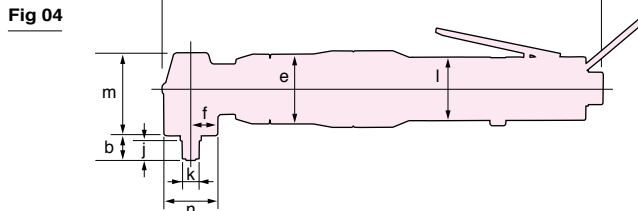
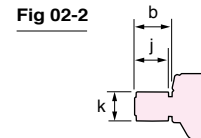
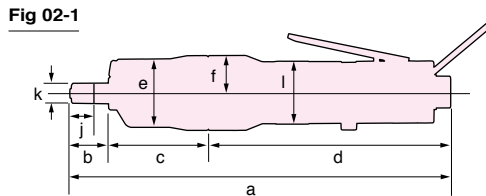
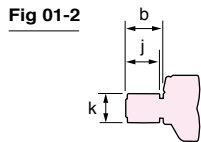
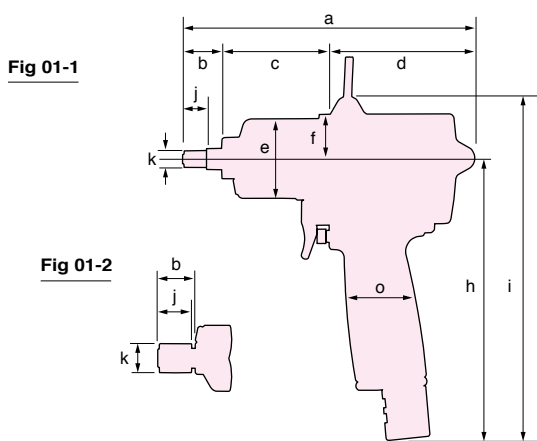


## Dimensions

ASSEMBLY TOOLS .....	120
ABRASIVE TOOLS .....	124
DRILLS / TAPPERS .....	130
PERCUSSIVE TOOLS .....	132
AIR MOTORS .....	134
OTHERS .....	137

# Dimensions

## Assembly Tools



### ELECTRONIC TORQUE CONTROL PULSE WRENCHES

Fig No.	Model	a	b	c	d	e	f	h	i	j	k	o
01-1	FET-33-1	181	25.0	62.0	94	42	23.0	146	181	12.0	12	39
01-1	FET-44-3	181	25.0	62.0	94	42	23.0	146	181	12.0	12	39
01-1	FET-55-3	181	25.0	62.0	94	42	23.0	146	181	12.0	12	39
01-1	FET-66-3	193	25.0	62.0	106	42	23.0	146	181	12.0	12	39
01-1	FET-77-1	188	23.5	64.5	100	47	26.0	181	220	12.0	12	41
01-1	FET-88-4	203	28.0	73.0	102	53	27.0	173	214	16.5	16	41
01-1	FET-99-2	202	28.0	69.0	105	57	29.5	175	217	16.5	16	41
01-1	FET-111-2	215	28.0	69.0	118	60	31.0	175	223	16.5	15	41
01-1	FET-133-2	230	28.0	77.0	125	66	34.0	181	232	16.5	15	44
01-1	FET-777-1	201	23.5	64.5	113	47	26.0	181	220	12.0	12	41
01-1	FET-888-4	216	28.0	73.0	115	53	27.0	173	214	16.5	16	41
01-1	FET-999-2	220	28.0	69.0	123	57	30.0	175	217	16.5	16	41
01-1	FET-1111-2	222	28.0	69.0	125	60	31.0	175	223	16.5	15	41
01-1	FET-1333-2	234	28.0	77.0	129	66	34.0	181	232	16.5	15	44
01-1	FET-33D-1(10)	181	25.0	62.0	94	42	23.0	146	181	21.0	18	39
01-2	FET-44D-3(30)	181	25.0	62.0	94	42	23.0	146	181	21.0	18	39
01-2	FET-55D-3(30)	181	25.0	62.0	94	42	23.0	146	181	21.0	18	39
01-2	FET-66D-3(30)	193	25.0	62.0	106	42	23.0	146	181	21.0	18	39

### PULSE WRENCHES SHUT-OFF TYPE

#### Pistol Grip Models

High Air Pressure Use

Fig No.	Model	a	b	c	d	e	f	h	i	j	k	o
01-1	FPT-110-1	195	23.5	68.0	103.5	35	20	143	163	12.0	12	41
01-1	FPT-330-1	198	25.0	72.0	101.0	42	23	146	169	12.0	12	39
01-1	FPT-440-1	193	25.0	72.0	96.0	42	23	146	169	12.0	12	39
01-1	FPT-550-1	193	25.0	72.0	96.0	42	23	146	169	12.0	12	39
01-1	FPT-660-1	202	25.0	77.0	100.0	42	23	146	169	12.0	12	39
01-1	FPT-770-1	200	24.0	78.0	98.0	47	30	169	206	12.0	12	41
01-1	FPT-880-3	214	28.0	73.0	114.0	53	27	173	211	16.5	16	41
01-1	FPT-990-1	215	28.0	69.0	118.0	57	30	175	216	16.5	16	41
01-1	FPT-1110-1	216	27.5	69.0	119.5	60	31	175	219	16.5	16	41
01-1	FPT-1330-1	228	27.5	77.0	123.5	66	34	180	227	16.5	16	44
01-1	FPT-1660-1	266	35.5	88.5	142.0	70	39	205	257	24.0	25	49
01-2	FPT-110D-1(10)	198	26.5	68.0	103.5	35	20	143	163	21.0	18	41
01-2	FPT-330D-1(10)	198	25.0	72.0	101.0	42	23	146	169	21.0	18	39
01-2	FPT-440D-1(10)	193	25.0	72.0	96.0	42	23	146	169	21.0	18	39
01-2	FPT-550D-1(10)	193	25.0	72.0	96.0	42	23	146	169	21.0	18	39
01-2	FPT-660D-1(10)	202	25.0	77.0	100.0	42	23	146	169	21.0	18	39

#### Pistol Grip Models

Low Air Pressure Use

Fig No.	Model	a	b	c	d	e	f	h	i	j	k	o
01-1	FPT-440-1L	193	25.0	72	96.0	42	23.0	146	169	12.0	12	39
01-1	FPT-550-1L	193	25.0	72	96.0	42	23.0	146	169	12.0	12	39
01-1	FPT-660-1L	202	25.0	77	100.0	42	23.0	146	169	12.0	12	39
01-1	FPT-770-1L	200	24.0	78	98.0	47	30.0	169	206	12.0	12	41
01-1	FPT-880-3L	214	28.0	73	113.0	53	27.0	173	211	16.5	16	41
01-1	FPT-990-1L	215	28.0	69	118.0	57	29.5	175	216	16.5	16	41
01-1	FPT-1110-1L	216	27.5	69	119.5	60	31.0	175	219	16.5	16	41
01-1	FPT-1330-1L	228	27.5	77	123.5	66	34.0	180	227	16.5	16	44
01-2	FPT-440D-1L(10L)	193	25.0	72	96.0	42	23.0	146	169	21.0	18	39
01-2	FPT-550D-1L(10L)	193	25.0	72	96.0	42	23.0	146	169	21.0	18	39
01-2	FPT-660D-1L(10L)	202	25.0	77	100.0	42	23.0	146	169	21.0	18	39

#### Straight Models

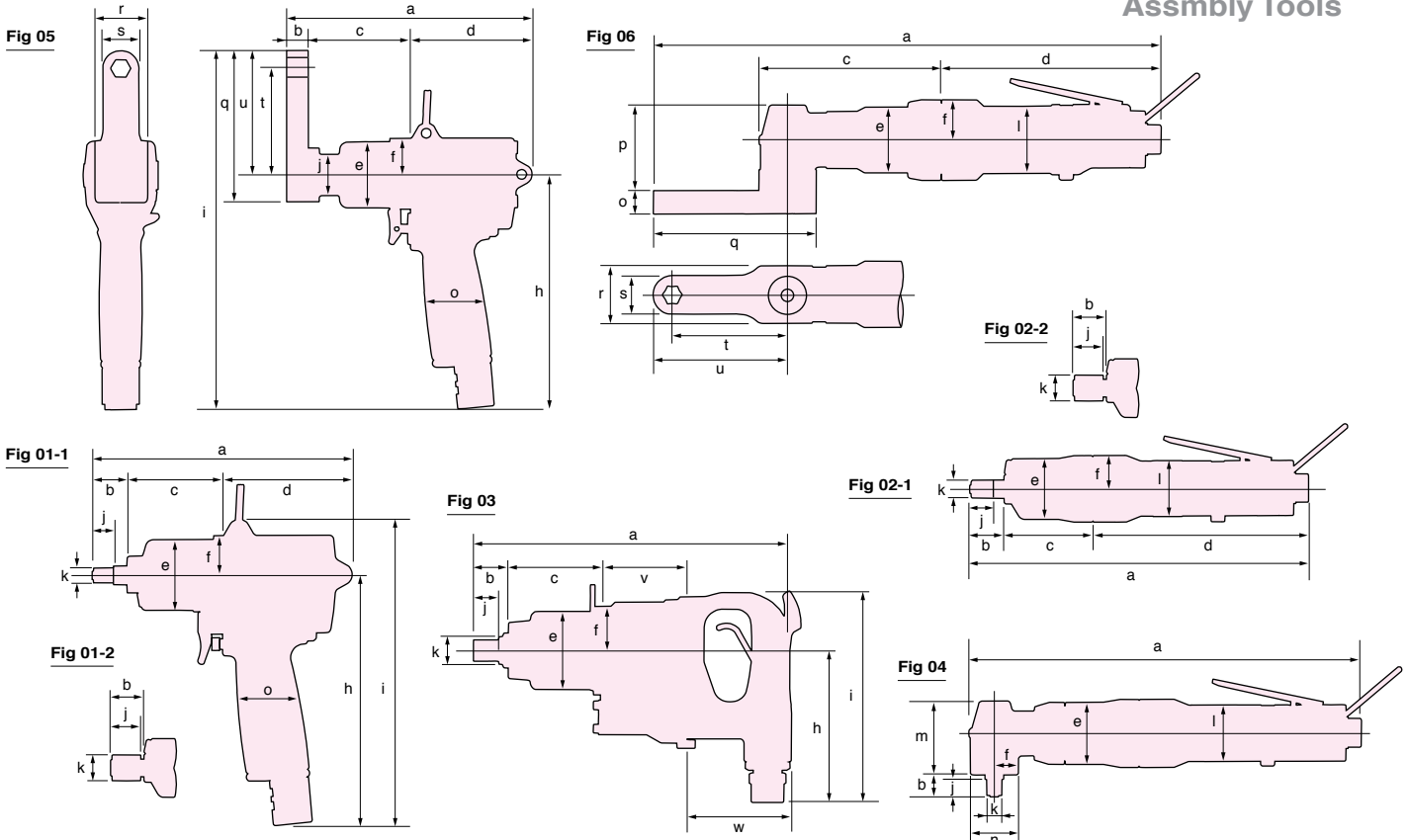
High Air Pressure Use

Fig No.	Model	a	b	c	d	e	f	j	k	l
02-1	FPT-110S-1	237	23.5	73	140.5	35	20	12	12	30.5
02-1	FPT-330S-1	250	25.0	72	153.0	42	23	12	12	38.0
02-1	FPT-440S-1	250	25.0	72	153.0	42	23	12	12	38.0
02-1	FPT-550S-1	250	25.0	72	153.0	42	23	12	12	38.0
02-1	FPT-660S-1	262	25.0	77	160.0	42	23	12	12	38.0
02-1	FPT-770S-1	275	22.5	80	172.5	45	54	12	12	45.0
02-2	FPT-110SD-1(10)	240	26.5	73	140.5	35	20	21	18	30.5
02-2	FPT-330SD-1(10)	250	25.0	72	153.0	42	23	21	18	38.0
02-2	FPT-440SD-1(10)	251	25.0	72	154.0	42	23	21	18	38.0
02-2	FPT-550SD-1(10)	251	25.0	72	154.0	42	23	21	18	38.0
02-2	FPT-660SD-1(10)	262	25.0	77	160.0	42	23	21	18	38.0

#### Angle Head Models

High Air Pressure Use

Fig No.	Model	a	b	e	f	j	k	l	m	n
04	FPT-440SC-1	281	15.0	41	14.5	12	12	38	41.5	29
04	FPT-550SC-1	281	15.0	41	14.5	12	12	38	41.5	29
04	FPT-660SC-1	294	15.0	42	16.0	12	12	38	50.0	32
04	FPT-770SC-1	307	16.0	50	18.0	12	12	45	55.0	36



### GEARED PULSE WRENCHES SHUT-OFF TYPE

Fig No.	Model	a	b	c	d	e	f	h	i	j	o	q	r	s	t	u
05	FPT-770G-1	202	15	88.5	98.5	47	29	169	259	29	41	109	38	25	78	90
Fig No.	Model	a	c	d	e	f	l	o	p	q	r	s	t	u		
06	FPT-770SCG-1	378	136	171	50	27	45	15	58	109	38	25	78	90		

Fig No.	Model	a	b	c	d	e	f	h	i	j	o	q	r	s	t	u
05	FPT-770G-1L	202	15	88.5	98.5	47	29	169	259	29	41	109	38	25	78	90

### PULSE WRENCHES

#### Pistol Grip Models

Fig No.	Model	a	b	c	d	e	f	h	i	j	k	o
01-1	FPW-110-1	143	23.5	63.5	56.0	35	20.0	144	163	12.0	12	33
01-1	FPW-330-1	151	24.0	57.0	70.0	42	22.5	144	166	12.0	12	39
01-1	FPW-440-3	151	24.0	57.0	70.0	42	22.5	144	166	12.0	12	39
01-1	FPW-550-3	151	24.0	57.0	70.0	42	22.5	144	166	12.0	12	39
01-1	FPW-660-4	163	24.0	57.0	82.0	42	22.5	144	166	12.0	12	39
01-1	FPW-770-3	175	23.5	64.5	87.0	47	26.0	168	206	12.0	12	41
01-1	FPW-880-6	190	28.0	73.0	89.0	53	27.0	173	210	16.5	16	41
01-1	FPW-990-3	190	28.0	69.0	93.0	57	29.0	175	216	16.5	16	41
01-1	FPW-1110-1	193	28.0	69.0	96.0	60	31.0	175	219	16.5	16	41
01-1	FPW-1330-1	206	28.0	77.0	101.0	66	34.0	180	227	16.5	16	44
01-1	FPW-1660-1	243	36.0	88.5	118.5	70	39.0	205	256	24.0	25	48

#### Pistol Grip Models

Fig No.	Model	a	b	c	d	e	f	h	i	j	k	o
01-2	FPW-110D-1(10)	149	29.5	63.5	56	35	20.0	144	163	21	18	33
01-2	FPW-330D-1(10)	151	24.0	57.0	70	42	22.5	144	166	21	18	39
01-2	FPW-440D-3(30)	151	24.0	57.0	70	42	22.5	144	166	21	18	39
01-2	FPW-550D-3(30)	151	24.0	57.0	70	42	22.5	144	166	21	18	39
01-2	FPW-660D-4(40)	163	24.0	57.0	82	42	22.5	144	166	21	18	39
01-2	FPW-770D-3(30)	174	22.5	64.5	87	47	26.0	168	206	21	18	41

#### Straight Models

Fig No.	Model	a	b	c	d	e	f	j	k	l
02-1	FPW-110S-1	218	23.5	63.5	131	35	20.0	12	12	30.5
02-1	FPW-330S-1	226	24.0	57.0	145	42	22.5	12	12	38.0
02-1	FPW-440S-1	226	24.0	57.0	145	42	22.5	12	12	38.0
02-1	FPW-550S-1	226	24.0	57.0	145	42	22.5	12	12	38.0
02-1	FPW-660S-1	238	24.0	62.0	152	42	23.0	12	12	38.0
02-1	FPW-770S-1	240	24.0	67.0	149	44	27.0	12	12	47.0

Fig No.	Model	a	b	c	v	w	e	f	h	i	j	k
03	FPW-2220S-1	352.5	36	103	112	101.5	90	47.5	144	204	24	25

Fig No.	Model	a	b	c	d	e	f	j	k	l
02-2	FPW-110SD-1(10)	224	29	63	132	35	20.0	21	18	30.5
02-2	FPW-330SD-1(10)	226	24	57	145	42	22.5	21	18	38.0
02-2	FPW-440SD-1(10)	226	24	57	145	42	22.5	21	18	38.0
02-2	FPW-550SD-1(10)	226	24	57	145	42	22.5	21	18	38.0
02-2	FPW-660SD-1(10)	238	24	62	152	42	23.0	21	18	38.0

#### Angle Head Models

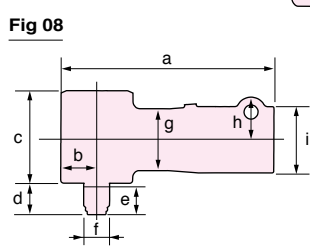
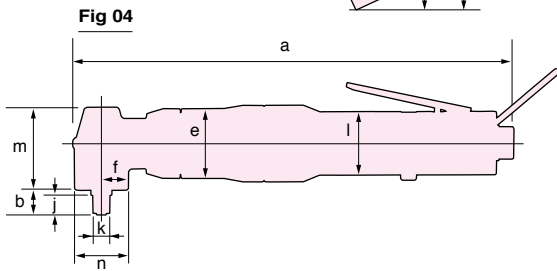
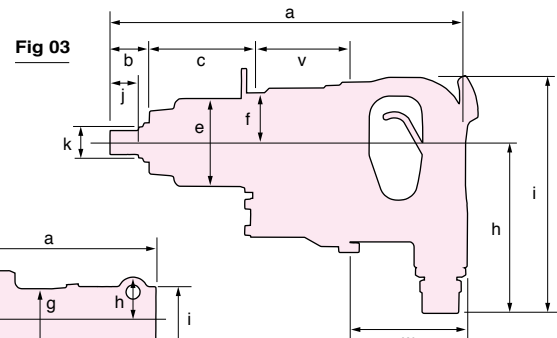
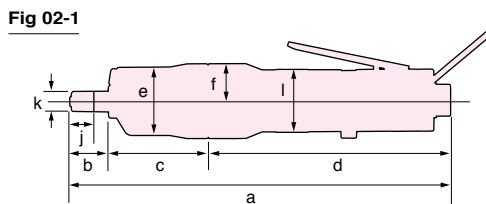
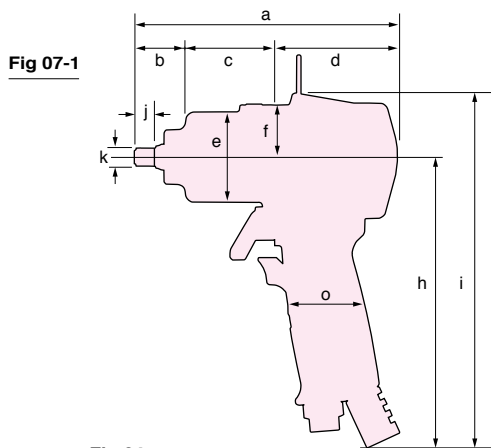
Fig No.	Model	a	b	e	f	j	k	l	m	n
04	FPW-440SC-1	255	15	41	14.5	12	12	38	41.5	29
04	FPW-550SC-1	255	15	41	14.5	12	12	38	41.5	29
04	FPW-660SC-1	267	15	42	16.0	12	12	38	50.0	32
04	FPW-770SC-1	271	16	44	18.0	12	12	47	55.0	36

### GEARED PULSE WRENCHES

Fig No.	Model	a	b	c	d	e	f	h	i	j	o	q	r	s	t	u
05	FPW-770G-1	177	15	75	87	47	26	169	258	29	41	109	38	25	78	90
Fig No.	Model	a	c	d	e	f	l	o	p	q	r	s	t	u		
06	FPW-770SCG-1	343	124	148	44	27	45	15	58	109	38	25	78	90		

# Dimensions

## Assembly Tools



### "DUAL CHAMBER MOTOR" IMPACT WRENCHES

#### Pistol Grip Models

Fig No.	Model	a	b	c	d	e	f	h	i	j	k	o
07-1	FW-44PA-2	131.0	23.0	38.0	70.0	39.5	22.5	144.0	166.0	12.0	12	38
07-1	FW-66PA-2	137.0	18.0	49.0	70.0	42.0	22.5	144.0	166.0	12.0	12	38
07-1	FW-88P-1	163.0	22.5	54.0	86.5	50.0	29.0	173.0	211.0	16.5	16	41

#### Straight Models

Fig No.	Model	a	b	c	d	e	f	j	k	l
02-1	FW-44SA-1	197.5	14.5	38	145	39.5	22.5	12	12	38
02-1	FW-66SA-1	212.0	18.0	49	145	42.0	22.5	12	12	38

### IMPACT WRENCHES

#### Small Pistol Grip Models

Fig No.	Model	a	b	c	d	e	f	h	i	j	k	o
07-1	FW-5PX-6	150.0	14.0	49.0	87.0	34.0	18.0	137.0	155.0	12.0	12.0	36.0
07-1	FW-6PM-1	140.0	18.0	48.0	74.0	42.0	23.5	145.0	168.0	12.0	12.0	38.0
07-1	FW-6PL-1	175.0	18.0	52.5	104.5	42.0	27.0	122.0	152.0	12.0	12.0	35.0
07-1	FW-6PX-5(6)	166.0	15.0	57.0	94.0	44.0	24.0	146.0	172.0	12.0	14.0	40.0
07-1	FW-6PH-1(11)	147.0	16.5	62.0	68.5	50.0	29.0	162.0	198.0	12.0	14.0	43.0
07-1	FW-8PH-3	162.0	21.0	65.0	76.0	54.0	29.0	168.0	208.0	16.5	16.0	45.5
07-1	FW-10PX-5	181.8	20.8	78.0	83.0	55.5	29.0	188.0	229.0	17.0	17.0	44.0
07-1	FW-10PH-1	179.4	23.9	77.5	78.0	58.0	33.0	171.0	214.0	17.0	17.0	44.3
07-1	FW-10PH-2	179.0	24.0	77.0	78.0	58.0	31.0	171.0	213.0	16.5	17.0	44.3
07-1	FW-14PX-5	197.3	21.3	93.0	83.0	66.0	34.5	192.0	237.0	16.5	16.8	50.0
07-1	FW-14PH-1	202.0	23.0	94.5	84.5	67.0	37.5	181.5	229.5	16.5	16.8	47.6
07-1	FW-14PH-2	202.0	23.0	94.0	85.0	67.0	37.5	181.0	228.0	16.5	20.0	47.6
07-1	FW-14PH-3	202.0	23.0	94.0	85.0	67.0	37.5	181.0	228.0	18.5	20.0	47.6

#### Straight Models

Fig No.	Model	a	b	c	d	e	f	j	k	l
02-1	FW-6SX-5	223	16	57	151	44.0	24	12.0	12	50
02-1	FW-6SX-6	225	16	57	152	44.0	24	12.0	14	50
02-1	FW-8SH-2	307	20	65	222	54.0	33	16.5	16	44
02-1	FW-10SX-5	318	21	78	219	55.5	33	17.0	17	44
02-1	FW-14SX-5	356	20	93	243	66.0	38	16.5	20	44

#### Angle Models

Fig No.	Model	a	b	e	f	j	k	l	m	n
04	FW-6SCX-6	262	13	44	17.5	12.0	12	49.5	46	35
04	FW-8SCH-2	354	20	58	22.0	16.5	16	44.0	63	44

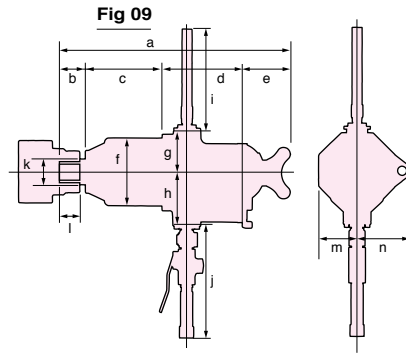
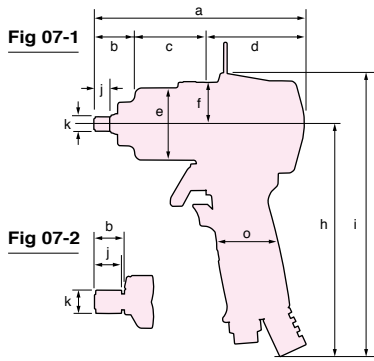
### CORNER ATTACHMENT(ANGLE HEAD)

Fig No.	Model	a	b	c	d	e	f	g	h	i
08	CA-14A	146	24.5	63	21	16.5	17	42	28	45

### IMPACT WRENCHES

#### Middle Size Straight Models

Fig No.	Model	a	b	c	v	w	e	f	h	i	j	k
03	FW-19Z-5(5C)	322	29.0	109.0	72.0	112.0	72	39.0	111	175	54	25
03	FW-250-1(1C)	302	33.0	88.0	81.5	99.5	73	41.5	143	198	28	32
03	FW-250-2(2C)	302	33.0	88.0	81.5	99.5	73	41.5	143	198	24	32
03	FW-320-1(1C)	353	51.5	115.5	86.5	99.5	87	51.0	143	198	28	42
03	FW-320-1L(1CL)	484	182.0	116.0	86.5	99.5	87	51.0	143	198	28	40
03	FW-420-1(1C)	349	34.0	132.0	80.0	103.0	93	55.0	143	198	28	42
03	FW-420-1L(1CL)	501	186.0	132.0	80.0	103.0	93	55.0	143	198	28	42
03	FW-420-2(2C)	351	36.0	132.0	80.0	103.0	93	55.0	143	198	30	42



### IMPACT WRENCHES

#### Middle Size Pistol Grip Models

Fig No.	Model	a	b	c	d	e	f	h	i	j	k	o
07-1	FW-19PX-5	239.0	29.0	109.0	101.0	72.0	40.0	200.0	249.0	24.0	25	50
07-1	FW-250P-1	228.0	33.0	88.0	107.0	73.0	41.5	205.5	265.0	28.0	32	46
07-1	FW-250P-2	228.0	33.0	88.0	107.0	73.0	41.5	205.5	265.0	24.0	32	46
07-1	FW-320P-1	268.0	51.5	115.5	101.0	87.0	51.0	210.0	261.0	28.0	40	46

#### Heavy Duty Straight Models

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	l	m	n
09	FW-50-7	500	50	220	110	120	142	100	120	298	340	49.8	40	90	100
09	FW-75-7	608	68	264	134	142	175	120	150	298	340	84.0	58	164	107
09	FW-100-1	710	77	253	232	148	212	130	160	316	358	80.0	58	118	165

### SCREW DRIVERS

#### Impact Clutch Type

##### Straight Models

Fig No.	Model	a	b	c	d	e	f	j	k	l
02-2	FW-5SXD-7(70)	223	24	50	149	34	18	21	18	33.0
02-2	FW-5SXD-8(80)	194	27	50	117	34	18	21	18	33.0
02-2	FW-6SXD-6(60)	235	27	57	151	44	24	21	18	49.5

##### Pistol Grip Models

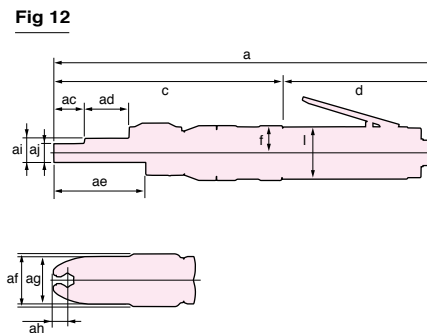
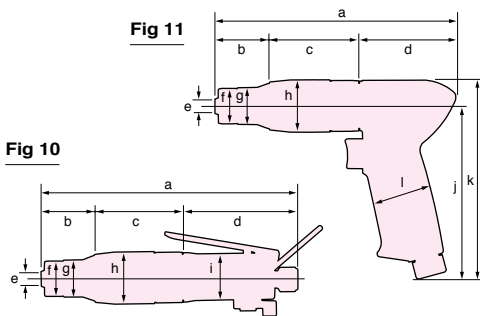
Fig No.	Model	a	b	c	d	e	f	h	i	j	k	o
07-2	FW-5PXD-6(60)	160	24.0	49.5	86.5	34	18.0	137	155	21	18	36
07-2	FW-6PMD-1(10)	146	24.0	48.0	74.0	42	23.5	145	168	21	18	38
07-2	FW-6PLD-1	180	23.5	52.5	104.0	42	30.0	122	152	20	19	35
07-2	FW-6PXD-6(60)	177	27.0	57.0	93.0	44	24.0	146	181	21	18	40
07-2	FW-6PHD-1	154	24.0	62.0	68.0	50	29.0	162	198	21	19	43

##### Straight Models

Fig No.	Model	a	b	c	d	e	f	j	k	l
02-2	FW-44SAD-1(10)	207	24	38	145	39.5	22.5	21	18	38
02-2	FW-66SAD-1(10)	218	24	49	145	42.0	22.5	21	18	38

##### Pistol Grip Models

Fig No.	Model	a	b	c	d	e	f	h	i	j	k	o
07-2	FW-44PAD-2(20)	132.0	24	38.0	70	39.5	22.5	144	166	21	18	38
07-2	FW-66PAD-2(20)	143.0	24	49.0	70	42.0	22.5	144	166	21	18	38



#### Slip Clutch Type

##### Straight Models

Fig No.	Model	a	b	c	d	e	f	g	h	i
10	FD-4	174	38.5	64	71.5	7.4	25	26	37	32
10	FD-5	233	45.0	92	96.0	7.4	25	32	42	38

##### Pistol Grip Models

Fig No.	Model	a	b	c	d	e	f	g	h	j	k	l
11	FD-4P	173	39	64	70	7.4	25	26	37	125	143	42
11	FD-5P	210	45	92	73	7.4	25	32	42	130	150	42

### OPEN-END WRENCHES

Fig No.	Model	a	c	d	f	l	ac	ad	ae	af	ag	ai	aj	ah
12	FOW-10-1	294	177	117	21	40	23.5	34.4	71	40	36	18	14	10.5
12	FOW-10-2	306	189	117	21	40	28.0	42.0	83	40	40	18	14	14.0

### RATCHET WRENCHES

Fig No.	Model	a	c	d	e	f	l	v	w	x	y	z	aa	ab
13	FRW-6NX-3(3A)	316.0	182.0	134	38.6	21.5	32	20	13(10)	13(10)	88.0	20.2(15.2)	10.0	28.0
13	FRW-6NX-4(4A)	320.0	186.0	134	38.6	21.5	32	24	13(10)	13(10)	92.7	20.2(15.2)	12.0	30.7
13	FRW-8NX-2(2A)	380.0	217.0	163	46.0	25.0	48	25	18(10)	16(10)	108.0	25.5(15.2)	12.5	32.0
13	FRW-10N-2	417.0	228.0	189	46.0	29.0	32	33	18	16	115.0	25.5	16.5	37.5
13	FRW-13N-3	418.5	229.5	189	46.0	29.0	32	36	18	16	116.0	25.5	18.0	37.5
13	FRW-13N-4	431.0	242.0	189	46.0	29.0	32	46	18	16	129.0	25.5	23.0	45.0

# Dimensions

## Abrasive Tools

Fig 14

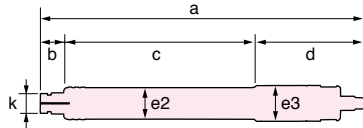


Fig 15

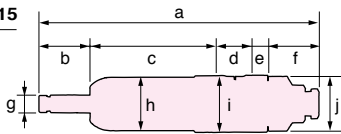


Fig 16-1

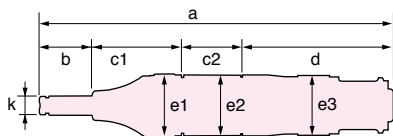


Fig 16-2

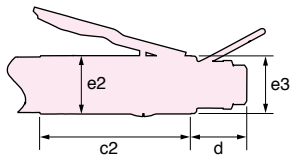


Fig 16-3

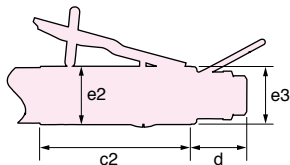


Fig 17-1

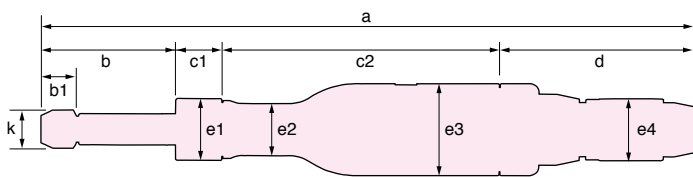


Fig 17-2

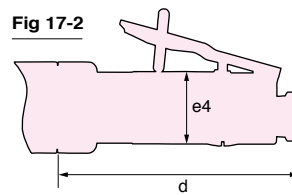


Fig 18-2

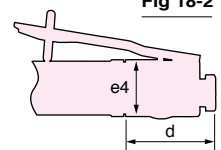


Fig 19-1

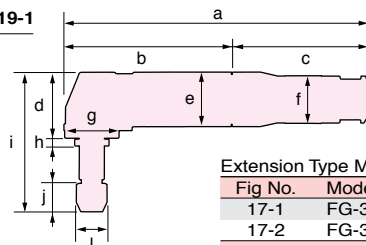


Fig 19-2

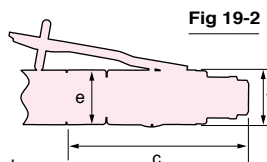
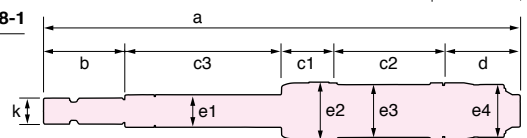


Fig 18-1



### PENCIL GRINDERS

Fig No.	Model	a	b	c	d	e2	e3	k
14	FG-06-1	153	11	90	52	14.5	16	9.5

### TURBO GRINDERS

Fig No.	Model	a	b	c	d	e	f	g	h	i	j
15	TURBO-100	153	28	70	18	9.0	28	9.5	29	31	29
15	TURBO-100A	155	30	70	18	9.0	28	16.0	29	31	29

### DIE GRINDERS

#### Roll Handle Models

Fig No.	Model	a	b	c1	c2	d	e1	e2	e3	k
16-1	FG-12U-2	191.0	28.5	47.5	79.5	35.5	36.0	35	33.0	17.0
16-1	FG-13-2	149.5	27.0	42.0	35.0	45.5	30.5	29	33.0	9.5
16-1	FG-13-20	149.5	43.5	25.5	35.0	45.5	30.5	29	33.0	9.5
16-1	FG-25D-2	202.0	28.0	54.5	84.0	35.5	38.5	39	33.0	30.0
16-1	FG-26-20	171.0	49.0	30.0	45.0	47.0	35.5	33	33.0	16.0
16-1	FG-50-2	180.0	48.5	29.0	54.5	48.0	39.5	36	37.0	16.0
16-1	FG-50D-2	213.0	28.0	51.0	98.5	35.5	40.5	41	37.0	17.0
16-1	FG-12UX-2	211.0	29.0	40.0	54.0	88.0	36.0	36	30.5	17.0
16-1	FG-13X-2	179.0	27.0	42.0	35.5	74.5	30.5	29	30.0	9.5
16-1	FG-13X-20	179.0	44.0	25.5	85.5	24.0	30.5	29	30.0	9.5
16-1	FG-25DX-2	227.0	28.0	50.0	61.0	88.0	38.5	36	30.5	17.0
16-1	FG-26X-20	211.0	49.0	30.0	44.0	88.0	35.5	33	30.5	16.0
16-1	FG-50DX-2	237.0	26.5	52.5	72.0	86.0	40.5	42	30.5	17.0
16-1	FG-50X-2	218.0	48.5	29.0	54.5	86.0	39.5	36	30.5	16.0

#### Lever Handle Models

Fig No.	Model	a	b	c1	c2	d	e1	e2	e3	k
16-2	FG-12U-1	188.0	28.5	48.0	101.5	10.0	36.0	35	34.0	17.0
16-2	FG-13-1	158.0	27.0	42.0	76.0	13.0	30.5	32	32.0	9.5
16-2	FG-13-10	158.0	43.5	25.5	76.0	13.0	30.5	32	32.0	9.5
16-2	FG-25D-1	198.0	28.0	52.0	108.0	10.0	38.5	39	38.0	17.0
16-2	FG-26-10	179.0	49.0	30.0	90.0	10.0	35.5	36	35.0	16.0
16-2	FG-50-1	191.0	49.0	29.0	103.0	10.0	39.5	37	38.0	16.0
16-2	FG-50D-1	210.0	28.0	51.0	121.0	10.0	40.5	41	40.0	17.0
16-2	FG-12UX-1	213.0	28.0	40.0	111.0	34.0	35.5	36	34.0	17.0
16-2	FG-13X-1	183.0	27.0	42.0	83.5	30.5	30.5	32	32.0	9.5
16-2	FG-13X-10	183.0	43.5	25.5	83.5	30.5	30.5	32	32.0	9.5
16-2	FG-25DX-1	231.0	28.0	50.0	119.0	34.0	38.5	39	34.0	17.0
16-2	FG-26X-10	206.0	49.0	30.0	96.5	30.5	35.5	35	34.0	16.0
16-2	FG-50DX-1	243.0	26.0	52.5	129.0	35.5	40.5	41	34.0	17.0
16-2	FG-50X-1	214.0	48.5	29.0	106.0	30.5	39.5	41	34.0	16.0

#### Locking Lever Handle Models

Fig No.	Model	a	b	c1	c2	d	e1	e2	e3	k
16-3	FG-12U-1F	188.0	28.5	48.0	101.5	10.0	36.0	35	34.0	17.0
16-3	FG-13-1F	158.0	27.0	42.0	76.0	13.0	30.5	32	32.0	9.5
16-3	FG-13-10F	158.0	43.5	25.5	76.0	13.0	30.5	32	32.0	9.5
16-3	FG-25D-1F	198.0	28.0	52.0	108.0	10.0	38.5	39	38.0	17.0
16-3	FG-26-10F	179.0	49.0	30.0	90.0	10.0	35.5	36	35.0	16.0
16-3	FG-26-20BF	180.0	49.0	30.0	45.0	56.0	35.5	33	33.0	16.0
16-3	FG-50-1F	191.0	49.0	29.0	103.0	10.0	39.5	37	38.0	16.0
16-3	FG-50-2BF	189.0	49.0	29.0	54.0	57.0	39.5	36	39.0	16.0
16-3	FG-50D-1F	210.0	28.0	51.0	121.0	10.0	40.5	41	40.0	17.0
16-3	FG-12UX-1F	213.0	28.0	40.0	111.0	34.0	35.5	36	34.0	17.0
16-3	FG-13X-1F	183.0	27.0	42.0	83.5	30.5	30.5	32	32.0	9.5
16-3	FG-13X-10F	183.0	43.5	25.5	83.5	30.5	30.5	32	32.0	9.5
16-3	FG-25DX-1F	231.0	28.0	50.0	119.0	34.0	38.5	39	34.0	17.0
16-3	FG-26X-10F	206.0	49.0	30.0	96.5	30.5	35.5	35	34.0	16.0
16-3	FG-50DX-1F	243.0	26.0	52.5	129.0	35.5	40.5	41	34.0	17.0
16-3	FG-50X-1F	214.0	48.5	29.0	106.0	30.5	39.5	41	34.0	16.0

#### Extension Type Models

Fig No.	Model	a	b1	b	c1	c2	d	e1	e2	e3	e4	k
17-1	FG-3H-5	344	18	71	24	148	101	32	27	48	32	17Hex
17-2	FG-3H-5F	369	18	71	24	148	126	32	27	48	38	17Hex
Fig No.	Model	a	b	c3	c1	c2	d	e1	e2	e3	e4	k
18-1	FG-26L-1	297	51	98	31	70	47	20	36	33	33	16
18-2	FG-26L-1BF	307	51	98	31	71	56	20	36	33	35	16

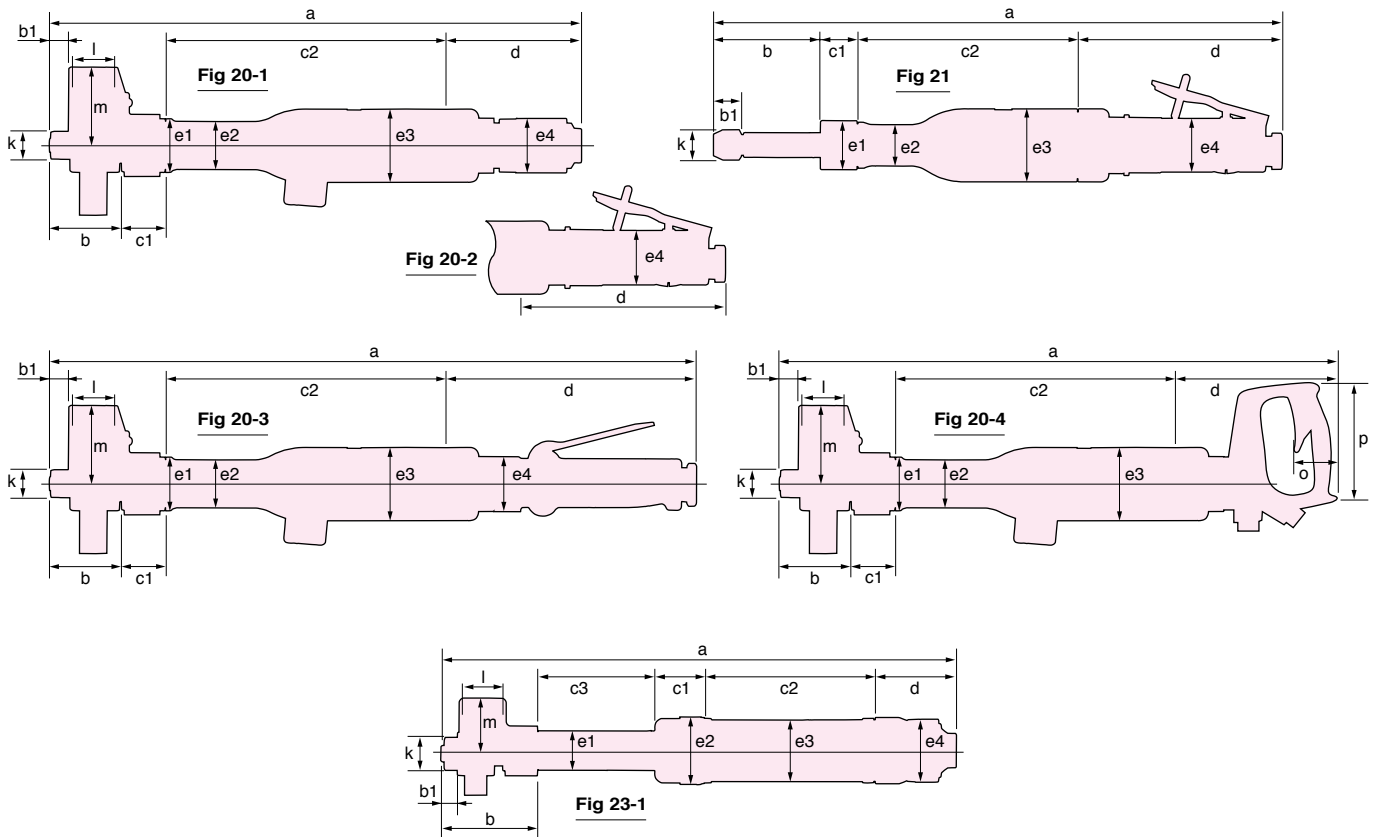
#### AngleType Models

##### Side Exhaust Type

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	l
19-1	FA-2C-2	157	110	47	42.5	35	33	35	5	90.3	18	17Hex
19-1	FA-2C-3	157	110	47	42.5	35	33	35	5	90.3	18	17Hex
19-2	FA-2C-2BF	190	110	80	42.5	35	35	35	5	90.3	18	17Hex
19-2	FA-2C-3BF	190	110	80	42.5	35	35	35	5	90.3	18	17Hex

##### Rear Exhaust Type

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	l
19-1	FA-2CX-2	197	109	88	42.5	35	30.5	35	5	90.3	18	17Hex
19-1	FA-2CX-3	197	109	88	42.5	35	30.5	35	5	90.3	18	17Hex
19-2	FA-2CX-2BF	226	109	117	42.5	35	35.0	35	5	90.3	18	17Hex
19-2	FA-2CX-3BF	226	109	117	42.5	35	35.0	35	5	90.3	18	17Hex



### LOW SPEED GRINDERS

#### Roll Handle Models

Fig No.	Model	a	b1	b	c1	c2	d	e1	e2	e3	e4	k	l	m
20-1	FG-3H-6	329.0	14	56.0	24	148	101.0	32	27	48.0	32.0	17Hex	29.3	41.0
20-1	FG-4VA-1	385.0	14	53.0	31	203	98.0	38	34	52.0	38.5	17Hex	30.0	45.5
20-1	FG-4VA-2	391.0	17	59.0	31	203	98.0	38	34	52.0	38.5	21Hex	31.0	58.5

#### Locking Lever Handle Models

Fig No.	Model	a	b1	b	c1	c2	d	e1	e2	e3	e4	k
21	FG-2VX-1F	216.0	18	47.0	57.0	83	29.0	16	39	44.0	44	17Hex
21	FG-3VX-1F	331.0	18	70.5	26.5	97	137.0	16	40	41.0	34	17Hex
21	FG-3VX-6F	331.0	18	70.5	26.5	97	137.0	16	40	41.0	34	17Hex
20-2	FG-3VX-2F	316.0	14	55.5	26.5	97	137.0	-	40	41.0	34	17Hex
20-2	FG-3VX-3F	316.0	14	55.5	26.5	97	137.0	-	40	41.0	34	17Hex

### STRAIGHT GRINDERS

#### Roll Handle Models

Fig No.	Model	a	b1	b	c1	c2	d	e1	e2	e3	e4	k	l	m
20-1	FG-3H-1	317.0	14	44.0	24	148	101.0	32	27	48.0	32.0	17Hex	18.0	41.0
20-1	FG-3H-2	317.0	14	44.0	24	148	101.0	32	27	48.0	32.0	17Hex	18.0	46.0
20-1	FG-4H-1	383.0	14	52.0	31	202	98.0	38	34	52.0	38.5	17Hex	31.0	58.5
20-1	FG-4H-2	391.0	14	60.0	31	202	98.0	38	34	52.0	38.5	21Hex	31.0	58.5
20-1	FG-5H-1	405.0	14	58.0	31	210	106.0	38	34	58.0	38.5	21Hex	27.0	72.0
20-1	FG-5H-2	410.0	23	63.0	31	210	106.0	38	34	58.0	38.5	26Hex	27.0	72.0
20-1	FG-6H-1	434.0	23	76.0	31	210	117.0	38	36	64.0	42.0	26Hex	34.0	84.7
20-1	FG-8H-1	472.0	23	78.0	30	232	132.0	52	40	80.0	42.0	26Hex	38.0	111.2
20-1	FG-8H-2	472.0	23	78.0	30	232	132.0	52	40	80.0	42.0	26Hex	34.8	99.7

#### Locking Lever Handle Models

Fig No.	Model	a	b1	b	c1	c2	d	e1	e2	e3	e4	k	l	m
20-2	FG-3H-1F	342.0	14	44.0	24	148	126.0	32	27	48.0	38.0	17Hex	18.0	41.0
20-2	FG-3H-2F	342.0	14	44.0	24	148	126.0	32	27	48.0	38.0	17Hex	18.0	46.0
20-2	FG-4H-1F	411.0	14	52.0	31	202	126.0	38	34	52.0	38.0	17Hex	31.0	58.5
20-2	FG-4H-2F	419.0	14	60.0	31	202	126.0	38	34	52.0	38.0	21Hex	31.0	58.5
20-3	FG-5H-1M	506.0	14	58.0	31	210	207.0	38	34	58.0	38.0	21Hex	27.0	72.0
20-3	FG-5H-2M	511.0	23	63.0	31	210	207.0	38	34	58.0	38.0	26Hex	27.0	72.0
20-3	FG-6H-1M	531.0	23	76.0	31	210	214.0	38	36	64.0	38.0	26Hex	34.0	84.7
20-3	FG-8H-1M	557.0	23	78.0	30	232	217.0	52	40	80.0	38.0	26Hex	38.0	111.2
20-3	FG-8H-2M	557.0	23	78.0	30	232	217.0	52	40	80.0	38.0	26Hex	34.8	99.7

#### Grip Handle Models

Fig No.	Model	a	b1	b	c1	c2	d	e1	e2	e3	k	l	m	o	p
20-4	FG-8H-1C	538.0	23	78.0	30	232	198.0	52	40	80.0	26Hex	38.0	111.2	57	124

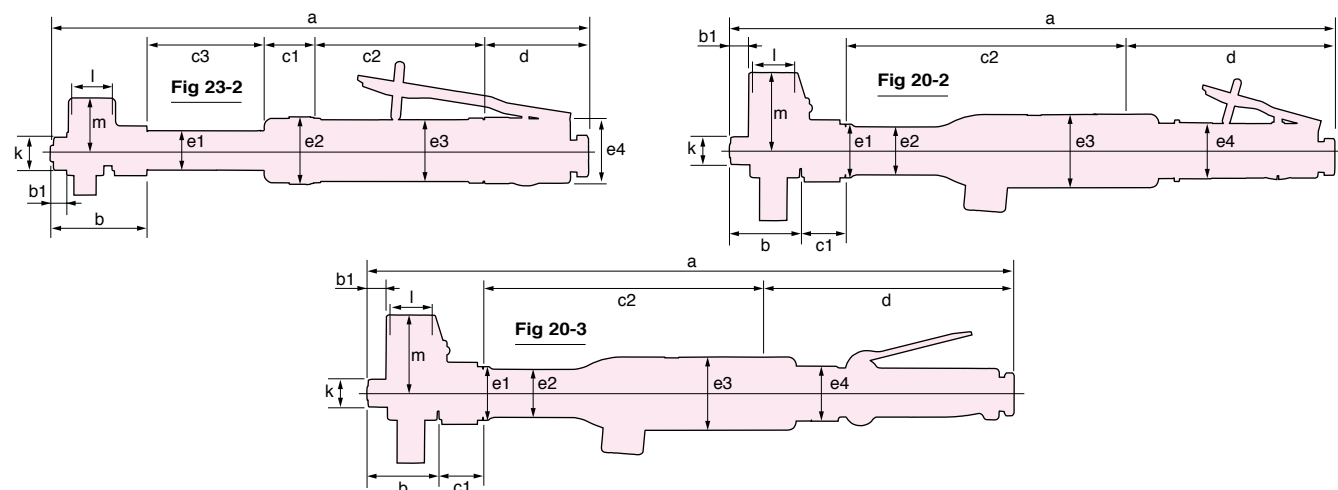
### EXTENDED GRINDERS

#### Roll Handle Models

Fig No.	Model	a	b1	b	c3	c1	c2	d	e1	e2	e3	e4	k	l	m
23-1	FG-50L-1	307.5	8	36.0	91	29	103.5	48	23	39.5	36.0	37	17Hex	22.0	32.0
23-1	FG-50Y-1	523.0	8	36.5	306	29	103.5	48	23	39.5	36.0	37	17Hex	22.0	32.0
23-1	FG-3HL-1	522.0	14	43.0	252	21	105.0	101	23	40.0	48.0	32	17Hex	22.5	40.5
Fig No.	Model	a	b1	b	c1	c2	d	e1	e2	e3	e4	k	l	m	
20-1	FG-4HL-1	585.0	14	50.0	22	415	98.0	27	34	52.0	38.5	17Hex	30	45.5	
20-1	FG-5HL-2	953.0	14	63.0	24	760	106.0	36	34	58.0	38.5	17Hex	31	58.5	

# Dimensions

## Abrasive Tools



### Locking Lever Handle Models

Fig No.	Model	a	b1	b	c3	c1	c2	d	e1	e2	e3	e4	k	l	m
23-2	FG-50L-1BF	316.5	8	36.0	91	29	103.5	57	23	39.5	36	39	17Hex	22.0	32.0
23-2	FG-50Y-1BF	532.0	8	36.5	306	29	103.5	57	23	39.5	36	39	17Hex	22.0	32.0
23-2	FG-3HL-1F	547.0	14	43.0	252	21	105.0	126	23	40.0	48	38	17Hex	22.5	40.5
Fig No.	Model	a	b1	b	c1	c2	d	e1	e2	e3	e4	k	l	m	
20-2	FG-4HL-1F	613.0	14	50.0	22	415	126.0	27	34	52.0	38	17Hex	33	45.5	
20-3	FG-5HL-2M	1055.0	14	63.0	24	760	208.0	36	34	58.0	38	21Hex	31	58.5	

Fig 24-1

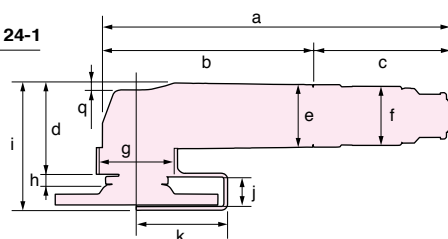
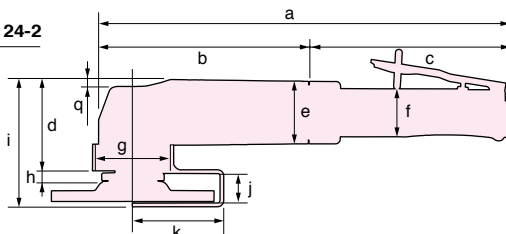


Fig 24-2



### ANGLE GRINDERS

#### Roll Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k
24-1	FA-2C-1	157.0	110.0	47.0	42.5	35	33.0	35	5	59.5	18.8	33.6
24-1	FA-3C-1	180.0	116.0	64.0	56.0	38	33.0	45	7	76.2	17.0	46.1
24-1	FA-3C-2	180.0	116.0	64.0	56.0	38	33.0	45	7	78.2	19.0	57.6
24-1	FA-2CX-1	197.0	109.0	88.0	42.5	35	30.5	35	5	59.5	18.8	33.6
24-1	FA-3CX-1	217.0	132.5	84.5	56.0	40	36.0	45	7	76.2	17.0	46.1
24-1	FA-3CX-2	217.0	132.5	84.5	56.0	40	36.0	45	7	78.2	19.0	57.6

#### Locking Lever Handle Models

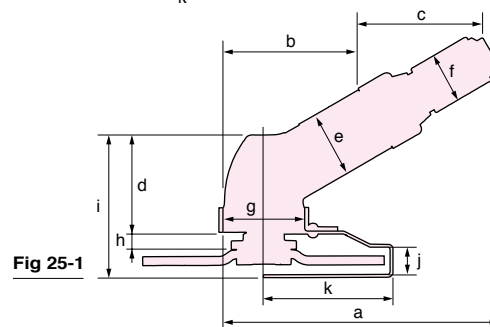
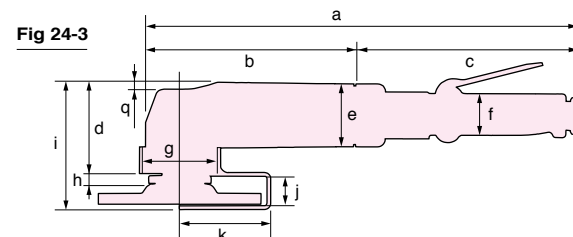
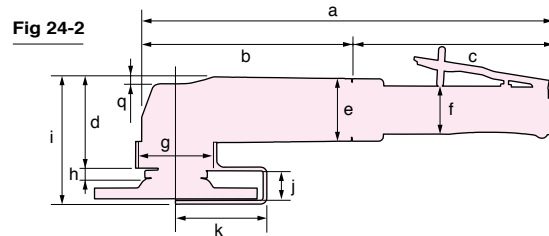
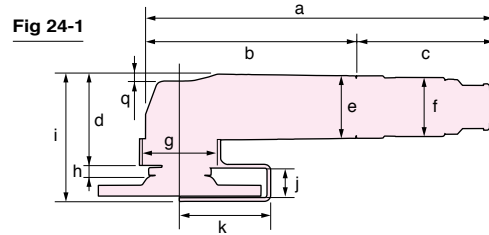
Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k
24-2	FA-2C-1BF	190.0	111.0	79.0	42.5	35	35	35	5	59.5	18.8	33.6
24-2	FA-3C-1F	192.5	116.5	76.0	56.0	38	35	45	7	76.2	17.0	46.1
24-2	FA-3C-2F	192.5	116.5	76.0	56.0	38	35	45	7	78.2	19.0	57.6
24-2	FA-2CX-1BF	226.0	109.0	117.0	42.5	35	35	35	5	59.5	18.8	33.6
24-2	FA-3CX-1F	247.0	133.0	114.0	56.0	40	35	45	8	76.2	17.0	46.1
24-2	FA-3CX-2F	247.0	133.0	114.0	56.0	40	35	45	7	78.2	19.0	57.6

#### Roll Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	q
24-1	FA-4C-1	212.0	111.0	101.0	69.0	48	32	52	8	95.0	14.8	57.6	-
24-1	FA-4CH-1	217.0	131.0	86.0	68.6	48	37	52	8	93.5	14.8	57.6	-
24-1	FA-5E-1V	210.5	110.5	100.0	61.5	52	36	45	13	90.7	18.5	72.6	4.5
24-1	FA-5E-2V	210.5	110.5	100.0	61.5	52	36	45	13	90.7	18.5	72.6	4.5
24-1	FA-5E-3V	210.5	110.5	100.0	61.5	52	36	45	13	90.2	19.0	57.6	4.5

#### Locking Lever Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	q
24-2	FA-4C-1F	237.0	111.0	126.0	69.0	48	38	52	8	95.0	14.8	57.6	-
24-2	FA-5E-1F	279.5	110.5	169.0	61.5	52	40	45	13	90.7	18.5	72.6	4.5
24-2	FA-5E-1VF	260.5	110.5	150.0	61.5	52	40	45	13	90.7	18.5	72.6	4.5
24-2	FA-5E-2F	279.5	110.5	169.0	61.5	52	40	45	13	90.7	18.5	72.6	4.5
24-2	FA-5E-2VF	260.5	110.5	150.0	61.5	52	40	45	13	90.7	18.5	72.6	4.5
24-2	FA-5E-13F	279.5	110.5	169.0	61.5	52	40	45	13	90.7	18.5	72.6	4.5
24-2	FA-5E-13VF	260.5	110.5	150.0	61.5	52	40	45	13	90.7	18.5	72.6	4.5



### Roll Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	q
24-1	FA-6C-10	252.0	146.0	106.0	74.0	56	38	60	15.0	108.0	20.8	96.6	-
24-1	FA-6C-1	252.0	146.0	106.0	74.0	56	38	60	15.0	108.0	20.8	96.6	-
24-1	FA-6C-12	252.0	146.0	106.0	74.0	56	38	60	15.0	108.0	20.8	96.6	-
24-1	FA-7E-1V	266.0	145.5	120.5	75.6	62	42	60	17.0	110.5	21.0	100.5	6
24-1	FA-7E-2V	266.0	145.5	120.5	75.6	62	42	60	17.0	110.5	21.0	100.5	6
24-1	FA-7E-3V	266.0	145.5	120.5	75.6	62	42	60	17.0	109.5	19.0	100.5	6

### Locking Lever Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	q
24-3	FA-6C-12M	353.0	146.0	207.0	74.0	56	38	60	15.0	108.0	20.8	96.6	-
24-3	FA-6C-9M	353.0	146.0	207.0	74.0	56	38	60	32.0	126.0	25.8	98.0	-
24-3	FA-6C-8M	353.0	146.0	207.0	74.0	56	38	60	32.0	126.0	25.8	98.0	-
24-3	FA-6C-6M	353.0	146.0	207.0	74.0	56	38	60	32.0	126.0	25.8	98.0	-
24-2	FA-7E-5VF	307.0	145.5	161.5	75.6	62	40	60	26.2	120.5	21.0	100.5	6
24-2	FA-7E-6VF	307.0	145.5	161.5	75.6	62	40	60	26.2	120.5	21.0	100.5	6
24-2	FA-7E-8VF	307.0	145.5	161.5	75.6	62	40	60	26.2	120.5	21.0	100.5	6

### Roll Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k
24-1	FA-9C-2	306.0	167.0	139.0	80.0	72.0	42.0	60	15.0	117.4	21.0	122.0
24-1	FA-9C-4	306.0	167.0	139.0	80.0	72.0	42.0	60	32.0	137.4	30.0	122.0

### Locking Lever Handle Models

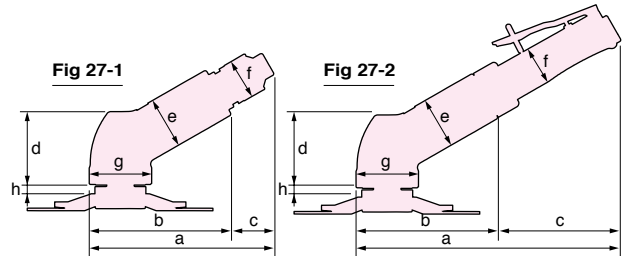
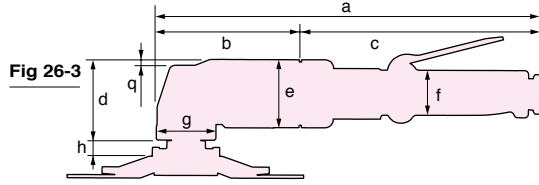
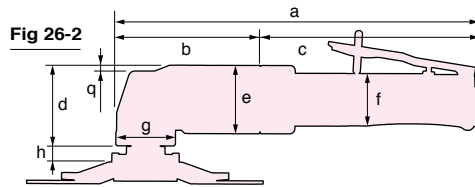
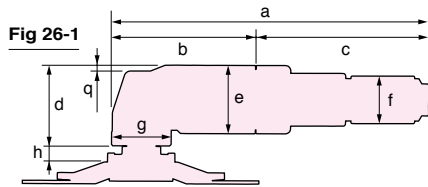
Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k
24-3	FA-9C-2M	380.0	167.0	213.0	80.0	72.0	38.0	60	15.0	117.4	21.0	122.0
24-3	FA-9C-4M	380.0	167.0	213.0	80.0	72.0	38.0	60	32.0	137.4	30.0	122.0

### Roll Handle Models(110°, 120°)

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k
25-1	FA-3CK-2	164.0	95.0	70.0	63.0	40.0	33.0	45	14.5	95.0	23.8	57.6
25-1	FA-4CHK-1	206.0	129.0	77.0	69.6	48.0	37.0	52	10.0	95.0	14.8	57.6
25-1	FA-150KG-5	206.0	127.0	79.0	72.0	50.0	36.0	60	15.0	107.0	20.8	96.6

# Dimensions

## Abrasive Tools



### ANGLE SANDERS

#### Roll Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h	q
26-1	FA-5C-5	227.0	131.0	96.0	71.0	52.0	36.0	57	13.0	4.0
26-1	FA-6C-10	252.0	146.0	106.0	74.0	56.0	38.0	60	15.0	-
26-1	FA-5E-7V	210.5	110.5	100.0	61.5	52.0	36.0	45	13.0	4.5

#### Locking Lever Handle Models

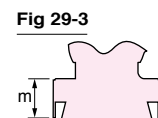
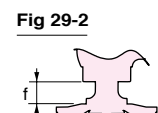
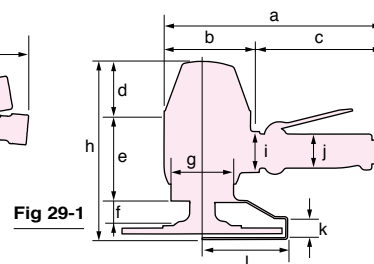
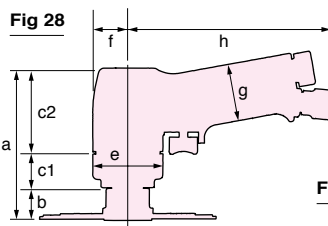
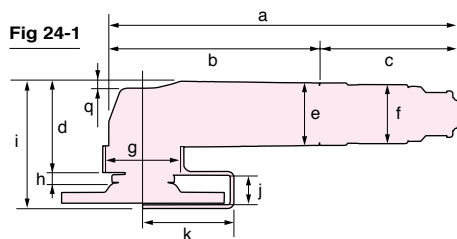
Fig No.	Model	a	b	c	d	e	f	g	h	q
26-3	FA-6C-10M	353.0	146.0	207.0	74.0	56.0	38.0	60	15.0	-
26-2	FA-5E-6VF	260.5	110.5	150.0	61.5	52.0	40.0	45	13.0	4.5
26-3	FA-6C-9M	353.0	146.0	207.0	74.0	56.0	38.0	60	32.0	-
26-2	FA-7E-5VF	307.0	145.5	161.5	75.6	62.0	40.0	60	26.2	6.0

#### Roll Handle Models(110°, 120°)

Fig No.	Model	a	b	c	d	e	f	g	h
27-1	FA-4CHK-3	206.0	129.0	77.0	70.0	48.0	37.0	52	8.6
27-1	FA-150K-2	179.0	137.0	42.0	71.6	60.0	39.5	60	9.0
27-1	FA-150K-3	179.0	137.0	42.0	71.6	50.0	39.5	60	9.0
27-1	FA-150KG-7	206.0	127.0	79.0	72.0	50.0	36.0	60	15.0
27-1	FA-3CK-1	164.0	113.0	51.0	61.0	40.0	33.0	45	18.0

#### Locking Lever Handle Models(110°, 120°)

Fig No.	Model	a	b	c	d	e	f	g	h
27-2	FA-4CHK-3F	235.0	129.0	106.0	70.0	48.0	38.0	52	8.6



### ANGLE CUTTERS

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	q
24-1	FA-5E-8V	210.5	110.5	100.0	61.5	52.0	36.0	45	17.0	90.7	18.5	72.6	4.5
24-1	FA-6C-20	252.0	146.0	106.0	74.0	56.0	38.0	60	18.0	103.0	27.4	84.1	-
24-1	FA-7C-21	264.0	143.5	120.5	73.6	63.0	42.0	60	18.0	108.0	20.8	96.6	-

### DISC SANDER

Fig No.	Model	a	b	c1	c2	e	f	g	h
28	FG-5PX-1	108.0	21.0	24.0	63.0	50.0	25.0	41	147.0

### VERTICAL GRINDERS

#### Standard Type

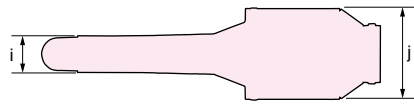
Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	l
29-1	FV-7-1M	247.0	100.0	147.0	63.0	94.4	26.2	64	201.0	46	38	22.0	96.6
29-1	FV-7-4M	247.0	100.0	147.0	63.0	94.4	26.2	64	201.0	46	38	22.0	96.6
29-1	FV-9BH-1M	266.0	127.5	138.5	69.0	119.0	50.2	69	238.2	46	38	30.0	122.0

#### Cup Wheel Type

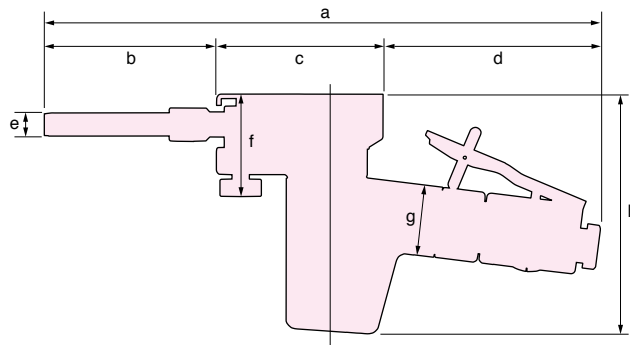
Fig No.	Model	a	b	c	d	e	f	g	h	i	j	l	m
29-3	FV-9BH-4M	266.0	127.5	138.5	69.0	119.0	76	69	264.0	46	38	88.4	56-85

#### Sanding Disc Type

Fig No.	Model	a	b	c	d	e	f	g	i	j
29-2	FV-7-2M	247.0	100.0	147.0	63.0	94.4	38	64	46	38

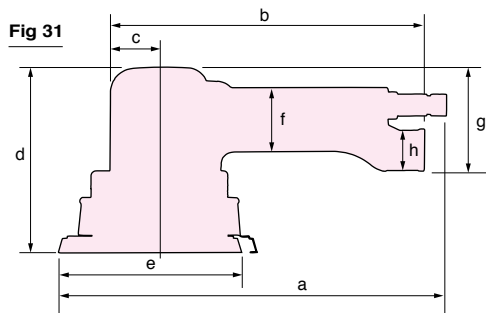


**Fig 30**

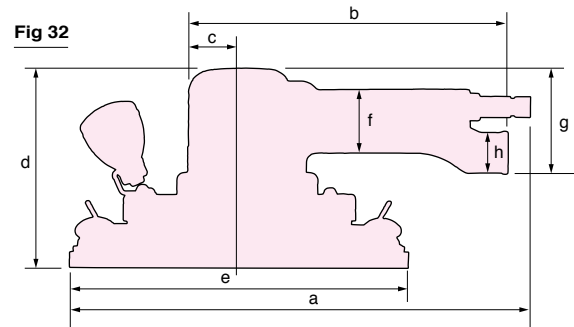


### BELT SANDERS

Fig No.	Model	a	b	c	d	e	f	g	h	i	j
30	FBS-1-1	281	87	84	110	10	51	35	121	18	45.2
30	FBS-1-2	375	181	84	110	20	51	35	121	22	45.2
30	FBS-1-3	345	151	84	110	13	51	35	121	18	45.2
30	FBS-1-4	345	151	84	110	20	51	35	121	22	45.2



**Fig 31**



**Fig 32**

### ORBITAL SANDERS

#### Cock Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h
31	DA-125T-E(-M)	172	142	33	89	125	-	41	26
31	FOR-125T-E(-M)	259	216	35	122	125	42	69	26
31	FOR-150T-E(-M)	276	124	35	122	150	42	68	26

#### Lever Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h
31	DA-125L-E(-M)	172	142	33	97	125	-	45	26
31	DA-125C-E(-M)	172	142	33	117	125	-	45	26
31	FOR-125B-E(-M)	259	216	35	122	125	42	69	26
31	FOR-150B-E(-M)	276	124	35	122	150	42	68	26

#### Locking Lever Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h
31	FOR-125BF-E(-M)	259	216	35	122	125	42	69	26
31	FOR-150BF-E(-M)	276	124	35	122	150	42	68	26

#### Cock Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h
32	OB-75T-E(-M)	160	125	31	88	75X100	-	46	26
32	FOS-175T-E(-M)	285	216	35	130	100X175	42	69	26
32	FOS-230T-E	312	217	35	132	100X230	42	68	26
32	FOS-400T-E	400	211	32	138	100X400	43	66	26

#### Lever Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h
32	OB-75L-E(-M)	160	125	31	99	75X100	-	57	26
32	OB-90L-E(-M)	160	125	31	99	90X100	-	57	26
32	FOS-175B-E(-M)	285	216	35	130	100X175	42	69	26
32	FOS-230B-E	312	217	35	132	100X230	42	68	26
32	FOS-400B-E	400	211	32	138	100X400	43	66	26

#### Locking Lever Handle Models

Fig No.	Model	a	b	c	d	e	f	g	h
32	FOS-175BF-E(-M)	285	216	35	130	100X175	42	69	26
32	FOS-230BF-E	312	217	35	132	100X230	42	68	26
32	FOS-400BF-E	400	211	32	138	100X400	43	66	26

# Dimensions

## Drills / Tappers

Fig 33

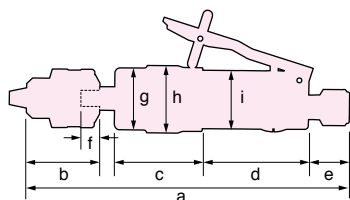
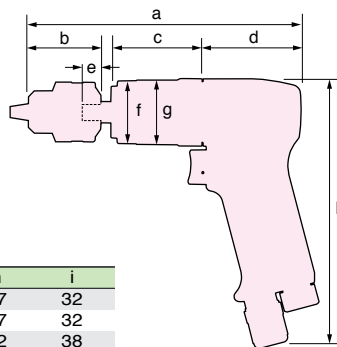


Fig 34-1



### DRILLS

#### Straight / Side Exhaust Type

Fig No.	Model	a	b	c	d	e	f	g	h	i
33	FRD-5S-1(F)	179	40	49	58.5	22.5	12	34	37	32
33	FRD-5S-2T(F)	168	32	49	58.5	22.5	12	34	37	32
33	FRD-6S-2(F)	209	40	57	82.5	22.5	12	39	42	38
33	FRD-6S-3(F)	212	43	57	82.5	22.5	12	39	42	38
33	FRD-6S-5(F)	230	51	69	82.5	22.5	12	41	46	38
33	FRD-6S-7(F)	265	64	91	82.5	22.5	15	32	42	38

#### Pistol / Rear Exhaust Type

Fig No.	Model	a	b	c	d	e	f	g	h
34-1	FRD-5P-1	155	40	46.5	60.5	12	34	35	159
34-1	FRD-6PX-2	166	40	57.0	62.0	12	39	40	165
34-1	FRD-6PX-3	169	43	57.0	62.0	12	39	40	165
34-1	FRD-6PX-5	187	51	69.0	62.0	12	41	45	165
34-1	FRD-6PX-7	222	64	91.0	62.0	15	32	38	165
34-1	FRD-8PX-1	187	43	62.0	75.0	12	40	45	191
34-1	FRD-8PX-2	210	51	77.0	75.0	12	40	52	191
34-1	FRD-8PX-3	240	64	95.0	75.0	15	48	51	191

Fig 35-1

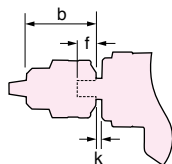
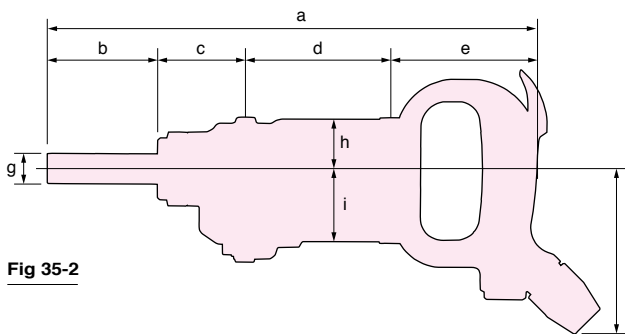


Fig 35-2



#### Grip Handle Middle Size Drills

Fig No.	Model	a	b	c	d	e	f	k	g	h	i	j
35-1	FRD-12Z-1(C)	349	51	58	96	97	15	5	-	33	47	108
35-1	FRD-16Z-1(C)	374	73	58	96	97	20	8	-	33	47	108

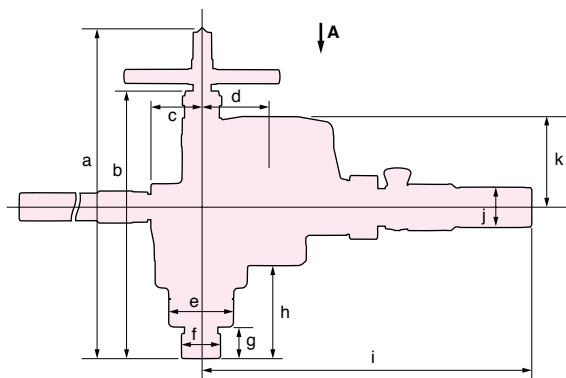
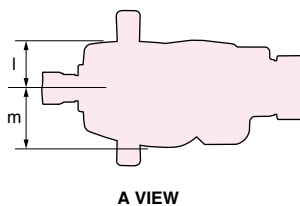


Fig 36



#### Heavy -Duty Rotary Drills

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	l	m
36	FRD-20R-21(S)	278.5~345.5	220.5	37	56.7	52	26	15.6	85.6	300.7	38	75.9	39	39
36	FRD-20R-22(S)	305~372	247.0	37	56.7	48	32	27.1	112.1	300.7	38	75.9	39	39
36	FRD-23R-21(S)	278.5~345.5	220.5	37	56.7	52	26	15.6	85.6	300.7	38	75.9	39	39
36	FRD-23R-22(S)	305~372	247.0	37	56.7	48	32	27.1	112.1	300.7	38	75.9	39	39
36	FRD-25R-11(S)	354.4~450.4	293.4	55	75.0	70	42	34.6	102.6	364.0	43	99.4	51	65
36	FRD-28R-11(S)	354.4~450.4	293.4	55	75.0	70	42	34.6	102.6	364.0	43	99.4	51	65
36	FRD-32R-11(S)	354.4~450.4	293.4	55	75.0	70	42	34.6	102.6	364.0	43	99.4	51	65
36	FRD-32R-12(S)	382.4~478.4	321.4	55	75.0	70	49	62.6	130.6	364.0	43	99.4	51	65
36	FRD-40R-11(S)	446.4~539.4	385.4	55	75.0	78	52	41.6	195.1	364.0	43	99.4	65	65
36	FRD-50R-11(S)	446.4~539.4	385.4	55	75.0	78	52	41.6	195.1	364.0	43	99.4	65	65
36	FRD-65R-1	466~591	391.0	82	121.7	87	70	46.0	141.0	572.0	48	122.0	68	68
36	FRD-65R-1S	466~591	391.0	82	121.7	87	70	46.0	141.0	552.0	43	122.0	68	68
36	FRD-75R-1	600~728	525.0	82	121.7	87	70	67.0	165.0	572.0	48	122.0	68	68
36	FRD-75R-1S	600~728	525.0	82	121.7	87	70	67.0	165.0	552.0	43	122.0	68	68
36	FRD-100R-1	600~728	525.0	82	121.7	87	70	67.0	165.0	572.0	48	122.0	68	68
36	FRD-100R-1S	600~728	525.0	82	121.7	87	70	67.0	165.0	552.0	43	122.0	68	68

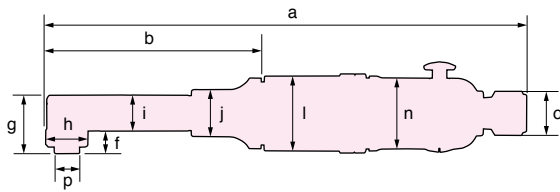


Fig 37

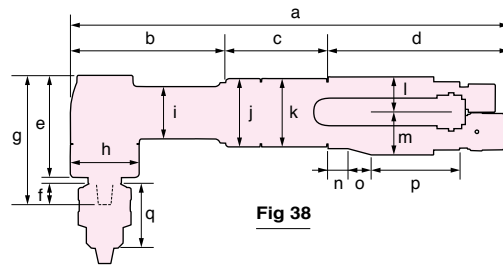


Fig 38

### BABY ANGLE DRILLS

Fig No.	Model	a	b	f	g	h	i	j	l	n	o	p
37	FCD-6A-1	223	99.5	10.5	26.5	19	16	21	34	32	19.6	9.5Hex
37	FCD-6B-1(F)	222	99.5	10.5	26.5	19	16	21	34	32	19.6	9.5Hex
37	FCD-6EX-3	246	94.0	7.0	27.0	17	17	22	38	35	27.0	-
37	FCD-6EX-4	246	94.0	7.0	27.0	17	17	22	38	35	27.0	-

### CORNER DRILLS

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
38	FCD-6X-1(F)	273	97	64	112	63	12	79	42	32	42	42	22.0	26.0	12	15	54	40
38	FCD-6X-2(F)	286	97	77	112	63	12	79	42	32	42	44	22.0	26.0	12	15	54	43
38	FCD-10X-1(F)	377	93	60	224	62	14	82	42	36	46	50	24.5	17.5	82	10	84	51

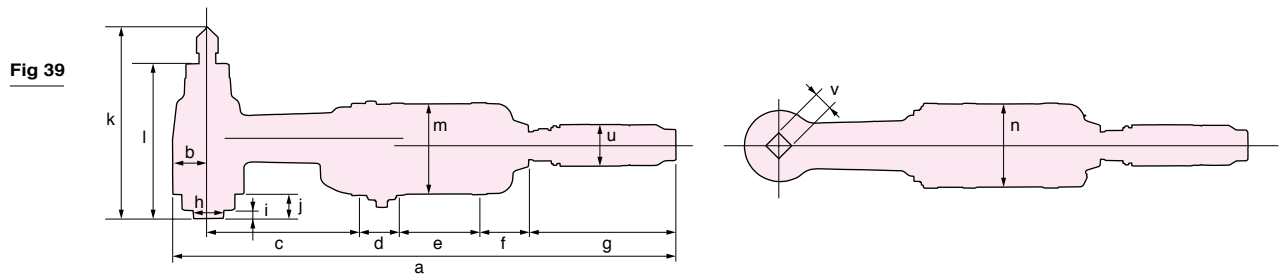


Fig 39

### Heavy-Duty Corner Drills

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	l	m	n	u	v
39	F-14CN	412	24	150	20	70	55	93	22	6.0	21.0	135.0~173.0	110.0	71.7	62	38	□ 16
39	F-14CN-1S	414	24	150	20	70	55	95	22	6.0	21.0	135.0~173.0	110.0	71.7	62	40	□ 16
39	F-14CN-2	412	24	150	20	70	55	93	29	16.5	33.5	147.5~185.5	122.5	71.7	62	38	□ 16
39	F-14CN-2S	414	24	150	20	70	55	93	29	16.5	33.5	147.5~185.5	122.5	71.7	62	40	□ 16
39	F-22RCN	499	35	150	39	79	50	146	29	8.0	24.0	177.0~237.0	152.0	88.0	82	40	□ 16
39	F-22RCN-1S	499	35	150	39	79	50	146	29	8.0	24.0	177.0~237.0	152.0	88.0	82	38	□ 16
39	F-32RCN	529	40	175	39	79	50	146	34	11.0	21.0	195.0~255.0	170.0	88.0	82	40	□ 16
39	F-32RCN-1S	529	40	175	39	79	50	146	34	11.0	21.0	195.0~255.0	170.0	88.0	82	38	□ 16
39	F-32RCNS	529	40	175	39	79	50	146	35	1.0	9.0	126.0~151.0	107.0	88.0	82	40	□ 14
39	F-32RCNS-1S	529	40	175	39	79	50	146	35	1.0	9.0	126.0~151.0	107.0	88.0	82	38	□ 14
39	F-22RCR	507	35	150	39	79	50	154	29	8.0	24.0	177.0~237.0	152.0	88.0	82	40	□ 16
39	F-22RCR-1S	528	35	150	39	79	50	175	29	8.0	24.0	177.0~237.0	152.0	88.0	82	38	□ 16
39	F-32RCR	538	40	175	39	79	50	155	34	11.0	21.0	195.0~255.0	170.0	88.0	82	40	□ 16
39	F-32RCR-1S	558	40	175	39	79	50	175	34	11.0	21.0	195.0~255.0	170.0	88.0	82	38	□ 16
39	FCD-23R-11(S)	473	27	96	39	80	60	172	27	5.5	15.5	151.5~186.5	126.5	91.5	81	38	□ 16
39	FCD-23R-12(S)	473	27	96	39	80	60	172	31	14.5	37.5	172.5~207.5	147.5	91.5	81	38	□ 16
39	FCD-32R-11	579	35	118	50	101	75	200	34	10.0	26.0	194.0~247.0	164.0	110.0	96	43	□ 16
39	FCD-32R-11S	579	35	118	50	101	72	203	35	10.0	26.0	194.0~247.0	164.0	110.0	96	43	□ 16
39	FCD-50R-11(S)	596	42	128	50	101	75	200	44	16.0	38.0	230.0~288.0	191.0	110.0	96	43	□ 22.2
39	FCD-75R-11(S)	652	49	157	50	121	75	200	60	18.0	48.0	272.0~329.0	227.0	110.0	96	43	□ 25.4
39	FCD-100R-11(S)	729	62	241	50	101	75	200	60	38.0	75.0	306.0~411.0	285.0	110.0	96	43	□ 23

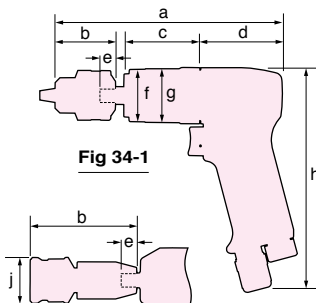


Fig 34-1

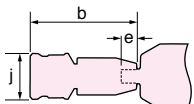


Fig 34-2

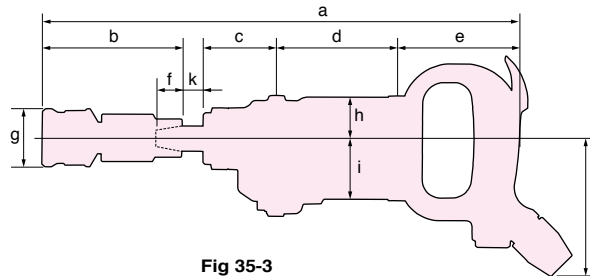


Fig 35-3

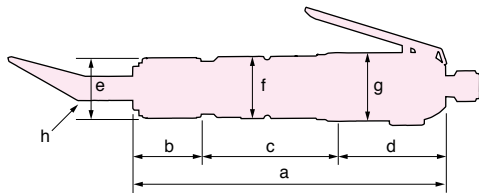
### TAPPERS

Fig No.	Model	a	b	c	d	e	f	g	h	j		
34-1	FT-6P-1	236	45	112	63.5	15	38	45	154.0	-		
34-1	FT-6BX-1D	206	40	34	128.0	15	46	47	143.5	-		
34-2	FT-6BX-1T	241	75	34	128.0	15	46	47	143.5	32		
34-2	FT-8PX-1	232	78	27	121.0	14	46	45	193.0	32		
Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k
35-3	FT-13Z-1	427	70	92	108	97	20	45	37	65	108	18

# Dimensions

## Percussive Tools

Fig 41



### FLUX CHIPPERS

Fig No.	Model	a	b	c	d	e	f	g	h
41	FCH-20	176	66	52	58	33	32	36	□9.0
41	FCH-20-1F	176	66	52	58	33	32	36	□9.0
41	FCH-20F	182	42	82	58	39	32	36	□12.7
41	FCH-20F-1F	182	42	82	58	39	32	36	□12.7
41	FCH-25	204	44	92	68	39	40	44	□12.7
41	FCH-25-1F	204	44	92	68	39	40	44	□12.7
41	FCH-25B	239	44	92	103	39	40	44	□12.7
41	FCH-25B-1F	239	44	92	103	39	40	44	□12.7

Fig 42

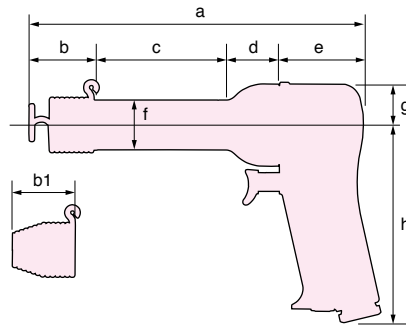
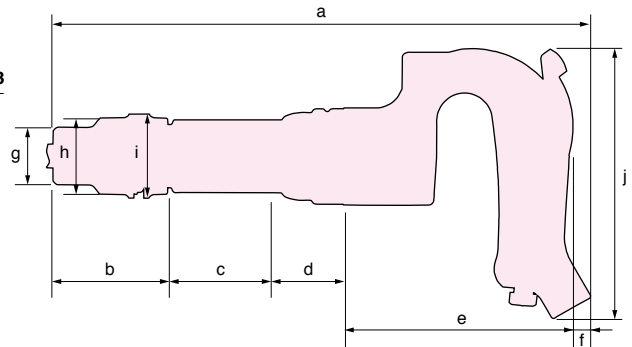


Fig 43



### LIGHT HAMMERS

Fig No.	Model	a	b	c	d	e	f	g	h	b1
42	FRH-3-1	140	39.5	10	38	52.5	30	25	121	38
42	FRH-3-2	140	39.5	10	38	52.5	30	25	121	38
42	FRH-6-1	206	39.5	76	38	52.5	30	25	121	38
42	FRH-6-2	206	39.5	76	38	52.5	30	25	121	38
42	FRH-6A-1	193	42.0	63	36	52.0	36	25	121	36
42	FRH-6A-2	193	42.0	63	36	52.0	36	25	121	36

### CHIPPING & CALKING HAMMERS

Fig No.	Model	a	b	c	d	e	f	g	h	i	j
43	FC-01SA-H	281.0	49.0	65	37.0	119	11	23	39	53	142
43	FC-01SA-R	281.0	49.0	65	37.0	119	11	23	39	53	142
43	FC-01-3	284.0	60.0	57	37.0	119	11	30	40	44	142
43	FC-01-4	284.0	60.0	57	37.0	119	11	30	40	44	142
43	FC-1Z-1	343.5	79.5	54	39.5	147	23	46	59	63	158
43	FC-1Z-2	343.5	79.5	54	39.5	147	23	46	59	63	158
43	FC-2Z-1	384.5	79.5	95	39.5	147	23	46	59	63	158
43	FC-2Z-2	384.5	79.5	95	39.5	147	23	46	59	63	158
43	FC-3Z-1	428.5	79.5	139	39.5	147	23	46	59	63	158
43	FC-3Z-2	428.5	79.5	139	39.5	147	23	46	59	63	158
43	FC-4Z-1	467.5	79.5	178	39.5	147	23	46	59	63	158
43	FC-4Z-2	467.5	79.5	178	39.5	147	23	46	59	63	158

Fig 44

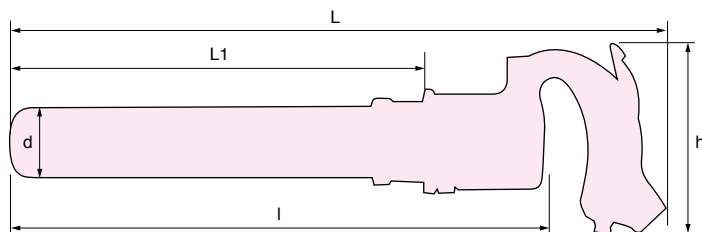


Fig 45-1

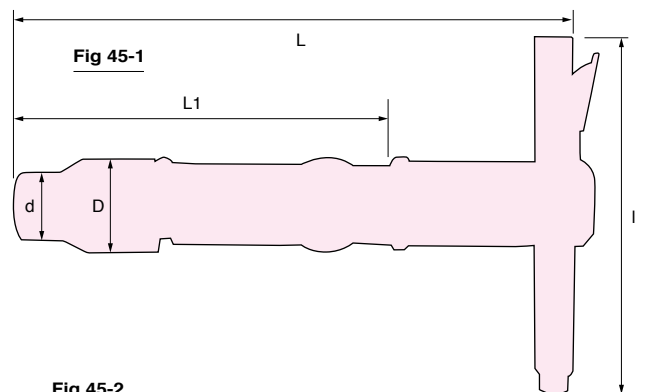
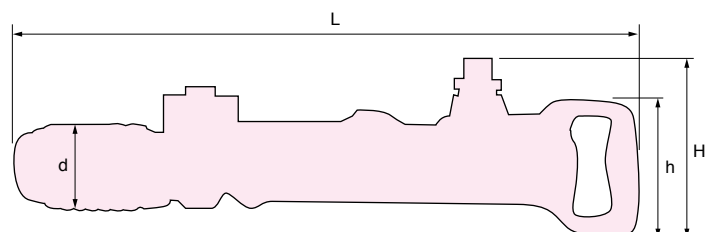


Fig 45-2



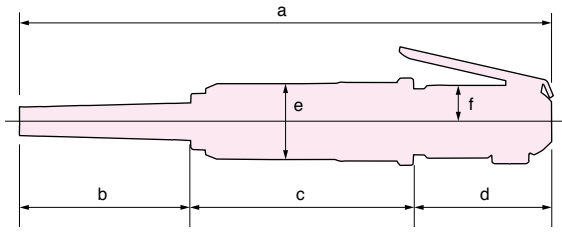
### RIVETING HAMMERS

Fig No.	Model	L	L1	l	h	d
44	B-40	400	205	300	156	61
44	B-50	425	230	325	156	61
44	B-60	450	255	350	156	61
44	B-80	500	305	400	156	61
44	B-90	525	330	425	156	61

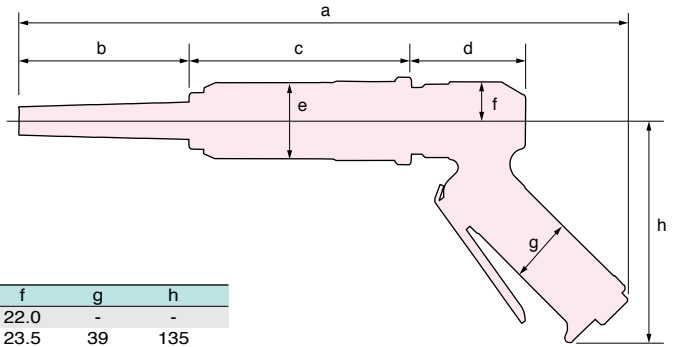
### CONCRETE BREAKERS

Fig No.	Model	L	L1	l	d	D
45-1	CB-10	490	320	435	65	80
45-1	CB-20	570	365	365	69	95
45-1	CB-30	620	415	365	73	119
Fig No.	Model	L	H	h	d	
45-2	CA-7	465	125	115	60	

**Fig 46-1**



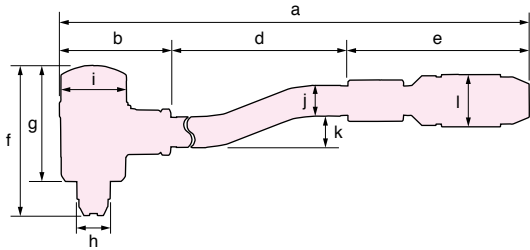
**Fig 46-2**



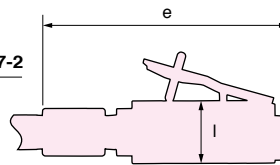
**NEEDLE SCALERS**

Fig No.	Model	a	b	c	d	e	f	g	h
46-1	FNS-2(-1F)	325	104	136	85	46	22.0	-	-
46-2	FNS-2P(-1F)	372	104	136	70	46	23.5	39	135

**Fig 47-1**



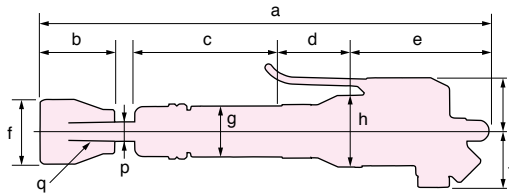
**Fig 47-2**



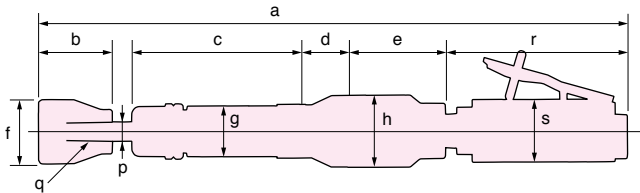
**SCALING HAMMERS**

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	l	m	n
47-1	FS-2A	510	82	-	295	133	110~94	85	21	50	22	23	38	-	-
47-1	FS-2A-1F	535	82	-	295	158	110~94	85	21	50	22	23	40	-	-

**Fig 48-1**



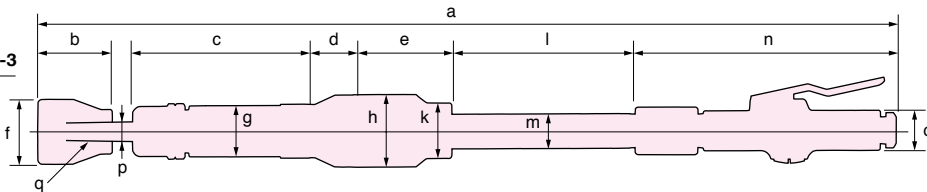
**Fig 48-2**



**SAND RAMMERS**

Fig No.	Model	a	b	c	d	e	f	r	g	h	s	i	j	p	q
48-1	FR-18B	287~337	47	114	28	85	41	-	32	46	-	34	36	12.0	taper 1:20
48-1	FR-22B	364~428	60	154	35	85	51	-	38	50	-	38	36	14.0	taper 1:20
48-1	FR-25B	539~622	80	228	49	117	67	-	46	60	-	47	32	17.5	taper 1:20
48-2	FR-18B-2F	390~440	47	114	28	63	41	118	32	46	40	-	-	12.0	taper 1:20
48-2	FR-22B-2F	465~529	60	154	35	68	51	118	38	50	40	-	-	14.0	taper 1:20
48-2	FR-25B-2F	630~713	80	228	49	90	67	118	46	60	40	-	-	17.5	taper 1:20

**Fig 48-3**



**Fig 48-4**

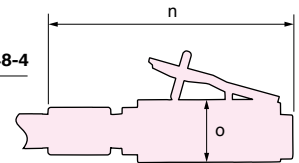


Fig No.	Model	a	b	c	d	e	f	g	h	k	l	m	n	o	p	q
48-3	FR-18L	565~615	47	113	28	64.0	41	32	46	35	124	21.7	167	25	12.0	taper 1:20
48-3	FR-22L	647~711	60	154	35	68.0	51	38	50	35	124	21.7	173	25	14.0	taper 1:20
48-3	FR-25L	1076~1159	80	228	49	90.0	67	46	60	45	400	21.7	169	32	17.5	taper 1:20
48-3	FR-32	1119~1246	92	262	60	85.0	75	53	68	50	395	27.5	154	32	19.0	taper 1:20
48-4	FR-18L-2F	542~592	60	113	28	64.0	51	32	46	35	124	21.7	158	40	12.0	taper 1:20
48-4	FR-22L-2F	614~678	60	154	35	68.0	51	38	50	35	124	21.7	158	40	14.0	taper 1:20
48-4	FR-25L-2F	1038~1121	80	228	49	90.0	67	46	60	45	400	21.7	158	40	17.5	taper 1:20
48-4	FR-32-2F	1123~1250	92	260	60	85.6	75	53	68	50	401	27.5	158	40	19.0	taper 1:20

# Dimensions

## Air Motors

Fig 49-1

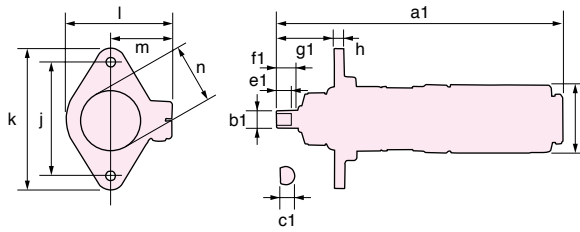
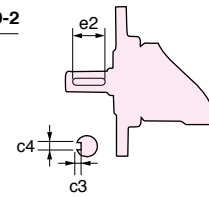


Fig 49-2



### AIR MOTORS Reversible Type

Fig No.	Model	a1	b1	c1	c3	c4	e1	e2	f1	g1	h	i	j	k	l	m	n	o	r	s
49-1	F-5SM-8.5R	147	8	7.0	-	-	10	-	12	20.0	5	40	60	74	55	33	35	18	6.5	8.0
49-1	F-5SM-2R	180	8	7.0	-	-	10	-	12	25.0	5	40	60	74	55	33	35	18	6.5	8.0
49-1	F-6SM-28R	146	10	8.5	-	-	12	-	14	19.0	6	42	70	88	64	38	39	20	6.5	8.0
49-1	F-6SM-21R	146	10	8.5	-	-	12	-	14	19.0	6	42	70	88	64	38	38	20	6.5	8.0
49-1	F-6SM-12R	157	10	8.5	-	-	12	-	14	18.0	6	42	70	88	64	38	39	20	6.5	8.0
49-1	F-6SM-8R	179	10	8.5	-	-	12	-	14	36.0	6	42	70	88	64	38	39	20	6.5	8.0
49-1	F-6SM-5R	179	10	8.5	-	-	12	-	14	36.0	6	42	70	88	64	38	38	20	6.5	8.0
49-1	F-6SM-2.5R	192	10	8.5	-	-	12	-	14	36.0	6	42	70	88	64	38	38	20	6.5	8.0
49-2	F-8SM-28R	183	12	-	2.5	4.0	-	18	25	29.0	6	58	70	88	64	38	45	26	11.0	17.0
49-2	F-8SM-12R	199	12	-	2.5	4.0	-	18	25	49.0	8	58	90	114	81	48	52	26	11.0	17.0
49-2	F-8SM-8.5R	222	16	-	3.0	5.0	-	25	32	46.5	8	58	90	114	81	48	51	26	11.0	17.0

Fig 50-1

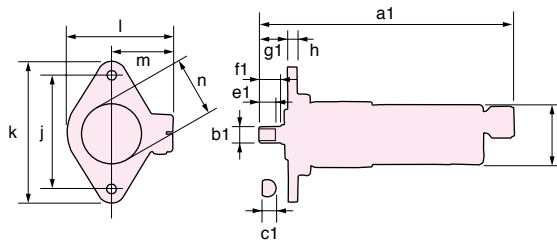


Fig 50-2

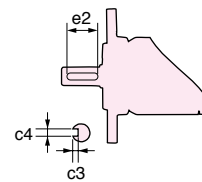
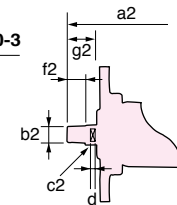


Fig 50-3



### Non-reversible Type

Fig No.	Model	a1	b1	c1	c3	c4	e1	e2	f1	g1	h	i	j	k	l	m	n	a2	b2	c2	d	f2	g2	
50-1	F-5SM-8.5	152	8	7.0	-	-	10	-	12	20.0	5	32	60	74	55	33	35	-	-	-	-	-	-	-
50-1	F-5SM-2	185	8	7.0	-	-	10	-	12	25.0	5	32	60	74	55	33	35	-	-	-	-	-	-	-
50-1, 3	F-6SM-28	167	10	8.5	-	-	12	-	14	19.0	6	38	70	88	64	38	39	169	3/8-24	10	4	12	21.0	
50-1, 3	F-6SM-21	167	10	8.5	-	-	12	-	14	19.0	6	38	70	88	64	38	39	167	3/8-24	10	4	12	19.0	
50-1, 3	F-6SM-12	178	10	8.5	-	-	12	-	14	18.0	6	38	70	88	64	38	41	178	3/8-24	10	4	12	18.0	
50-1, 3	F-6SM-8	200	10	8.5	-	-	12	-	14	36.0	6	38	70	88	64	38	38	200	3/8-24	14	5	12	36.0	
50-1, 3	F-6SM-5	200	10	8.5	-	-	12	-	14	36.0	6	38	70	88	64	38	38	200	3/8-24	14	5	12	36.0	
50-1, 3	F-6SM-2.5	213	10	8.5	-	-	12	-	14	36.0	6	38	70	88	64	38	38	214	3/8-24	14	5	12	36.0	
50-2, 3	F-8SMA-28	181	12	-	2.5	4.0	-	18	25	30.0	6	50	70	88	64	38	43	173	3/8-24	12	5	12	20.0	
50-2, 3	F-8SMA-12	200	12	-	2.5	4.0	-	18	25	28.0	8	50	90	114	81	48	51	189	3/8-24	12	5	12	17.0	
50-2, 3	F-8SMA-8.5	222	16	-	3.0	5.0	-	25	32	46.5	8	50	90	114	81	48	51	208	1/2-20	14	6	15	32.5	

Fig 51

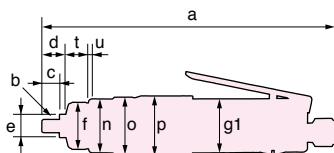


Fig 52

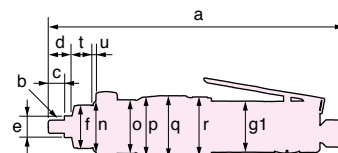


Fig 53

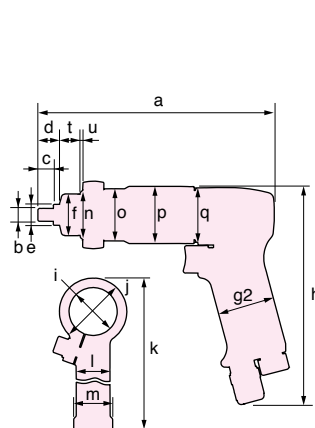
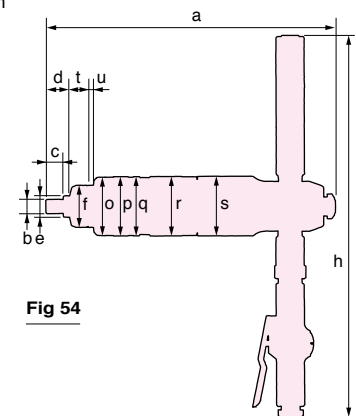


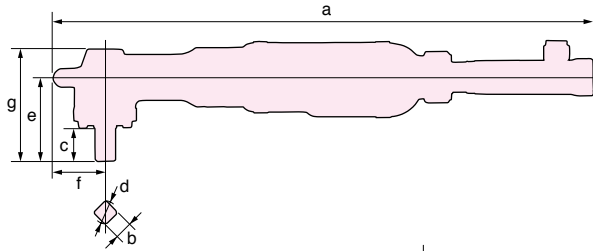
Fig 54



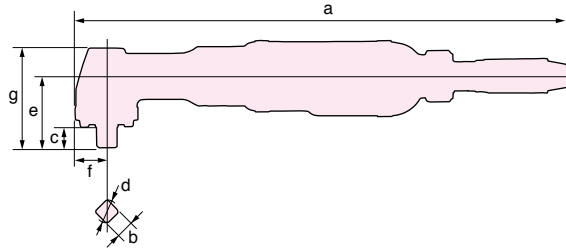
### Non-reversible Type

Fig No.	Model	a	b	c	d	e	f	g1	g2	h	i	j	k	l	m	n	o	p	q	r	s	t	u
51	F-6SE	210	3/8-24	12	17	15.88	32	38	-	-	38	52	176	26	30	38	40	42	-	-	-	16	2
52	F-6SF	225	3/8-24	12	17	15.88	32	38	-	-	38	52	176	26	30	38	40	44	46	44	-	16	2
53	F-6PFX	184	3/8-24	12	17	15.88	32	-	44	170	38	52	176	26	30	38	40	44	42	-	-	16	2
54	F-10MT	266	1/2-20	16	22	19.05	38	-	-	352	-	-	-	-	-	53	54	54	54	54	17	5	

**Fig 55-1**



**Fig 55-2**



**Portable Type**

Fig No.	Model	a	b	c	d	e	f	g
55-1	FM-2R-2C	630	□19	40	24	100	60	132
55-2	FNR-20	506	□16	17	20	62	31	95
55-2	FNR-20S	506	16	17	20	62	31	95

**Fig 56**

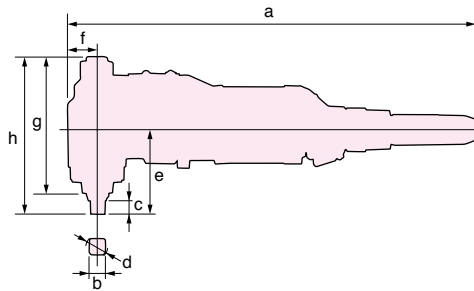
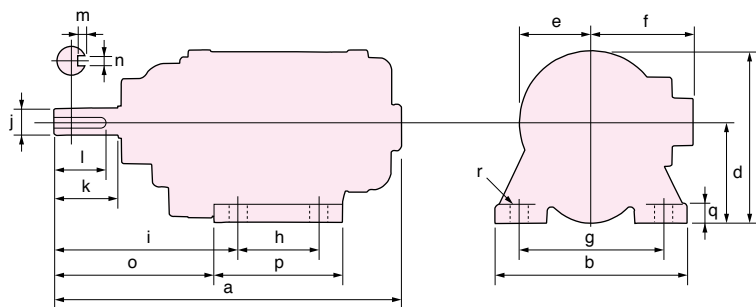


Fig No.	Model	a	b	c	d	e	f	g	h
56	FM-14RK-101	473	□13	16	16.5	80	27	133	158
56	FM-24RK-101	579	□14	17	17.5	98	35	170	197
56	FM-24RK-201	596	□19	20	25.0	122	42	197	227
56	FM-27RK-101	652	□31	30	35.0	151	49	233	275

**Fig 57**

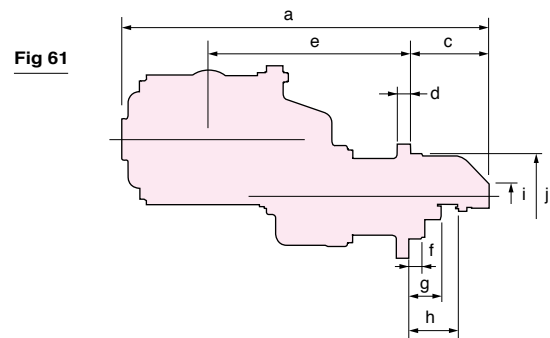
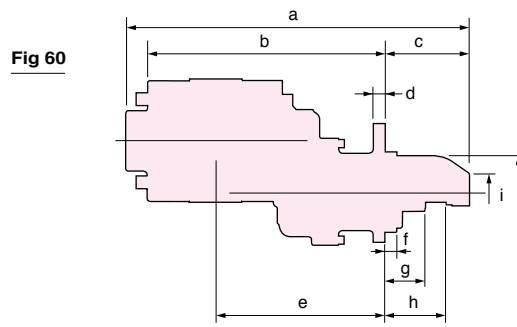
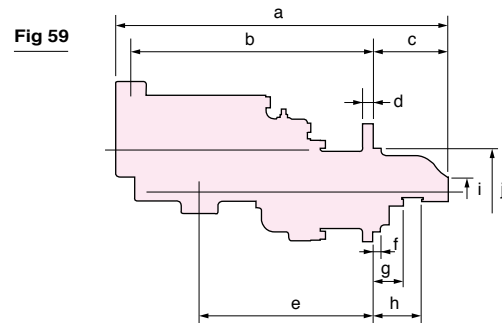
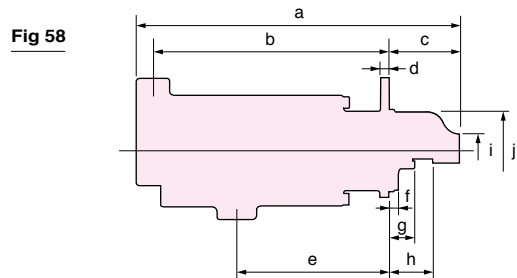


**Stationary Type**

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r
57	FM-1R-5	273	150	135	80	55	80	120	70	140	20	50	40	3.0	5	125	100	15	12
57	FM-1R-12	273	150	135	80	55	80	120	70	140	20	50	40	3.0	5	125	100	15	12
57	FM-2R-5	375	180	200	125	75	75	150	70	100	28	60	55	4.0	7	102	100	18	14
57	FM-3R-3	395	180	209	140	75	75	150	70	117	28	60	55	4.0	7	102	100	18	14
57	FM-3R-5	395	180	209	140	75	75	150	70	117	28	60	55	4.0	7	102	100	18	14
57	FM-5R-2	435	210	245	145	100	100	180	90	250	28	60	55	4.0	7	250	120	18	14
57	FM-10R-2	570	240	266	155	95	95	200	130	315	35	80	60	4.5	10	316	170	20	18

# Dimensions

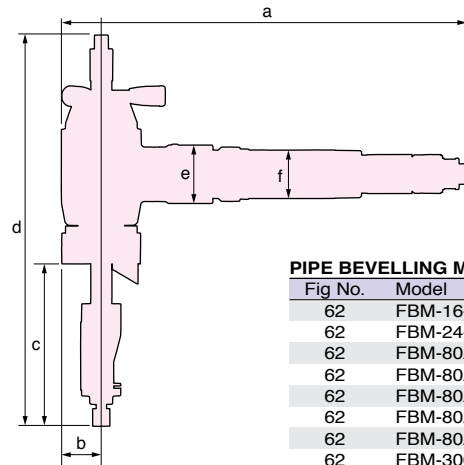
## Air Motors



### AIR STARTERS

Fig No.	Model	a	b	c	d	e	f	g	h	i	j
58	FSM-50C-101	361	267.5	75.5	10	169.5	5	26.5	46.0	36	89
59	FSM-70C-101	408	287.0	102.0	13	206.0	10	47.0	70.0	40	105
59	FSM-70C-101B	408	287.0	102.0	13	206.0	10	47.0	70.0	40	105
59	FSM-70C-102	408	293.5	95.5	13	212.5	10	40.5	63.5	40	105
59	FSM-70C-103	410	310.0	81.0	12	229.0	10	33.0	51.0	37	105
59	FSM-70C-104	410	270.0	121.5	12	189.0	15	65.0	91.0	42	105
59	FSM-70C-105	410	295.0	95.5	13	213.5	10	40.5	63.5	40	105
59	FSM-70C-106	418	277.0	122.0	12	196.0	10	66.0	92.0	37	110
60	FSM-100C-101	429	298.5	106.0	15	212.0	15	51.0	77.0	46	100
60	FSM-100C-102	428	298.0	105.5	12	212.0	10	50.5	76.5	46	100
60	FSM-100C-103	447	311.0	111.5	13	224.6	10	37.0	62.0	40	100
60	FSM-100C-104	447	311.0	111.5	13	224.6	10	37.0	62.0	40	100
60	FSM-100C-105	428	297.5	106.0	15	211.5	15	51.0	77.0	46	100
60	FSM-100C-201	447	311.0	111.5	13	224.6	10	37.0	62.0	40	100
60	FSM-100C-202	447	311.0	111.5	13	224.6	10	37.0	62.0	40	100
60	FSM-100C-203	447	311.0	111.5	13	224.6	10	37.0	62.0	40	100
61	FSM-200C-101	576	-	125.0	15	314.0	15	50.0	77.0	40	130
61	FSM-200C-102	572	-	115.0	15	319.0	10	50.0	72.0	48	130

Fig 62

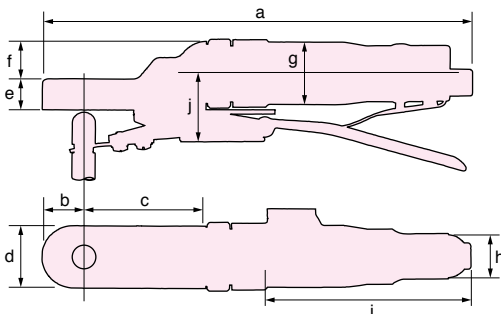


**PIPE BEVELLING MACHINES**

Fig No.	Model	a	b	c	d	e	f
62	FBM-16-1(S)	261 (272)	19.0	51	268	48	42
62	FBM-24-1(S)	278 (289)	27.5	67	240	48	42
62	FBM-80A-2(S)	403 (403)	39.0	160	388	58	48
62	FBM-80A-3(S)	403 (403)	39.0	160	388	58	48
62	FBM-80A-4(S)	403 (403)	39.0	160	388	58	48
62	FBM-80A-5(S)	403 (403)	39.0	160	388	58	48
62	FBM-80A-6(S)	403 (403)	39.0	160	388	58	48
62	FBM-300-2(S)	524 (557)	56.0	179	511	74	93
62	FBM-300-3(S)	524 (557)	135.0	179	511	74	93
62	FBM-300-4(S)	524 (557)	56.0	179	511	74	93

\* ( ) : S type size

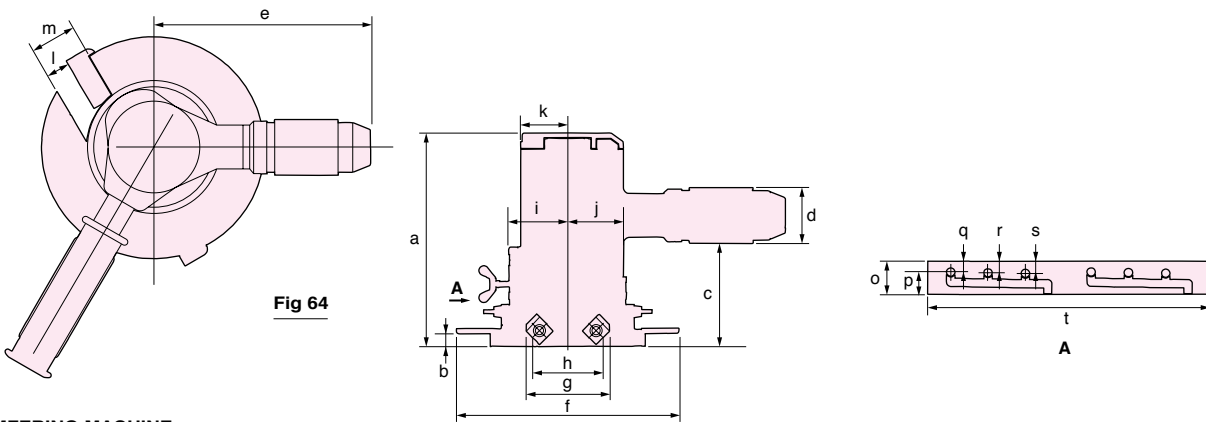
Fig 63



**TIP DRESSER**

Fig No.	Model	a	b	c	d	e	f	g	h	i	j
63	FTD-18-1	292	30	87	44	21.5	29	47	-	-	-
63	FTD-18A-1	307	30	83	44	22.0	26	46	30	147	54

Fig 64



**CHAMFERING MACHINE**

Portable Models

Fig No.	Model	a	b	c	d	e	f	g	h	i	j	k	l	m	o	p	q	r	s	t
64	FBM-1-1(F)	144	8.5	69 (68)	38 (40)	146	150	56	47.4	40	38	32	15	30	22	14.9	7.1	7.6	8	188.5
64	FBM-1-2(F)	144	8.5	69 (68)	38 (40)	146	150	56	47.4	40	38	32	15	30	22	14.9	7.1	7.6	8	188.5

\* ( ) : F type size

Fig 65

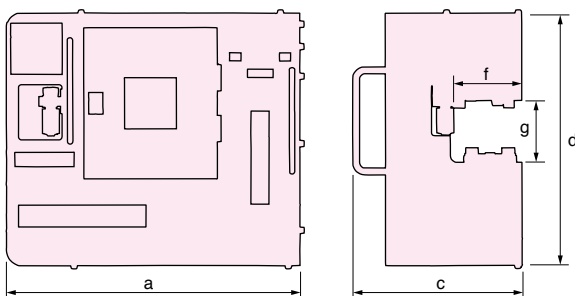
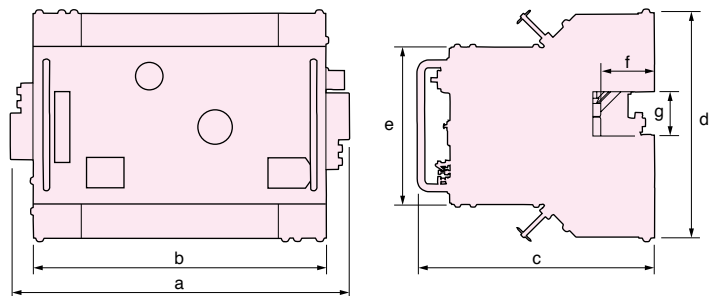


Fig 66

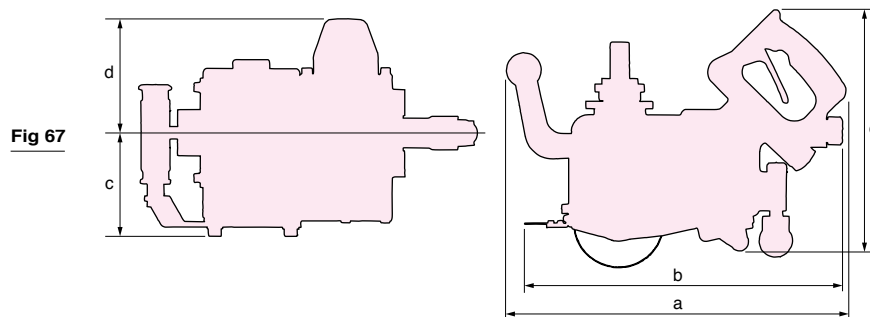


Self-propelled Models

Fig No.	Model	a	b	c	d	e	f	g
65	FX-027-1	388	-	223.0	335	-	90	83.5
66	FX-018-2F	430	380	306.5	291	203	75	57.0

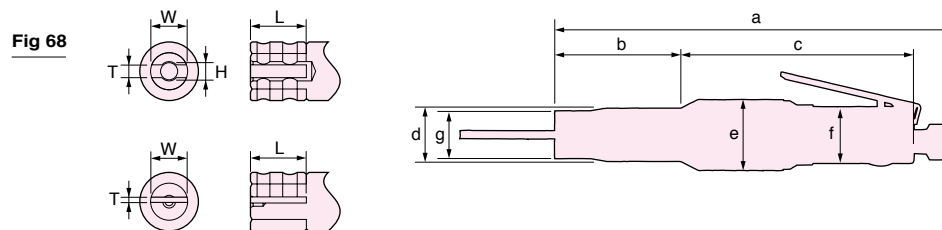
# Dimensions

## Others



### ALUMINUM MILLING MACHINES

Fig No.	Model	a	b	c	d	e
67	FRC-200-1	363	295	79	111	172
67	FRC-300-1	372	357	116	125	268



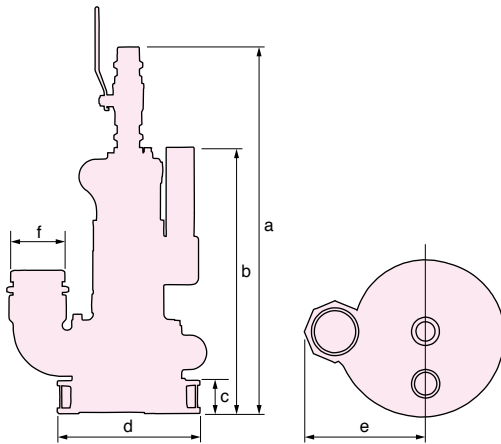
### AIR FILES

Fig No.	Model	a	b	c	d	e	f	g	T	W	L	H
68	FRF-4-1(F)	228	73	133.5	30	40	32	27	4	13	21	6

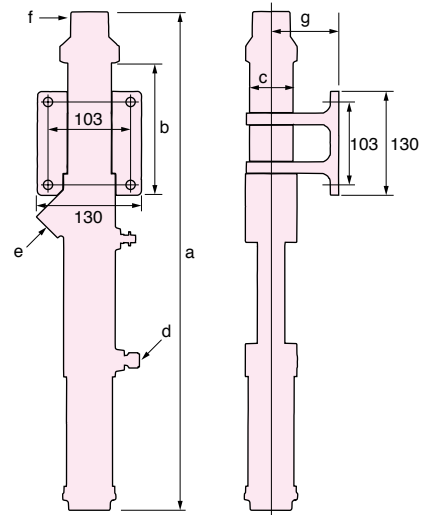
### AIR SAWS

Fig No.	Model	a	b	c	d	e	f	g	T	W	L
68	FRF-4-2(F)	232	77	133.5	30	40	32	27	2	13	21
69	FRS-45	421	24	50	46	131	48				

**Fig 70**



**Fig 71**



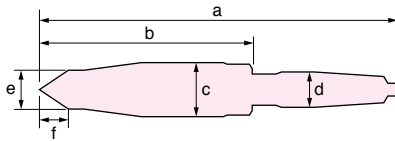
**SUMP PUMPS**

Fig No.	Model	a	b	c	d	e	f
70	FP-7-2	288.6	231.0	9	110	63	PT 3/4
70	FP-20-1	500.0	374.0	52	200	177	W 82.5-5
70	FP-35-1	607.0	452.6	50	220	187	W 82.5-5

**PISTON PUMPS**

Fig No.	Model	a	b	c	d	e	f	g
71	FP-11-1	622	137.5	55	PT 1/4	PT 3/4	PT 1 1/2	-
71	FP-11-2	622	137.5	55	PT 1/4	PT 3/4	PT 1 1/2	84

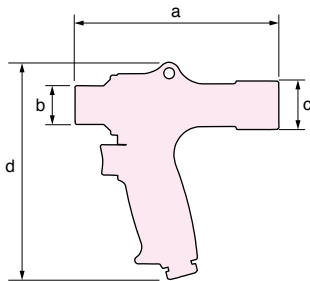
**Fig 72**



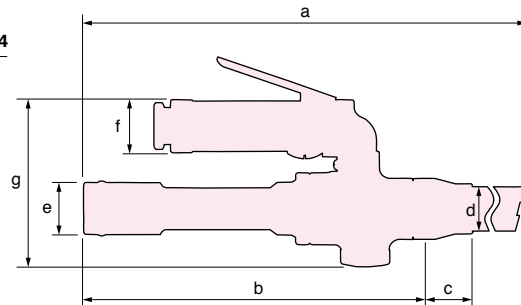
**MARKING PEN**

Fig No.	Model	a	b	c	d	e	f
72	G-400	147.5	76	19.5	17.5	2.15	1.5

**Fig 73**



**Fig 74**



**AIR CLEANERS**

Fig No.	Model	a	b	c	d
73	AC-200F	145	27	34	153

Fig No.	Model	a	b	c	d	e	f	g
74	FJP-500	1020	248.5	32	32	38	38	121

# Dimensions

## Others

Fig 75

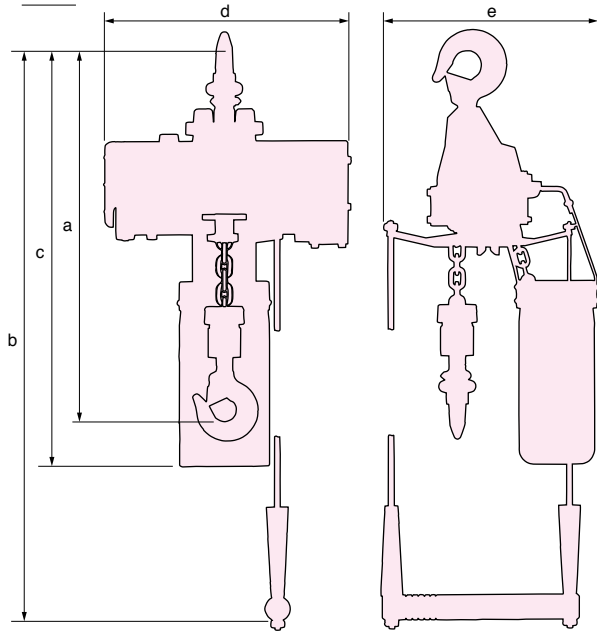
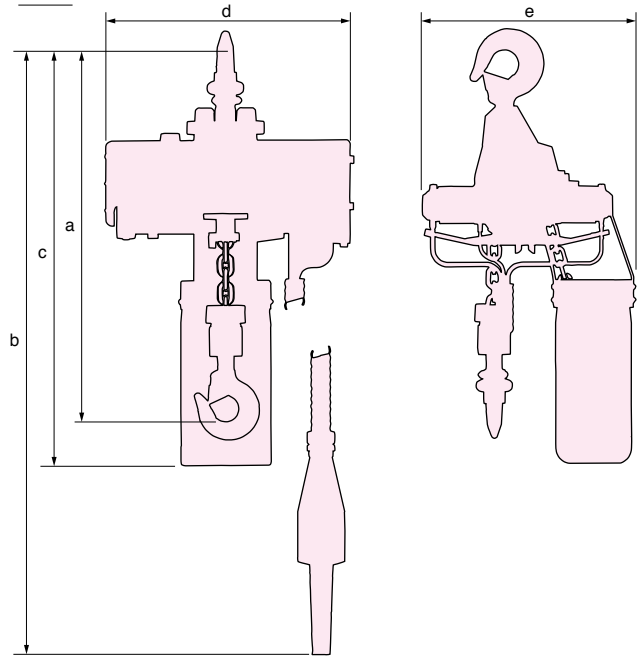


Fig 76



### AIR HOISTS

#### C Type

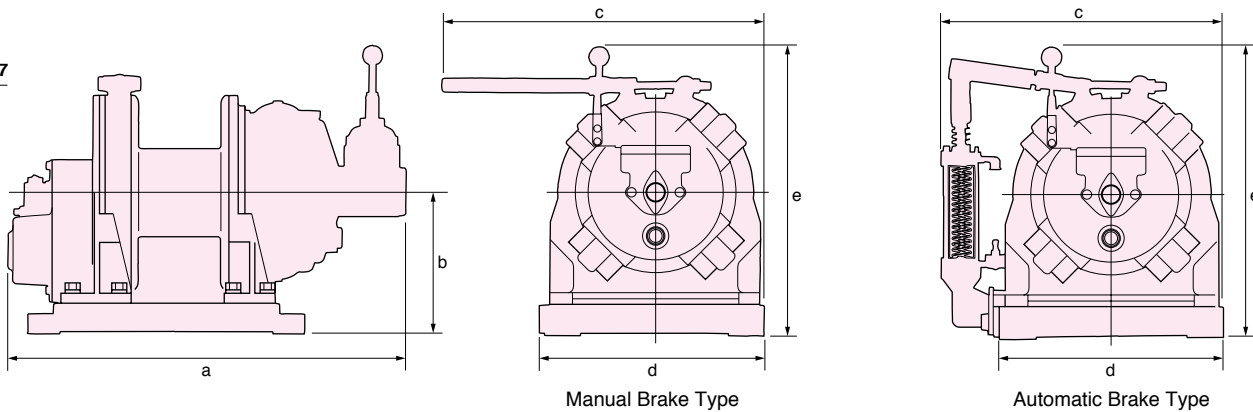
Fig No.	Model	a	b	c	d	e
75	FAH-25LC	430~3430	2500	560	333	285
75	FAH-50LC	430~3430	2500	560	333	285
75	FAH-100LC	485~3485	2500	560	333	285

#### P Type

Fig No.	Model	a	b	c	d	e
76	FAH-25LP	430~3430	2500	560	333	289
76	FAH-50LP	430~3430	2500	560	333	289
76	FAH-100LP	485~3485	2500	560	333	289

\* C Type: Pull Cord, P Type: Pendant.

Fig 77



### AIR WINCHES

Fig No.	Model	a	b	c	d	e
77	W-05-3-S	536	148	380 (335)	230	346
77	W-05-3-L	650	148	380 (335)	230	346
77	W-10-220-S	830	305	696 (593)	470	617
77	W-10-220-L	1008	305	696 (593)	470	617
77	W-20-220-S	852	305	696 (593)	470	617
77	W-20-220-L	1030	305	696 (593)	470	617
77	W-30-36-S	1041	444	748 (727)	540	764
77	W-30-36-L	1281	444	748 (727)	540	764
77	W-50-36-S	1159	557	- (882)	660	877
77	W-50-36-L	1459	557	- (882)	660	877

\* ( ) are Automatic Brake Type.