

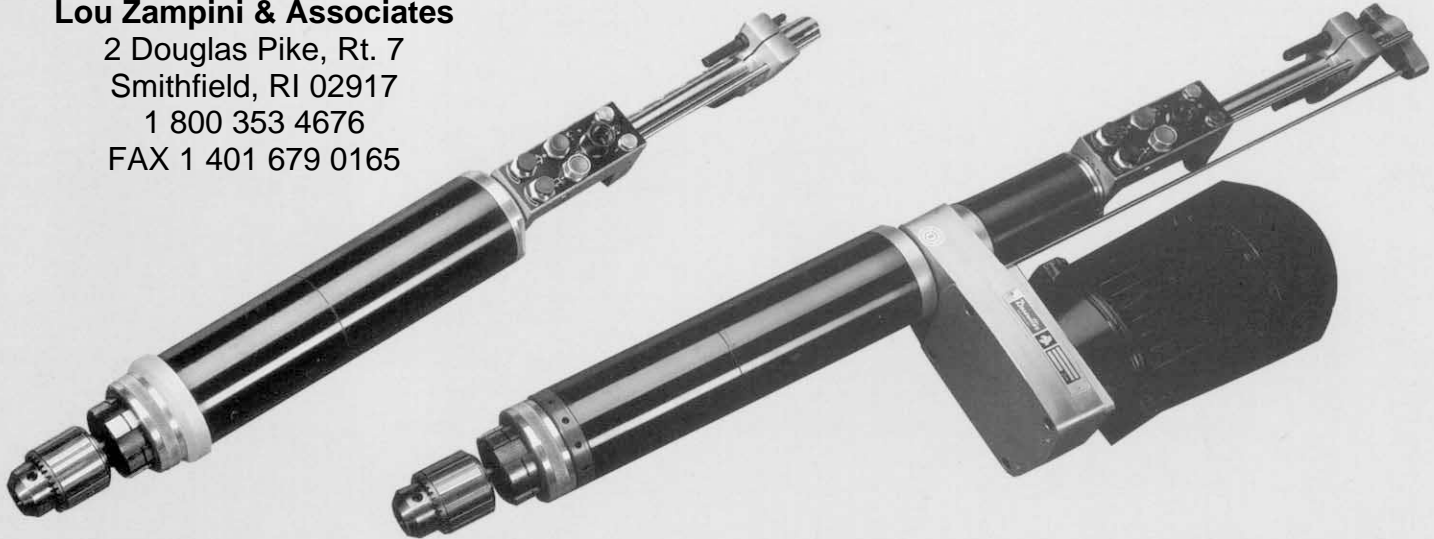
# Desoutter



## 60 Series Auto Feed Units

**Lou Zampini & Associates**

2 Douglas Pike, Rt. 7  
Smithfield, RI 02917  
1 800 353 4676  
FAX 1 401 679 0165



● **DESOUTTER QUALITY**

(Registered to BS EN ISO 9001).

● **CONFORMING TO DIRECTIVE\***

\* AFD's are supplied as "Machinery to be incorporated" – Customer is responsible for safe incorporation into the complete machine.

Speeds indicated are nominal. Maximum power is achieved at 50% of no load speed (pneumatic) and 85% of no load speed (electric). For optimum efficiency and minimum maintenance it is recommended that a filter, regular and lubricator is fitted to the airline supplying the Auto Feed Unit. Performance data is obtained at an inlet pressure of 6.3 bar.

Electric units are not supplied with a starter. This should conform to local regulations.

● **Equipment supplied:-**

- Chuck
- Spanner kit
- Operating and maintenance manual

Maximum capacity recommended for the AFD in a specific material.



Certificate No. 28383

### PERFORMANCE SPECIFICATION - PNEUMATIC UNIT

Drilling							
Tool type – No load speed rev/min.	Chuck size fitted mm	Max. working stroke mm	Max. feed stroke mm	Dynamic thrust N	Air consumption		
					l/s	cfm	
<b>AFD60 Series – 520W (0.7 hp)</b>							
AFD60-4300	10						
AFD60-3000	10						
AFD60-2100	10						
AFD60-1600	10	95	102	1200	15.6	33	
AFD60-1000	13						
AFD60- 700	13						
AFD60- 550	13						
<b>AFD61 Series – 750W (1.0 hp)</b>							
AFD61-3500	10						
AFD61-2500	10						
AFD61-1880	10						
AFD61-1180	13	95	102	1200	19	40	
AFD61- 820	13						
AFD61- 650	13						

Recommended drilling capacity							
Mild steel hole ø mm	Max. no. of spindles	Aluminium hole ø mm		Hard wood hole ø mm			
		Max. no. of spindles	Max. no. of spindles	Max. no. of spindles	Max. no. of spindles		
2	5	4	5	6	5		
3	4	6	3	10	3		
4	3	10	2	14	2		
6	2	12	1	16	1		
10	1	16	1	20	1		
12	1	18	1	22	1		
14	1	19	1	25	1		
3	4	6	5	8	5		
4	3	8	3	12	3		
5	2	10	2	14	2		
8	1	16	1	20	1		
10	1	18	1	22	1		
14	1	19	1	25	1		

Tapping										
Tool type – no load speed rev/min.	Chuck size fitted mm	Max. feed stroke mm	Max. working stroke mm	Air consumption l/s	Air consumption cfm	Available tapping torque Nm	Capacity Aluminium mm	Capacity Mild steel mm		
<b>AFT60 Series – 520W (0.7 hp) – with push-off reversing head</b>										
AFT60-700	4.5 - 13	102	83	14.6	31	14	126	M16	M10	
AFT60-550	4.5 - 13	102	83	14.6	31	18	160	M18	M12	
<b>AFT61 Series – 750W (1.0 hp) – with push-pull reversing head</b>										
AFT61-820	4.5 - 13	102	83	19	40	17	147	M18	M12	
AFT61-650	4.5 - 13	102	83	19	40	21	185	M18	M14	

### PERFORMANCE SPECIFICATION - ELECTRIC UNIT

Drilling								
Tool type – No load speed rev/min	Chuck size fitted mm	Max. feed stroke mm	Max. working stroke mm	Dynamic thrust N	Air consumption	Amps at 50 Hz	Amps at 60 Hz	
<b>AFDE60 Series – 750W (1 hp)</b>								
AFDE60-6000	10							
AFDE60-5300	10							
AFDE60-4600	10							
AFDE60-3900	10							
AFDE60-3000	10							
AFDE60-2300	10							
AFDE60-1550	13							
AFDE60-1250	13	102	102	1200	64 litres (2.25 scf)	3.1A at 220/240V	3.3A at 220/264V	
AFDE60-1050	13					1.9A at 360/440V	1.9A at 380/520V	
AFDE60- 830	13							
AFDE60- 700	13							
AFDE60- 540	13							
AFDE60- 420	13							
AFDE60- 290	13							

Recommended drilling capacity							
Mild steel hole ø mm	Max. no. of spindles	Aluminium hole ø mm		Hard wood hole ø mm			
		Max. no. of spindles	Max. no. of spindles	Max. no. of spindles	Max. no. of spindles		
1.5	5	3	5	4	5		
1.5	5	3.5	5	5	5		
2	5	4	5	6	5		
2.5	5	5	3	7	4		
3	4	6	2	9	3		
4	3	10	1	13	2		
6	2	12	1	16	1		
7	2	16	1	18	1		
9	1	19	1	20	1		
11	1	20	1	22	1		
13	1	22	1	24	1		
17	1	24	1	26	1		
20	1	26	1	28	1		
20	1	26	1	28	1		

Tapping										
Tool type – no load speed rev/min.	Chuck size fitted mm	Max. feed stroke mm	Max. working stroke mm	Air consumption	Amps at 50Hz	Amps at 60Hz	Available tapping torque Nm	Capacity Aluminium mm	Capacity Mild steel mm	
<b>AFT60 Series 750W (1.0 hp) – with push pull reversing head</b>										
AFT60-700	4.5 - 13	102	90	64 litres (2.25 scf) for 25 full strokes	3.1A at 220/240V	3.3A at 220/264V	10	88	M14	M10
AFT60-540	4.5 - 13	102	90	64 litres (2.25 scf) for 25 full strokes	1.9A as 360/440V	1.9A as 380/520V	13	115	M16	M10
AFT60-420	4.5 - 13	102	90	64 litres (2.25 scf) for 25 full strokes	1.9A as 360/440V	1.9A as 380/520V	17	150	M16	M12
AFT60-290	4.5 - 13	102	90	64 litres (2.25 scf) for 25 full strokes	1.9A as 360/440V	1.9A as 380/520V	24	210	M18	M14



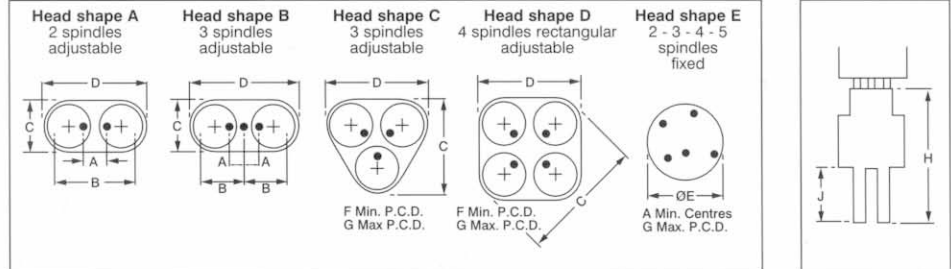
## Multiple Spindle Drilling and Tapping Heads

### Collets for head types 52362, 52392, 52422, 52442, 52462



High precision double taper

Collet Size		Part No.	Collet Size		Part No.	
mm	in.		mm	in.		
0.5	0.020	52582	3.7	0.146	52642	
0.6	0.024		3.8	0.150		
0.7	0.028		3.9	0.154		
0.8	0.032		4.0	0.157		
0.9	0.036					
1.0	0.039					
1.1	0.043	52592	4.1	0.161	52652	
1.2	0.047		4.2	0.165		
1.3	0.052		4.3	0.169		
1.4	0.055		4.4	0.173		
1.5	0.059		4.5	0.177		
1.6	0.063	52602	4.6	0.181	52662	
1.7	0.067		4.7	0.185		
1.8	0.071		4.8	0.189		
1.9	0.075		4.9	0.193		
2.0	0.079		5.0	0.197		
2.1	0.083	52622	5.1	0.201	52662	
2.2	0.087		5.2	0.205		
2.3	0.091		5.3	0.209		
2.4	0.094		5.4	0.213		
2.5	0.098		5.5	0.216		
2.6	0.102	52632	5.6	0.220	52672	
2.7	0.106		5.7	0.224		
2.8	0.110		5.8	0.228		
2.9	0.114		5.9	0.232		
3.0	0.118		6.0	0.236		
3.1	0.122	52642	6.1	0.240	52672	
3.2	0.126		6.2	0.244		
3.3	0.130		6.3	0.248		
3.4	0.134		6.4	0.252		
3.5	0.138		6.5	0.256		
3.6	0.142		6.6	0.260		
			6.7	0.264		
			6.8	0.268		
			6.9	0.272		
			7.0	0.276		



### Collets for head types MST200, MSD200, 204193



Single taper

Collet Size		Part No.	Collet Size		Part No.
mm	in.		mm	in.	
2.0	0.079	39302	5.8	0.228	35242
2.1	0.083	39322	5.9	0.232	35252
2.2	0.087	39332	6.0	0.236	35272
2.3	0.091	39342	6.1	0.240	35282
2.4	0.094	39352	6.2	0.244	35292
2.5	0.098	39362	6.3	0.248	35302
2.6	0.102	39372	6.4	0.252	35332
2.7	0.106	39382	6.5	0.256	35342
2.8	0.110	39392	6.6	0.260	35352
2.9	0.114	39402	6.8	0.268	35382
3.0	0.118	39422	6.9	0.272	35392
3.1	0.122	39432	7.0	0.276	35402
3.2	0.126	34902	7.1	0.280	35422
3.3	0.130	34932	7.2	0.283	35432
3.4	0.134	34942	7.3	0.287	35452
3.5	0.138	34952	7.4	0.291	35462
3.6	0.142	34962	7.5	0.295	35472
3.7	0.146	34982	7.6	0.299	35492
3.8	0.150	34992	7.7	0.303	35502
3.9	0.154	35002	7.8	0.307	35522
4.0	0.157	35022	7.9	0.311	35532
4.1	0.161	35032	8.0	0.315	35552
4.2	0.165	35042	8.1	0.319	35562
4.3	0.169	35052	8.2	0.323	35572
4.4	0.173	35062	8.3	0.327	35582
4.5	0.177	35072	8.4	0.331	35592
4.6	0.181	35082	8.5	0.335	35602
4.7	0.185	35092	8.6	0.339	35622
4.8	0.189	35102	8.7	0.342	35632
4.9	0.193	35122	8.8	0.346	35652
5.0	0.197	35132	8.9	0.350	35672
5.1	0.201	35152	9.0	0.354	35682
5.2	0.205	35172	9.1	0.358	35692
5.3	0.209	35182	9.2	0.362	35722
5.4	0.213	35192	9.3	0.366	35732
5.5	0.216	35202	9.4	0.370	35752
5.6	0.220	35222	9.5	0.375	35762
5.7	0.224	35232			

### Drilling

Head shape	Head Part No.	Max. speed r/min.	Min. centres A mm	Max. centres B mm	C mm	D mm	øE mm	Min. P.C.D. F mm	Max. P.C.D. G mm	H mm	J mm	Collet range mm	Drill bit depth in spindle mm	Suitable for AFD types
A	52362	8500	18.4	87.3	62	115	-	-	-	214	60	1.0 - 7.0	26	AFD60, AFD61, AFDE60
A	52462	8500	41.1	109.9	62	137	-	-	-	214	60	1.0 - 7.0	26	
B	52442	8500	20.5	55	62	137	-	-	-	214	60	1.0 - 7.0	26	
C	52392	8500	-	-	-	116	-	27.3	96.2	214	60	1.0 - 7.0	26	
E	52422	8500	-	-	-	116	-	41.1	109.9	214	60	1.0 - 7.0	26	
D	MSD200	5300	19	-	-	-	-	-	95.2	201	64	2.0 - 9.5	20	

### Tapping

Head shape	Head Part No.	Max. speed r/min.	Min. centres A mm	Max. centres B mm	C mm	D mm	øE mm	Min. P.C.D. F mm	Max. P.C.D. G mm	H mm	J mm	Collet range mm	Suitable for AFD types
A	204193 <sup>2</sup>	5300	19	95	76	124	-	-	-	279	64	2.0 - 9.5	AFD60, AFD61, AFDE60
E	MST200 <sup>3</sup>	5300	19	-	-	-	-	-	95.2	279	64	2.0 - 9.5	

(1) Where maximum P.C.D. does not exceed 74.6mm, øE is 100.8mm. Where P.C.D. is greater than 74.6, øE is 126.2mm.

(2) These tapping heads incorporate their own reversing mechanism and cannot be mounted directly onto the single spindle tapping units. When ordering the following must be specified:  
 a. Select the AFD drill type of the appropriate speed.  
 b. Specify multi-head part number from above chart.  
 Specify collet size from chart opposite.

Always provide drawings of hole pattern required when ordering 2, 3, 4 or 5 fixed spindle heads.

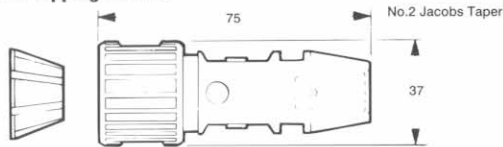
Please specify collet size required when ordering.  
 See opposite for details.

### IMPORTANT

Bands indicate special head types.  
 In preference select heavy duty, precision head types from white area of chart providing performance parameters are suitable.

## Output Drive

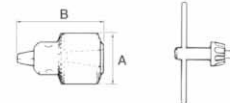
### Single spindle tapping chucks



Taper fitting	A mm	B mm	Collet shank ø mm	Collet Part No.	Chuck Assembly Part No.
No. 2	75	37	4.5-13	36172	34742

Chuck assembly Part No. includes collet, chuck body spanner Part No. 31692 and collet nut spanner Part No. 31682.  
 Optional collet for chucks with No. 2 taper fitting 9 - 16mm Part No. 39242.

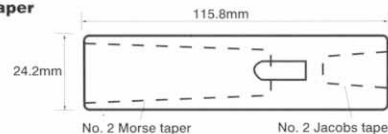
### Jacobs key adjustable chucks



Chuck key is supplied under chuck part number.

Chuck capacity mm	Spindle mounting taper	A mm	B mm	Key only Part No.	Chuck and key Part No.
10	No. 2	37	61	29242	34752
13	No. 2	52	90	29242	34332

### No. 2 Morse taper



Part No. 34862





## Electric/Pneumatic Interface & Control Top Signals

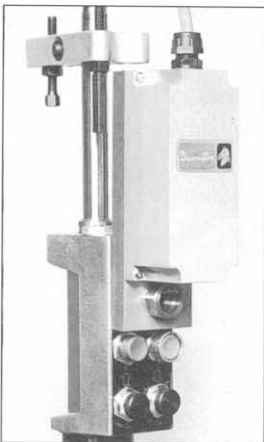
### Optional electric/pneumatic interface unit

The Desoutter interface unit allows the AFD to be sequenced using the signals provided by a programmable controller.

It provides signals to start, stop and sequence the auto feed unit. In addition, signals for pecking and dwell control are provided.

The Desoutter interface unit is compact, self contained and easy to install. The solenoids operate on 24V d.c., but other voltages are available to special order.

Suitable tool type	Interface Part No.
AFDE60, AFTE60	79502
AFD60, AFT60, AFD61, AFT61	79532



#### Input signals

Remote start N.C.  
Black/Green connection.  
Short duration signal required.  
Can be switched when the sequence switch is closed.

Remote stop N.O.  
Black/Red connection.  
Permanent signal required when air to control top is on.  
Switch signal off to return AFD to datum rest position.

#### Output signals

Depth stop signal N.O.  
White/Yellow connections.

The function of these two outputs is identical to standard control top. See below.

#### Electrical Inputs and Outputs

24Vd.c. Switched	Red
OV. Common	Black
24V. D.C. Switched	Green
Switch	Yellow
Switch Common	White
Switch	Blue

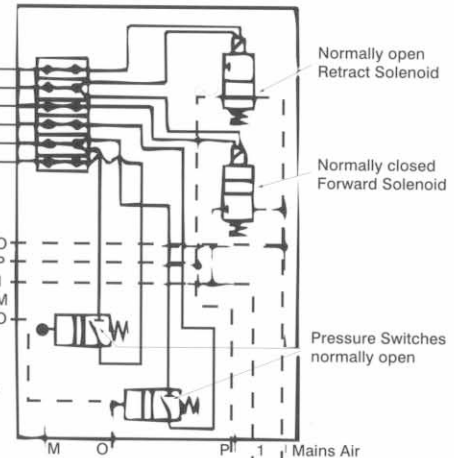
Air Inputs	Mains Air
Tapped M5	To retract Unit
Air Signals	To Advance Unit
Tapped M5	Sequence Signal
	Depth Stop Signal

#### Equipment supplied

2 metre cable – Part No. 292173  
Adaptor – Part No. 287753 and 'O' Ring – Part No. 250913 for external control of retract function.

#### Optional

Plug – Part No. 292153  
Socket – Part No. 292163



### Standard auto feed control top AFD60/AFD61/AFDE60/AFT60/ AFT61/AFTE60

#### Input signals

Remote start signal (1) – for external start.

The requirements for a signal to feed into the remote start are a minimum of 2.8 bar (40 lbf/in<sup>2</sup>) pressure and only for a short duration. It is essential that this signal is cut before the drill reaches the bottom of its stroke.

#### Remote stop signal (P)

This port is for supplying an external signal for returning the unit to datum rest position.

The pressure signal must be at least 2.8 bar (40 lbf/in<sup>2</sup>). This signal should not be held for any length of time as the air consumption is approximately 0.7 l/s (1.5 cfm) per AFD.

#### Output signals

##### Depth stop signal (O) via adaptor

This is positive when tool stroke has reached pre-set depth. It is used in conjunction with external circuits, e.g. dwell or pecking.

##### Sequence signal (M)

This is positive when tool has advanced 8mm from datum rest position.

Adaptor Part No. 287753 and 'O' Ring Part No. 250913 can be fitted to interrupt the signal from the valve. This enables external control of the retract motion to be obtained for variable or fixed delay such as dwell or pecking.

