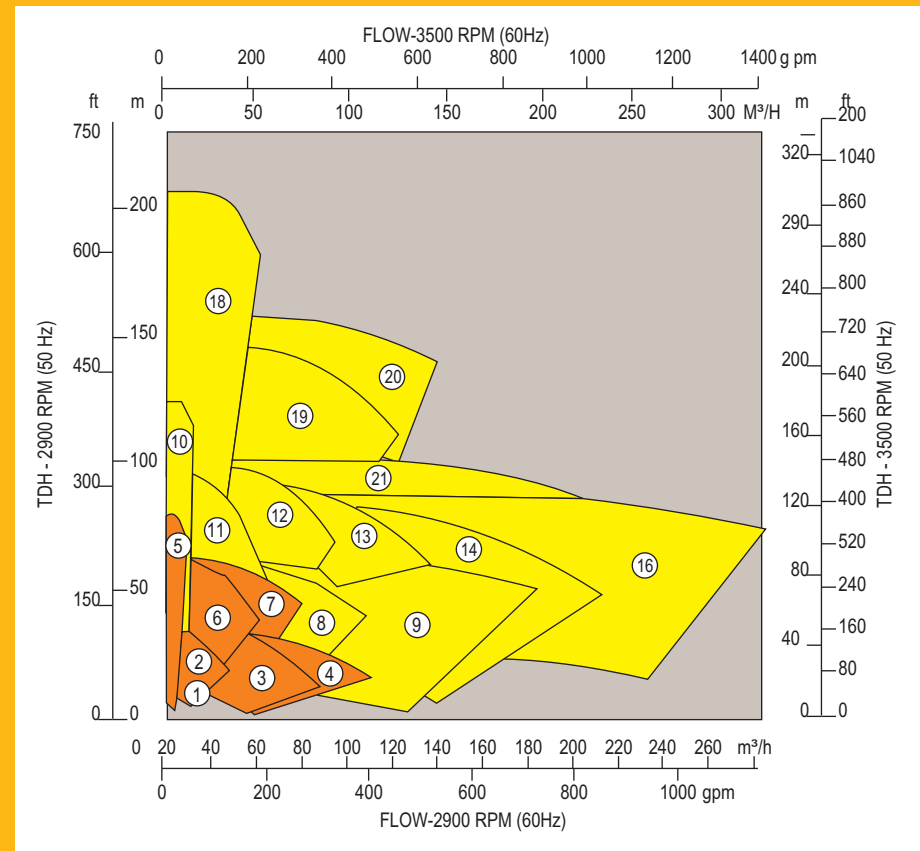


## HYDRAULIC COVERAGE



### Mark 3 Standard Group 1

- 1 1½x1LF-4
- 2 1½x1-6
- 3 3x1 ½-6
- 4 3x2-6
- 5 1½x1LF-8
- 6 1½x1-8
- 7 3x1 ½-8

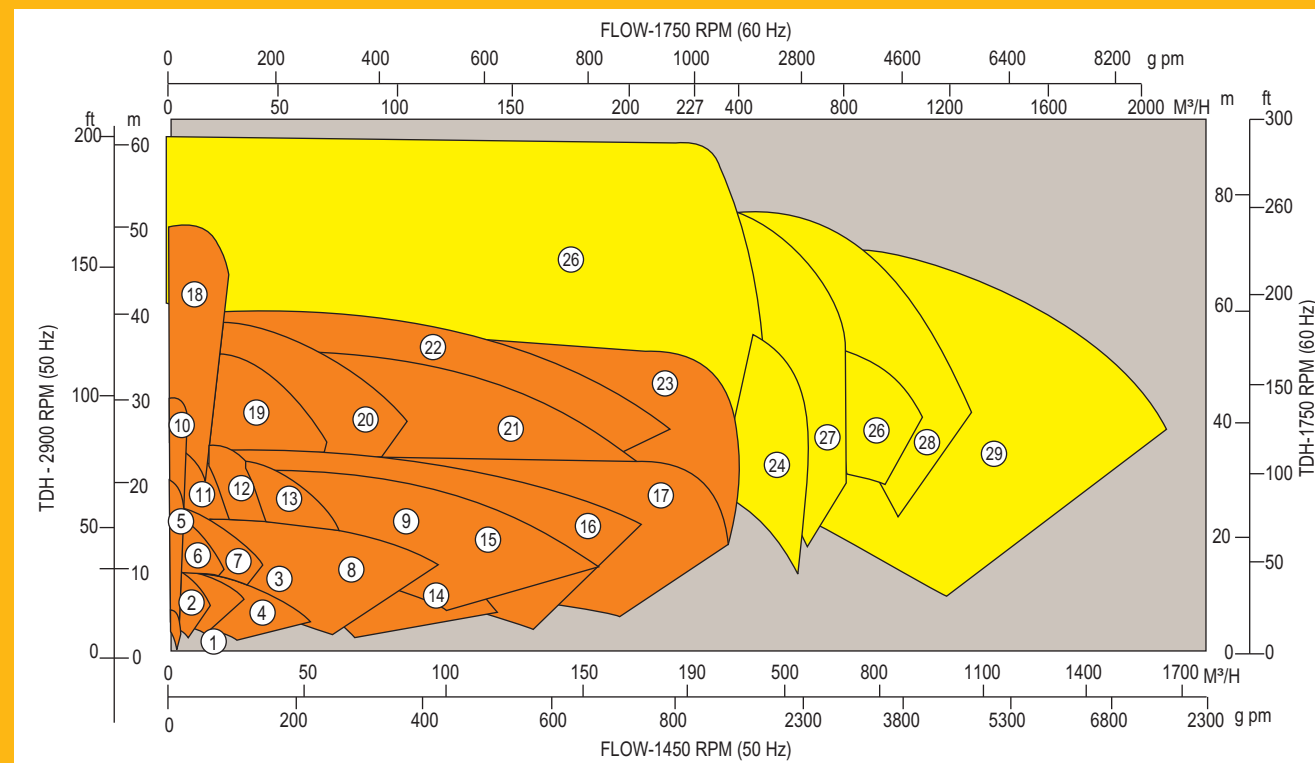
### Mark 3 Standard Group 3

- 24 8x6-14A
- 25 10x8-14
- 26 6x4-16
- 27 8x6-16A
- 28 10x8-16
- 29 10x8-16H
- 30 10x8-17<sup>2</sup>

### Mark 3 Standard Group 2

- 8 3x2-8
- 9 4x3-8
- 10 2x1LF-10
- 11 2x1-10A
- 12 3x1 ½-10A
- 13 3x2-10A
- 14 4x3-10
- 15 4x3-10H
- 16 6x4-10
- 17 6x4-10H
- 18 3x1 ½LF-13
- 19 3x1 ½-13
- 20 3x2-13
- 21 4x3-13
- 22 4x3-13HH
- 23 6x4-13A

2 Higher flows available with Mark 3, Group 4 pump. Please see Bulletin PSS-10-13.2 for more information.  
3 Max. speed : 1450 rpm



**SMOOTHFLO**  
Innovative Flow Solutions

## Centrifugal Chemical Process Pump Match - III

**ANSI**  
Series  
B73-1 2001



**SMOOTHFLO**  
Innovative Flow Solutions

Inno Engineered Products Pte Ltd

48 Siglap Drive, Singapore 456173  
Tel : +65 6441 3455 Fax : +65 6441 5677  
Website : www.smoothflopumps.com

## DESCRIPTION

### Range

Delivery Size up to 200 mm (8" Inch)  
Capacity up to 410 M<sup>3</sup>/Hr.  
Head up to 150 Meter  
Working Pressure 17 kg/Cm<sup>2</sup>

### APPLICATIONS

Acid Transfer, Beverage Processing, Brine, Chemical Processing, Chloral-alkali, Corrosive Services, Organic Chemicals, Polymers, Sea Water, Solvents, Paper, Food, Synthetic Fibers, Slurry & others.

### CONSTRUCTIONAL FEATURES

Pumps are as per ANSI B73.1-2001. The design is of back pull out type. Large varieties of models are available to operate at 1450 RPM and 2900 RPM at 50 HZ & 1750 RPM and 3500 RPM at 60 HZ. ANSI series chemical process pump is a horizontal single stage centrifugal pump.

Pump rotating element can be withdrawn towards the Motor end without disturbing the suction or delivery pipe lines, due to back pull out design. The motor remains fixed to base plate. The pump rotating element can easily be dismantled into its components. After reassembly no time consuming re-alignment is necessary.

### CASING

The casing has end suction and top centre line delivery. The pump feet are integrally cast in the volute casing. Smooth hydraulic passages ensure high efficiency.

### IMPELLER

Impellers are of open type. Hydraulic balancing of impellers is achieved either by back vanes or by balancing holes. The impellers are dynamically balanced. Reliable fixing of the impeller on shaft is achieved by using helicoil insert under impeller nut.

## EXPELLER

JEC ASME series process pumps are available with expeller to reduced gland leakage in soft packing as well as increase mechanical seal life.

### SHAFT

The shaft is of the dry type, with protection sleeve to prevent contact with the pumped liquid (for gland packed & standard mechanical seal only). For specialized cartridge mechanical seal models the shaft will be in contact with the pumped liquid.

### SHAFT SEALING

The stuffing box is sealed by gland packing or by mechanical seal. Conversion from gland packing to mechanical seal is achieved by changing some standardize parts. Re-machining of stuffing box is not necessary. Stuffing box cooling is provided for high temperature applications

### BEARINGS

The bearing arrangement consists of Double Row Angular Contact Ball Bearing and Single Row Deep Groove Ball Bearing. Oil level indicator is provided for oil level checking and maintaining.

### DIRECTION OF ROTATION

Clockwise viewed from driving end

### DRIVE

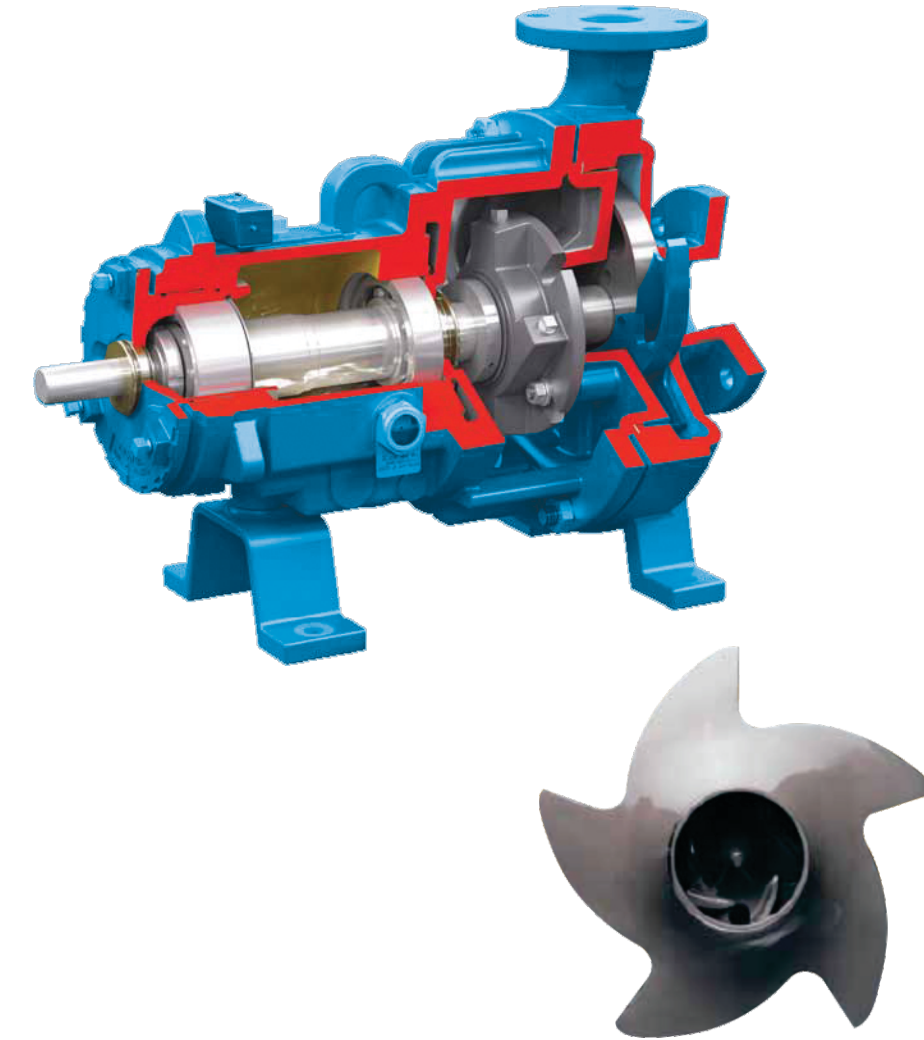
The pump is only recommended for direct via a flexible spacer coupling. Spacer couplings enable utilization of the back pull out feature.

### BASE PLATE

Base plates for electric drives are available in a variety of styles.  
Standard: Fixed & grouted directly to the foundation  
Anti Vibration: Rigid base plate on rubber mounts

### FLANGES

Standard	Optional
ANSI B16.5 - 150 Class	Available on request



### Exclusive Reverse Vane Impeller Offers Performance and Maintenance Advantages

The JEC reverse vane impeller with balance holes delivers excellent efficiency and performance, while extending bearing and seal life. The result is reduced total cost of pump ownership.

Predistable, Repeatable Seal Chamber Pressures and Thrust Loads mean the mechanical seals last longer. Lowest Required NPSH of any standard pump. Rear Cover takes the abrasive wear instead of the more expensive casing.

Easy Impeller Adjustment - whether in the shop or in the field - with the only impeller design that takes full advantage of the back pull-out feature  
In-shop Impeller Adjustment with the only impeller design that takes full advantage of the back pull-out feature. Since the critical running clearance is set between the rear of the impeller and the rear cover plate, both impeller and mechanical seal settings can be done in the shop, "On the bench," instead of under adverse field conditions.  
Repeatable Performance Assurance with the only impeller design that offers repeatable seal chamber pressures and bearing thrust loads

### External Micrometer Enables In-shop Impeller Adjustment

JEC unique external micrometer impeller adjustment mechanism is simple to use and reduces maintenance time. Most importantly, it is precisely accurate.

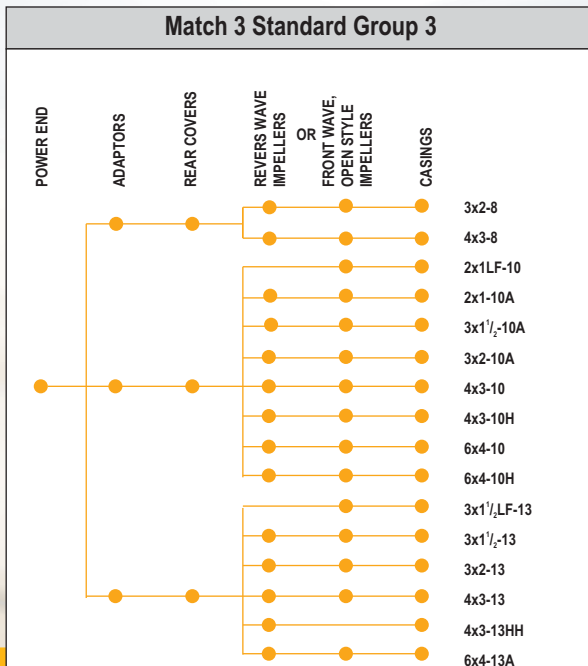
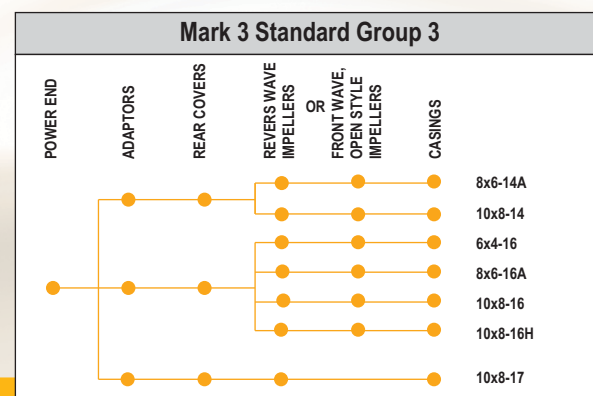
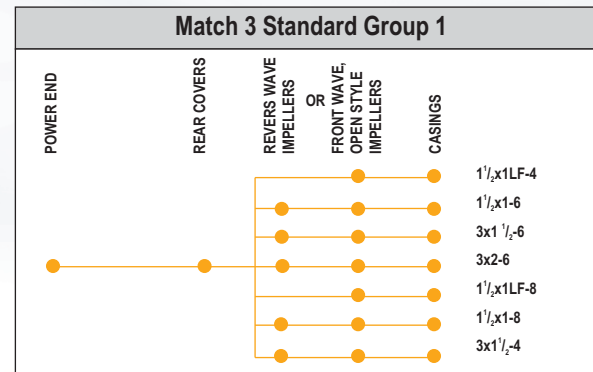


### Available Front Vane, Open Style Impeller

The JEC Pumps is also available with an open style impeller. Fully interchangeable with the reverse vane impeller, the front vane, open style impeller is an excellent choice for fibrous, stringy materials and certain applications requiring high shear against the casing.

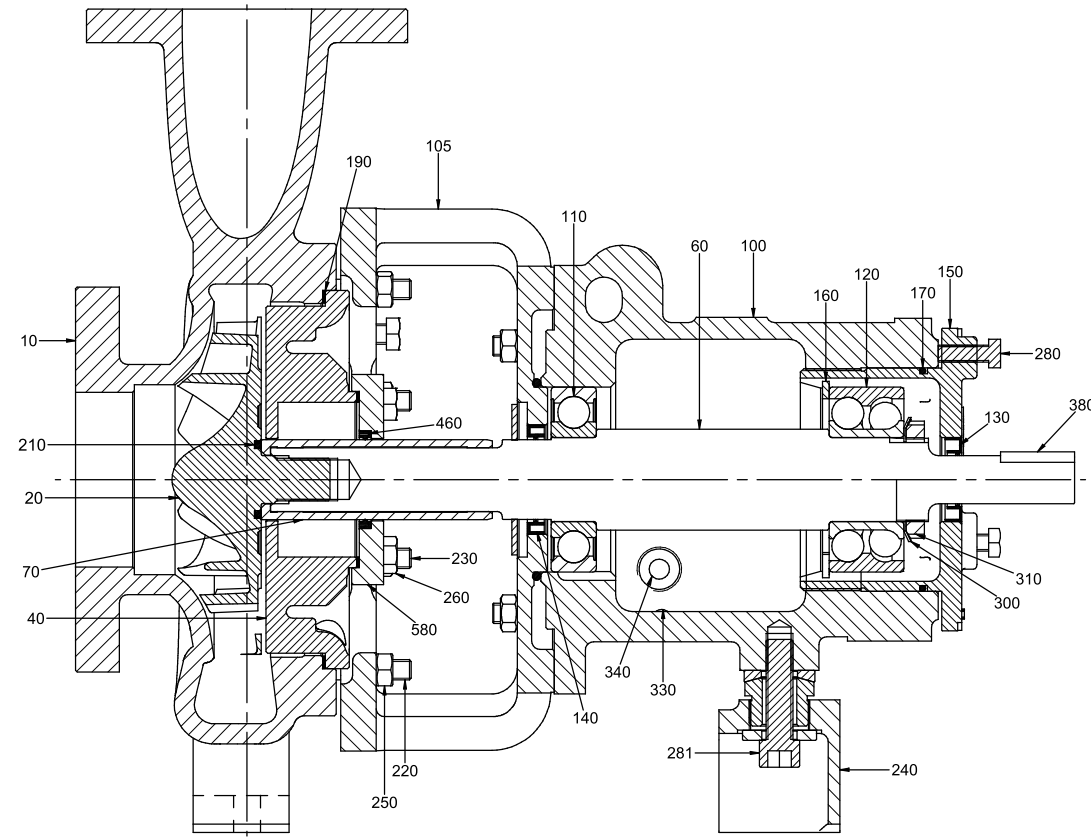
Low-flow and recessed impeller pump configurations are also available. See pages 24 and 30, respectively.

## MODULAR INTERCHANGEABILITY

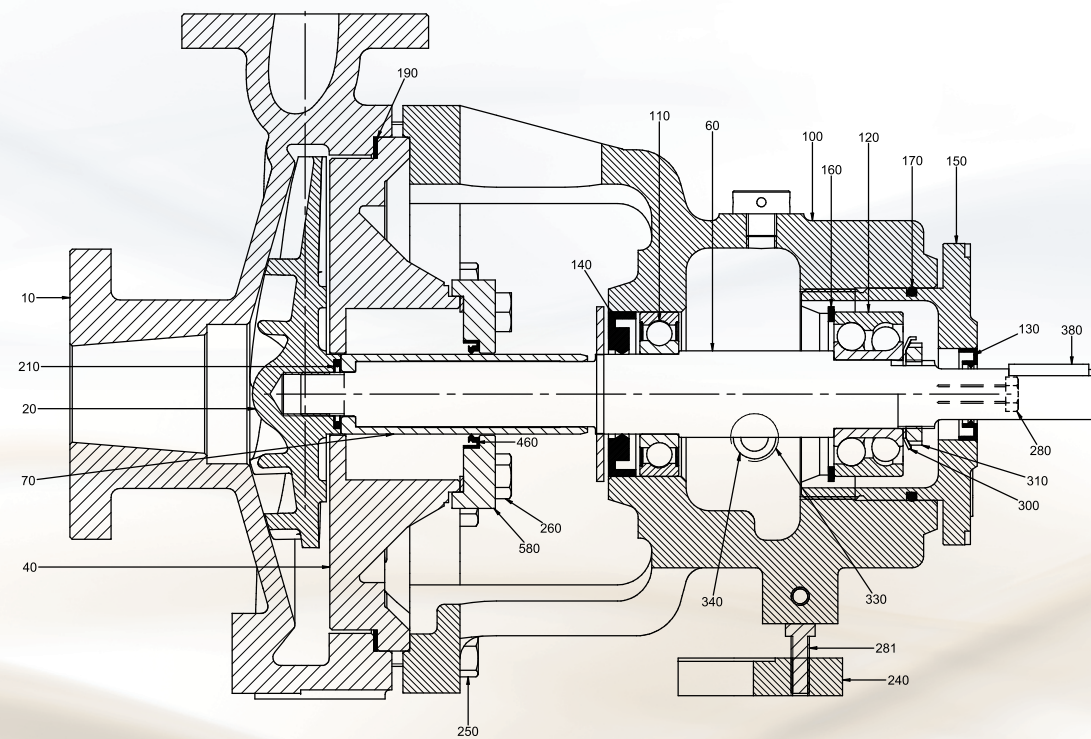


With only three different power frames and five SealSentry seal chamber options, the 30 pumps in the Durko Mark 3 family offer a high degree of parts interchangeability. Pumps delivered worldwide are manufactured in ISO 9001 certified Flowserve facilities.

### SECTIONAL DRAWING FOR ANSI MT & LT SERIES



### SECTIONAL DRAWING FOR ST SERIES



### BILL OF MATERIAL FOR SOFT PACKED PUMP

Pos. No.	Qty.	Description	Material						
			CI	CS	CF8	CF8M	A 20	HC	HB
10	1	Volute casing	CI	CS	CF8	CF8M	A 20	HC	HB
20 *	1	Impeller	CI	CS	CF8	CF8M	A 20	HC	HB
40	1	Stuffing Box	CI	CS	CF8	CF8M	A 20	HC	HB
60	1	Shaft	SS 410		SS304	SS316			
70	1	Shaft Sleeve	SS410		SS304	SS316	A20	HC	HB
100	1	Bearing housing	CI						
105	1	Lantern Piece	CI						
110 *	1	Ball Bearing	Steel						
120 *		Ball Bearing	Steel						
130 *	1	Oil Seal – Drive End	Nitrile						
140 *	1	Oil seal - Non Drive End	Steel		Nitrile	SS304			
150	1	Adjusting Bush	Steel		CI	SS304			
160	1	Internal circlip	Steel				CI		
170 *	1	O Ring	Steel		Nitrile	SS304			
190 *	1	Gasket - volute casing	Steel		PTFE	SS304			
210 *	1	Gasket - Shaft Sleeve	PTFE						
220	x	Stud for volute casing							
230	x	Stud for Stuffing box							
240	1	Support Foot							
250	x	Hex nut for volute casing							
260	x	Hex nut for Stuffing box							
280	x	Bolt for Adjusting Bush	Steel						
281	1	Bolt for support foot	Steel						
300	1	Lock nut washer	Steel						
310	1	Lock Nut	Steel						
330	1	Plug	Steel						
340	1	Oil Level Indicator	Aluminum						
380	1	Key at drive end	Steel						
460 *	1	Oil Seal at gland plate	Nitrile						
580	1	Gland Plate	Steel	SS304	SS316	A20	HC	HB	

\* - Recommended Spares    x – Quantity depends on model  
+