbs	65 lbs	300G	Hard	\$14,864
	EXSM680ca	40 lbs	80 lbs	300G	Hard	\$21,262

\*All Prices are subject to change. See back for contact information.

## Professional Wet Clean

## Dryers Listing

COMPANY	MODEL	CAPACITY	HEATING	RESIDUAL MOISTURE SENSOR	LIST PRICE*
Aqua Solo	P-500	50 lbs		Sensor in drum	\$8,500
American Dryer Corp	SL-50	50 lbs	Gas/Steam/ Electric	Sensor in drum	Gas: \$4,300 Electric: \$4,500 Steam: \$5,130
	SL-75	75 lbs	Gas/Steam/ Electric	Sensor in drum	Gas: \$4,600 Electric: \$5,200 Steam: \$5,600
Imesa	IMC170	75 lbs	Gas/Steam	Sensor in drum	\$12,995
Maytag	MDG77	75 lbs	Gas/Steam	Sensor in drum	\$4,995
Miele	T6185	10 lbs	Electric	Sensor in drum	\$4,849
	PT 7251	14 lbs	Electric	Sensor in drum	\$9,199
	PT 7331	18 lbs	Steam	Sensor in drum	\$13,709
	PT 7401	22 lbs	Steam	Sensor in drum	\$14,309
	PT 7501	27 lbs	Steam	Sensor in drum	\$16,209
	T 6551	35 lbs	Steam	Sensor in drum	\$16,309
	T6571	42 lbs	Steam	Sensor in drum	\$17,009
Wascomat	TD 30 WC	30 lbs	Gas/Steam/ Electric	Sensor in drum	Gas: \$4,275 Electric: \$4,727 Steam: \$5,336
	TD 50 WC	50 lbs	Gas/Steam/ Electric	Sensor in drum	Gas: \$5,127 Electric: \$5,997 Steam: \$6,359
	TD 75 WC	75 lbs	Gas/Steam/ Electric	Sensor in drum	Gas: \$5,676 Electric: \$6,357 Steam: \$6,855
	TD 100 WC	100 lbs	Gas/Steam/ Electric	Sensor in drum	Gas: \$10,245 Electric: \$11,847 Steam: \$12,708

## EQUIPMENT CONTACTS

COMPANY	DISTRIBUTOR	CONTACT NAME	PHONE	WEBSITE
Aqua Solo (Washer Only)		Young Kim	(201) 699-7227	www.wetcleanaqua.com
American Dryer		Ezra Schley	(714) 343-6109	www.amdry.com eschley@socal.rr.com
Imesa			(973) 535-8305	www.imesa.it
Ipsos			(920) 748-3121	www.ipsos.be
Maytag		Ezra Schley	(714) 343-6109	www.maytagcommerciallaundry.com eschley@socal.rr.com
Miele	BOGO	Hans Kim	(909) 921-2256	www.wetcleaning.com
Natura				
Wascomat	Justin Ha Taylor Houseman	LA Area only Bay Area only	(800) 465-8300 (800) 464-6866	www.wascomat.com

## Description: Tensioning Equipment



*Tensioning Form Finisher*

Wet cleaned garments can be finished using either conventional pressing equipment or specialized tensioning finishing equipment. Tensioning presses are designed to reverse or prevent shrinkage and/or seam crumbling and creasing of garments by applying widthwise and lengthwise tension on garments during the pressing process. Tensioning finishing equipment is increasingly recognized as an essential component of professional wet cleaning. Performance tests have shown that professional wet cleaning is effective in the actual cleaning of clothes, but that dimensional change (shrinking and stretching) can sometimes be a problem if the cleaner does not use tensioning equipment. In addition, tensioning finishing equipment has been shown to reduce the pressing labor time at professional wet cleaning facilities.



*Tensioning Pants Topper*

There are two main types of tensioning equipment, form finishers and pants toppers. Both pieces of equipment function by using steam to relax fibers, moving parts to stretch and shape clothes and hot air to dry.

## Tensioning Equipment Listing

MANUFACTURER	EQUIPMENT TYPE	MODEL	TYPES OF GARMENTS	LIST PRICE*
Aqua Solo	Tensioning Pants Topper	WDP—FA2003	Pants	\$6,500
	Tensioning Form Finisher	WDP—FA 2013	Coats, jackets, blouses & dresses	\$13,500
Clean Concepts	Tensioning Form Finisher	314	Coats, jackets, blouses & dresses	\$17,900
	Tensioning Form Finisher	375	Pants	\$10,900
	Tensioning Form Finisher	376	Coats, dresses, various garments	\$12,900
Forenta	Tensioning Pants Topper	TPT-503	Pants	\$9,500
	Tensioning Form Finisher	TFF-507	Pants	\$11,500

## Tensioning Equipment Listing

MANUFACTURER	EQUIPMENT TYPE	MODEL	TYPES OF GARMENTS	LIST PRICE*
Hi-Steam	Tensioning Shirt Finisher	SAM451	Shirts, jackets	\$23,989
	Tensioning Form Finisher	JAM510	Jackets, overcoats, dresses, blouses, and skirts	\$13,289
	Tensioning Form Finisher	JAM510 (Rotating)	Jackets, overcoats, dresses, blouses, and skirts	\$14,389
	Tensioning Pants Topper	PAM510	Pants	\$12,289
	Tensioning Pants Topper	PAM510 with Pleat Paddles	Pants	\$13,898
Hoffman/ NewYorker	Tensioning Pants Finisher	Topmaster II-PP	Khakis, dress pants, uniform rentals, pleated pants and jeans	\$11,200
	Tensioning Form Finisher	JUDI II	Jackets, blouses, coats, sweaters and outerwear	\$10,500
Trevil		Model 5120	Jackets, overcoats, dresses, golf shirts	\$12,995
	Tensioning Pants Topper	Model 5304	Pants	\$11,000
Itsumi	Tensioning Form Finisher	GF-3 Mini Former	Jackets, overcoats, dresses, blouses, and skirts	\$9,250
	Tensioning Pants Topper	TO-322A	Pants	\$8,000
Unipress	Tensioning Form	TUF	Coats, jackets, blouses, dresses, skirts	\$13,500
	Tensioning Pants Topper	TPF- PA	Pants w/pleat	\$13,500
Veit	Multiform Finisher	8319	Coats, jackets, blouses, dresses, skirts	\$18,927
	Multiform Finisher	8356	Coats, jackets, blouses, dresses, skirts	\$13,276
	Multiform Finisher (Rotation)	8362	Coats, jackets, blouses, dresses, skirts	\$17,784
	Tensioning Pants Topper	8741 STD	Pants & Shorts	\$11,973
	Tensioning Pants Topper	8741 EXT	Pants & Shorts	\$15,487

\*All Prices are subject to change. See next page for contact information.

## Tensioning Equipment Listing

### EQUIPMENT CONTACTS

COMPANY	DISTRIBUTOR	CONTACT NAME	PHONE	WEBSITE
Clean Concepts	Clean Concepts	John Tipps	(972) 406-8107	www.cleanconcepts.net
Forenta	Laundry & Dry Cleaning Equipment Equiptech Services Taylor Houseman		(650) 588-8800  (510) 639-7409 (800) 464-6866	www.forentausa.com
Hi-Steam	Taylor Houseman	Bill Alvarez (949) 245-9177	(888) 460-9292 (800) 464-6866	www.histeam.com futuretech@dlsextrême.com
Hoffman/New Yorker	Hoffman New Yorker	Scott Blackwell	(928) 855-3306/ (909) 851-4581	www.hoffman-newyorker.com
Seitz	National	Roland Dobbens	(303) 829-3310	http://www.seitz24.com/en roland.dobbins@seitz24.com
Trevil			(877) 873-8451	www.trevil.com
Itsumi	Western Multitex Kellerher Equipment JKE Equipment	J. Anthony Kim	(714) 871-8890 (800) 894-1555 TBA	www.kelleherequipment.com/
Unipress	Taylor Houseman		(813) 623-3731 (800) 464-6866	www.unipresscorp.com
Veit	DK Equipment	Unis Griffin	(510) 293-8964	www.veit.de/en



## Description: Detergent Dispensing System

The detergent dispensing system comes with a computer program that injects the detergent into the washer, allowing the operator to specify the amount and type of wet clean detergent to be used for each load. This is an essential part of the wet cleaning system, as it maximizes the effectiveness and performance of wet cleaning detergents.

## Dispensing Systems Listing

MANUFACTURER	SYSTEM DESCRIPTION	MODEL	LIST PRICE*
Beta Technology	Summit, 6 pump dispenser w/ internal trigger	1202421	\$1500.70
	Summit programmer	1201354	\$146.40
	Low level alarm lances	1201180	\$53.30
Knight	4 Pump Dispenser w/Remote Control, with Pumps 23 oz/min*	MF-4804RC & KP-8120AX	\$895.27
	5 Pump Dispenser w/Remote Control with Pumps 23 oz/min*	MF-4805RC & KP-8120AX	\$941.09
	6 Pump Dispenser w/Remote Control with Pumps 23 oz/min*	MF-4806RC & KP-8120AX	\$996.03

*\*All Prices are subject to change. See next page for contact information.*



## EQUIPMENT CONTACTS

COMPANY	DISTRIBUTOR	CONTACT NAME	PHONE	WEBSITE
Beta Technologies	Beta Technology Inc	Steve Dufort	(800) 858-2382	www.beta-technology.com
Knight	Knight Systems	Chris March	(800) 854-3764	www.knightequip.com
Seitz	National	Roland Dobbens	(303) 829-3310	http://www.seitz24.com/en roland.dobbins@seitz24.com

### Description: Cleaning Agents

A wide range of specially designed detergents, conditioners, and sizing agents have been developed for professional wet cleaning. The computer controls on wet clean washers are designed to maximize the effectiveness of these cleaning agents.

**Detergents:** Specialized wet cleaning detergents are formulated with additives to minimize shrinkage and color loss.

**Conditioners:** Wet cleaning conditioners smooth and soften garments, and coating fibers to minimize shrinkage.

**Sizing Agents:** Wet cleaning sizing agents add body to garments and improve creases which helps with finishing.

**Combinations:** Some chemical manufacturers offer a conditioner and sizing agent in one or a detergent, conditioner, and sizing agent in one.

**Spotting Agents:** In addition to cleaning chemicals, specially formulated biodegradable pre-spotting agents for professional wet cleaning have been developed, since waste water from wet cleaning machines are disposed through municipal sewer drains.

**Specific Information on Chemical Manufacturers:** Information on type and price of cleaning agents was developed for this report (see table on next page). Additional information from chemical manufacturers includes: availability and prices of detergent dispenser pumps, cost of shipping, refund policies, and support services.

\*Peristaltic pumps with 23 oz/min capacity are available for Knight Inc at \$103.00 each. In addition, peristaltic pumps with 10 oz/min capacity are also available at \$90.00 each.

## Cleaning Agents Listing

COMPANY	DETERGENT	CONDITIONER	SIZING	CONDITIONER & SIZING	DETERGENT, CONDITIONER, SIZING	SPOTTING AGENTS
Adco	X			X	X	X
A.L. Wilson						X
Bufa	X			X		X
Fiber Tech	X	X	X			
Gurtler						X
Kleerwite Chemicals					X	X
Kreussler	X	X				X
Laidlaw	X	X	X			X
MEGS	X	X		X		
Pariser Industries, Inc	X	X				X
R.R. Street	X	X	X			X
Sanitone	X			X		
Seitz	X	X	X			X
Stanford	X		X			

*See next page for contact information and pricing.*

## Spotting Agents Listing

Stain Type	Manufacturer	Product
<b>Oil/ Grease</b>		
Degreaser	<b>MEGS</b>	D Degreaser
Oil eliminator	<b>MEGS</b>	E Pre spotter oil eliminator
Grease	<b>Seitz</b>	Purasol
Grease	<b>Seitz</b>	Quickol
<b>Protein/Blood Removal</b>		
Blood/ protein remover, post-spotting agent for textile cleaning	<b>Kreussler</b>	Deprit Professional Red
Protein/ Blood	<b>Laidlaw</b>	Rapid Spot Remover
Protein spotter	<b>MEGS</b>	MegsPro Protein Spotter
Protein/ Blood	<b>Seitz</b>	Blutol
<b>Tannin</b>		
Tannin/ fruit coloring remover	<b>Kreussler</b>	Deprit Professional Blue
Tannin spotter	<b>MEGS</b>	MegsTen Tannin Spotter
<b>Rust</b>		
Rust Remover	<b>AL Wilson</b>	Fluoride Free RustGo
Rust remover	<b>Laidlaw</b>	Rust Stain Remover
Rust, metallic stain remover; post-spotting agent for textile cleaning	<b>Kreussler</b>	Deprit Professional Yellow
<b>Ink</b>		
Ink, ball-point, colour stain remover: post-spotting agent for textile cleaning	<b>Kreussler</b>	Deprit Professional Purple
Ink	<b>Seitz</b>	Purasol
<b>Coffee/ Wine</b>		
Coffee/ Wine	<b>AL Wilson</b>	BonGo
Coffee/ Wine	<b>Seitz</b>	Cavesol
<b>Odor</b>		
Odor absorber	<b>Seitz</b>	OdoSorb Spray
<b>General Spotter</b>		
	<b>AL Wilson</b>	SpotsGo

## EQUIPMENT CONTACTS

COMPANY	CONTACT NAME	PHONE	WEBSITE
Adco		(660) 826-3300	www.adco-inc.com
A.L. Wilson		(800) 526-1188	www.alwilson.com
Fiber Tech		(888) 833-6181	
Gurtler	Tom Yahn	(800) 638-7300 or (708) 331-2550	www.gurter.com
Keerwite	Mike Levine	(703) 625-9879 or (877) 553-3794	www.dry-clean.com
Krussler		(813) 884-1499	www.kreussler-chemie.de
Laidlaw	Mike Achin	(508) 699-5521 or (508) 878-8739	www.laidlawcorp.com
MEGS	Zion Orpaz	(714) 689-0068	www.megswetcleaning.com
Pariser		(973) 569-9090	www.pariserchem.com
RR Street	Tim Racette	(630) 416-4244	www.4streets.com
Sanitone		(800) 543-0406	www.sanitone.com
Stamford	Steve Nagel	(606) 781-8200	http://www.fabritec.com/ stamford/index.html
Seitz	Roland Dobbins	(303) 829-3310	www.seitz24.com roland.dobbins@seitz24.com