$F\,d\,d\,d$ No. 70 $F\,2/d\,2/d\,2/d$ D_{2h}^{24}

	Axes	Coordinates origin 1	Coordinates origin 2	Wyckoff positions 8*a*	8*b*	16*c*	16*d*	16*e*	16*f*	16*g*	32*h*
I Maximal *translationengleiche* subgroups											
[2] $F2dd$ (43)			$x,y+\frac{1}{8},z+\frac{1}{8}$	8*a*	8*a*	16*b*	16*b*	2×8*a*	16*b*	16*b*	2×16*b*
$\widehat{=}\,Fdd2$	**b**, **c**, **a**	y,z,x	$y+\frac{1}{8},z+\frac{1}{8},x$								
[2] $Fd2d$ (43)			$x+\frac{1}{8},y,z+\frac{1}{8}$	8*a*	8*a*	16*b*	16*b*	16*b*	2×8*a*	16*b*	2×16*b*
$\widehat{=}\,Fdd2$	**c**, **a**, **b**	z,x,y	$z+\frac{1}{8},x+\frac{1}{8},y$								
[2] $Fdd2$ (43)			$x+\frac{1}{8},y+\frac{1}{8},z$	8*a*	8*a*	16*b*	16*b*	16*b*	16*b*	2×8*a*	2×16*b*
[2] $F222$ (22)			$x+\frac{1}{8},y+\frac{1}{8},z+\frac{1}{8}$	4*a*; 4*c*	4*b*; 4*d*	16*k*	16*k*	8*e*; 8*j*	8*f*; 8*i*	8*g*; 8*h*	2×16*k*
[2] $C2/c11$ (15)	$-\mathbf{a}, \mathbf{b}, -\frac{1}{2}(\mathbf{b}+\mathbf{c})$	$-x+\frac{1}{8},y-z,-2z+\frac{1}{4}$	$-x,y-z,-2z$	4*e*	4*e*	4*a*; 4*c*	4*b*; 4*d*	2×4*e*	8*f*	8*f*	2×8*f*
$\widehat{=}\,C12/c1$	$\mathbf{b}, \mathbf{a}, -\frac{1}{2}(\mathbf{b}+\mathbf{c})$	$y-z,x-\frac{1}{8},-2z+\frac{1}{4}$	$y-z,x,-2z$								
[2] $C12/c1$ (15)	$\mathbf{a}, -\mathbf{b}, -\frac{1}{2}(\mathbf{a}+\mathbf{c})$	$x-z,-y+\frac{1}{8},-2z+\frac{1}{4}$	$x-z,-y,-2z$	4*e*	4*e*	4*a*; 4*d*	4*b*; 4*c*	8*f*	2×4*e*	8*f*	2×8*f*
[2] $A112/a$ (15)	$-\frac{1}{2}(\mathbf{a}+\mathbf{b}), \mathbf{b}, -\mathbf{c}$	$-2x+\frac{1}{4},-x+y,-z+\frac{1}{8}$	$-2x,-x+y,-z$	4*e*	4*e*	4*a*; 4*d*	4*b*; 4*c*	8*f*	8*f*	2×4*e*	2×8*f*

		origin 1	origin 2	Wyckoff positions 8*a*	8*b*	16*c*	16*d*	16*e*	16*f*	16*g*	32*h*
Enlarged unit cell, isomorphic											
[3] $Fddd$	$3\mathbf{a}, \mathbf{b}, \mathbf{c}$	$\frac{1}{3}x-\frac{1}{4},y+\frac{1}{4},z+\frac{1}{4}$; $\pm(\frac{1}{3},0,0)$	$\frac{1}{3}x,y+\frac{1}{4},z+\frac{1}{4}$; $\pm(\frac{1}{3},0,0)$	8*b*; 16*e*	8*a*; 16*e*	16*c*; 32*h*	16*d*; 32*h*	3×16*e*	16*f*; 32*h*	16*g*; 32*h*	3×32*h*
[*p*] $Fddd$	$p\mathbf{a}, \mathbf{b}, \mathbf{c}$	$\frac{1}{p}x,y,z;+(\frac{u}{p},0,0)$	$\frac{1}{p}x,y,z;+(\frac{u}{p},0,0)$	8*a*(*b**); $\frac{p-1}{2}$×16*e*	8*b*(*a**); $\frac{p-1}{2}$×16*e*	16*c*(*d*†); $\frac{p-1}{2}$×32*h*	16*d*(*c*†); $\frac{p-1}{2}$×32*h*	*p*×16*e*	16*f*; $\frac{p-1}{2}$×32*h*	16*g*; $\frac{p-1}{2}$×32*h*	*p*×32*h*
	p = prime = $4n+1$; $u=1,\ldots,p-1$										
[*p*] $Fddd$	$p\mathbf{a}, \mathbf{b}, \mathbf{c}$	$\frac{1}{p}x-\frac{1}{4},y+\frac{1}{4},z+\frac{1}{4}$; $+(\frac{u}{p},0,0)$	$\frac{1}{p}x,y+\frac{1}{4},z+\frac{1}{4}$; $+(\frac{u}{p},0,0)$	8*b*(*a*‡); $\frac{p-1}{2}$×16*e*	8*a*(*b*‡); $\frac{p-1}{2}$×16*e*	16*c*(*d*§); $\frac{p-1}{2}$×32*h*	16*d*(*c*§); $\frac{p-1}{2}$×32*h*	*p*×16*e*	16*f*; $\frac{p-1}{2}$×32*h*	16*g*; $\frac{p-1}{2}$×32*h*	*p*×32*h*
	p = prime = $4n-1$; $u=1,\ldots,p-1$										
[3] $Fddd$	$\mathbf{a}, 3\mathbf{b}, \mathbf{c}$	$x+\frac{1}{4},\frac{1}{3}y-\frac{1}{4},z+\frac{1}{4}$; $\pm(0,\frac{1}{3},0)$	$x+\frac{1}{4},\frac{1}{3}y,z+\frac{1}{4}$; $\pm(0,\frac{1}{3},0)$	8*b*; 16*f*	8*a*; 16*f*	16*c*; 32*h*	16*d*; 32*h*	16*e*; 32*h*	3×16*f*	16*g*; 32*h*	3×32*h*
[*p*] $Fddd$	$\mathbf{a}, p\mathbf{b}, \mathbf{c}$	$x,\frac{1}{p}y,z;+(0,\frac{u}{p},0)$	$x,\frac{1}{p}y,z;+(0,\frac{u}{p},0)$	8*a*(*b**); $\frac{p-1}{2}$×16*f*	8*b*(*a**); $\frac{p-1}{2}$×16*f*	16*c*(*d*†); $\frac{p-1}{2}$×32*h*	16*d*(*c*†); $\frac{p-1}{2}$×32*h*	16*e*; $\frac{p-1}{2}$×32*h*	*p*×16*f*	16*g*; $\frac{p-1}{2}$×32*h*	*p*×32*h*
	p = prime = $4n+1$; $u=1,\ldots,p-1$										
[*p*] $Fddd$	$\mathbf{a}, p\mathbf{b}, \mathbf{c}$	$x+\frac{1}{4},\frac{1}{p}y-\frac{1}{4},z+\frac{1}{4}$; $+(0,\frac{u}{p},0)$	$x+\frac{1}{4},\frac{1}{p}y,z+\frac{1}{4}$; $+(0,\frac{u}{p},0)$	8*b*(*a*‡); $\frac{p-1}{2}$×16*f*	8*a*(*b*‡); $\frac{p-1}{2}$×16*f*	16*c*(*d*§); $\frac{p-1}{2}$×32*h*	16*d*(*c*§); $\frac{p-1}{2}$×32*h*	16*e*; $\frac{p-1}{2}$×32*h*	*p*×16*f*	16*g*; $\frac{p-1}{2}$×32*h*	*p*×32*h*
	p = prime = $4n-1$; $u=1,\ldots,p-1$										
[3] $Fddd$	$\mathbf{a}, \mathbf{b}, 3\mathbf{c}$	$x+\frac{1}{4},y+\frac{1}{4},\frac{1}{3}z-\frac{1}{4}$; $\pm(0,0,\frac{1}{3})$	$x+\frac{1}{4},y+\frac{1}{4},\frac{1}{3}z$; $\pm(0,0,\frac{1}{3})$	8*b*; 16*g*	8*a*; 16*g*	16*c*; 32*h*	16*d*; 32*h*	16*e*; 32*h*	16*f*; 32*h*	3×16*g*	3×32*h*
[*p*] $Fddd$	$\mathbf{a}, \mathbf{b}, p\mathbf{c}$	$x,y,\frac{1}{p}z;+(0,0,\frac{u}{p})$	$x,y,\frac{1}{p}z;+(0,0,\frac{u}{p})$	8*a*(*b**); $\frac{p-1}{2}$×16*g*	8*b*(*a**); $\frac{p-1}{2}$×16*g*	16*c*(*d*†); $\frac{p-1}{2}$×32*h*	16*d*(*c*†); $\frac{p-1}{2}$×32*h*	16*e* $\frac{p-1}{2}$×32*h*	16*f*; $\frac{p-1}{2}$×32*h*	*p*×16*g*	*p*×32*h*
	p = prime = $4n+1$; $u=1,\ldots,p-1$										
[*p*] $Fddd$	$\mathbf{a}, \mathbf{b}, p\mathbf{c}$	$x+\frac{1}{4},y+\frac{1}{4},\frac{1}{p}z-\frac{1}{4}$; $+(\frac{u}{p},0,0)$	$x+\frac{1}{4},y+\frac{1}{4},\frac{1}{p}z$; $+(\frac{u}{p},0,0)$	8*b*(*a*‡); $\frac{p-1}{2}$×16*g*	8*a*(*b*‡); $\frac{p-1}{2}$×16*g*	16*c*(*d*§); $\frac{p-1}{2}$×32*h*	16*d*(*c*§); $\frac{p-1}{2}$×32*h*	16*e*; $\frac{p-1}{2}$×32*h*	16*f*; $\frac{p-1}{2}$×32*h*	*p*×16*g*	*p*×32*h*
	p = prime = $4n-1$; $u=1,\ldots,p-1$										

* origin 2 and $p=8n+5$
† origin 1 and $p=8n+5$
‡ origin 2 and $p=8n+7$
§ origin 1 and $p=8n+7$