

Medical Device Contract Manufacturing Update Winter 2018/2019



Q Industry Overview

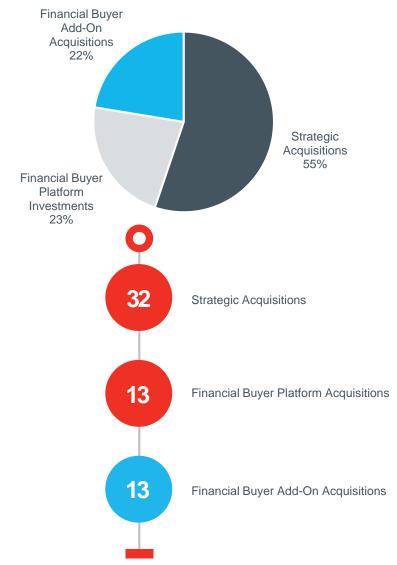
The global medical devices contract manufacturing market generated annual revenues of \$70 billion in 2017, and is forecasted to increase to \$115 billion in 2022, a compound annual growth rate (CAGR) of 9.5%.¹

The medical device contract manufacturing industry can be segmented on the basis of device type (Class I, II and III devices), application (orthopedic and spine, cardiovascular, radiology and general medical devices) and service (prototype development, finished device manufacturing, assembly and packaging, and testing and regulatory support services). The market is experiencing tremendous growth due to the reduction in overall cost and decrease in time required to bring a product to market. These dynamics allow for original equipment manufacturers (OEMs) to focus their efforts internally and partner with trusted contract manufacturing organizations (CMOs) to produce their products or vital components of those products.

Activity in the sector is being driven by growing pressure on medical device OEMs to reduce production costs and accelerate the timeline for taking a product to market. In addition, macroeconomic factors such as an aging worldwide population and the increasing prevalence of noninvasive surgical procedures are driving the demand for medical devices. To remain competitive in markets that are highly specialized and increasingly segmented, OEMs must rely on CMOs for everything from added manufacturing capacity to product design and technical expertise.

Anytime an industry is highly fragmented and includes companies with deep customer relationships, technical manufacturing expertise and significant growth potential, consolidation is inevitable. In this report, we will analyze the market trends impacting the CMO space, as well as highlight the rationale for what we see as a trend of ongoing consolidation for the foreseeable future.

2 0 1 8 C L O S E D T R A N S A C T I O N S ²



¹ Source: Global Medical Device Contract Manufacturing Market Forecast - Visiongain Page 2

² Source: CapitalIQ, PitchBook, Mergermarket

Note: M&A deal count is defined by a list of subsectors viewed as the best representation of the industry

OEM Consolidation Spurring Demand Creation of Strategic Partnerships

The landscape of medical device manufacturing has rapidly changed over the past few years, as major medical device OEMs have combined complementary skills to gain greater market share. OEMs are choosing to outsource technical and production services to trusted partners to reduce their manufacturing footprint. Outsourcing the production of various components in a medical device allows manufacturers to be more dynamic and cost-effective in their production of medical devices.

As a result of OEMs buying other OEMs, CMOs have followed the broader industry trend and consolidated to expand capabilities and act as strategic partners to OEMs. Furthermore, as OEMs reduce the number of suppliers and restructure their supply chain, smaller, lessstrategic contract manufacturers will be removed from approved supplier lists. Due to the increased visibility into the OEMs' supply chain, contract manufacturers turn to mergers and acquisitions to diversify capabilities and position themselves as trusted partners. "Medical device OEMs are looking for partners that bring to bear broad and deep turnkey capabilities that have the ability to fill technology gaps in their portfolios and accelerate time to market for disruptive innovations. They are looking for partners with the scale and sophistication required to support increasingly complex global supply chains," Mauricio Arellano, Spectrum Plastics medical division president.





OEM Consolidation Spurring Demand



CMO Consolidation to

Expand Capabilities

Sources: SEC filings, S&P Global Market Intelligence, Mergermarket, company press releases and various news sources (e.g., New York Times DealBook, The Deal, The Wall Street Journal)

OEM Consolidation Spurring Demand Continued CMO Consolidation

	OEMs' continued cost-cutting efforts to reduce their number of suppliers has positioned contract manufacturers to benefit from	
MMe	downstream pressure, as they offer a wider range of capabilities and help reduce spelling, general and administrative costs	Cost
Wel		
	OEMs are investing in innovation and advanced technologies,	
	allowing specialized contract manufacturers to gain traction through engineering capabilities and the ability to scale capacity	Innovation
BRAI		
	The reduction of the number of CMOs OEMs are using has led to an unprecedented level of activity in the space, as larger players	
	utilize a buy-and-build strategy to acquire smaller players within the fragmented industry	Demand
RES		
IK	As the medical product life cycle shortens, the demand for CMOs to launch a product quickly and scale when the market calls for it	
pho	acts as a key tailwind to continue to gain wallet share of OEMs	Speed
P		
))) a	Capital investments by CMOs are outpacing OEMs, as OEMs are leveraging the one-stop-shop manufacturing services provided	
Micro	by CMOs to gain greater visibility into the supply chain	Capital Investments
NE		

Target	Buyer	Transaction Size	Announced Date
		NA	Dec-18
Welch/Allyn ⁻	Heraeus	NA	Oct-18
CLADA MEDICAL DEVICES	Nordson	NA	Oct-18
EIT	Johnson-Johnson	NA	Sep-18
BRADSHAW		NA	May-18
Quality Above All Else	MW	NA	Apr-18
PARAGON MEDICAL	PRECISION ENGINEERED PRODUCTS	\$375M	Apr-18
RESONETICS	Regatta Medical	NA	Feb-18
	CEMTREX	\$160M	Sep-17
		NA	Jul-17
	katena	NA	Jul-17
		NA	Jun-17
MicroGroup [®]		NA	May-17
NENTION	Nordson	\$716M	Mar-17

Source: S&P Global Market Intelligence, Mergermarket, company press releases and various new sources (e.g., *New York Times* DealBook, The Deal, *The Wall Street Journal*)

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Continued Private Equity Interest Buy-and-Build M&A Strategy

In 2017, U.S. healthcare deals rose to prerecession-level highs as private equity (PE) investors latched onto industry tailwinds that have made healthcare such a compelling investment: aging population, rising prevalence of chronic disease and a fragmented delivery system that is ripe for consolidation.3

PE investors have turned to medical device CMOs as a platform investment due to the fragmented nature of the industry and the ability to complete add-on acquisitions to increase ancillary capabilities to increase wallet share with the major OEMs. With more and more PE interest, valuations continue to rise and deal activity skyrocketed. As more PE investors enter the sector, competition will likely continue to increase among funds. In addition, CMOs could be a way for nonhealthcare specific or generalist funds to get comfortable investing in healthcare without possessing deep industry knowledge.

Private Equity Sponsor	Platform Investment	Add-On Acquisitions	Rationale ⁴
GTCR	Regatta Medical	The acquisition will enable Regatta Medical to enhance its ability to serve the MedTech industry with a broader set of capabilities	
AEA	SPECTRUM PLASTICS GROUP		Spectrum has executed eight acquisitions over the past four years, building out their scale and capabilities to include catheter delivery systems and subassemblies
eurazeo			Reinforces In'Tech's position as a leading contract manufacturer of surgical instruments in orthopedics, as well as adding significant market penetration power
Investment Partners	orthopaedics manufacturing	SMBMedical a	Complementary product line and machining capabilities will benefit customers as the combined entity ranks among the top three CMOs for orthopedic implants worldwide
JLL Partners WATER STREET ³ Source: Bain & Company – Global Healthcare Private Equity	WE'RE IN IT FOR LIFE.	NENTION: Onteger Advanced Surgical and Orthopedic Lines	Enhances core capabilities and enables Viant to position themselves as a full- service supplier through their diverse metal capabilities and global footprint

⁴Source: Company press releases

Strong Underlying Market Dynamics Trends Driving Growth

Regulation and Legislation

- The major outcome of the Patient Protection and Affordable Care Act is that almost all individuals are required to have health insurance or face a penalty tax. This healthcare overhaul aimed at expanding coverage to a broader patient-base will aim to loosen the criteria for enrollment in Medicaid, as well as making private insurance more available
- The increase in availability of healthcare will likely drive growth within the industry as more patients will visit physicians and hospitals, furthering the demand for the medical device industry's products and services

Aging Population Drives Demand

- From 2018 to 2023, the number of adults aged 65 and older is anticipated to increase at an annualized rate of 3.2%. As the baby boomer generation ages, they will consume healthcare services at an outsized rate compared to the other demographics, leading to price increases and rising levels of demand⁵
- •The Centers for Medicare and Medicaid Services (CMS) projects national health expenditure growth to average 5.5% annually for the 10-year period ended 2026, pushing health spending's share of gross domestic product from 17.9% in 2016 to 19.7% by 2026⁶

Increased Outsourcing of Manufacturing

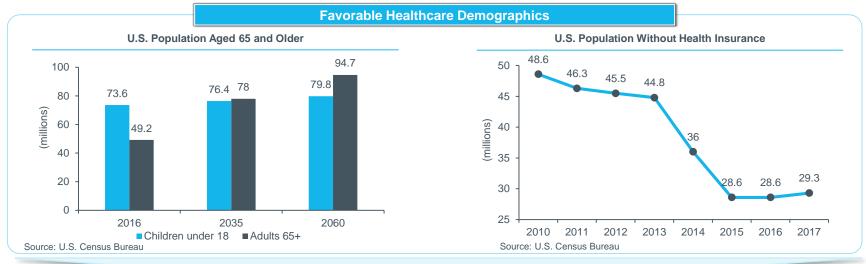
- •Medical device outsourcing growth is projected to be driven by the rising pressure from customers to reduce the cost of manufacturing and accelerate time to market to capture market share in an increasingly shorter product life cycle
- In addition, a growing geriatric population is likely to increase demand for medical devices and supplies, as a large patient-base with limited health resources will push manufacturers toward subcontracting of activities such as assembling and packaging⁷

⁵Source: American Hospital Associate – How Boomers Will Change Healthcare

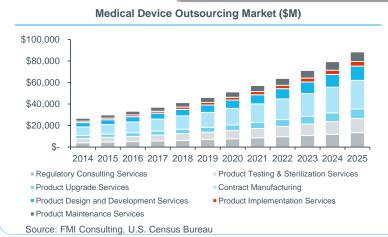
⁷Source: Medical Device Outsourcing Market Analysis – Grandview Research

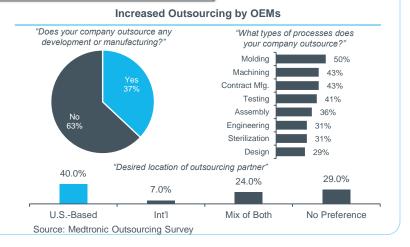
⁶Source: An Aging Nation: The Older Population in the United States – U.S. Census Bureau

Strong Underlying Market Dynamics Key Economic Indicators



Drive Global Demand for Outsourced Services





Healthcare Contract Manufacturing Public Company Overview.

Compony	Enterprise	Market	Enterprise \	/alue/EBITDA	Enterprise Value/Revenue			
Company	Enterprise Value (\$M)	Capitalization (\$M)	LTM	LTM 2018E		2018E		
AMETEK Inc.	\$17,097	\$15,714	13.8x	13.5x	3.6x	3.5x		
Carpenter Technology Corporation	2,219	1,687	7.3	7.0	1.0	1.0		
Danaher Corporation	82,131	72,277	16.9	17.3	4.2	4.1		
Elos Medtech AB (publ)	91	64	9.7	NA	1.3	1.3		
Flex Ltd.	5,555	4,007	4.8	4.2	0.2	0.2		
Integer Holdings Corporation	3,401	2,470	11.6	12.7	2.2	2.7		
LISI S.A.	1,595	1,247	5.8	5.8	0.8	0.8		
Nordson Corporation	8,145	6,914	13.4	13.7	3.6	3.7		
Teleflex Incorporated	13,682	11,886	20.6	18.7	5.7	5.6		

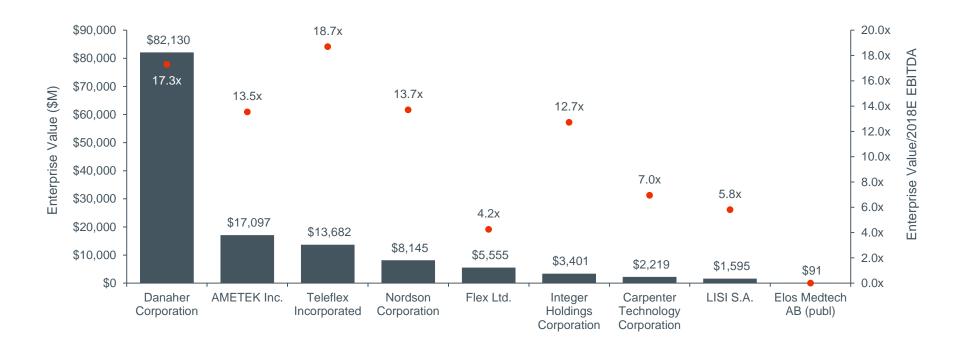
Source: Capital IQ as of December 31, 2018

Note: Public comparables were selected based on criteria best defining the contract manufacturing industry

DEFINITIONS

EBITDA: earnings before interest, taxes, depreciation and amortization Enterprise Value: market capitalization + total debt + preferred equity + minority interest – cash and short-term investments LTM: publicly announced last 12 months

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Market Valuation Public Trading Data

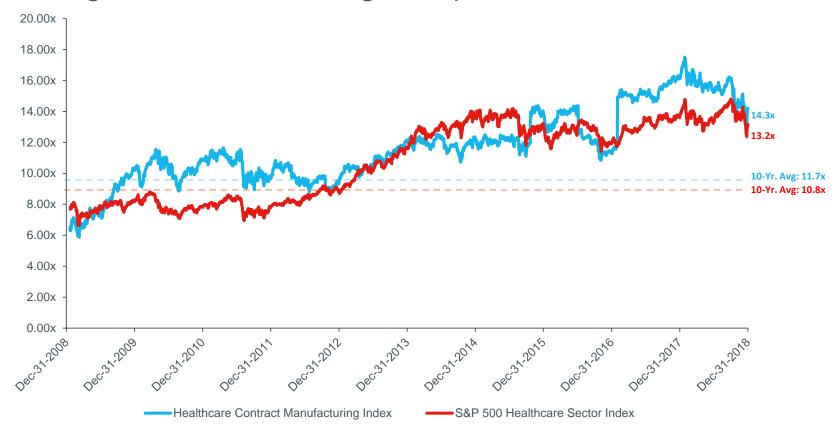
(\$ in millions, except per share amounts)													Enterprise	e Value/		
	Share Price	% of	Market	Enterprise		Revenue			EBITDA		Revenue			EBITDA		
	31-Dec-18	52-Wk. High	Сар	Value	CY 16	CY 17	CY 18	CY 16	CY 17	CY 18	LTM	CY 17	CY 18	LTM	CY 17	CY 18
Healthcare Contract Manufacturing																
AMETEK Inc.	\$67.70	82.6%	\$15,714.3	\$17,096.8	\$3,840.1 -	\$4,300.2 12.0%	\$4,836.3 12.5%	\$1,007.2 -	\$1,115.1 <i>10.7%</i>	\$1,262.2 <i>13.2%</i>	3.6x	4.0x	3.5x	13.8x	15.3x	13.5x
Carpenter Technology Corporation	\$35.61	57.9%	\$1,686.8	\$2,218.7	\$2,250.3 -	\$1,948.9 <i>(13.4%)</i>	\$2,326.0 <i>19.3%</i>	\$196.3 -	\$278.0 41.6%	\$319.2 <i>14.8%</i>	1.0x	1.1x	1.0x	7.3x	8.0x	7.0x
Danaher Corporation	\$103.12	93.0%	\$72,277.1	\$82,130.5	\$19,615.2 -	\$18,329.7 <i>(</i> 6.6%)	\$19,856.3 <i>8.3%</i>	\$4,092.4 -	\$4,418.6 <i>8.0%</i>	\$4,749.7 <i>7.5%</i>	4.2x	4.5x	4.1x	16.9x	18.6x	17.3x
Elos Medtech AB (publ)	\$7.88	85.4%	\$63.6	\$91.2	\$70.3 -	\$70.6 <i>0.5%</i>	\$71.6 <i>1.4%</i>	\$10.4 -	\$11.3 <i>9.1%</i>	NA NA	1.3x	1.3x	1.3x	9.7x	8.1x	NA
Flex Ltd.	\$7.61	38.6%	\$4,007.3	\$5,554.8	\$26,297.0 -	\$24,892.8 <i>(</i> 5.3%)	\$26,316.0 <i>5.7%</i>	\$1,192.3 -	\$1,143.4 <i>(4.1%)</i>	\$1,307.4 <i>14.3%</i>	0.2x	0.2x	0.2x	4.8x	4.9x	4.2x
Integer Holdings Corporation	\$76.26	84.7%	\$2,469.5	\$3,400.8	\$1,540.1 -	\$1,461.9 <i>(5.1%)</i>	\$1,281.6 <i>(12.3%)</i>	\$262.6 -	\$283.8 <i>8.1%</i>	\$267.4 (5.8%)	2.2x	2.3x	2.7x	11.6x	12.0x	12.7x
LISI S.A.	\$23.47	49.1%	\$1,247.2	\$1,595.1	\$1,923.3 -	\$2,005.3 4.3%	\$1,898.0 (5.3%)	\$251.6 -	\$314.0 24.8%	\$274.7 (12.5%)	0.8x	0.8x	0.8x	5.8x	5.1x	5.8x
Nordson Corporation	\$119.35	78.6%	\$6,913.6	\$8,145.4	\$2,254.7 -	\$2,209.9 <i>(2.0%)</i>	\$2,204.1 <i>(0.3%)</i>	\$493.9 -	\$616.1 24.7%	\$594.4 (3.5%)	3.6x	3.7x	3.7x	13.4x	13.2x	13.7x
Teleflex Incorporated	\$258.48	89.5%	\$11,885.5	\$13,682.3	\$2,401.9 -	\$2,146.3 (10.6%)	\$2,448.9 14.1%	\$488.8 -	\$589.4 20.6%	\$731.9 24.2%	5.7x	6.4x	5.6x	20.6x	23.2x	18.7x
Median Mean	\$67.70 \$77.72	82.6% 73.3%	\$4,007.3 \$12,918.3	\$5,554.8 \$14,879.5	\$2,254.7 \$6,688.1	\$2,146.3 \$6,374.0	\$2,326.0 \$6,804.3	\$488.8 \$888.4	\$589.4 \$974.4	\$663.1 \$1,188.4	2.2x 2.5x	2.3x 2.7x	2.7x 2.5x	11.6x 11.5x	12.0x 12.0x	13.1x 11.6x

Source: Capital IQ as of December 31, 2018

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Market Valuation Average Historical Trading Multiples



Source: Capital IQ

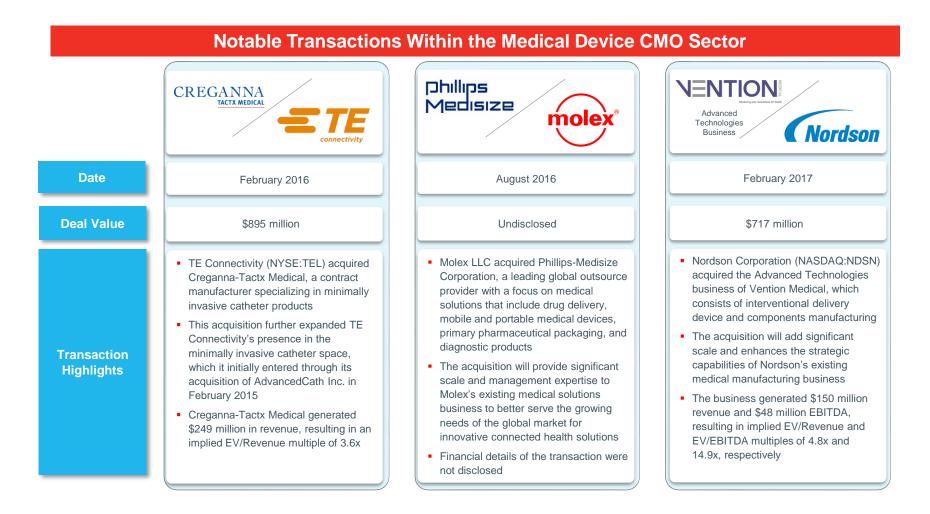
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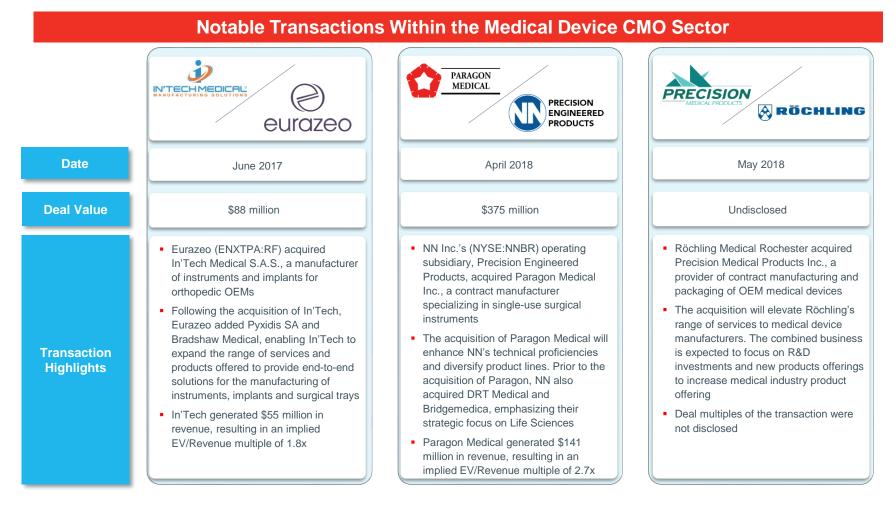
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Notable Transaction Activity Increased Demand for Differentiated Services



Notable Transaction Activity Increased Demand for Differentiated Services ...



Sources: SEC filings, S&P Global Market Intelligence, Mergermarket, company press releases and various news sources (e.g., New York Times DealBook, The Deal, The Wall Street Journal)

Notable Transaction Activity Increased Demand for Differentiated Services

Notable Transactions Within the Medical Device CMO Sector Integer evergreen MEDICAL TECHNOLOGIES AVALIGN Advanced Surgical and Heraeus **ΥΙΑΝΤ** LINDEN Orthopedics Business Date June 2018 October 2018 December 2018 **Deal Value** \$600 million Undisclosed Undisclosed Linden LLC acquired Avalign Viant (f/k/a MedPlast LLC) acquired the Heraeus Medical Components acquired • Technologies Inc., a manufacturer of Evergreen Medical Technologies, a advanced surgical and orthopedics implants, instruments, specialty surgical businesses of Integer Holdings manufacturer of implantable medical instruments and other devices for Corporation (NYSE:ITGR) devices and contract OEM supplier medical device OFMs The acquisition will increase Heraeus's Upon completion of the acquisition, Avalign is Linden's platform investment medical product portfolio and expand MedPlast rebranded as Viant to in the contract manufacturing space. the company's neuromodulation represent the dedication to its Avalign and Linden decided to partner Transaction capabilities to include implantable leads customers and patients. The through the next phase of the and stimulation devices. Heraeus aims acquisition doubled the size of Viant's Highlights businesses growth due to Linden's to support customers to enable them to revenue base, in addition to expanding deep healthcare and contract capabilities and service offerings, to accelerate innovation in the manufacturing experience, as well as help position the company as a fullneuromodulation therapy area Linden possessing the resources to service provider for customers Deal multiples of the transaction were support the Company's growth strategy Deal multiples of the transaction were not disclosed Deal multiples of the transaction were not disclosed not disclosed

Healthcare Contract Manufacturing M&A Activity ...

Selected M&A Transaction Analysis

(\$ in millions)

4	nnounced	Target Name	Target Business Description	Acquirer Name	Enterprise Value	LTM Revenue	LTM EBITDA	EBITDA Margin	EV/ Revenue	EV/EBITDA
	May-18	Integer Holdings Corporation, Advanced Surgical and Orthopedic Businesses	Integer Holdings Corporation's Advanced Surgical and Orthopedic product lines provide innovative, high-quality technologies and manufacturing capabilities to medical device OEMs	Viant Medical, LLC	\$600.0	\$400.0	NM	NA	1.50x	NA
	Apr-18	Paragon Medical Inc.	Paragon Medical Inc. designs, validates and manufactures cases and trays, reusable and single-use surgical instruments and implantable components for the medical device marketplace		\$375.0	\$141.0	NM	NA	2.66x	NA
	Oct-17	Exactech Inc.	Exactech Inc. develops, manufactures, markets, distributes and sells orthopedic implant devices, related surgical instrumentation and biologic services	TPG Capital L.P.	\$709.6	\$264.4	\$43.2	16.3%	2.68x	16.4x
	Sep-17	Bird & Cronin LLC	Bird & Cronin LLC manufactures orthopedic soft goods, sports medicine related items and specialty patient care products for healthcare professionals and their patients	Dynatronics Corporation	\$15.5	\$24.0	NM	NA	0.65x	NA
	Sep-17	Argon Medical Devices Inc.	Argon Medical Devices Inc. manufactures and sells medical devices for interventional radiology, vascular surgery, interventional cardiology and critical care procedures	Weigao International Medical Hong Kong Limited	\$844.2	\$225.4	\$68.0	30.2%	3.74x	12.4x
				Mean	\$354.7	\$176.0	\$29.6	15.6%	1.96x	13.7x
So	urces: Capita	I IQ and company filings		Median	\$266.8	\$145.5	\$30.0	11.8%	1.64x	13.7x

Note: Selected M&A transactions were selected as the best representation of the industry with publicly available information

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Healthcare Contract Manufacturing M&A Activity ...

Selected M&A Transaction Analysis

(\$ in millions)

Anno	ounced	Target Name	Target Business Description	Acquirer Name	Enterprise Value	LTM Revenue	LTM EBITDA	EBITDA Margin	EV/ Revenue	EV/EBITDA
Se	ep-17	Key Tronic Corporation	Key Tronic Corporation, doing business as KeyTronicEMS Co., provides electronic manufacturing services (EMS) and solutions to OEMs in the U.S. and internationally	Cemtrex Inc.	\$158.6	\$467.8	\$16.8	3.6%	0.34x	9.5x
Ju	n-17	InTech Medical S.A.S.	InTech Medical S.A.S. develops and manufactures instruments and implants for orthopedic companies	Eurazeo PME	\$109.7	\$61.9	NM	NA	1.77x	NA
Ma	ar-17	Hausmann Industries Inc.	Hausmann Industries Inc. designs and manufactures medical, therapy, and athletic training equipment to customers in the United States and internationally	Dynatronics Corporation	\$9.7	\$14.8	\$1.1	7.2%	0.66x	9.1x
Fe	eb-17	Vention Medical Inc., Advanced Technologies Business	Vention Medical Inc.'s Advanced Technologies Business designs, develops and manufactures minimally invasive interventional delivery devices, catheters and advanced components for the global medical technology market	Nordson Corporation	\$716.5	\$150.0	\$48.0	32.0%	4.78x	14.9x
Au	ıg-17	Medical Australia Limited	Medical Australia Limited develops, manufactures, distributes and sells medical devices and equipment used by healthcare facilities and critical care services in Australia, Asia and the United Kingdom	ICU Medical Inc.	\$8.0	\$10.1	\$0.4	4.0%	0.80x	19.7x
				Mean	\$354.7	\$176.0	• • •	15.6%		13.7x
Source	s: Capita	al IQ and company filings		Median	\$266.8	\$145.5	\$30.0	11.8%	1.64x	13.7x

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